

## SEARCH SUBMISSION: THIS SECTION TO BE FILLED IN BY THE SEARCHER

Searcher: Thomas Solomon      Email: thomastindlesolomon@gmail.com  
Date submitted: 07 February 2022      Date requested by: 11 February 2022

### Systematic Review Title:

Does post-exercise heat exposure improve endurance exercise performance? A systematic review of the effect of passive heat acclimation on exercise performance.

This search strategy is ...

My PRIMARY (core) database strategy — First time submitting a strategy for search question and database.

### Database

(i.e., MEDLINE, CINAHL...):

MEDLINE, EMBASE, CENTRAL, and clinical trials databases (ClinicalTrials.gov, and WHO International Clinical Trials Registry Platform [ICTRP], EU Clinical Trials Register [EUCTR]).

### Interface

(i.e., Ovid, EBSCO...):

Ovid.

### Research Question

The purpose of this systematic review is to answer the question: *Does post-exercise heat exposure improve endurance exercise performance?*

### PICO Format

(Outline the PICO for your question — i.e., Patient, Intervention, Comparison, Outcome, and Study Design — as applicable)

- P** Healthy male or female adults ( $\geq 18$  years of age) of any race/ethnicity, in any clinical research setting.
- I** Daily exercise under thermoneutral ( $< 25^{\circ}\text{C}$ ) environmental conditions coupled with post-exercise heat exposure (via any method, including but not limited to sauna or hot water immersion etc) for at least 2 consecutive days, with baseline and post-intervention exercise performance tests completed in either hot ( $\geq 25^{\circ}\text{C}$ ) or thermoneutral ( $< 25^{\circ}\text{C}$ ) conditions. The daily exercise must be completed in normal ambient conditions and must include at least 30-mins of aerobic activities (walking, hiking, running, cycling, rowing, xc skiing, swimming, stair-stepping etc) at a moderate intensity or higher ( $> 40\%$  heart rate reserve or  $\text{VO}_2$  reserve,  $> 60\%$  heart rate max; per ACSM activity guidelines). Post-exercise heat exposure must commence within 30-mins of exercise cessation.
- C** Control group must complete the same daily exercise intervention but without the post-exercise heat exposure.
- O** *Primary outcome(s)*: Endurance exercise performance (assessed by time trial, time-to-exhaustion, or a race) in hot conditions in all people.  
*Secondary outcome(s)*: Endurance exercise performance in cool conditions. And,  $\text{VO}_2\text{max}$ , economy/efficiency, lactate threshold, RPE, heart rate, sweat rate, and thermal comfort in hot or cool conditions. Plus, examination of all outcome variables in athletes alone (vs. non-athletes).  
All outcomes should be measured at baseline and within 7-days of finishing the interventions since effects of heat acclimation have been found to last up to 1-week.

S Randomised controlled trials only.

### Inclusion Criteria

Those listed above in addition to English language only publications; peer-review published articles only; any date limitations for searches (e.g., past 10 years, etc – need to provide rationale if so).

(List criteria such as age groups, study designs, etc., to be included) [optional]

We will include full-text English language papers published in peer-reviewed journals.

The studies must include healthy male or female adults ( $\geq 18$  years of age) of any race/ethnicity.

The interventions must include at least 30-mins of daily exercise with post-exercise heat exposure for at least 2 consecutive days. The control group must complete the same daily exercise but without post-exercise heat exposure.

The study outcomes must measure endurance exercise performance by time trial, time-to-exhaustion, or a race.

The study design must be a randomised controlled trial.

### Exclusion Criteria

(Any designs that are not RCTs; non-English language peer-reviewed studies).

(List criteria such as study designs, date limits, etc., to be excluded) [optional]

We will exclude the following studies:

Unavailable full-text, non-English language, non-randomised study designs, published in non-peer-reviewed journals.

### Was a search filter applied?

Yes  No

If YES, which one(s) (e.g., Cochrane RCT filter, PubMed Clinical Queries filter)? Provide the source if this is a published filter. [mandatory if YES to previous question — textbox]

Not applicable.

Other notes or comments you feel would be useful for the peer reviewer? [optional]

No further comments.

Please copy and paste your search strategy here, exactly as run, including the number of hits per line. [mandatory]

(heat exposure[Title/Abstract] OR post exercise sauna[Title/Abstract] OR post exercise hot water bath[Title/Abstract] OR heat acclimation OR heat acclimatization OR heat acclimat\* OR post exercise bath OR heat adaptation OR heat adapt\* OR "hot water immersion"[Title/Abstract] OR Sauna OR "heat chamber")

AND (time trial[Title/Abstract] OR performance[Title/Abstract] OR race[Title/Abstract] OR time to fatigue[Title/Abstract] OR athletic performance[MeSH Terms] OR VO2max OR "aerobic capacity" OR exercise[title/abstract])

AND humans

The first line yields 28,109 results. Adding the second line yields 3,532 results. Including all three lines yields 1,977 results.

### PEER REVIEW ASSESSMENT: THIS SECTION TO BE FILLED IN BY THE REVIEWER

Reviewer: Janice Thompson

Email: j.thompson.1@bham.ac.uk

Date completed: 11 February 2022

## 1. TRANSLATION

- A - No revisions   
B - Revision(s) suggested   
C - Revision(s) required

If “B” or “C,” please provide an explanation or example:

Does the search strategy match the research question/PICO?

Yes

Are the search concepts clear?

Yes

Are there too many or too few PICO elements included?

No

Are the search concepts too narrow or too broad?

May be a bit too narrow with regards to ‘clinical settings’ only. See my comment above.

Does the search retrieve too many or too few records? (Please show number of hits per line.)

Appropriate numbers as stated above.

Are unconventional or complex strategies explained?

Not applicable

## 2. BOOLEAN AND PROXIMITY OPERATORS

- A - No revisions   
B - Revision(s) suggested   
C - Revision(s) required

If “B” or “C,” please provide an explanation or example:

Are Boolean or proximity operators used correctly?

Insert comments here.

Is the use of nesting with brackets appropriate and effective for the search?

Insert comments here.

If NOT is used, is this likely to result in any unintended exclusions?

Insert comments here.

Could precision be improved by using proximity operators (eg, adjacent, near, within) or phrase searching instead of AND?

Insert comments here.

Is the width of proximity operators suitable (eg, might adj5 pick up more variants than adj2)?

Insert comments here.

### 3. SUBJECT HEADINGS

- A - No revisions
- B - Revision(s) suggested
- C - Revision(s) required

If “B” or “C,” please provide an explanation or example:

Are the subject headings relevant?

Insert comments here.

Are any relevant subject headings missing; for example, previous index terms?

Insert comments here.

Are any subject headings too broad or too narrow?

Insert comments here.

Are subject headings exploded where necessary and vice versa?

Insert comments here.

Are major headings (“starring” or restrict to focus) used? If so, is there adequate justification?

Insert comments here.

Are subheadings missing?

Insert comments here.

Are subheadings attached to subject headings? (Floating subheadings may be preferred.)

Insert comments here.

Are floating subheadings relevant and used appropriately?

Insert comments here.

Are both subject headings and terms in free text (see the following) used for each concept?

Insert comments here.

### 4. TEXT WORD SEARCHING

- A - No revisions
- B - Revision(s) suggested
- C - Revision(s) required

If “B” or “C,” please provide an explanation or example:

Does the search include all spelling variants in free text (eg, UK vs. US spelling)?

Insert comments here.

Does the search include all synonyms or antonyms (eg, opposites)?

Insert comments here.

Does the search capture relevant truncation (ie, is truncation at the correct place)?

Insert comments here.

Is the truncation too broad or too narrow?

Insert comments here.

Are acronyms or abbreviations used appropriately? Do they capture irrelevant material? Are the full terms also included?

Insert comments here.

Are the keywords specific enough or too broad? Are too many or too few keywords used? Are stop words used?

Insert comments here.

Have the appropriate fields been searched; for example, is the choice of the text word fields (.tw.) or all fields (.af.) appropriate? Are there any other fields to be included or excluded (database specific)?

Insert comments here.

Should any long strings be broken into several shorter search statements?

Insert comments here.

#### 5. SPELLING, SYNTAX, AND LINE NUMBERS

A - No revisions

B - Revision(s) suggested

C - Revision(s) required

If "B" or "C," please provide an explanation or example:

Are there any spelling errors?

Insert comments here.

Are there any errors in system syntax; for example, the use of a truncation symbol from a different search interface?

Insert comments here.

Are there incorrect line combinations or orphan lines (ie, lines that are not referred to in the final summation that could indicate an error in an AND or OR statement)?

Insert comments here.

#### 6. LIMITS AND FILTERS

A - No revisions

B - Revision(s) suggested

C - Revision(s) required

If "B" or "C," please provide an explanation or example:

Are all limits and filters used appropriately and are they relevant given the research question?

Insert comments here.

Are all limits and filters used appropriately and are they relevant for the database?

Insert comments here.

Are any potentially helpful limits or filters missing? Are the limits or filters too broad or too narrow? Can any limits or filters be added or taken away?

Insert comments here.

Are sources cited for the filters used?

Insert comments here.

<b>OVERALL EVALUATION</b>
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(Note: If one or more “revision required” is noted above, the response below must be “revisions required”.)
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- |                           |                                     |
|---------------------------|-------------------------------------|
| A - No revisions          | <input checked="" type="checkbox"/> |
| B - Revision(s) suggested | <input type="checkbox"/>            |
| C - Revision(s) required  | <input type="checkbox"/>            |

Additional comments:

Just two very minor wording changes suggested as highlighted in comments above. But no substantial revisions suggested or required.

## MEDLINE search string:

Search available [here](#).

(heat exposure[Title/Abstract] OR post exercise sauna[Title/Abstract] OR post exercise hot water bath[Title/Abstract] OR heat acclimation OR heat acclimatization OR heat acclimat\* OR post exercise bath OR heat adaptation OR heat adapt\* OR "hot water immersion"[Title/Abstract] OR Sauna OR "heat chamber") AND (time trial[Title/Abstract] OR performance[Title/Abstract] OR race[Title/Abstract] OR time to fatigue[Title/Abstract] OR athletic performance[MeSH Terms] OR VO2max OR "aerobic capacity" OR exercise[title/abstract]) AND humans

## CENTRAL search string:

Search available [here](#).

1. (heat exposure):ti,ab,kw
2. (post exercise sauna):ti,ab,kw
3. (post exercise hot water bath):ti,ab,kw
4. (heat acclimation):ti,ab,kw
5. (heat acclimatization):ti,ab,kw
6. (heat acclimat\*):ti,ab,kw
7. (post exercise bath):ti,ab,kw
8. (heat adaptation):ti,ab,kw
9. (heat adapt\*):ti,ab,kw
10. ("hot water immersion"):ti,ab,kw
11. (sauna):ti,ab,kw
12. ("heat chamber"):ti,ab,kw
13. (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12)
14. (time trial):ti,ab,kw
15. (performance):ti,ab,kw
16. (race):ti,ab,kw
17. (time to fatigue):ti,ab,kw
18. MeSH descriptor: [Athletic Performance] explode all trees
19. (VO2max):ti,ab,kw
20. ("aerobic capacity"):ti,ab,kw
21. (exercise):ti,ab,kw
22. (#14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21)
23. (human)
24. (#13 AND #22 AND #23)



# PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
<b>TITLE</b>			
Title	1	Identify the report as a systematic review.	Page 1
<b>ABSTRACT</b>			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Page 2
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Page 3
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Page 3
<b>METHODS</b>			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Page 4
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Page 3
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Page 3 and Supplemental File 2
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Page 4
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Page 4-5
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Page 4 and Table 1
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Page 4-5
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Page 5
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Page 5-6
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Page 4
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Page 4-5
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Pages 5 and 10
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Page 5-6
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Page 6
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Page 6
Reporting bias	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Page 6





# PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
assessment			
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Page 7
<b>RESULTS</b>			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Page 7 and Fig 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Supplemental Tables S1a, S1b, S1c, and S1d
Study characteristics	17	Cite each included study and present its characteristics.	Page 7 and Table 2
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Page 9 and Fig 2
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Figs 3-11
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Page 9 and Fig 2 and Table 2
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Pages 10-13 and Figs 3-11
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Pages 10-13
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Pages 10-13
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Pages 9-13 and Fig 2 and Fig 12
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Page 13 and Table 3
<b>DISCUSSION</b>			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Pages 14 & 18
	23b	Discuss any limitations of the evidence included in the review.	Page 15
	23c	Discuss any limitations of the review processes used.	Page 16
	23d	Discuss implications of the results for practice, policy, and future research.	Page 19
<b>OTHER INFORMATION</b>			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Pages 2 & 4
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Pages 2 & 4



## PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	Page 4
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Page 1
Competing interests	26	Declare any competing interests of review authors.	Page 1
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Pages 1, 10, and 14

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: <http://www.prisma-statement.org/>

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?								
N. A. Nelson; W. B. Shelley; e	1948	The influence of clothing, work, and air movement on the thermal exchanges of acclimatized men	J Clin Invest	Exclude	-	-	-	-	No	-	-
H. Krauss	1953	[Possibilities and limitations of the sauna in exercise therapy of cardiovascular diseases]	Arch Phys Ther (Leipzig)	Exclude	-	-	No	-	No	-	-
E. R. Buskirk; P. F. Iampietro;	1958	Work performance after dehydration: effects of physical conditioning and heat acclimatization	J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. Miettinen; E. Karvinen	1963	EFFECT OF SAUNA BATH ON PHYSICAL PERFORMANCE	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
L. H. Nahum	1963	Acclimatization to heat. An exercise in the scientific method	Conn Med	Exclude	-	No	-	-	No	-	-
S. W. Meagher	1963	POST-TRAUMATIC VASOSPASM OF THE HAND	Med Trial Tech Q	Exclude	Yes	-	-	-	-	-	-
N. B. Strydom; C. H. Wyndham	1963	Effect of heat on work performance in the gold mines of South Africa	Fed Proc	Exclude	-	-	-	-	No	-	-
B. Saltin	1964	AEROBIC WORK CAPACITY AND CIRCULATION AT EXERCISE IN MAN. WITH SPECIAL REFERENCE TO THE EFFECT OF HEAT	Acta Physiol Scand Suppl	Exclude	-	No	-	-	No	-	-
E. Bedrak; G. Beer; K. I. Furr	1964	FIBRINOLYTIC ACTIVITY AND MUSCULAR EXERCISE IN HEAT	J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
P. A. Bradbury; R. H. Fox; R.	1964	THE EFFECT OF EXERCISE ON TEMPERATURE REGULATION	J Physiol	Exclude	-	-	-	-	No	-	-
A. Fomosa	1964	MODIFICATIONS OF THE HEMOGRAMME IN SWIMMERS AND GYMNASTS BY PHYSICAL EXERCISE	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
J. E. Greenleaf	1964	LACK OF ARTIFICIAL ACCLIMATIZATION TO HEAT IN PHYSICALLY FIT SUBJECTS	Nature	Exclude	-	-	-	-	No	-	-
R. J. Joy; R. H. Poe; T. R. Dav	1964	THE EFFECT OF PRIOR HEAT ACCLIMATIZATION UPON MILITARY PERFORMANCE IN THE FIELD	Mil Med	Exclude	-	-	-	-	No	-	-
B. Saltin	1964	CIRCULATORY RESPONSE TO SUBMAXIMAL AND MAXIMAL EXERCISE AFTER THE EFFECTS OF HEAT	J Appl Physiol	Exclude	-	-	-	-	No	-	-
B. Saltin	1964	AEROBIC AND ANAEROBIC WORK CAPACITY AFTER DEHYDRATION	J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. H. Wyndham; R. K. McPherson	1964	REACTIONS TO HEAT OF ABORIGINES AND CAUCASIANS	J Appl Physiol	Exclude	-	No	-	-	No	-	-
C. H. Wyndham; B. Metz; A. I.	1964	REACTIONS TO HEAT OF ARABS AND CAUCASIANS	J Appl Physiol	Exclude	-	No	-	-	No	-	-
C. H. Wyndham; N. B. Strydom	1964	HEAT REACTIONS OF CAUCASIANS AND BANTU IN SOUTH AFRICA	J Appl Physiol	Exclude	-	No	-	-	No	-	-
C. H. Wyndham; N. B. Strydom	1964	HEAT REACTIONS OF CAUCASIANS IN TEMPERATE, IN HOT, DRY, AND IN HOT, HUMID CLIMATES	J Appl Physiol	Exclude	-	No	-	-	No	-	-
J. E. Greenleaf; F. Sargent; J.	1965	Voluntary dehydration in man	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. F. Wing	1965	Upper thermal tolerance limits for unimpaired mental performance	Aerosp Med	Exclude	-	-	-	-	No	-	-
J. W. Garden	1966	Plasma and sweat histamine concentrations after heat exposure and physical exercise	J Appl Physiol	Exclude	-	No	-	-	No	-	-
J. Peter; C. H. Wyndham	1966	Activity of the human eccrine sweat gland during exercise in a hot humid environment before and after heat acclimatization	J Physiol	Exclude	-	-	-	-	No	-	-
R. J. Ward; E. J. Powell; M. H.	1966	An evaluation of human performance during exposure to elevated heat and humidity	J Psychol	Exclude	-	-	-	-	No	-	-
H. J. Marx; L. B. Rowell; R. E.	1967	Maintenance of aortic pressure and total peripheral resistance during exercise in heat	J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. Robinson	1967	Training, acclimatization and heat tolerance	Can Med Assoc J	Exclude	-	No	-	-	-	-	-
J. A. Downey; R. C. Darling; J.	1968	The effects, of heat, cold, and exercise on the peripheral circulation	Arch Phys Med Rehabil	Exclude	-	-	-	-	No	-	-
W. P. Colquhoun	1969	Effects of raised ambient temperature and event rate on vigilance performance	Aerosp Med	Exclude	-	-	-	-	No	-	-
R. Deroanne; F. Pimay; J. M.	1969	[Measurements of central temperature during muscular exercise carried out in a hot environment]	Int Z Angew Physiol	Exclude	-	-	No	-	No	-	-
O. G. Edholm	1969	The effect of heat on acclimatized and unacclimatized groups of very fit men	Proc R Soc Med	Exclude	-	-	-	-	No	-	-
A. J. Gold; A. Zornitser; S. Sa	1969	Influence of season and heat on energy expenditure during rest and exercise	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. E. Greenleaf; J. S. Bosco	1969	Orthostatic intolerance after artificial heat acclimatization in physically fit subjects	Nature	Exclude	-	-	-	-	No	-	-
D. K. Mathews; E. L. Fox; D.	1969	Physiological responses during exercise and recovery in a football uniform	J Appl Physiol	Exclude	-	-	-	-	No	-	-
R. W. Schrier; J. Hano; H. I. K.	1970	Renal, metabolic, and circulatory responses to heat and exercise. Studies in military recruits during heat acclimatization	Ann Intern Med	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.	1970	Movement of water, protein and crystalloids between vascular and extra-vascular compartments in man	J Physiol	Exclude	-	-	-	-	No	-	-
C. T. Davies; C. Barnes; A. J.	1971	Body temperature in exercise. Effects of acclimatization to heat and habituation to work	Int Z Angew Physiol	Exclude	-	-	-	-	No	-	-
P. Baumgartl; E. Knapp; A. Ai	1972	[The effect of sauna on haemodynamics and myocardial performance]	Munch Med Wochenschr	Exclude	-	-	No	-	No	-	-
A. Ghaem; J. M. Verpillat; B.	1972	[Reaction of the cutaneous circulation to muscular exercise at a high ambient temperature in non-acclimatized man]	J Physiol (Paris)	Exclude	-	-	-	-	No	-	-
J. Kuusinen; M. Heinonen	1972	Immediate aftereffects of the Finnish sauna on psychomotor performance and mood	J Appl Psychol	Exclude	-	-	-	-	No	-	-
P. Marcus	1972	Heat acclimatization by exercise-induced elevation of body temperature	J Appl Physiol	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.	1972	Changes in plasma volume and protein content during exposures of working men to various temperatures	J Physiol	Exclude	-	-	-	-	No	-	-
P. Taggart; P. Parkinson; M. C.	1972	Cardiac responses to thermal, physical, and emotional stress	Br Med J	Exclude	-	-	-	-	No	-	-
B. L. Drinkwater	1973	Physiological responses of women to exercise	Exerc Sport Sci Rev	Exclude	-	-	-	-	No	-	-
O. G. Edholm; R. H. Fox; H. S.	1973	Body temperature during exercise and rest in cold and hot climates	Arch Sci Physiol (Paris)	Exclude	-	-	-	-	No	-	-
W. F. Grether	1973	Human performance at elevated environmental temperatures	Aerosp Med	Exclude	-	-	-	-	No	-	-
T. D. Noakes	1973	Exercise-induced heat injury in South Africa	S Afr Med J	Exclude	-	-	-	-	No	-	-
C. H. Wyndham	1973	The physiology of exercise under heat stress	Annu Rev Physiol	Exclude	-	-	-	-	No	-	-
H. J. Dordel	1974	[The effects of a 14-day physical training program within the framework of a rehabilitation course]	Rehabilitation (Stuttgart)	Exclude	-	-	No	-	No	-	-
C. V. Gisolfi; J. R. Copping	1974	Thermal effects of prolonged treadmill exercise in the heat	Med Sci Sports	Exclude	-	-	-	-	No	-	-
J. R. Greenleaf; J. S. Bosco; M.	1974	Orthostatic tolerance in dehydrated, heat-acclimated men following exercise in the heat	Aerosp Med	Exclude	-	-	-	-	No	-	-
E. R. Nadel; K. B. Pandolf; M.	1974	Mechanisms of thermal acclimation to exercise and heat	J Appl Physiol	Exclude	-	-	-	-	No	-	-
B. Nielsen	1974	Effects of changes in plasma volume and osmolality on thermoregulation during exercise	Acta Physiol Scand	Exclude	-	-	-	-	No	-	-
K. B. Pandolf; R. R. Gonzalez	1974	Physiological strain during light exercise in hot-humid environments	Aerosp Med	Exclude	-	-	-	-	No	-	-
K. B. Pandolf; E. Kamon	1974	Respiratory responses to intermittent and prolonged exercise in a hot-dry environment	Life Sci	Exclude	-	-	-	-	No	-	-
C. L. Wells; S. M. Horvath	1974	Metabolic and thermoregulatory responses of women to exercise in two thermal environments	Med Sci Sports	Exclude	-	-	-	-	No	-	-
D. P. Wyon	1974	The effects of moderate heat stress on typewriting performance	Ergonomics	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
W. C. Adams; R. H. Fox; A. J. 1975	1975	Thermoregulation during marathon running in cool, moderate, and hot environments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
F. T. Agarkov; A. S. Pavlov 1975	1975	[Increasing human heat tolerance by means of muscle training]	Kosm Biol Aviakosm Med	Exclude	-	-	No	-	No	-	-
F. M. Davis; A. D. Baddeley; 1975	1975	Diver performance: the effect of cold	Undersea Biomed Res	Exclude	Yes	-	-	-	-	-	-
J. T. Fein; E. M. Haymes; E. R 1975	1975	Effects of daily and intermittent exposures on heat acclimation of women	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
E. Kamon 1975	1975	Ergonomics of heat and cold	Tex Rep Biol Med	Exclude	-	-	-	-	No	-	-
T. F. O'Donnell, Jr. 1975	1975	Acute heat stroke. Epidemiologic, biochemical, renal, and coagulation studies	Jama	Exclude	-	-	-	-	No	-	-
J. D. Ramsey; D. Dayal; B. Gi 1975	1975	Heat stress limits for the sedentary worker	Am Ind Hyg Assoc J	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr. 1975	1975	Plasma volumes and constituents of heat-exposed men before and after acclimatization	J Appl Physiol	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.; S. Fortney 1975	1975	Untrained females: effects of submaximal exercise and heat on body fluids	J Appl Physiol	Exclude	-	-	-	-	No	-	-
E. Shvartz; N. B. Strydom; H. 1975	1975	Orthostatism and heat acclimation	J Appl Physiol	Exclude	-	-	-	-	No	-	-
E. Baum; K. Brück; H. P. Schv 1976	1976	Adaptive modifications in the thermoregulatory system of long-distance runners	J Appl Physiol	Exclude	-	-	-	-	No	-	-
R. M. Bonner; M. H. Harrison 1976	1976	Effect of heat acclimatization on intravascular responses to acute heat stress in man	J Appl Physiol	Exclude	-	-	-	-	No	-	-
K. J. Collins; R. J. Brotherhoo 1976	1976	Physiological performance and work capacity of Sudanese cane cutters with Schistosoma mansoni	Am J Trop Med Hyg	Exclude	Yes	-	-	-	-	-	-
K. E. Cooper; S. Martin; P. Ri 1976	1976	Respiratory and other responses in subjects immersed in cold water	J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. H. Harrison; R. J. Edwards 1976	1976	Measurement of change in plasma volume during heat exposure and exercise	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
R. W. Hubbard; W. T. Matthev 1976	1976	The laboratory rat as a model for hyperthermic syndromes in humans	Am J Physiol	Exclude	-	-	-	No	-	-	-
E. Kamon 1976	1976	Acclimation processes by daily exercise stints at temperate conditions followed by short heat exposure	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
J. P. Martineaud; J. Raynaud; 1976	1976	[Hand blood flow at rest and during submaximal exercise in acute and chronic heat stress (author's review)]	J Physiol (Paris)	Exclude	-	-	No	-	No	-	-
A. Meister 1976	1976	[Heat exposure, performance reliability and efficiency]	Z Psychol Z Angew Psych	Exclude	-	-	No	-	No	-	-
D. Mitchell; L. C. Senay; C. H 1976	1976	Acclimatization in a hot, humid environment: energy exchange, body temperature, and sweating	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. Raynaud; J. P. Martineaud; 1976	1976	Body temperatures during rest and exercise in residents and sojourners in hot climate	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
L. C. Senay; D. Mitchell; C. H 1976	1976	Acclimatization in a hot, humid environment: body fluid adjustments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. Shibolet; M. C. Lancaster; 1976	1976	Heat stroke: a review	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
C. H. Wyndham; G. G. Rogers 1976	1976	Acclimatization in a hot, humid environment: cardiovascular adjustments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
E. R. Buskirk 1977	1977	Temperature regulation with exercise	Exerc Sport Sci Rev	Exclude	-	No	-	-	No	-	-
R. Francesconi; J. Maher; G. F 1977	1977	Recurrent heat exposure: effects on levels of plasma and urinary sodium and potassium in resting men	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
R. P. Francesconi; J. T. Maher 1977	1977	Recurrent heat exposure: enzymatic responses in resting and exercising men	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
R. Henane; R. Flandrois; J. P. 1977	1977	Increase in sweating sensitivity by endurance conditioning in man	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
L. E. Herman; M. H. Stroud; V 1977	1977	Diaphoresis and Meniere's disease	Arch Otolaryngol	Exclude	Yes	-	-	-	-	-	-
M. Irondele; H. Freund 1977	1977	Carbohydrate and fat metabolism of unacclimatized men during and after submaximal exercise in a hot environment	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
K. V. Kuhlmeier; J. M. Millei 1977	1977	Determinants of the prescriptive zone of industrial workers	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
P. Mairiaux; W. Nullens; R. Fè 1977	1977	[Evaluation of the effects of cooling clothes on the adaptation to prolonged exertion in high temperature]	Rev Inst Hyg Mines (Hass)	Exclude	-	-	No	-	No	-	-
Y. Ohira; A. Ito; S. Ikawa 1977	1977	Hemoconcentration during isometric handgrip exercise	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
K. B. Pandolf; R. L. Burse; R. 1977	1977	Role of physical fitness in heat acclimatization, decay and reinduction	Ergonomics	Exclude	-	-	-	-	No	-	-
M. F. Roberts; C. B. Wenger; 1977	1977	Skin blood flow and sweating changes following exercise training and heat acclimation	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. J. S'Jongers; P. Vogelaere; J. 1977	1977	[Development of various physiological variables during sauna in a moderately trained male population]	Schweiz Z Sportmed	Exclude	-	-	No	-	No	-	-
L. C. Senay; R. Kok 1977	1977	Effects of training and heat acclimatization on blood plasma contents of exercising men	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Shvartz; Z. Glick; A. Maga; 1977	1977	Responses to temperate, cold, and hot environments and the effect of physical training	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
E. Shvartz; A. Meroz; A. Magi 1977	1977	Exercise and heat orthostatism and the effect of heat acclimation and physical fitness	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
E. Shvartz; Y. Shapiro; A. Mag 1977	1977	Heat acclimation, physical fitness, and responses to exercise in temperate and hot environments	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Shvartz; S. Shibolet; A. Me 1977	1977	Prediction of heat tolerance from heart rate and rectal temperature in a temperate environment	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. A. Stolwijk 1977	1977	Responses to the thermal environment	Fed Proc	Exclude	-	No	-	-	No	-	-
H. G. Wenzel; R. Ilmarinen 1977	1977	Effects of environmental heat on performance and some physiological responses of a man during heat acclimation	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	No	-	-
F. de Techttermann; E. Jéquier 1978	1978	[Calorimetric study of the effect of salicylate in man during heat exposure and exercise (author's review)]	J Physiol (Paris)	Exclude	-	-	No	-	No	-	-
P. Engel; G. Hildebrandt; A. P. 1978	1978	[Studies on thermoregulatory performance of disabled persons with congenital maldevelopment of the hypothalamus]	Z Orthop Ihre Grenzgeb	Exclude	-	-	No	-	No	-	-
R. R. Gonzalez; L. G. Berglund 1978	1978	Indices of thermoregulatory strain for moderate exercise in the heat	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
H. W. Lane; J. J. Cerda 1978	1978	Potassium requirements and exercise	J Am Diet Assoc	Exclude	-	-	-	-	No	-	-
T. Miura 1978	1978	Human performance under hot thermal condition of work environment	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	No	-	-
S. A. Nunneley 1978	1978	Physiological responses of women to thermal stress: a review	Med Sci Sports	Exclude	-	No	-	-	No	-	-
M. Pribil; J. Matousek 1978	1978	[The effect of periodical sauna bath on certain signs of the neurovegetative system and physical fitness]	Cas Lek Cesk	Exclude	-	-	No	-	No	-	-
L. C. Senay, Jr. 1978	1978	Early response of plasma contents on exposure of working men to heat	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Shvartz; Y. Shapiro; H. Birr 1978	1978	Maximal oxygen uptake, heat tolerance and rectal temperature	Med Sci Sports	Exclude	-	-	-	-	No	-	-
I. Vuori; M. Makarainen; A. Ji 1978	1978	Sudden death and physical activity	Cardiology	Exclude	-	-	-	-	No	-	-
B. L. Drinkwater; S. M. Horva 1979	1979	Heat tolerance and aging	Med Sci Sports	Exclude	-	-	-	-	No	-	-
S. M. Fortney; L. C. Senay, Jr. 1979	1979	Effect of training and heat acclimation on exercise responses of sedentary females	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
C. V. Gisolfi; J. S. Cohen 1979	1979	Relationships among training, heat acclimation, and heat tolerance in men and women: the control of heat stress	Med Sci Sports	Exclude	-	No	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
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G. L. Brengelmann	1983	Circulatory adjustments to exercise and heat stress	Annu Rev Physiol	Exclude	-	-	-	-	No	-	-
M. D. Curley; R. N. Hawkins	1983	Cognitive performance during a heat acclimatization regimen	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
N. Fellmann; G. Grizard; J. C.	1983	Human frontal sweat rate and lactate concentration during heat exposure and exercise	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
R. P. Francesconi; M. N. Sawk	1983	Hypohydration and heat acclimation: plasma renin and aldosterone during exercise	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. E. Greenleaf; P. J. Brock; L.	1983	Drinking and water balance during exercise and heat acclimation	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
A. Hoffmann; M. Müller; H. U.	1983	[Are swimming and sauna hazardous in the rehabilitation of heart patients?]	Schweiz Med Wochenschr	Exclude	Yes	-	No	-	-	-	-
H. Kalant; A. D. Lé	1983	Effects of ethanol on thermoregulation	Pharmacol Ther	Exclude	Yes	-	-	-	-	-	-
R. Kubica; B. Nielsen; A. Bon	1983	Relationship between plasma volume reduction and plasma electrolyte changes after prolonged bi	Acta Physiol Pol	Exclude	-	-	-	-	No	-	-
G. N. Novozhilov; V. P. Koval	1983	[Physiologo-medical evaluation of regimens of preliminary heat adaptation]	Voen Med Zh	Exclude	-	-	No	-	-	-	-
M. L. O'Toole; A. M. Paolone;	1983	The effects of heat acclimation on plasma volume and plasma protein of females	Int J Sports Med	Exclude	-	-	-	-	No	-	-
K. Sato; F. Sato	1983	Individual variations in structure and function of human eccrine sweat gland	Am J Physiol	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; R. W. Hubbard;	1983	Effects of acute plasma volume expansion on altering exercise-heat performance	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
M. N. Sawka; K. B. Pandolf; I	1983	Does heat acclimation lower the rate of metabolism elicited by muscular exercise?	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
M. N. Sawka; M. M. Toner; R	1983	Hypohydration and exercise: effects of heat acclimation, gender, and environment	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
V. M. Sharma; G. Pichan; M. I	1983	Differential effects of hot-humid and hot-dry environments on mental functions	Int Arch Occup Environ H	Exclude	-	-	-	-	No	-	-
H. J. Winterfeld; D. Strangfeld	1983	[Effect of sauna and walking series on blood pressure, peripheral microcirculation and performan	Z Gesamte Inn Med	Exclude	-	-	No	-	No	-	-
A. B. Babaev; M. Charyev; G.	1984	[Blood circulation in healthy inhabitants of the arid zone of Turkmenistan. Report 2. Use of contr	Kardiologia	Exclude	Yes	-	No	-	-	-	-
J. R. Brotherhood	1984	Nutrition and sports performance	Sports Med	Exclude	Yes	-	-	-	-	-	-
B. S. Cadarette; M. N. Sawka;	1984	Aerobic fitness and the hypohydration response to exercise-heat stress	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
J. E. Caldwell; E. Ahonen; U.	1984	Differential effects of sauna-, diuretic-, and exercise-induced hypohydration	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Danforth, Jr.; A. Burger	1984	The role of thyroid hormones in the control of energy expenditure	Clin Endocrinol Metab	Exclude	Yes	-	-	-	-	-	-
G. Dixon; P. Eurman; B. E. St	1984	Hypothalamic function in amenorrheic runners	Fertil Steril	Exclude	Yes	-	-	-	-	-	-
R. P. Francesconi; M. N. Sawk	1984	Hypohydration and acclimation: effects on hormone responses to exercise/heat stress	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
S. I. Gibbons; W. C. Adams	1984	Combined effects of ozone exposure and ambient heat on exercising females	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-
C. V. Gisolfi; C. B. Wenger	1984	Temperature regulation during exercise: old concepts, new ideas	Exerc Sport Sci Rev	Exclude	-	-	No	-	-	-	-
K. N. Kachanovskii	1984	[Effect of short-term thermal adaptation on indices of physical work capacity]	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-
M. A. Kolka; W. L. Holden; R	1984	Heat exchange following atropine injection before and after heat acclimation	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
M. A. Kolka; L. Levine; B. S.	1984	Effects of heat acclimation on atropine-impaired thermoregulation	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
A. T. Mar'ianovich; V. S. Balal	1984	[Individual characteristics of the body's reactions to combined heat and physical loading]	Fiziol Cheloveka	Exclude	-	-	No	-	No	-	-
D. M. Orenstein; K. G. Henke	1984	Heat acclimation in cystic fibrosis	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. S. Petrofsky; C. A. Phillips	1984	The use of functional electrical stimulation for rehabilitation of spinal cord injured patients	Cent Nerv Syst Trauma	Exclude	Yes	-	-	-	-	-	-
J. M. Pivarnik; E. M. Leeds; J	1984	Effects of endurance exercise on metabolic water production and plasma volume	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; R. P. Francescoi	1984	Hydration and vascular fluid shifts during exercise in the heat	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
M. N. Sawka; R. P. Francescoi	1984	Influence of hydration level and body fluids on exercise performance in the heat	Jama	Exclude	-	-	-	-	No	-	-
M. N. Sawka; L. Levine; M. A	1984	Effect of atropine on the exercise-heat performance of man	Fundam Appl Toxicol	Exclude	-	-	-	-	No	-	-
L. E. Armstrong; D. L. Costill;	1985	Effects of dietary sodium on body and muscle potassium content during heat acclimation	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
S. M. Fortney; N. B. Vroman	1985	Exercise, performance and temperature control: temperature regulation during exercise and implic	Sports Med	Exclude	-	-	No	-	No	-	-
R. P. Francesconi; M. N. Sawk	1985	Plasma hormonal responses at graded hypohydration levels during exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
C. J. Gaebelein; L. C. Senay; J	1985	Changes in blood pressure, heart rate and blood constituents during heat exposure in men with ele	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
S. Gold; M. Cahani; H. Sohmi	1985	Effects of body temperature elevation on auditory nerve-brain-stem evoked responses and EEGs i	Electroencephalogr Clin N	Exclude	Yes	-	-	-	No	-	-
C. Goodman; I. Cohen; J. Wal	1985	The effect of water intake on body temperature during rugby matches	S Afr Med J	Exclude	-	-	-	-	No	-	-
J. E. Greenleaf; P. J. Brock; D.	1985	Effects of exercise-heat acclimation on fluid, electrolyte, and endocrine responses during tilt and	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
M. H. Harrison	1985	Effects on thermal stress and exercise on blood volume in humans	Physiol Rev	Exclude	-	-	-	-	No	-	-
S. K. Hillman; G. Delforge	1985	The use of physical agents in rehabilitation of athletic injuries	Clin Sports Med	Exclude	Yes	-	-	-	-	-	-
R. Huch	1985	[Travel, sports and pregnancy]	Geburthshilfe Frauenheilkd	Exclude	Yes	-	No	-	-	-	-
A. Ivanov Yu; L. A. Korolev	1985	Heat acclimatization by controlled hypothermia	Hum Physiol	Exclude	-	-	-	-	No	-	-
M. Jauhainen; M. Laitinen; I.	1985	Lipids and apolipoproteins A-I, B and C-II and different rapid weight loss programs (weight lifter	Int J Biochem	Exclude	Yes	-	-	-	-	-	-
T. Katsuura; K. Nakano; Y. Sa	1985	Influence of native place on forearm blood flow at rest and during exercise in dry and humid heat	Ann Physiol Anthropol	Exclude	-	-	-	-	No	-	-
W. L. Kenney	1985	A review of comparative responses of men and women to heat stress	Environ Res	Exclude	-	-	No	-	-	-	-
D. S. King; D. L. Costill; W. J	1985	Muscle metabolism during exercise in the heat in unacclimatized and acclimatized humans	J Appl Physiol (1985)	Exclude	-	-	No	-	No	-	-
G. Pichan; K. Sridharan; Y. V.	1985	Physiological acclimatization to heat after a spell of cold conditioning in tropical subjects	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
M. N. Sawka; A. J. Young; B.	1985	Influence of heat stress and acclimation on maximal aerobic power	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
M. N. Sawka; A. J. Young; R.	1985	Thermoregulatory and blood responses during exercise at graded hypohydration levels	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
R. J. Shephard	1985	Adaptation to exercise in the cold	Sports Med	Exclude	Yes	-	-	-	-	-	-
R. E. Sinclair	1985	Be serious about siriasis. Guidelines for avoiding heat injury during 'dog days'	Postgrad Med	Exclude	Yes	-	-	-	-	-	-
J. Smolander; P. Kolari	1985	Laser-Doppler and plethysmographic skin blood flow during exercise and during acute heat stress	Eur J Appl Physiol Occup	Exclude	-	-	No	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
A. J. Young; M. N. Sawka; L. T. F. Barkve; K. Langseth-Mai	1985	Skeletal muscle metabolism during exercise is influenced by heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
G. M. Budd; A. L. Hendrie; S. B. S. Cadarette; L. Levine; P. D. L. Costill	1986	Increased uptake of transdermal glyceryl trinitrate during physical exercise and during high ambient temperature	Am Heart J	Exclude	-	No	-	-	-	-	-	No	-	-
M. H. Harrison	1986	Behavioural temperature regulation during a motor-toboggan traverse in Antarctica	Eur J Appl Physiol Occup Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Danon; S. Ben-Shimon; Z. P. A. Eisenman	1986	Effects of atropine on thermoregulatory responses to exercise in different environments	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
K. Fujishima	1986	Muscle metabolism and electrolyte balance during heat acclimation	Acta Physiol Scand Suppl	Exclude	-	-	-	-	-	-	-	No	-	-
M. H. Harrison	1986	Effect of exercise and heat exposure on percutaneous absorption of methyl salicylate	Eur J Clin Pharmacol	Exclude	-	-	-	-	-	-	-	No	-	-
V. Hessemmer; A. Zeh; K. Bräuer	1986	Hot weather, exercise, old age, and the kidneys	Geriatrics	Exclude	-	No	-	-	-	-	-	No	-	-
M. Ishikawa; K. Ishikawa	1986	Thermoregulatory responses during exercise and a hot water immersion and the affective response	Int J Biometeorol	Exclude	-	-	-	-	-	-	-	No	-	-
M. H. Harrison	1986	Heat and exercise. Effects on blood volume	Sports Med	Exclude	-	No	-	-	-	-	-	No	-	-
M. J. Smolander; P. K. Kolari; O. Koivumäki; J. M. Piirainen; L. C. Senay, Jr	1986	Effects of passive heat adaptation and moderate sweatless conditioning on responses to cold and heat	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
M. J. Smolander; P. K. Kolari; O. Koivumäki; J. M. Piirainen; L. C. Senay, Jr	1986	Influence of profuse sweating on systolic time intervals	Br Heart J	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Johnson; G. L. Brengel	1986	Regulation of the cutaneous circulation	Fed Proc	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. L. Kenney; D. A. Lewis; R. C. R. Kirby; V. A. Convertino	1986	A simple exercise test for the prediction of relative heat tolerance	Am Ind Hyg Assoc J	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. A. Kirsch; L. Rocker; H. V. F. Konikoff; Y. Shoenfeld; A. A. P. Kozlovskii; E. A. Lushchik	1986	Plasma aldosterone and sweat sodium concentrations after exercise and heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
J. Leblanc	1986	The cardiac filling pressure following exercise and thermal stress	Yale J Biol Med	Exclude	-	-	-	-	-	-	-	No	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	Effects of salt loading during exercise in a hot dry climate	Biomed Pharmacother	Exclude	-	-	-	-	-	-	-	No	-	-
J. M. Piirainen; L. C. Senay, Jr	1986	[Human tolerance for high-intensity contact heat exposure of the surface of the skin]	Kosm Biol Aviakosm Med	Exclude	-	-	No	-	-	-	-	-	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	Thermogenesis with relation to exercise and exercise-training	Acta Med Scand Suppl	Exclude	-	No	-	-	-	-	-	-	-	-
J. M. Piirainen; L. C. Senay, Jr	1986	Physiological differences between genders. Implications for sports conditioning	Sports Med	Exclude	Yes	No	-	-	-	-	-	-	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	Prediction modeling of physiological responses and human performance in the heat	Comput Biol Med	Exclude	-	No	-	-	-	-	-	No	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	Effects of exercise detraining and deacclimation to the heat on plasma volume dynamics	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	Free and conjugated catecholamines in human plasma during physical exercise	Clin Exp Pharmacol Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. A. Lewis; E. Kamon; J. L. K. B. Pandolf; L. A. Stroschein	1986	An inquiry into the role of cardiac filling pressure in acclimatization to heat	Yale J Biol Med	Exclude	-	No	-	-	-	-	-	-	-	-
J. M. Piirainen; L. C. Senay, Jr	1986	Aerobic and anaerobic responses to incremental exercise in a thermoneutral and a hot dry environment	Acta Physiol Scand	Exclude	-	-	-	-	-	-	-	No	-	-
L. E. Armstrong; R. W. Hubbard	1987	Effect of age on heat-activated sweat gland density and flow during exercise in dry heat	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
L. E. Armstrong; R. W. Hubbard	1987	Changes in body water and electrolytes during heat acclimation: effects of dietary sodium	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
L. E. Armstrong; R. W. Hubbard	1987	Heat acclimatization during summer running in the northeastern United States	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-	No	-	-
L. E. Armstrong; R. W. Hubbard	1987	Evaluation of a temperate environment test to predict heat tolerance	Eur J Appl Physiol Occup Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
J. H. Bittel	1987	Heat debt as an index for cold adaptation in men	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. A. Convertino	1987	Fluid shifts and hydration state: effects of long-term exercise	Can J Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. R. Gonzalez	1987	Biophysical and physiological integration of proper clothing for exercise	Exerc Sport Sci Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Gruca	1987	Water loss distribution in exercising men under hot conditions	Acta Physiol Pol	Exclude	-	No	-	-	-	-	-	No	-	-
L. E. Hart; J. R. Sutton	1987	Environmental considerations for exercise	Cardiol Clin	Exclude	-	No	-	-	-	-	-	No	-	-
S. Hjertén; K. Elenbring; F. K. R. W. Hubbard; C. B. Matthews	1987	Carrier-free zone electrophoresis, displacement electrophoresis and isoelectric focusing in a high-voltage field	J Chromatogr	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. W. Hubbard; C. B. Matthews	1987	Novel approaches to the pathophysiology of heatstroke: the energy depletion model	Ann Emerg Med	Exclude	-	No	-	-	-	-	-	-	-	-
G. L. Irion	1987	Responses of distance runners and sprinters to exercise in a hot environment	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
J. P. Kirwan; D. L. Costill; H. F. Koban; H. Hornak; E. Schulz	1987	Substrate utilization in leg muscle of men after heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
W. J. Kraemer; L. E. Armstrong	1987	[Secretory performance of eccrine sweat glands from the nephrologic viewpoint]	Z Gesamte Inn Med	Exclude	Yes	-	No	-	-	-	-	-	-	-
W. J. Kraemer; L. E. Armstrong	1987	Plasma opioid peptide responses during heat acclimation in humans	Peptides	Exclude	-	-	-	-	-	-	-	No	-	-
J. D. Ramsey; C. H. Lee	1987	The impact of the sauna bath and the sauna exercise suit on physiological cost during exercise	J Sports Med Phys Fitness	Exclude	-	-	-	-	-	-	-	No	-	-
J. Sirvio; J. Jolkonen; A. Pitkäranta; J. T. Viitasalo; H. Kyröläinen	1987	Adenohypophyseal hormone levels during hyperthermia	Endocrinology	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. T. Viitasalo; H. Kyröläinen	1987	Effects of rapid weight reduction on force production and vertical jumping height	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. Carpenter; S. A. Nunneley	1988	Heatstroke and army training	Lancet	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. Carpenter; S. A. Nunneley	1988	Endogenous hormones subtly alter women's response to heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
D. J. Coté; W. E. Prentice, Jr.; M. T. Duncan; S. M. Horvath	1988	Comparison of three treatment procedures for minimizing ankle sprain swelling	Phys Ther	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. M. Gopinathan; G. Pichan; F. L. Kaufman; D. E. Mills; R. W. L. Kenney; R. K. Anderson	1988	Physiological adaptations to thermal stress in tropical Asians	Eur J Appl Physiol Occup Physiol	Exclude	-	No	-	-	-	-	-	No	-	-
P. M. Gopinathan; G. Pichan; F. L. Kaufman; D. E. Mills; R. W. L. Kenney; R. K. Anderson	1988	Role of dehydration in heat stress-induced variations in mental performance	Arch Environ Health	Exclude	-	-	-	-	-	-	-	No	-	-
F. L. Kaufman; D. E. Mills; R. W. L. Kenney; R. K. Anderson	1988	Effects of bromocriptine on sweat gland function during heat acclimatization	Horm Res	Exclude	-	-	-	-	-	-	-	No	-	-
W. L. Kenney; R. K. Anderson	1988	Responses of older and younger women to exercise in dry and humid heat without fluid replacement	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
W. L. Kenney; S. R. Fowler	1988	Methylcholine-activated eccrine sweat gland density and output as a function of age	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. J. Kraemer; L. E. Armstrong	1988	Responses of plasma human atrial natriuretic factor to high intensity submaximal exercise in the heat	Eur J Appl Physiol Occup Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Lenz; M. Weiss; E. Werle; J. P. Libert; C. Amoros; J. Di Lorenzo	1988	Influence of exercise in water on hormonal, metabolic and adrenergic receptor changes in man	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Ogawa; N. Ohnishi; Y. Yamamoto	1988	Thermoregulatory adjustments during continuous heat exposure	Eur J Appl Physiol Occup Physiol	Exclude	-	No	-	-	-	-	-	No	-	-
K. B. Pandolf; B. S. Cadarette	1988	Effect of facial cooling during heat acclimation process on adaptive changes in sweating activity	Jpn J Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
M. E. Pattison; J. L. Logan; S. M. T. Duncan; S. M. Horvath	1988	Thermoregulatory responses of middle-aged and young men during dry-heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
M. E. Pattison; J. L. Logan; S. M. T. Duncan; S. M. Horvath	1988	Exertional heat stroke and acute renal failure in a young woman	Am J Kidney Dis	Exclude	-	No	-	-	-	-	-	No	-	-

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
G. Pichan; K. Sridharan; R. K. J. M. Pivarnik; J. E. Wilkerson	1988	Physiological and metabolic responses to work in heat with graded hypohydration in tropical subjects	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
S. Rehunen	1988	Recovery metabolism and thermoregulation of endurance trained and heat acclimatized men	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
M. N. Sawka; R. R. Gonzalez; S. C. Shearer	1988	The sauna and sports	Ann Clin Res	Exclude	-	No	-	-	No	-	-
H. Urponen; I. Vuori; J. Hasan	1988	Polycythemia and hydration: effects on thermoregulation and blood volume during exercise-heat stress	Am J Physiol	Exclude	-	-	-	-	No	-	-
H. J. Winterfeld; H. Siewert; I. L. E. Armstrong; R. P. Frances	1988	Intestinal parasites in novice black miners. Prevalence and possible effect on heat acclimatization	S Afr Med J	Exclude	Yes	-	-	-	No	-	-
D. E. Bunnell; S. M. Horvath	1989	Self-evaluations of factors promoting and disturbing sleep: an epidemiological survey in Finland	Soc Sci Med	Exclude	Yes	-	-	-	-	-	-
B. Dawson; F. S. Pyke; A. R. D. C. Gavhed; I. Holmér	1989	[Use of walking and sauna therapy in the rehabilitation of hypertensive patients with ischemic heart disease]	Z Kardiol	Exclude	Yes	-	No	-	-	-	-
K. H. Kilbun; R. H. Warsaw; J. P. Knochel	1989	Plasma cortisol, renin, and aldosterone during an intense heat acclimation program	Int J Sports Med	Exclude	-	-	-	-	No	-	-
M. A. Kolka; L. A. Stephenson	1989	Interactive effects of heat, physical work, and CO exposure on metabolism and cognitive task performance	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
V. A. Kuz'menko	1989	Improvements in heat tolerance induced by interval running training in the heat and in sweat clothing	J Sports Sci	Exclude	-	-	-	-	No	-	-
P. D. Neuffer; A. J. Young; M. S. Rose; P. Fran	1989	Thermoregulatory responses of firemen to exercise in the heat	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
M. L. O'Toole	1989	Neurobehavioral dysfunction in firemen exposed to polychlorinated biphenyls (PCBs): possible heat stroke and related heat stress disorders	Arch Environ Health	Exclude	Yes	-	-	-	-	-	-
B. C. Pramanik; C. R. Mooma	1989	Control of sweating during the human menstrual cycle	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; R. R. Gonzalez; M. N. Sawka; A. J. Young; R. B. Zahorska-Markiewicz; M. I. L. E. Armstrong; R. W. Hubbard	1989	Control of thermoregulatory sweating during exercise in the heat	Am J Physiol	Exclude	-	No	-	-	No	-	-
A. V. Astrup; N. J. Christensen	1989	Human intravascular immunoglobulin responses to exercise-heat and hypohydration	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
P. Delamarche; J. Bittel; J. R. Y. Epstein; R. Arnon; D. Mora	1990	Circadian variations in psychophysiological responses to heat exposure and exercise	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubbard	1990	Time course of recovery and heat acclimation ability of prior exertional heatstroke patients	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
A. S. S. Kapp; I. A. Petersen; R. J. L. Kobrick; R. F. Johnson; I. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1990	Evaluation of a temperate-environment test of heat tolerance in prior heatstroke patients and controls	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
N. J. Rehrer; E. J. Beckers; F. G. P. Rodgers; A. N. Schechter	1990	Effects of nutrient intake on sympathoadrenal activity and thermogenic mechanisms	J Neurosci Methods	Exclude	Yes	-	-	-	-	-	-
D. L. Costill; J. A. Houmard; D. L. Costill; J. D. S. Kapp; I. A. Petersen; R. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1990	Thermoregulation at rest and during exercise in prepubertal boys	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
M. Waluga	1990	Effect of pyridostigmine on the exercise-heat response of man	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
L. E. Armstrong; R. W. Hubbard	1990	Metabolic adaptation to decreases in energy intake due to changes in the energy cost of low energy density food	World Rev Nutr Diet	Exclude	Yes	-	-	-	-	-	-
H. J. Green; L. L. Jones; D. C. R. Gruza	1990	HIV infection risk to nonhealth-care workers	Am Ind Hyg Assoc J	Exclude	Yes	-	-	-	-	-	-
G. Havenith; H. van Middeldijk	1990	Effects of short-term training on cardiac function during prolonged exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
J. A. Houmard; D. L. Costill; J. D. S. Kapp; I. A. Petersen; R. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1990	Efficiency of thermoregulatory system in man under endogenous and exogenous heat loads	Acta Physiol Pol	Exclude	-	-	-	-	No	-	-
D. S. Kapp; I. A. Petersen; R. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1990	The relative influence of physical fitness, acclimatization state, anthropometric measures and gender on heat tolerance	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1990	The influence of exercise intensity on heat acclimation in trained subjects	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
N. J. Rehrer; E. J. Beckers; F. G. P. Rodgers; A. N. Schechter	1990	Two or six hyperthermia treatments as an adjunct to radiation therapy yield similar tumor responses	Int J Radiat Oncol Biol Phys	Exclude	Yes	-	-	-	-	-	-
P. J. Bloom; L. M. Goossens; I. C. J. Braden	1991	Effects of atropine/2-PAM chloride, heat, and chemical protective clothing on visual performance	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
A. Burlina; M. Plebani; S. Secchi	1991	Effects of nerve agent antidote and heat exposure on soldier performance in the BDU and MOPP-2	Mil Med	Exclude	Yes	-	-	-	-	-	-
F. Cisse; F. Martineaud; J. P. M. V. A. Convertino	1991	Thermoregulation in pregnancy. Implications for exercise	Sports Med	Exclude	-	No	-	-	-	-	-
S. Doré; G. R. Brissou; A. Fou	1991	Effects of dehydration on gastric emptying and gastrointestinal distress while running	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Microcirculatory adaptations in sickle cell anemia: reactive hyperemia response	Am J Physiol	Exclude	Yes	-	-	-	-	-	-
P. Hayes	1991	Heat illness. Fluid and electrolyte issues for pediatric and adolescent athletes	Pediatr Clin North Am	Exclude	-	No	-	-	No	-	-
G. R. Jansen; R. Binard	1991	[Effect of physical exercise and heat on energy expenditure in obesity]	Pol Arch Med Wewn	Exclude	Yes	-	No	-	-	-	-
H. Just	1991	The induction and decay of heat acclimatization in trained athletes	Sports Med	Exclude	-	No	-	-	No	-	-
V. P. Kovalenko; V. V. Skornia	1991	Effects of order of presentation of exercise intensities and of sauna baths on perceived exertion during exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
V. A. Kuz'menko; V. Balsamo	1991	Patterns of change over time in learned response to chronic illness among participants in a system of physical activity	Arthritis Care Res	Exclude	Yes	-	-	-	-	-	-
L. Levine; M. S. Rose; P. Fran	1991	Precipitation method for separating and quantifying bone and liver alkaline phosphatase isoenzymes	Clin Biochem	Exclude	Yes	-	-	-	-	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	[Central temperature during chronic exposure to a warm climate]	Arch Int Physiol Biochim	Exclude	-	-	No	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Blood volume: its adaptation to endurance training	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Contribution of hGH20K variant to blood hGH response in sauna and exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	[Effect of radiating heat and physical exercise on adolescents]	Gig Sanit	Exclude	Yes	-	-	-	-	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Diving and hypothermia	Arctic Med Res	Exclude	Yes	-	-	-	-	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Effect of dietary protein and environmental factors on lactation performance in rats	Physiol Behav	Exclude	Yes	-	-	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Peripheral adaptations in congestive heart failure: a review	Am J Med	Exclude	Yes	-	-	-	-	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	[The physiological hygiene aspects of enhancing human heat resistance (a review of the literature)]	Voen Med Zh	Exclude	-	-	No	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	[Effects of sauna on the values of blood circulation studied by the isometric exercise test]	Clin Ter	Exclude	-	-	No	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Fluid replacement during sustained activity in the heat: nutrient solution vs. water	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. J. Young; M. S. Rose; P. Fran	1991	Hypohydration does not impair skeletal muscle glycogen resynthesis after exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
\*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
K. B. Pandolf	1991	Aging and heat tolerance at rest or during work	Exp Aging Res	Exclude	-	-	-	-	-	-	-	No	-	-
A. S. Pavlov	1991	[The effect of an improvement in the conceptual model of activity on the rate of searching for and	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-	-	-	-
J. Smolander; R. Ilmarinen; O	1991	An evaluation of heat stress indices (ISO 7243, ISO/DIS 7933) in the prediction of heat strain in u	Int Arch Occup Environ H	Exclude	-	-	-	-	-	-	-	No	-	-
H. S. Uberoi; J. S. Dugal; A. S	1991	Acute renal failure in severe exertional rhabdomyolysis	J Assoc Physicians India	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. N. Azhaev; A. S. Kuz'min;	1992	[The performance quality of a flight trainer operator under conditions of heat discomfort]	Voen Med Zh	Exclude	Yes	-	-	No	-	-	-	-	-	-
D. A. DuBose; J. W. Agnew	1992	Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronect	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
N. Fellmann	1992	Hormonal and plasma volume alterations following endurance exercise. A brief review	Sports Med	Exclude	Yes	No	-	-	-	-	-	-	-	-
H. J. Gerner; P. Engel; G. C. C	1992	The effects of sauna on tetraplegic and paraplegic subjects	Paraplegia	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Johnson	1992	Exercise and the cutaneous circulation	Exerc Sport Sci Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. L. Kenney; J. M. Johnson	1992	Control of skin blood flow during exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Landry; H. Lambert; M. Zh	1992	Human HSP27 is phosphorylated at serines 78 and 82 by heat shock and mitogen-activated kinase	J Biol Chem	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. A. MacKenzie; W. R. Aeng	1992	Electrocardiographic changes during steady mild hypothermia and normothermia in patients with	Clin Sci (Lond)	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. D. Mittleman; T. J. Doubt;	1992	Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Murray	1992	Nutrition for the marathon and other endurance sports: environmental stress and dehydration	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. B. Pandolf; R. W. Gange; V	1992	Human thermoregulatory responses during heat exposure after artificially induced sunburn	Am J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Savourey; L. Clerc; A. L. V	1992	Blood flow and muscle bio-energetics by 31P-nuclear magnetic resonance after local cold acclime	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; A. J. Young; W.	1992	Human tolerance to heat strain during exercise: influence of hydration	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
J. Smolander; V. Louhevaara	1992	Effect of heat stress on muscle blood flow during dynamic handgrip exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
Z. P. Zunnunov	1992	[Physical work capacity as a criterion of human resistance under the hot climatic conditions of an	Fiziol Zh SSSR Im I M Se	Exclude	-	-	No	-	-	-	-	No	-	-
L. E. Armstrong; W. C. Curtis;	1993	Symptomatic hyponatremia during prolonged exercise in heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubba	1993	Responses to moderate and low sodium diets during exercise-heat acclimation	Int J Sport Nutr	Exclude	-	-	-	-	-	-	-	No	-	-
A. Barnett; R. J. Maughan	1993	Response of unacclimatized males to repeated weekly bouts of exercise in the heat	Br J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
J. M. Beelley; D. J. Smith; E. F	1993	Environmental hazards and health	Br Med Bull	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Bouchama; A. el-Yazigi; A.	1993	Alteration of taurine homeostasis in acute heatstroke	Crit Care Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. L. Brengelmann	1993	Specialized brain cooling in humans?	Faseb j	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. W. Briner, Jr.	1993	Physical allergies and exercise. Clinical implications for those engaged in sports activities	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. M. Budd; J. R. Brotherhook	1993	Effects of acclimatization to cold baths on men's responses to whole-body cooling in air	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Juul; A. Behrenscheer; T. T	1993	Impaired thermoregulation in adults with growth hormone deficiency during heat exposure and ex	Clin Endocrinol (Oxf)	Exclude	-	-	-	-	-	-	No	No	-	-
B. Nielsen; J. R. Hales; S. Stra	1993	Human circulatory and thermoregulatory adaptations with heat acclimation and exercise in a hot,	J Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
K. L. Schmidt	1993	[Characteristics of physical therapy in diseases of the musculoskeletal system in the elderly]	Z Gerontol	Exclude	Yes	-	-	No	-	-	-	-	-	-
R. J. Shephard	1993	Metabolic adaptations to exercise in the cold. An update	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Torii; H. Nakayama	1993	Disappearance of seasonal variation of sweating responses in exercising man: effect of pre-heatin	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	-	-	-	No	-	-
B. B. Yaspelkis, 3rd; G. C. Scr	1993	Carbohydrate metabolism during exercise in hot and thermoneutral environments	Int J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
A. J. Young; M. N. Sawka; M.	1993	Role of thermal factors on aerobic capacity improvements with endurance training	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
D. H. Zappe; C. G. Tankersley	1993	Fluid restriction prior to cycle exercise: effects on plasma volume and plasma proteins	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Aoyagi; T. M. McLellan; R.	1994	Effects of training and acclimation on heat tolerance in exercising men wearing protective clothin	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
K. E. Cooper	1994	Some responses of the cardiovascular system to heat and fever	Can J Cardiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Dawson	1994	Exercise training in sweat clothing in cool conditions to improve heat tolerance	Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
T. J. Doubt; P. A. Deuster	1994	Fluid ingestion during exercise in 25 degrees C water at the surface and 5.5 ATA	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Falk; O. Bar-Or	1994	[Responses to exercise in heat and cold among children and adolescents]	Harefuah	Exclude	-	-	-	No	-	-	No	-	-	-
M. A. Febbraio; R. J. Snow; M	1994	Muscle metabolism during exercise and heat stress in trained men: effect of acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
B. Fu; P. E. Nelson	1994	Conditions and constraints of food processing in space	Food Technol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. J. Gordon	1994	Thermoregulation in laboratory mammals and humans exposed to anticholinesterase agents	Neurotoxicol Teratol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Janal; M. Glusman; J. P	1994	Are runners stoical? An examination of pain sensitivity in habitual runners and normally active co	Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. S. Lee	1994	Microvascular volume changes induced by exercise, heat exposure, or endotoxin injection	Am J Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
E. L. Lloyd	1994	ABC of sports medicine. Temperature and performance-II: Heat	Bmj	Exclude	-	No	-	-	-	-	-	No	-	-
D. M. Lyle; P. R. Lewis; D. A.	1994	Heat exhaustion in The Sun-Herald City to Surf fun run	Med J Aust	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. M. Mancini; L. Bolinger; H	1994	Validation of near-infrared spectroscopy in humans	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. M. McLellan; J. Frim	1994	Heat strain in the Canadian Forces chemical defence clothing: problems and solutions	Can J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. J. Mountain; M. N. Sawka; E	1994	Physiological tolerance to uncompensable heat stress: effects of exercise intensity, protective clot	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
A. Montmayeur; A. Buguet; H	1994	Exercise and sleep in four African sportsmen living in the Sahel. A pilot study	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Nielsen	1994	Heat stress and acclimation	Ergonomics	Exclude	-	No	-	-	-	-	-	-	-	-
K. B. Pandolf	1994	Heat tolerance and aging	Exp Aging Res	Exclude	-	No	-	-	-	-	-	-	-	-
P. F. Rosenbaum; J. E. Vena; M	1994	Occupational exposures associated with male breast cancer	Am J Epidemiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. F. Sanborn; C. M. Jankowski	1994	Physiologic considerations for women in sport	Clin Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Schwaber; H. P. Liss; I.	1994	Hazard of sauna use after strenuous exercise	Ann Intern Med	Exclude	-	No	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:				Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?											
A. V. Shakula; V. I. Varus	1994	[The efficacy of restoring the professional health of flight personnel in a combat unit]	Lik Sprava	Exclude	Yes	-	No	-	-	-	-	-	-	
J. L. Shaver	1994	Beyond hormonal therapies in menopause	Exp Gerontol	Exclude	Yes	-	-	-	-	-	-	-	-	
C. Siewert; H. Siewert; H. J. V	1994	[The behavior of central and peripheral hemodynamics in isometric and dynamic stress in hypertensive patients]	Z Kardiol	Exclude	-	-	No	-	-	No	No	-	-	
Y. Aoyagi; T. M. McLellan; R.	1995	Determination of body heat storage in clothing: calorimetry versus thermometry	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
Y. Aoyagi; T. M. McLellan; R.	1995	Effects of 6 versus 12 days of heat acclimation on heat tolerance in lightly exercising men wearing protective clothing	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
O. Bar-Or	1995	The young athlete: some physiological considerations	J Sports Sci	Exclude	Yes	-	-	-	-	No	-	-	-	
B. L. Bennett; R. D. Hagan; K.	1995	Comparison of two cool vests on heat-strain reduction while wearing a firefighting ensemble	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
M. F. Bergeron; L. E. Armstro	1995	Fluid and electrolyte losses during tennis in the heat	Clin Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
M. A. Ciardiello; L. Camardel	1995	Glucose-6-phosphate dehydrogenase from the blood cells of two antarctic teleosts: correlation with environmental temperature	Biochim Biophys Acta	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Falk; M. Einbinder; Y. Wei	1995	Blood lactate concentration following exercise: effects of heat exposure and of active recovery in humans	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
L. H. Gerber; J. E. Hicks	1995	Surgical and rehabilitation options in the treatment of the rheumatoid arthritis patient resistant to medical therapy	Rheum Dis Clin North Am	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Jetté; J. Quenneville; J. Th	1995	Reproducibility of body temperature response to standardized test conditions when assessing clothing insulation	Ergonomics	Exclude	-	-	-	-	-	-	No	-	-	
E. Kristal-Boneh; J. G. Glusm	1995	Physical performance and heat tolerance after chronic water loading and heat acclimation	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	
R. J. Maughan; M. I. Lindinge	1995	Preparing for and competing in the heat: the human perspective	Equine Vet J Suppl	Exclude	-	No	-	-	-	-	No	-	-	
J. B. Mercer	1995	Enhancing tolerance to cold exposure—how successful have we been?	Arctic Med Res	Exclude	Yes	-	-	-	-	-	-	-	-	
L. G. Meyer; D. J. Horrigan; J	1995	Effects of three hydration beverages on exercise performance during 60 hours of heat exposure	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	
S. J. Montain; W. A. Latzka; N	1995	Control of thermoregulatory sweating is altered by hydration level and exercise intensity	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
K. B. Pandolf; L. A. Stroschei	1995	Predicting human heat strain and performance with application to space operations	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	
V. J. Paolone; A. M. Paolone	1995	Thermogenesis during rest and exercise in cold air	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	
A. L. Peterson; G. W. Talcott;	1995	Bulimic weight-loss behaviors in military versus civilian weight-management programs	Mil Med	Exclude	Yes	-	-	-	-	-	-	-	-	
W. H. Saris	1995	Effects of energy restriction and exercise on the sympathetic nervous system	Int J Obes Relat Metab Di	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Sasaki; A. Yamaguchi; Y. Ni	1995	Exercise at high temperature causes maternal hyperthermia and fetal anomalies in rats	Teratology	Exclude	-	-	-	-	-	No	No	-	-	
N. Terrados; R. J. Maughan	1995	Exercise in the heat: strategies to minimize the adverse effects on performance	J Sports Sci	Exclude	-	No	-	-	-	-	No	-	-	
M. Torii	1995	Maximal sweating rate in humans	J Hum Ergol (Tokyo)	Exclude	Yes	-	-	-	-	-	-	-	-	
A. J. Young; M. N. Sawka; L.	1995	Metabolic and thermal adaptations from endurance training in hot or cold water	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
Y. Aoyagi; T. M. McLellan; R.	1996	Determination of body heat storage: how to select the weighting of rectal and skin temperatures for heat balance calculations	Int Arch Occup Environ H	Exclude	-	-	-	-	-	-	No	-	-	
G. Bates; C. Gazey; K. Cena	1996	Factors affecting heat illness when working in conditions of thermal stress	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	-	-	No	-	-	
I. K. Brenner; Y. D. Severs; P.	1996	Impact of heat exposure and moderate, intermittent exercise on cytolytic cells	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
M. C. Bricknell	1996	Heat illness in the army in Cyprus	Occup Med (Lond)	Exclude	Yes	-	-	-	-	-	-	-	-	
R. T. Chatterton, Jr.; K. M. Vo	1996	Salivary alpha-amylase as a measure of endogenous adrenergic activity	Clin Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. F. Clapp, 3rd	1996	Pregnancy outcome: physical activities inside versus outside the workplace	Semin Perinatol	Exclude	Yes	-	-	-	-	-	-	-	-	
G. Corti; P. Mognoni; F. Saib	1996	Work tolerance and physiological responses to thermal environment wearing protective NBC clothing	Ergonomics	Exclude	-	-	-	-	-	-	No	-	-	
A. K. el-Bakry; A. B. Channa;	1996	Heat exhaustion during mass pilgrimage—is there a diagnostic role for pulse oximetry?	Resuscitation	Exclude	-	-	-	-	-	-	No	-	-	
G. L. Gibby; S. Lampotang; N	1996	Magneton-based inline microwave fluid warmer	J Clin Monit	Exclude	Yes	-	-	-	-	-	-	-	-	
C. J. Gordon	1996	Thermoregulatory aspects of environmental exposure to anticholinesterase agents	Rev Environ Health	Exclude	Yes	-	-	-	-	-	-	-	-	
J. A. Kark; P. Q. Burr; C. B. W	1996	Exertional heat illness in Marine Corps recruit training	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	
W. Keatisuwan; T. Ohnaka; Y.	1996	Physiological responses of women during exercise under dry-heat condition in winter and summer	Appl Human Sci	Exclude	-	-	-	-	-	-	No	-	-	
J. R. Kelly; I. Nishimura; S. D	1996	Ceramics in dentistry: historical roots and current perspectives	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-	-	-	
G. P. Kenny; G. G. Giesbrecht	1996	A comparison of human thermoregulatory response following dynamic exercise and warm-water immersion	Eur J Appl Physiol Occup	Exclude	-	Yes	-	Yes	Yes	Yes	No	Yes	-	
R. Kubica; A. Tyka; A. Zuchow	1996	Human acclimation to work in warm and humid environments	J Physiol Pharmacol	Exclude	-	-	-	-	-	-	No	-	-	
T. M. McLellan; Y. Aoyagi	1996	Heat strain in protective clothing following hot-wet or hot-dry heat acclimation	Can J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	
P. K. Nag; P. Bandyopadhyay;	1996	Human work capacity under combined stress of work and heat	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	-	-	No	-	-	
B. Nielsen	1996	Olympics in Atlanta: a fight against physics	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
A. Puntchart; M. Vogt; H. R.	1996	Hsp70 expression in human skeletal muscle after exercise	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Razmjou	1996	Mental workload in heat: toward a framework for analyses of stress states	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Rico-Sanz; W. R. Frontera;	1996	Effects of hyperhydration on total body water, temperature regulation and performance of elite young men	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Saami; J. Pentti	1996	Free-time activities among seafarers on board Finnish cargo ships	Bull Inst Marit Trop Med H	Exclude	Yes	-	-	-	-	-	-	-	-	
M. A. Tarnopolsky; N. Cipriani	1996	Effects of rapid weight loss and wrestling on muscle glycogen concentration	Clin J Sport Med	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Torii; M. Yamasaki; T. Sasi	1996	Effect of prewarming in the cold season on thermoregulatory responses during exercise	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
D. H. Zappe; G. W. Bell; H. S	1996	Age and regulation of fluid and electrolyte balance during repeated exercise sessions	Am J Physiol	Exclude	-	-	-	-	-	-	No	-	-	
E. O. Acevedo; M. C. Meyers;	1997	Applying physiological principles and assessment techniques to swimming the English Channel	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	
Y. Aoyagi; T. M. McLellan; R.	1997	Interactions of physical training and heat acclimation. The thermophysiology of exercising in a hot environment	J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
I. K. Brenner; S. Thomas; R. J	1997	Spectral analysis of heart rate variability during heat exposure and repeated exercise	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-	-	-	
I. K. Brenner; J. Zamecnik; P.	1997	The impact of heat exposure and repeated exercise on circulating stress hormones	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
J. W. Castellani; C. M. Maresh	1997	Intravenous vs. oral rehydration: effects on subsequent exercise-heat stress	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
R. P. Francesconi; J. S. Willis;	1997	On the trail of potassium in heat injury	Wilderness Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

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Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?											
R. R. Gonzalez; T. M. McLellan; 1997	1997	Heat strain models applicable for protective clothing systems: comparison of core temperature res	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
C. J. Gore; A. G. Hahn; C. M. 1997	1997	VO2max and haemoglobin mass of trained athletes during high intensity training	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
J. E. Greenleaf 1997	1997	Exercise thermoregulation with bed rest, confinement, and immersion deconditioning	Ann N Y Acad Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
Z. Jiráková; M. V. Jokl; H. Jiráková 1997	1997	The assessment proposal for long-term and short-term tolerable hydrothermal microclimatic cond	Physiol Res	Exclude	Yes	-	-	-	-	-	-	-	-	
W. L. Kenney 1997	1997	Thermoregulation at rest and during exercise in healthy older adults	Exerc Sport Sci Rev	Exclude	-	-	-	-	-	-	No	-	-	
W. A. Lutzka; M. N. Sawka; S. 1997	1997	Hyperhydration: thermoregulatory effects during compensable exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
J. M. Lawler; C. C. Cline; Z. F. 1997	1997	Effect of oxidative stress and acidosis on diaphragm contractile function	Am J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. P. Libert; V. Bach; G. Farge 1997	1997	Neutral temperature range in incubators: performance of equipment in current use and new develo	Crit Rev Biomed Eng	Exclude	Yes	-	-	-	-	-	-	-	-	
M. J. Luetkemeyer; M. G. Col 1997	1997	Dietary sodium and plasma volume levels with exercise	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
R. J. Maughan; S. M. Shirreffs 1997	1997	Recovery from prolonged exercise: restoration of water and electrolyte balance	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
C. T. Minson; W. L. Kenney 1997	1997	Age and cardiac output during cycle exercise in thermoneutral and warm environments	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
S. J. Montain; J. E. Laird; W. J. 1997	1997	Aldosterone and vasopressin responses in the heat: hydration level and exercise intensity effects	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
K. S. Mudambo; W. Coutie; M. 1997	1997	Plasma arginine vasopressin, atrial natriuretic peptide and brain natriuretic peptide responses to lo	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
B. Nielsen; S. Strange; N. J. C. 1997	1997	Acute and adaptive responses in humans to exercise in a warm, humid environment	Pflugers Arch	Exclude	-	-	-	-	-	-	No	-	-	
T. D. Noakes 1997	1997	1996 J.B. Wolfe Memorial Lecture. Challenging beliefs: ex Africa semper aliquid novi	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
D. J. Paddon-Jones; B. M. Qui 1997	1997	Effect of cryotherapy on muscle soreness and strength following eccentric exercise	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
T. H. Rammesayer 1997	1997	Effects of body core temperature and brain dopamine activity on timing processes in humans	Biol Psychol	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Rissanen; H. Rintamäki 1997	1997	Thermal responses and physiological strain in men wearing impermeable and semipermeable prot	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Schiffmann; J. Rathgeber; I. 1997	1997	Airway humidification in mechanically ventilated neonates and infants: a comparative study of a l	Crit Care Med	Exclude	Yes	-	-	-	-	-	-	-	-	
C. R. Shaw 1997	1997	The perimenopausal hot flash: epidemiology, physiology, and treatment	Nurse Pract	Exclude	Yes	-	-	-	-	-	-	-	-	
M. S. Westerterp-Plantenga; C. 1997	1997	Acute effects of exercise or sauna on appetite in obese and nonobese men	Physiol Behav	Exclude	-	-	-	-	-	-	No	-	-	
Y. Aoyagi; T. M. McLellan; R. 1998	1998	Effects of endurance training and heat acclimation on psychological strain in exercising men wear	Ergonomics	Exclude	-	-	-	-	-	-	No	-	-	
L. E. Armstrong; C. M. Mares 1998	1998	Effects of training, environment, and host factors on the sweating response to exercise	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
K. D. Brandt 1998	1998	The importance of nonpharmacologic approaches in management of osteoarthritis	Am J Med	Exclude	Yes	-	-	-	-	-	-	-	-	
I. K. Brenner; S. Thomas; R. J. 1998	1998	Autonomic regulation of the circulation during exercise and heat exposure. Inferences from heart	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
A. Buguet; R. Cespuoglio; M. V. 1998	1998	Sleep and stress in man: an approach through exercise and exposure to extreme environments	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	
M. J. Buono; J. H. Heaney; K. 1998	1998	Acclimation to humid heat lowers resting core temperature	Am J Physiol	Exclude	-	-	-	-	-	-	No	-	-	
J. W. Castellani; C. M. Mares 1998	1998	Endocrine responses during exercise-heat stress: effects of prior isotonic and hypotonic intraveno	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
S. S. Cheung; T. M. McLellan 1998	1998	Heat acclimation, aerobic fitness, and hydration effects on tolerance during uncompensable heat s	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
H. Degens 1998	1998	Age-related changes in the microcirculation of skeletal muscle	Adv Exp Med Biol	Exclude	Yes	-	-	-	-	-	-	-	-	
W. Derave; D. De Clercq; J. B. 1998	1998	The influence of exercise and dehydration on postural stability	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
E. R. Eichner 1998	1998	Treatment of suspected heat illness	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Falk 1998	1998	Effects of thermal stress during rest and exercise in the paediatric population	Sports Med	Exclude	-	-	-	-	-	No	No	-	-	
B. Falk; S. Radom-Isaac; J. R. 1998	1998	The effect of heat exposure on performance of and recovery from high-intensity, intermittent exer	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
J. S. Greiwe; K. S. Staffey; D. 1998	1998	Effects of dehydration on isometric muscular strength and endurance	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Hargreaves; M. Febbraio 1998	1998	Limits to exercise performance in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
R. Imamura; S. Rissanen; M. I. 1998	1998	Manual performance in cold conditions while wearing NBC clothing	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
J. M. Johnson 1998	1998	Physical training and the control of skin blood flow	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Kargotich; C. Goodman; D. 1998	1998	The influence of exercise-induced plasma volume changes on the interpretation of biochemical pa	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
R. W. Kenefick; C. M. Mares 1998	1998	Plasma testosterone and cortisol responses to training-intensity exercise in mild and hot environm	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
W. L. Kenney 1998	1998	Heat flux and storage in hot environments	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
J. L. Kilgore; T. I. Musch; C. I. 1998	1998	Physical activity, muscle, and the HSP70 response	Can J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
W. A. Lutzka; M. N. Sawka; S. 1998	1998	Hyperhydration: tolerance and cardiovascular effects during uncompensable exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
F. Marino; J. Booth 1998	1998	Whole body cooling by immersion in water at moderate temperatures	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-	-	-	
D. J. Marlin 1998	1998	Acclimation and acclimatization of the equine athlete	Int J Sports Med	Exclude	-	No	-	-	-	No	-	-	-	
R. J. Maughan; S. M. Shirreffs 1998	1998	Dehydration, rehydration and exercise in the heat: concluding remarks	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
S. J. Montain; M. N. Sawka; V. 1998	1998	Thermal and cardiovascular strain from hypohydration: influence of exercise intensity	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
D. S. Moran; A. Shitzer; K. B. 1998	1998	A physiological strain index to evaluate heat stress	Am J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Müllerová; D. Matějčková; 1998	1998	[Energy expenditure at rest and obesity]	Sb Lek	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Murray 1998	1998	Rehydration strategies—balancing substrate, fluid, and electrolyte provision	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Nielsen 1998	1998	Heat acclimation—mechanisms of adaptation to exercise in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
K. B. Pandolf 1998	1998	Time course of heat acclimation and its decay	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
G. Schwarz 1998	1998	[Rhinomanometric studies of thermal modification of nasal ventilation]	Hno	Exclude	Yes	-	-	-	-	-	-	-	-	
Y. Shapiro; D. Moran; Y. Epst 1998	1998	Acclimatization strategies—preparing for exercise in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	No	-	-	
R. J. Shephard; P. N. Shek 1998	1998	Cold exposure and immune function	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Vanakoski; T. Seppälä 1998	1998	Heat exposure and drugs. A review of the effects of hyperthermia on pharmacokinetics	Clin Pharmacokinet	Exclude	-	No	-	-	-	-	No	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. Werner; U. Beckmann	1998	Conflicts of thermal adaptation and fever—a cybernetic approach based on physiological experiments	Fiziol Cheloveka	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. R. Zunnunov	1998	[The reserve potentials of patients with ischemic heart disease who live under the conditions of an	Ter Arkh	Exclude	Yes	-	No	-	-	-	-	-	-	-
S. I. Barr	1999	Effects of dehydration on exercise performance	Can J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. G. Bell; I. Jacobs; T. M. McLellan	1999	Thermal regulation in the heat during exercise after caffeine and ephedrine ingestion	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
A. Burger-Kentischer; E. Mull	1999	Hypertonicity-induced accumulation of organic osmolytes in papillary interstitial cells	Kidney Int	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. S. Cadarette; S. J. Montain;	1999	Cross validation of USARIEM heat strain prediction models. U.S. ARMY Research Institute of Environmental Health	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. Cheung; T. M. McLellan	1999	Comparison of short-term aerobic training and high aerobic power on tolerance to uncompensable heat	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
E. Fehrenbach; A. M. Niess	1999	Role of heat shock proteins in the exercise response	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Giannetti; M. Juneau; A. Ai	1999	Sauna-induced myocardial ischemia in patients with coronary artery disease	Am J Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. E. Holley; J. W. Butler; J. M	1999	Carbon monoxide poisoning in racing car drivers	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Inoue; G. Havenith; W. L. F	1999	Exercise- and methylcholine-induced sweating responses in older and younger men: effect of heat	Int J Biometeorol	Exclude	-	-	-	-	-	-	No	-	-	-
C. Jimenez; B. Melin; N. Koul	1999	Plasma volume changes during and after acute variations of body hydration level in humans	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
R. J. Maughan	1999	Exercise in the heat: limitations to performance and the impact of fluid replacement strategies. Int	Can J Appl Physiol	Exclude	-	No	-	-	-	-	No	-	-	-
T. M. McLellan; J. Frim; D. G	1999	Efficacy of air and liquid cooling during light and heavy exercise while wearing NBC clothing	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
D. S. Moran; M. Horowitz; U.	1999	The physiological strain index applied to heat-stressed rats	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	-
Y. P. Pitsiladis; R. J. Maughan	1999	The effects of exercise and diet manipulation on the capacity to perform prolonged exercise in the heat	J Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
M. J. Price; I. G. Campbell	1999	Thermoregulatory responses of spinal cord injured and able-bodied athletes to prolonged upper body heat	Spinal Cord	Exclude	-	-	-	-	-	-	No	-	-	-
A. M. Rivera-Brown; R. Gutierrez	1999	Drink composition, voluntary drinking, and fluid balance in exercising, trained, heat-acclimatized humans	J Appl Physiol (1985)	Exclude	-	-	-	-	-	No	No	-	-	-
M. N. Sawka; E. F. Coyle	1999	Influence of body water and blood volume on thermoregulation and exercise performance in the heat	Exerc Sport Sci Rev	Exclude	-	-	-	-	-	-	No	-	-	-
R. J. Shephard	1999	Identifying bottlenecks in endurance performance: the conductance theorem	Can J Appl Physiol	Exclude	-	No	-	-	-	-	No	-	-	-
R. J. Shephard; P. N. Shek	1999	Immune dysfunction as a factor in heat illness	Crit Rev Immunol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Singh; R. G. Sirisinghe	1999	Haematological and plasma electrolyte changes after long distance running in high heat and humidity	Singapore Med J	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Takamata; T. Ito; K. Yaegas	1999	Effect of an exercise-heat acclimation program on body fluid regulatory responses to dehydration	Am J Physiol	Exclude	-	No	Yes	Yes	Yes	Yes	Yes	No	No	No
	2000	Climatic heat stress and the exercising child and adolescent. American Academy of Pediatrics. Committee on Sports Medicine and Fitness	Co Pediatrics	Exclude	-	-	-	-	-	-	No	-	-	-
D. Amos; R. Hansen; W. M. L	2000	Physiological and cognitive performance of soldiers conducting routine patrol and reconnaissance	Mil Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. R. Buskirk; P. F. Lampietro;	2000	Work performance after dehydration: effects of physical conditioning and heat acclimatization. 19th International Symposium on Environmental Ergonomics	Wilderness Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
S. S. Cheung; T. M. McLellan	2000	The thermophysiology of uncompensable heat stress. Physiological manipulations and individual differences	Sports Med	Exclude	-	-	-	-	-	-	No	-	-	-
E. Fehrenbach; A. M. Niess; E	2000	Transcriptional and translational regulation of heat shock proteins in leukocytes of endurance runners	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Fehrenbach; P. Passek; A	2000	HSP expression in human leukocytes is modulated by endurance exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Gleeson	2000	The scientific basis of practical strategies to maintain immunocompetence in elite athletes	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. P. Ivanov	2000	[International Conference on 'Problems of physiology under extreme conditions']	Russ Fiziol Zh Im 1 M Sec	Exclude	-	-	No	-	-	-	No	-	-	-
K. P. Ivanov	2000	[International Conference on the Problems of the Human Physiology and Cognitive Performance]	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	No	-	-	-
D. Kay; F. E. Marino	2000	Fluid ingestion and exercise hyperthermia: implications for performance, thermoregulation, and metabolic rate	J Sports Sci	Exclude	-	No	-	-	-	-	No	-	-	-
W. A. Latzka; M. N. Sawka	2000	Hyperhydration and glycerol: thermoregulatory effects during exercise in hot climates	Can J Appl Physiol	Exclude	-	No	-	-	-	-	No	-	-	-
M. I. Lindinger; L. J. McCutcheon	2000	Heat acclimation improves regulation of plasma volume and plasma Na <sup>+</sup> content during exercise	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	No	-	-
A. McArdle; M. J. Jackson	2000	Exercise, oxidative stress and ageing	J Anat	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Merezhinskaya; W. N. Fish	2000	Mutations in MCT1 cDNA in patients with symptomatic deficiency in lactate transport	Muscle Nerve	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Moehrle; W. Koehle; K. Di	2000	Reduction of minimal erythema dose by sweating	Photodermatol Photoimmunol Photobiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. J. Montain; W. A. Latzka; M	2000	Impact of muscle injury and accompanying inflammatory response on thermoregulation during exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. R. Naghii	2000	The significance of water in sport and weight control	Nutr Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. D. Noakes	2000	Physiological models to understand exercise fatigue and the adaptations that predict or enhance athletic performance	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. B. Pyne; M. Gleeson; W. A	2000	Training strategies to maintain immunocompetence in athletes	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Rintamaki	2000	Predisposing factors and prevention of frostbite	Int J Circumpolar Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; V. A. Convertino	2000	Blood volume: importance and adaptations to exercise training, environmental stresses, and trauma	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; S. J. Montain	2000	Fluid and electrolyte supplementation for exercise heat stress	Am J Clin Nutr	Exclude	Yes	No	-	-	-	-	-	-	-	-
E. Sohar; Y. Shapiro; Y. Epstein	2000	[Man in a hot climate—early studies of the Institute of Military Physiology]	Harefuah	Exclude	Yes	-	No	-	-	-	-	-	-	-
U. M. Stern; O. P. Hornstein;	2000	Do training-dependent differences in perspiration exist between healthy and atopic subjects?	J Dermatol	Exclude	-	-	-	-	-	-	No	-	-	-
M. A. van Nieuwenhoven; B. I	2000	Effect of dehydration on gastrointestinal function at rest and during exercise in humans	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Watt; A. P. Garnham; M.	2000	Effect of acute plasma volume expansion on thermoregulation and exercise performance in the heat	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	-
X. J. Yu; T. D. Yang; C. Pang	2000	[Weightlessness and heat stress on astronauts]	Space Med Med Eng (Beijing)	Exclude	Yes	-	No	-	-	-	-	-	-	-
L. S. Abrams; D. M. Skee; J. P	2001	Pharmacokinetics of norelgestromin and ethinyl estradiol delivered by a contraceptive patch (Ortho Evra)	J Clin Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. X. Bigard; H. Sanchez; G.	2001	Effects of dehydration and rehydration on EMG changes during fatiguing contractions	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. K. Byrne; J. H. Wilmore	2001	The effects of a 20-week exercise training program on resting metabolic rate in previously sedentary individuals	Int J Sport Nutr Exerc Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Castellani; A. J. Young;	2001	Thermoregulation during cold exposure after several days of exhaustive exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. J. Chan; J. U. Corselli; W. C	2001	A simple comet assay for archived sperm correlates DNA fragmentation to reduced hyperactivated sperm motility	Fertil Steril	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Chan; P. A. Barraud; B. Mel	2001	Effects of fluid ingestion on cognitive function after heat stress or exercise-induced dehydration	Int J Psychophysiol	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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M. A. Febbraio	2001	Alterations in energy metabolism during exercise and heat stress	Sports Med	Exclude	-	No	-	-	-	-	-
E. Fehrenbach; A. M. Niess; R	2001	Changes of HSP72-expression in leukocytes are associated with adaptation to exercise under con	J Leukoc Biol	Exclude	Yes	-	-	-	-	-	-
E. Fehrenbach; H. Northoff	2001	Free radicals, exercise, apoptosis, and heat shock proteins	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
D. Fiala; K. J. Lomas; M. Sto	2001	Computer prediction of human thermoregulatory and temperature responses to a wide range of en	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
C. A. Finn	2001	Reproductive ageing and the menopause	Int J Dev Biol	Exclude	Yes	-	-	-	-	-	-
A. Frank; M. Belokopytov; D.	2001	Changes in heart rate variability following acclimation to heat	J Basic Clin Physiol Pharm	Exclude	-	-	-	-	No	-	-
A. Frank; M. Belokopytov; Y.	2001	The cumulative heat strain index—a novel approach to assess the physiological strain induced by e	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
E. M. Gass; G. C. Gass	2001	Thermoregulatory responses to repeated warm water immersion in subjects who are paraplegic	Spinal Cord	Exclude	-	-	-	No	No	-	-
N. Gill; G. Sleivert	2001	Effect of daily versus intermittent exposure on heat acclimation	Aviat Space Environ Med	Exclude	-	Yes	Yes	Yes	No	No	Yes
G. Havenith	2001	Individualized model of human thermoregulation for the simulation of heat stress response	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
C. Jessen	2001	Selective brain cooling in mammals and birds	Jpn J Physiol	Exclude	Yes	-	-	-	-	-	-
M. Koishi; S. Yokota; T. Mae;	2001	The effects of KNK437, a novel inhibitor of heat shock protein synthesis, on the acquisition of the	Clin Cancer Res	Exclude	Yes	-	-	-	-	-	-
N. Kondo; M. Shibasaki; K. A.	2001	Function of human eccrine sweat glands during dynamic exercise and passive heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
T. M. McLellan	2001	The importance of aerobic fitness in determining tolerance to uncompensable heat stress	Comp Biochem Physiol A	Exclude	-	No	-	-	No	-	-
B. Melin; N. Koulmann; C. Jir	2001	Comparison of passive heat or exercise-induced dehydration on renal water and electrolyte excret	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. B. Mitchell; E. R. Schiller;	2001	The influence of different external cooling methods on thermoregulatory responses before and aft	J Strength Cond Res	Exclude	Yes	-	-	-	No	-	-
H. Ozaki; Y. Nagai; Y. Tochih	2001	Physiological responses and manual performance in humans following repeated exposure to sever	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; W. A. Lutzka; S	2001	Physiologic tolerance to uncompensable heat: intermittent exercise, field vs laboratory	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
J. E. Schoffstall; J. D. Branch;	2001	Effects of dehydration and rehydration on the one-repetition maximum bench press of weight-trai	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
C. L. Stebbins; J. W. Daniels;	2001	Effects of caffeine and high ambient temperature on haemodynamic and body temperature respon	Clin Physiol	Exclude	Yes	-	-	-	-	-	-
J. M. Stocks; M. J. Patterson;	2001	Metabolic habituation following repeated resting cold-water immersion is not apparent during low	J Physiol Anthropol Appl	Exclude	Yes	-	-	-	-	-	-
Y. Takeno; Y. I. Kamijio; H. Ni	2001	Thermoregulatory and aerobic changes after endurance training in a hypobaric hypoxic and warm	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
C. Tei	2001	Thermal therapy for congestive heart failure: estimation by TEI index	J Cardiol	Exclude	Yes	-	-	-	-	-	-
A. van Tubergen; R. Landewé;	2001	Combined spa-exercise therapy is effective in patients with ankylosing spondylitis: a randomized	Arthritis Rheum	Exclude	-	-	-	No	No	-	-
M. Vogt; A. Puntschart; J. Gei	2001	Molecular adaptations in human skeletal muscle to endurance training under simulated hypoxic co	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. M. Walker; B. Dawson; T. F	2001	Performance enhancement in rally car drivers via heat acclimation and race simulation	Comp Biochem Physiol A	Exclude	-	-	-	-	No	-	-
Y. J. Zhang; H. Y. Pan; S. J. G.	2001	Reverse transcription slippage over the mRNA secondary structure of the LIP1 gene	Biotechniques	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; J. Stoppani	2002	Central nervous system control of heat acclimation adaptations: an emerging paradigm	Rev Neurosci	Exclude	-	No	-	-	No	-	-
D. R. Bassett, Jr.	2002	Scientific contributions of A. V. Hill: exercise physiology pioneer	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
R. T. Burkman	2002	The transdermal contraceptive patch: a new approach to hormonal contraception	Int J Fertil Womens Med	Exclude	Yes	-	-	-	-	-	-
B. S. Cadarette; L. Levine; M.	2002	Heat strain reduction by ice-based and vapor compression liquid cooling systems with a toxic age	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
L. Féasson; D. Stockholm; D.	2002	Molecular adaptations of neuromuscular disease-associated proteins in response to eccentric exerc	J Physiol	Exclude	Yes	-	-	-	-	-	-
E. Ferrer; A. Alegria; R. Farré;	2002	High-performance liquid chromatographic determination of furfural compounds in infant formula	J Chromatogr A	Exclude	Yes	-	-	-	-	-	-
A. M. Hedley; M. Climstein;	2002	The effects of acute heat exposure on muscular strength, muscular endurance, and muscular powe	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
C. Jimenez; N. Koulmann; I. h	2002	Plasma compartment filling after exercise or heat exposure	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
W. L. Kenney; M. J. Zeman	2002	Psychrometric limits and critical evaporative coefficients for unacclimated men and women	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
K. Koppo; A. M. Jones; L. Var	2002	Effect of prior exercise on VO(2) slow component is not related to muscle temperature	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
K. C. Kregel	2002	Heat shock proteins: modifying factors in physiological stress responses and acquired thermotoler	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
K. Kunitzuka; K. Yamatsu; Y.	2002	[A correspondence behavioral approach for 6 lifestyle's improvements in a workplace]	Nihon Koshu Eisei Zasshi	Exclude	-	-	No	-	No	-	-
M. A. Leydon; C. Wall	2002	New Zealand jockeys' dietary habits and their potential impact on health	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
J. Malchaire; B. Kampmann;	2002	Assessment of the risk of heat disorders encountered during work in hot conditions	Int Arch Occup Environ H	Exclude	Yes	-	-	-	-	-	-
S. A. Marsh; D. G. Jenkins	2002	Physiological responses to the menstrual cycle: implications for the development of heat illness in	Sports Med	Exclude	Yes	-	-	-	-	-	-
C. Marzolini; A. Béguin; A. Tr	2002	Determination of lopinavir and nevirapine by high-performance liquid chromatography after solid	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
A. McArdle; A. Vasilaki; M. J.	2002	Exercise and skeletal muscle ageing: cellular and molecular mechanisms	Ageing Res Rev	Exclude	Yes	-	-	-	-	-	-
L. M. McCracken; R. T. Gross	2002	Multimethod assessment of treatment process in chronic low back pain: comparison of reported p	Behav Res Ther	Exclude	Yes	-	-	-	-	-	-
T. M. McLellan; S. G. Rhind;	2002	Body temperature in sedentary adults during moderate exercise: no effect from exercise the day b	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
J. M. Moore; A. F. Timperio;	2002	Weight management and weight loss strategies of professional jockeys	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
D. S. Moran; W. L. Kenney; J.	2002	Aging and assessment of physiological strain during exercise-heat stress	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
A. L. Morgan; W. E. Sinning;	2002	Age effects on body fluid distribution during exercise in the heat	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
M. K. Nasr; R. J. McCarthy;	2002	The role of pedometers in the assessment of intermittent claudication	Eur J Vasc Endovasc Surg	Exclude	Yes	-	-	-	-	-	-
T. Ookawara; K. Suzuk; S. Ha	2002	Transcription regulation of gene expression in human skeletal muscle in response to endurance tra	Res Commun Mol Pathol	Exclude	Yes	-	-	-	-	-	-
B. H. Pannen	2002	[Etiology and sequelae of perioperative accidental hypothermia]	Anesthesiol Reanim	Exclude	Yes	-	No	-	-	-	-
J. J. Pilcher; E. Nadler; C. Bus	2002	Effects of hot and cold temperature exposure on performance: a meta-analytic review	Ergonomics	Exclude	Yes	-	-	-	-	-	-
H. Post; G. Heusch	2002	Ischemic preconditioning. Experimental facts and clinical perspective	Minerva Cardioangiol	Exclude	Yes	-	-	-	-	-	-
S. Shastry; D. O. Toft; M. J. Jc	2002	HSP70 and HSP90 expression in leucocytes after exercise in moderately trained humans	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
D. Singer	2002	[Phylogeny of Mammalian metabolism]	Anesthesiol Intensivmed	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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H. S. Thompson; P. M. Clarks	2002	The repeated bout effect and heat shock proteins: intramuscular HSP27 and HSP70 expression fol	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
I. Vasmatzidis; R. E. Schlegel	2002	An investigation of heat stress effects on time-sharing performance	Ergonomics	Exclude	Yes	-	-	-	-	-	-
B. Voltaire; O. Galy; O. Coste	2002	Effect of fourteen days of acclimatization on athletic performance in tropical climate	Can J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. P. Ward; J. S. Millledge	2002	Griffith Pugh, pioneer Everest physiologist	High Alt Med Biol	Exclude	Yes	-	-	-	-	-	-
H. A. Zacur; B. Hedon; D. Ma	2002	Integrated summary of Ortho Evra/Evra contraceptive patch adhesion in varied climates and cond	Fertil Steril	Exclude	Yes	-	-	-	-	-	-
Y. Boegli; G. Gremion; S. Gol	2003	Endurance training enhances vasodilation induced by nitric oxide in human skin	J Invest Dermatol	Exclude	Yes	-	-	-	-	-	-
B. Bogin; L. Rios	2003	Rapid morphological change in living humans: implications for modern human origins	Comp Biochem Physiol A	Exclude	Yes	-	-	-	-	-	-
M. W. Bridge; A. S. Weller; M	2003	Ambient temperature and the pituitary hormone responses to exercise in humans	Exp Physiol	Exclude	-	-	-	-	No	-	-
M. W. Bridge; A. S. Weller; M	2003	Responses to exercise in the heat related to measures of hypothalamic serotonergic and dopamine	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. N. Cheuvront; M. A. Kolka	2003	Efficacy of intermittent, regional microclimate cooling	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
G. C. Donaldson; W. R. Keatr	2003	Cardiovascular responses to heat stress and their adverse consequences in healthy and vulnerabl	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
H. Faerøvik; R. E. Reinertsen	2003	Effects of wearing aircrew protective clothing on physiological and cognitive responses under var	Ergonomics	Exclude	Yes	-	-	-	-	-	-
E. Fehrenbach; R. Veith; M. Si	2003	Inverse response of leukocyte heat shock proteins and DNA damage to exercise and heat	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
C. J. Gordon	2003	Role of environmental stress in the physiological response to chemical toxicants	Environ Res	Exclude	Yes	-	-	-	-	-	-
A. Gutiérrez; J. L. Mesa; J. R.	2003	Sauna-induced rapid weight loss decreases explosive power in women but not in men	Int J Sports Med	Exclude	-	-	-	-	No	-	-
P. A. Hancock; I. Vasmatzidis	2003	Effects of heat stress on cognitive performance: the current state of knowledge	Int J Hyperthermia	Exclude	-	No	-	-	-	-	-
A. E. Jeukendrup	2003	Modulation of carbohydrate and fat utilization by diet, exercise and environment	Biochem Soc Trans	Exclude	Yes	No	-	-	-	-	-
J. O. Jørgensen; M. Krag; J. K	2003	Exercise, hormones, and body temperature: regulation and action of GH during exercise	J Endocrinol Invest	Exclude	Yes	-	-	-	-	-	-
H. Kalthoff	2003	Mild dehydration: a risk factor of broncho-pulmonary disorders?	Eur J Clin Nutr	Exclude	Yes	-	-	-	-	-	-
M. Khassaf; A. McArdle; C. E	2003	Effect of vitamin C supplements on antioxidant defence and stress proteins in human lymphocytes	J Physiol	Exclude	Yes	-	-	-	-	-	-
N. Koulmann; S. Banzet; A. X	2003	[Physical activity in the heat: physiology of hydration recommendations]	Med Trop (Mars)	Exclude	-	No	No	-	No	-	-
W. J. Kraemer; L. E. Armstron	2003	The effects of exertional heatstroke and exercise-heat acclimation on plasma beta-endorphin conc	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
J. A. Loeppky; M. V. Icenogle	2003	Body temperature, autonomic responses, and acute mountain sickness	High Alt Med Biol	Exclude	Yes	-	-	-	-	-	-
A. Michalsen; R. Lüdtker; M. I	2003	Thermal hydrotherapy improves quality of life and hemodynamic function in patients with chroni	Am Heart J	Exclude	Yes	-	-	-	No	-	-
K. Nagiev Iu	2003	[Duration-outcome relations in nonpharmacological treatment of chronic cardiac failure develop	Vopr Kurortol Fizioter Lec	Exclude	-	-	No	-	-	-	-
A. M. Niess; E. Fehrenbach;	2003	Individual differences in self-reported heat tolerance. Is there a link to the cardiorespiratory, therm	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
A. M. Niess; E. Fehrenbach; B	2003	Impact of elevated ambient temperatures on the acute immune response to intensive endurance ex	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
C. O'Brien; S. J. Mountain	2003	Hypohydration effect on finger skin temperature and blood flow during cold-water finger immers	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
R. C. Oh; J. S. Henning	2003	Exertional heatstroke in an infantry soldier taking ephedra-containing dietary supplements	Mil Med	Exclude	Yes	-	-	-	-	-	-
R. A. Opliger; S. A. Steen; J.	2003	Weight loss practices of college wrestlers	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
J. K. Ormerod; T. A. Elliott; T.	2003	Drinking behavior and perception of thirst in untrained women during 6 weeks of heat acclimatio	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
J. Saboisky; F. E. Marino; D. I	2003	Exercise heat stress does not reduce central activation to non-exercised human skeletal muscle	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
B. Smalley; R. M. Janke; D. C	2003	Exertional heat illness in Air Force basic military trainees	Mil Med	Exclude	Yes	-	-	-	-	-	-
K. A. Stokes; M. E. Nevill; H.	2003	Reproducibility of the growth hormone response to sprint exercise	Growth Horm IGF Res	Exclude	Yes	-	-	-	-	-	-
R. P. Taylor; J. W. Starnes	2003	Age, cell signalling and cardioprotection	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
D. Thompson; C. Williams; P.	2003	Post-exercise vitamin C supplementation and recovery from demanding exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
H. S. Thompson; E. B. Mayna	2003	Exercise-induced HSP27, HSP70 and MAPK responses in human skeletal muscle	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
B. Voltaire; S. Berthouze-Arar	2003	Influence of a hot/wet environment on exercise performance in natives to tropical climate	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
F. Yamazaki; K. Hamasaki	2003	Heat acclimation increases skin vasodilation and sweating but not cardiac baroreflex responses in	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
P. A. Armada-da-Silva; J. Woo	2004	The effect of passive heating and face cooling on perceived exertion during exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
G. Banfi; A. Dolci; R. Verna; I	2004	Exercise raises serum heat-shock protein 70 (Hsp70) levels	Clin Chem Lab Med	Exclude	Yes	-	-	-	-	-	-
S. S. Cheung; G. G. Sleivert	2004	Lowering of skin temperature decreases isokinetic maximal force production independent of core	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. N. Cheuvront; R. Carter; B	2004	Branched-chain amino acid supplementation and human performance when hypohydrated in the h	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
E. E. Coris; A. M. Ramirez; D	2004	Heat illness in athletes: the dangerous combination of heat, humidity and exercise	Sports Med	Exclude	Yes	-	-	-	-	-	-
K. A. Dickson; J. B. Graham	2004	Evolution and consequences of endothermy in fishes	Physiol Biochem Zool	Exclude	Yes	-	-	-	-	-	-
L. Hirose; K. Nosaka; M. New	2004	Changes in inflammatory mediators following eccentric exercise of the elbow flexors	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
O. Hue; B. Voltaire; O. Galy;	2004	Effects of 8 days acclimation on biological and performance response in a tropical climate	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
M. K. Irmak; A. Korkmaz; O.	2004	Selective brain cooling seems to be a mechanism leading to human craniofacial diversity observ	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
L. P. Kilduff; E. Georgiades; N	2004	The effects of creatine supplementation on cardiovascular, metabolic, and thermoregulatory respo	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
A. M. Lane; P. C. Terry; M. J.	2004	Mood responses to athletic performance in extreme environments	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. Leeb	2004	Gasping for victory	Nature	Exclude	Yes	-	-	-	-	-	-
J. Lietava; B. Vohnout; D. Vali	2004	Comparison of hemodynamics during hyperthermal immersion and exercise testing in apparently	Ital Heart J	Exclude	-	-	-	-	No	-	-
D. M. Linnane; R. M. Bracker	2004	Effects of hyperthermia on the metabolic responses to repeated high-intensity exercise	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
Y. Liu; W. Lormes; L. Wang; S	2004	Different skeletal muscle HSP70 responses to high-intensity strength training and low-intensity ex	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
R. Maughan; S. Shirreffs	2004	Exercise in the heat: challenges and opportunities	J Sports Sci	Exclude	Yes	No	-	-	-	-	-
M. Nimmo	2004	Exercise in the cold	J Sports Sci	Exclude	Yes	No	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***?
M. J. Patterson; J. M. Stocks; 2004	2004	Sustained and generalized extracellular fluid expansion following heat acclimation	J Physiol	Exclude	Yes	-	-	-	-	-	-
B. Peiser; T. Reilly 2004	2004	Environmental factors in the summer Olympics in historical perspective	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
C. D. Raeburn; M. A. Zimmer 2004	2004	Surgical applications of organ preconditioning	Minerva Chir	Exclude	Yes	-	-	-	-	-	-
D. V. Reising; P. M. Sandersor 2004	2004	Minimal instrumentation may compromise failure diagnosis with an ecological interface	Hum Factors	Exclude	Yes	-	-	-	-	-	-
W. F. U. H. Sciences; N. I. o. 2004	2004	Clonidine-induced Spinal Acetylcholine Release: Normal Volunteers vs. Neuropathic Pain		Exclude	Yes	-	-	-	-	-	-
C. L. Shields; G. G. Giesbrech 2004	2004	The effects of a moderate physical activity program on thermoregulatory responses in a warm env	Can J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
D. Sinar; D. Malatesta; C. Ko 2004	2004	Effect of age on Hsp72 expression in leukocytes of healthy active people	Exp Gerontol	Exclude	Yes	-	-	-	-	-	-
A. B. Stein; X. L. Tang; Y. Gu 2004	2004	Delayed adaptation of the heart to stress: late preconditioning	Stroke	Exclude	Yes	-	-	-	-	-	-
J. M. Steinacker; W. Lormes; 2004	2004	New aspects of the hormone and cytokine response to training	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
K. A. Stokes; M. E. Nevill; P. 2004	2004	Effect of 6 weeks of sprint training on growth hormone responses to sprinting	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
R. Tucker; L. Rauch; Y. X. Ha 2004	2004	Impaired exercise performance in the heat is associated with an anticipatory reduction in skeletal	Pflugers Arch	Exclude	Yes	-	-	-	-	-	-
S. Uno; T. Abo; T. Tanaka; H. 2004	2004	In vitro sealing performance of two one-step adhesive systems in cervical cavities	J Adhes Dent	Exclude	Yes	-	-	-	-	-	-
M. Whitham; S. L. Halson; G. 2004	2004	Leukocyte heat shock protein expression before and after intensified training	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
Q. Zhou; R. X. Xu; S. Z. Zhan 2004	2004	[Hemorheological changes in hot and humid environment]	Di Yi Jun Yi Da Xue Xue	Exclude	Yes	-	-	-	-	-	-
S. Angepat; V. M. Gorenflo; J. 2005	2005	Accelerating perfusion process optimization by scanning non-steady-state responses	Biotechnol Bioeng	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; C. M. Mares 2005	2005	Heat acclimation and physical training adaptations of young women using different contraceptive	Am J Physiol Endocrinol	Exclude	-	-	-	-	No	-	-
I. Bautmans; R. Njemini; S. Vi 2005	2005	Biochemical changes in response to intensive resistance exercise training in the elderly	Gerontology	Exclude	Yes	-	-	-	-	-	-
L. Boyer; S. Robitail; D. Debe 2005	2005	[Media and public health: example of heat wave during summer 2003]	Rev Epidemiol Sante Publ	Exclude	-	No	No	-	No	-	-
T. K. Day; D. Grimshaw 2005	2005	An observational study on the spectrum of heat-related illness, with a proposal on classification	J R Army Med Corps	Exclude	-	No	-	-	No	-	-
F. Haman; F. Péronnet; G. P. K 2005	2005	Partitioning oxidative fuels during cold exposure in humans: muscle glycogen becomes dominant	J Physiol	Exclude	Yes	-	-	-	-	-	-
J. Hassi; M. Rytönen; J. Kota 2005	2005	Impacts of cold climate on human heat balance, performance and health in circumpolar areas	Int J Circumpolar Health	Exclude	Yes	-	-	-	-	-	-
S. J. Laing; D. Gwynne; J. Bla 2005	2005	Salivary IgA response to prolonged exercise in a hot environment in trained cyclists	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
G. I. Lancaster; Q. Khan; P. D 2005	2005	The physiological regulation of toll-like receptor expression and function in humans	J Physiol	Exclude	Yes	-	-	-	-	-	-
K. F. Leinfelder 2005	2005	Indirect posterior composite resins	Compend Contin Educ De	Exclude	Yes	-	-	-	-	-	-
J. Leppaluoto; T. Pääkkönen; 12005	2005	Pituitary and autonomic responses to cold exposures in man	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
D. Low; T. Cable; A. Purvis 2005	2005	Exercise thermoregulation and hyperlocaemia	Ergonomics	Exclude	Yes	-	-	-	-	-	-
A. Masuda; Y. Koga; M. Hatta 2005	2005	The effects of repeated thermal therapy for patients with chronic pain	Psychother Psychosom	Exclude	-	-	-	-	No	No	-
H. Miyamoto; H. Kai; H. Naki 2005	2005	Safety and efficacy of repeated sauna bathing in patients with chronic systolic heart failure: a prel	J Card Fail	Exclude	-	-	-	-	No	No	-
M. L. Ong; E. Y. Ng 2005	2005	A global bioheat model with self-tuning optimal regulation of body temperature using Hebbian fe	Med Phys	Exclude	Yes	-	-	-	-	-	-
J. S. Petrofsky; S. Lee; C. Patt 2005	2005	Sweat production during global heating and during isometric exercise in people with diabetes	Med Sci Monit	Exclude	Yes	-	-	-	-	-	-
J. Radons; G. Multhoff 2005	2005	Immunostimulatory functions of membrane-bound and exported heat shock protein 70	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
A. P. Russell 2005	2005	PGC-1alpha and exercise: important partners in combating insulin resistance	Curr Diabetes Rev	Exclude	Yes	-	-	-	-	-	-
M. Saat; R. G. Sirisinghe; R. S 2005	2005	Decay of heat acclimation during exercise in cold and exposure to cold environment	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. Saat; R. G. Sirisinghe; R. S 2005	2005	Effects of short-term exercise in the heat on thermoregulation, blood parameters, sweat secretion	J Physiol Anthropol Appl	Exclude	-	No	Yes	Yes	Yes	No	No
M. Saat; Y. Tochihara; N. Hasl 2005	2005	Effects of exercise in the heat on thermoregulation of Japanese and Malaysian males	J Physiol Anthropol Appl	Exclude	-	-	-	-	-	No	-
A. C. Spetz; K. Ellefsen; E. Ti 2005	2005	Calcitonin gene-related peptide during sweating in young healthy women	Gynecol Obstet Invest	Exclude	Yes	-	-	-	-	-	-
R. C. Spreafico; I. Krejci; D. I 2005	2005	Clinical performance and marginal adaptation of class II direct and semidirect composite restorati	J Dent	Exclude	Yes	-	-	-	-	-	-
A. T. Strachan; J. B. Leiper; R 2005	2005	Serotonin2C receptor blockade and thermoregulation during exercise in the heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
D. Thompson; S. Basu-Modak 2005	2005	Exercise-induced expression of heme oxygenase-1 in human lymphocytes	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
B. G. Väner 2005	2005	FPA-based infrared thermography as applied to the study of cutaneous perspiration and stimulate	Phys Med Biol	Exclude	Yes	-	-	-	-	-	-
J. G. Valdivia Uria; O. Regojo 2005	2005	[Transurethral resection with saline solution: a technological achievement not yet assimilated by t	Arch Esp Urol	Exclude	Yes	-	No	-	-	-	-
D. C. Wallace 2005	2005	The mitochondrial genome in human adaptive radiation and disease: on the road to therapeutics at	Gene	Exclude	Yes	-	-	-	-	-	-
N. Webborn; M. J. Price; P. C. 2005	2005	Effects of two cooling strategies on thermoregulatory responses of tetraplegic athletes during repe	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
Aetn 2005	2005	Effects of Continuous Airway Pressure on the ability to heat and humidify air in healthy subjects	<a href="http://www.who.int/italise">http://www.who.int/italise</a>	Exclude	Yes	-	-	-	-	-	-
S. S. Bruce-Low; D. Cotterell 2006	2006	Heart rate variability during high ambient heat exposure	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
C. Byrne; J. K. Lee; S. A. Che 2006	2006	Continuous thermoregulatory responses to mass-participation distance running in heat	Med Sci Sports Exerc	Exclude	-	No	-	-	No	-	-
S. N. Cheuvront; R. Carter, 3r 2006	2006	No effect of moderate hypohydration or hyperthermia on anaerobic exercise performance	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
V. G. Coffey; A. Shield; B. J. ( 2006	2006	Interaction of contractile activity and training history on mRNA abundance in skeletal muscle fro	Am J Physiol Endocrinol	Exclude	Yes	-	-	-	-	-	-
V. G. Coffey; Z. Zhong; A. Sh 2006	2006	Early signaling responses to divergent exercise stimuli in skeletal muscle from well-trained huma	Faseb j	Exclude	Yes	-	-	-	-	-	-
C. Fernández-de-Las-Peñas; C 2006	2006	One-year follow-up of two exercise interventions for the management of patients with ankylosing	Am J Phys Med Rehabil	Exclude	Yes	-	-	-	No	-	-
C. P. Fischer; N. J. Hiscock; S 2006	2006	Vitamin E isoform-specific inhibition of the exercise-induced heat shock protein 72 expression in	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
A. D. Flouris; S. S. Cheung; J. 2006	2006	Influence of body heat content on hand function during prolonged cold exposures	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. D. French; M. Cameron; B. 2006	2006	Superficial heat or cold for low back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	No	-	-
D. Girlich; T. Naas; P. Nordm 2006	2006	Regulation of class D beta-lactamase gene expression in Ralstonia pickettii	Microbiology (Reading)	Exclude	Yes	-	-	-	-	-	-
N. W. Gonzalez; T. E. Bernard 2006	2006	Maximum sustainable work rate for five protective clothing ensembles with respect to moisture v	J Occup Environ Hyg	Exclude	Yes	-	-	-	-	-	-
S. R. Gray; G. De Vito; M. A. 2006	2006	Skeletal muscle ATP turnover and muscle fiber conduction velocity are elevated at higher muscle	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

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				Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?				
A. M. Hile; J. M. Anderson; K 2006		Creatine supplementation and anterior compartment pressure during exercise in the heat in dehydrated individuals	J Athl Train	Exclude	Yes	-	-	-	-	-	-
O. Hue; B. Voltaire; C. Hertog 2006		Heart rate, thermoregulatory and humoral responses during a 9-day cycle race in a hot and humid environment	Int J Sports Med	Exclude	-	No	-	-	-	-	-
A. M. Joseph; H. Pilegaard; A. 2006		Control of gene expression and mitochondrial biogenesis in the muscular adaptation to endurance training	Essays Biochem	Exclude	Yes	-	-	-	-	No	-
Y. Kamijo; H. Nose 2006		Heat illness during working and preventive considerations from body fluid homeostasis	Ind Health	Exclude	Yes	No	-	-	-	-	-
C. L. Lim; L. T. Mackinnon 2006		The roles of exercise-induced immune system disturbances in the pathology of heat stroke: the distal effect	Sports Med	Exclude	Yes	-	-	-	-	-	-
Y. Liu; L. Gampert; K. Nethin 2006		Response and function of skeletal muscle heat shock protein 70	Front Biosci	Exclude	Yes	-	-	-	-	-	-
C. Magalhães Fde; C. A. Macl 2006		Possible biphasic sweating response during short-term heat acclimation protocol for tropical natives	J Physiol Anthropol	Exclude	-	-	-	-	-	No	-
E. B. Manukhina; H. F. Down 2006		Role of nitric oxide in cardiovascular adaptation to intermittent hypoxia	Exp Biol Med (Maywood)	Exclude	Yes	-	-	-	-	-	-
H. C. Marshall; R. A. Ferguso 2006		Human resting extracellular heat shock protein 72 concentration decreases during the initial adaptation to heat	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
N. H. McInnis; W. S. Journeay 2006		15 degrees head-down tilt attenuates the postexercise reduction in cutaneous vascular conductance	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. R. Miller; M. D. Puruggana 2006		Molecular population genetics and phenotypic diversification of two populations of the thermophilic bacterium <i>Halobacterium salinarum</i>	Appl Environ Microbiol	Exclude	Yes	-	-	-	-	-	-
T. Mündel; J. King; E. Colla 2006		Drink temperature influences fluid intake and endurance capacity in men during exercise in a hot environment	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
J. Oksa; H. Rintamäki; T. Mak 2006		The effect of training of military skills on performance in cold environment	Mil Med	Exclude	Yes	-	-	-	-	-	-
M. J. Quod; D. T. Martin; P. B 2006		Cooling athletes before competition in the heat: comparison of techniques and practical considerations	Sports Med	Exclude	Yes	No	-	-	-	-	-
S. Racinais; K. Chamari; Y. Hi 2006		Effect of an acute hot and dry exposure in moderately warm and humid environment on muscle performance	Int J Sports Med	Exclude	-	-	-	-	-	No	-
T. Reilly; B. Drust; W. Grego 2006		Thermoregulation in elite athletes	Curr Opin Clin Nutr Metal	Exclude	-	No	-	-	-	No	-
A. M. Rivera-Brown; T. W. R. 2006		Exercise tolerance in a hot and humid climate in heat-acclimatized girls and women	Int J Sports Med	Exclude	-	-	-	-	-	No	-
R. L. Sharp 2006		Role of sodium in fluid homeostasis with exercise	J Am Coll Nutr	Exclude	Yes	-	-	-	-	-	-
M. Shibasaki; T. E. Wilson; C. 2006		Neural control and mechanisms of eccrine sweating during heat stress and exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
N. A. Taylor 2006		Challenges to temperature regulation when working in hot environments	Ind Health	Exclude	Yes	-	-	-	-	-	-
R. Tucker; T. Marle; E. V. Lan 2006		The rate of heat storage mediates an anticipatory reduction in exercise intensity during cycling at high ambient temperature	J Physiol	Exclude	-	-	-	-	-	No	-
V. V. Upreti; M. Khurana; D. S. 2006		Determination of endogenous glycosaminoglycans derived disaccharides in human plasma by HPLC	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
N. P. Walsh; M. Whitham 2006		Exercising in environmental extremes: a greater threat to immune function?	Sports Med	Exclude	Yes	No	-	-	-	-	-
T. L. Weissgerber; L. A. Wolfe 2006		Physiological adaptation in early human pregnancy: adaptation to balance maternal-fetal demands	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
J. E. Wingo; K. J. Cureton 2006		Body cooling attenuates the decrease in maximal oxygen uptake associated with cardiovascular drift	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. E. Wingo; K. J. Cureton 2006		Maximal oxygen uptake after attenuation of cardiovascular drift during heat stress	Aviat Space Environ Med	Exclude	-	-	-	-	-	No	-
S. W. Yeargin; D. J. Casa; L. E. 2006		Heat acclimatization and hydration status of American football players during initial summer work	J Strength Cond Res	Exclude	-	No	-	-	-	No	-
L. E. Armstrong; D. J. Casa; N. 2007		American College of Sports Medicine position stand. Exertional heat illness during training and competition	Med Sci Sports Exerc	Exclude	Yes	No	-	-	-	-	-
T. Bender; G. Nagy; I. Barna; 2007		The effect of physical therapy on beta-endorphin levels	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. Buguet 2007		Sleep under extreme environments: effects of heat and cold exposure, altitude, hyperbaric pressure	J Neurol Sci	Exclude	Yes	-	-	-	-	-	-
M. J. Buono; K. D. Ball; F. W. 2007		Sodium ion concentration vs. sweat rate relationship in humans	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Cecchini; V. LoPresti 2007		Drug residues store in the body following cessation of use: impacts on neuroendocrine balance and health	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
C. K. Chang; C. P. Chang; S. 2007		Oxidative stress and ischemic injuries in heat stroke	Prog Brain Res	Exclude	Yes	-	-	-	-	-	-
S. S. Cheung 2007		Neuropsychological determinants of exercise tolerance in the heat	Prog Brain Res	Exclude	Yes	-	-	-	-	-	-
M. Cleary; D. Ruiz; L. Eberm 2007		Dehydration, cramping, and exertional rhabdomyolysis: a case report with suggestions for recovery	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-
E. E. Coris; S. Walz; J. Konin; 2007		Return to activity considerations in a football player predisposed to exertional heat illness: a case report	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-
O. V. Grishin; N. V. Ustuzanin 2007		The influence of cold on energy expenditure at rest and during exercise in person in the North	Alaska Med	Exclude	Yes	-	-	-	-	-	-
P. A. Hancock; J. M. Ross; J. I. 2007		A meta-analysis of performance response under thermal stressors	Hum Factors	Exclude	-	No	-	-	-	No	-
Y. Hellsten; J. J. Nielsen; J. Ly 2007		Antioxidant supplementation enhances the exercise-induced increase in mitochondrial uncoupling	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
D. J. Horner; D. Farrow; I. M 2007		Caffeine, carbohydrate, and cooling use during prolonged simulated tennis	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
M. Horowitz 2007		Heat acclimation and cross-tolerance against novel stressors: genomic-physiological linkage	Prog Brain Res	Exclude	-	No	-	-	-	No	-
M. Horowitz; S. D. Robinson 2007		Heat shock proteins and the heat shock response during hyperthermia and its modulation by altered protein synthesis	Prog Brain Res	Exclude	Yes	-	-	-	-	-	-
D. Jezova; Z. Radikova; M. Vi 2007		Growth hormone response to different consecutive stress stimuli in healthy men: is there any difference?	Stress	Exclude	Yes	-	-	-	-	-	-
A. C. Lacerda; F. Gripp; L. O. 2007		Acute heat exposure increases high-intensity performance during sprint cycle exercise	Eur J Appl Physiol	Exclude	-	-	-	-	-	No	-
A. Loregian; M. C. Scarpa; S. 2007		Measurement of ribavirin and evaluation of its stability in human plasma by high-performance liquid chromatography	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
R. Lovell; L. Madden; S. Carr 2007		The time-profile of the PBMC HSP70 response to in vitro heat shock appears temperature-dependent	Amino Acids	Exclude	Yes	-	-	-	-	-	-
R. J. Lovell; I. Kirke; J. Siegle 2007		Soccer half-time strategy influences thermoregulation and endurance performance	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
D. Markovitch; R. M. Tyrrell; 2007		The effect of prior exercise on ex vivo induction of heme oxygenase-1 in human lymphocytes	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
S. J. Montain; S. N. Cheuvron 2007		Sweat mineral-element responses during 7 h of exercise-heat stress	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
R. Mora-Rodríguez; J. Del Co 2007		Separate and combined effects of airflow and rehydration during exercise in the heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
O. H. Mortensen; P. Plomgaan 2007		PGC-1beta is downregulated by training in human skeletal muscle: no effect of training twice ever	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
R. H. Morton 2007		Contrast water immersion hastens plasma lactate decrease after intense anaerobic exercise	J Sci Med Sport	Exclude	-	-	-	-	-	No	-
T. Mündel; S. J. Bunn; P. L. H 2007		The effects of face cooling during hyperthermic exercise in man: evidence for an integrated thermoregulatory response	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
B. Murray 2007		Hydration and physical performance	J Am Coll Nutr	Exclude	Yes	-	-	-	-	-	-
T. D. Noakes 2007		Hydration in the marathon: using thirst to gauge safe fluid replacement	Sports Med	Exclude	Yes	-	-	-	-	-	-
G. Paulsen; K. Vissing; J. M. 2007		Maximal eccentric exercise induces a rapid accumulation of small heat shock proteins on myofibrils	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Z. Qiu; T. H. MacRae	2007	Developmentally regulated synthesis of p8, a stress-associated transcription cofactor, in diapause-	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. Radaković; J. Marić; V. F	2007	Effect of acclimation on changes in water and electrolyte homeostasis in soldiers during exertion	Vojnosanit Pregl	Exclude	-	-	No	-	-	-	-	-	-	-
S. S. Radakovic; J. Marie; M.	2007	Effects of acclimation on cognitive performance in soldiers during exertional heat stress	Mil Med	Exclude	-	-	-	-	-	-	No	-	-	-
H. Rintamäki	2007	Performance and energy expenditure in cold environments	Alaska Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Rintamäki	2007	Human responses to cold	Alaska Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Rowland; A. Garrison; D. P	2007	Determinants of endurance exercise capacity in the heat in prepubertal boys	Int J Sports Med	Exclude	Yes	-	-	-	-	-	No	-	-	-
R. L. Sharp	2007	Role of whole foods in promoting hydration after exercise in humans	J Am Coll Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. M. Shirreffs; D. J. Casa; R.	2007	Fluid needs for training and competition in athletics	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Simar; D. Malatesta; S. Bai	2007	Physical activity modulates heat shock protein-72 expression and limits oxidative damage accumu	J Gerontol A Biol Sci Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. G. Sleivert	2007	Using microtechnology to monitor thermal strain and enhance performance in the field	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. A. Sonna; M. N. Sawka; C.	2007	Exertional heat illness and human gene expression	Prog Brain Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Starnes; R. P. Taylor	2007	Exercise-induced cardioprotection: endogenous mechanisms	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Tanaka; K. Ishii; H. Suzuki;	2007	[Cholinergic urticaria successfully treated by immunotherapy with partially purified sweat antigen	Arerugi	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. M. Watkins; D. J. Cheek; A	2007	Heat shock protein (HSP-72) levels in skeletal muscle following work in heat	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. S. Weller; D. M. Linnane; /	2007	Quantification of the decay and re-induction of heat acclimation in dry-heat following 12 and 26	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
D. Wendt; L. J. van Loon; W. I	2007	Thermoregulation during exercise in the heat: strategies for maintaining health and performance	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Wilk; A. M. Rivera-Brown;	2007	Voluntary drinking and hydration in non-acclimatized girls exercising in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
U. Wisloff; A. Stoylen; J. P. L	2007	Superior cardiovascular effect of aerobic interval training versus moderate continuous training in	Circulation	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. C. Wright; P. C. Geiger; D.	2007	Calcium induces increases in peroxisome proliferator-activated receptor gamma coactivator-1-alpha	J Biol Chem	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. A. Wright; P. W. Grandjean	2007	The effects of creatine loading on thermoregulation and intermittent sprint exercise performance i	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. M. Yamada; F. T. Amorim; I	2007	Effect of heat acclimation on heat shock protein 72 and interleukin-10 in humans	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
F. Yamazaki; T. Ikuta; R. Sone	2007	[Modulation of central sudomotor control by short-term heat acclimation as evidenced by frequen	J uoeh	Exclude	-	-	-	No	-	-	-	No	-	-
S. Yokoyama; M. Tao; N. Kak	2007	Prediction computer program for whole body temperatures and its application under various work	Ind Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. S. Scoun; W. G. Hopkins; S	2007	Effect of post-exercise sauna bathing on the endurance performance of competitive male runners	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G. E. Adam; R. Carter, 3rd; S.	2008	Safety and nutritional assessment of GM plants and derived food and feed: the role of animal feed	Food Chem Toxicol	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Al-Rimawi; S. Jallad	2008	Hydration effects on cognitive performance during military tasks in temperate and cold environm	Physiol Behav	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Al-Rimawi; S. Jallad	2008	Sport participation in adolescents with sickle cell disease	Pediatr Endocrinol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Alasaad; L. Rossi; S. Maion	2008	HotSHOT Plus ThermalSHOCK, a new and efficient technique for preparation of PCR-quality mi	Parasitol Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. S. Allard; L. K. Heilbronn;	2008	In vitro cellular adaptations of indicators of longevity in response to treatment with serum collect	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. T. Amorim; P. M. Yamada; I	2008	The effect of the rate of heat storage on serum heat shock protein 72 in humans	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
P. Angerer; S. Kadlez-Gebhart	2008	Comparison of cardiocirculatory and thermal strain of male firefighters during fire suppression to	Am J Cardiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Anslley; G. Marvin; A. Shar	2008	The effects of head cooling on endurance and neuroendocrine responses to exercise in warm cond	Physiol Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Ascensão; V. Azevedo; R. F	2008	Physiological, biochemical and functional changes induced by a simulated 30 min off-road comp	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Barwood; R. C. Thelwel	2008	Psychological skills training improves exercise performance in the heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. A. Burgomaster; K. R. How	2008	Similar metabolic adaptations during exercise after low volume sprint interval and traditional end	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. N. Cheuvront; T. D. Chinev	2008	Serum S-100beta response to exercise-heat strain before and after acclimation	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
S. N. Cheuvront; D. A. Goodr	2008	Impact of a protective vest and spacer garment on exercise-heat strain	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. D. Chinevere; B. S. Cadaret	2008	Efficacy of body ventilation system for reducing strain in warm and hot climates	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. D. Chinevere; R. W. Kenef	2008	Effect of heat acclimation on sweat minerals	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
J. D. Coso; E. Estevez; R. A. F	2008	Anaerobic performance when rehydrating with water or commercially available sports drinks duri	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. W. DeGroot; W. L. Kenney	2008	Thermal response to running across the Sahara desert: data for three men	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Duffield	2008	Cooling interventions for the protection and recovery of exercise performance from exercise-indu	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. D. Flouris; D. A. Westwo	2008	Effect of body temperature on cold induced vasodilation	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Folkesson; A. L. Mackey; I	2008	Immunohistochemical changes in the expression of HSP27 in exercised human vastus lateralis m	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. N. French; K. G. Thompsot	2008	The effects of contrast bathing and compression therapy on muscular performance	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
F. Ftaiti; M. Jenni; A. Kacem;	2008	Effect of hyperthermia and physical activity on circulating growth hormone	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	-	No	-	-
M. J. Gibala; S. L. McGee	2008	Metabolic adaptations to short-term high-intensity interval training: a little pain for a lot of gain?	Exerc Sport Sci Rev	Exclude	Yes	No	-	-	-	-	-	-	-	-
K. L. Gilbert; K. A. Stokes; G.	2008	Growth hormone responses to 3 different exercise bouts in 18- to 25- and 40- to 50-year-old men	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. M. Gosling; B. J. Gabbie; J.	2008	The incidence of heat casualties in sprint triathlon: the tale of two Melbourne race events	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. R. Gray; K. Söderlund; R. /	2008	ATP and phosphocreatine utilization in single human muscle fibres during the development of ma	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. J. Green; E. Bombardier; T.	2008	Metabolic, enzymatic, and transporter responses in human muscle during three consecutive days c	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Hadid; R. Yanovich; T. Ertl	2008	Effect of a personal ambient ventilation system on physiological strain during heat stress wearin	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Hargreaves	2008	Physiological limits to exercise performance in the heat	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. A. Judelson; C. M. Mares;	2008	Effect of hydration state on resistance exercise-induced endocrine markers of anabolism, catabolis	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Jung; P. Strauss; H. J. Lind	2008	Influence of moderate cycling on scrotal temperature	Int J Androl	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Kampmann; P. Brode; M. S	2008	Lowering of resting core temperature during acclimation is influenced by exercise stimulus	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:				Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?											
A. C. Kayani; J. P. Morton; A. 2008		The exercise-induced stress response in skeletal muscle: failure during aging	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	
R. W. Kenefick; A. St Pierre; 2008		Effect of increased plasma osmolality on cold-induced thirst attenuation	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
G. A. Khomenok; A. Hadid; O 2008		Hand immersion in cold water alleviating physiological strain and increasing tolerance to uncom	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
R. M. Laing; S. T. Sims; C. A. 2008		Differences in wearer response to garments for outdoor activity	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
G. P. Lambert 2008		Intestinal barrier dysfunction, endotoxemia, and gastrointestinal symptoms: the 'canary in the coal	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
C. L. Lim; C. Byrne; J. K. Lee 2008		Human thermoregulation and measurement of body temperature in exercise and clinical settings	Ann Acad Med Singap	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Lovell; L. Madden; L. R. M 2008		Effects of active and passive hyperthermia on heat shock protein 70 (HSP70)	Amino Acids	Exclude	-	-	-	-	-	-	No	-	-	
J. A. Lumini; J. Magalhães; P. 2008		Beneficial effects of exercise on muscle mitochondrial function in diabetes mellitus	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
C. A. Machado-Moreira; F. Wi 2008		Local differences in sweat secretion from the head during rest and exercise in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
D. J. Mahoney; A. Safdar; G. I 2008		Gene expression profiling in human skeletal muscle during recovery from eccentric exercise	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	
F. E. Marino 2008		Comparative thermoregulation and the quest for athletic supremacy	Med Sport Sci	Exclude	Yes	No	-	-	-	-	-	-	-	
F. E. Marino 2008		The evolutionary basis of thermoregulation and exercise performance	Med Sport Sci	Exclude	Yes	No	-	-	-	-	-	-	-	
J. P. McClung; J. D. Hasday; J 2008		Exercise-heat acclimation in humans alters baseline levels and ex vivo heat inducibility of HSP72	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-	
T. L. Merry; P. N. Ainslie; R. 2008		Fitness alters fluid regulatory but not behavioural responses to hypohydrated exercise	Physiol Behav	Exclude	Yes	-	-	-	-	-	-	-	-	
K. J. Milne; E. G. Noble 2008		Response of the myocardium to exercise: sex-specific regulation of hsp70	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Mora-Rodriguez; J. Del Co 2008		Thermoregulatory responses to constant versus variable-intensity exercise in the heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
J. P. Morton; D. P. Maclaren; 2008		Trained men display increased basal heat shock protein content of skeletal muscle	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
T. Mündel 2008		Exercise heat stress and metabolism	Med Sport Sci	Exclude	Yes	No	-	-	-	-	-	-	-	
M. D. Nelson; L. A. Stuart-Hil 2008		Hypervolemia and blood alkalinity: effect on physiological strain in a warm environment	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Newell; J. Newell; S. Gran 2008		Fluid and electrolyte balance in elite gaelic football players	Ir Med J	Exclude	Yes	-	-	-	-	-	-	-	-	
M. H. Noweir; A. O. Bafail; I. 2008		Study of heat exposure during Hajj (pilgrimage)	Environ Monit Assess	Exclude	-	No	-	-	-	-	No	-	-	
A. Panossian; G. Wikman 2008		Pharmacology of Schisandra chinensis Bail.: an overview of Russian research and uses in medicin	J Ethnopharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	
C. Papadopoulos; J. Doyle; J. 2008		The effect of the hypohydration on the lactate threshold in a hot and humid environment	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Philippova; D. Ivanov; M. 2008		Identification of proteins associating with glycosylphosphatidylinositol- anchored T-cadherin on t	Mol Cell Biol	Exclude	Yes	-	-	-	-	-	-	-	-	
M. J. Quod; D. T. Martin; P. B 2008		Practical precooling: effect on cycling time trial performance in warm conditions	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
D. E. Rae; G. J. Knobel; T. Mi 2008		Heatstroke during endurance exercise: is there evidence for excessive endothermy?	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
A. M. Rivera-Brown; F. A. Ra 2008		Voluntary drinking and hydration in trained, heat-acclimatized girls exercising in a hot and humid	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	No	-	-	
K. S. Röckl; C. A. Witzak; L. 2008		Signaling mechanisms in skeletal muscle: acute responses and chronic adaptations to exercise	IUBMB Life	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Romeo; D. Jiménez-Pavón; 2008		Immunological changes after a single bout of moderate-intensity exercise in a hot environment	J Physiol Biochem	Exclude	Yes	-	-	-	-	-	-	-	-	
R. M. Rossi; W. Bolli; R. Stan 2008		Performance of firefighters' protective clothing after heat exposure	Int J Occup Saf Ergon	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Rothmaier; M. Weder; A. 2008		Design and performance of personal cooling garments based on three-layer laminates	Med Biol Eng Comput	Exclude	Yes	-	-	-	-	-	-	-	-	
T. Rowland; S. Hagenbuch; D 2008		Exercise tolerance and thermoregulatory responses during cycling in boys and men	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
M. E. Sandström; J. C. Siegler 2008		The effect of 15 consecutive days of heat-exercise acclimation on heat shock protein 70	Cell Stress Chaperones	Exclude	-	-	-	-	-	-	No	-	-	
J. M. Saxton; I. Zwierska; K. I 2008		Effect of upper- and lower-limb exercise training on circulating soluble adhesion molecules, hs-C	Eur J Vasc Endovasc Surg	Exclude	Yes	-	-	-	-	-	-	-	-	
N. A. Shein; N. Grigoriadis; A 2008		Differential neuroprotective properties of endogenous and exogenous erythropoietin in a mouse m	J Neurotrauma	Exclude	Yes	-	-	-	-	-	-	-	-	
N. A. Shevchuk 2008		Hydrotherapy as a possible neuroleptic and sedative treatment	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-	-	-	
S. E. Simmons; T. Mündel; D. 2008		The effects of passive heating and head-cooling on perception of exercise in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
C. Sunderland; J. G. Morris; N 2008		A heat acclimation protocol for team sports	Br J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
A. A. Thambirajah; K. Sleigh; 2008		Differential heat shock protein responses to strenuous standardized exercise in chronic fatigue syn	Clin Invest Med	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Toko; T. Minamino; I. Kon 2008		Role of heat shock transcriptional factor 1 and heat shock proteins in cardiac hypertrophy	Trends Cardiovasc Med	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Umehara; A. Yamaguchi; S 2008		Repeated waon therapy improves pulmonary hypertension during exercise in patients with severe	J Cardiol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. E. Wingo; D. A. Low; D. M 2008		Heat acclimation of an adult female with a large surface area of grafted skin	J Burn Care Res	Exclude	-	No	-	-	-	No	No	-	-	
Y. Xie; B. Guo; J. Li; G. Ku; I 2008		Adaptive and robust methods of reconstruction (ARMOR) for thermoacoustic tomography	IEEE Trans Biomed Eng	Exclude	Yes	-	-	-	-	-	-	-	-	
L. M. Yamamoto; D. A. Judels 2008		Effects of hydration state and resistance exercise on markers of muscle damage	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	
W. K. Yeo; C. D. Paton; A. P. 2008		Skeletal muscle adaptation and performance responses to once a day versus twice every second d	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Zouhal; C. Jacob; P. Delam 2008		Catecholamines and the effects of exercise, training and gender	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Vaile; S. Halson; N. Gill; B. 2008		Effect of hydrotherapy on recovery from fatigue	Int J Sports Med	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
J. Vaile; S. Halson; N. Gill; B. 2008		Effect of hydrotherapy on the signs and symptoms of delayed onset muscle soreness	Eur J Appl Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
C. R. Abbiss; P. B. Laursen 2009		Do changes in heat storage mediate an anticipatory regulation of exercise intensity?	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Alametst; A. Värr; J. Viik; 2009		Ballistocardiographic studies with acceleration and electromechanical film sensors	Med Eng Phys	Exclude	Yes	-	-	-	-	-	-	-	-	
W. Ament; G. J. Verkerke 2009		Exercise and fatigue	Sports Med	Exclude	Yes	No	-	-	-	-	-	-	-	
M. J. Barwood; P. S. Newton; 2009		Ventilated vest and tolerance for intermittent exercise in hot, dry conditions with military clothing	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	
J. R. Basford; J. K. Oh; T. G. / 2009		Safety, acceptance, and physiologic effects of sauna bathing in people with chronic heart failure: a	Arch Phys Med Rehabil	Exclude	-	No	-	-	-	No	No	-	-	
A. E. Beaudin; M. E. Clegg; N 2009		Adaptation of exercise ventilation during an actively-induced hyperthermia following passive hea	Am J Physiol Regul Integr	Exclude	-	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
M. F. Bergeron 2009		Youth sports in the heat: recovery and scheduling considerations for tournament play	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
M. F. Bergeron; M. D. Laird; I 2009		Repeated-bout exercise in the heat in young athletes: physiological strain and perceptual response	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
J.A. Betts; C. Williams	2010	Short-term recovery from prolonged exercise: exploring the potential for protein ingestion to accelerate recovery	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. P. Blondin; I. Dépaült; P. Inchausti	2010	Effects of two glucose ingestion rates on substrate utilization during moderate-intensity shivering	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Brazaitis; A. Skurvydas	2010	Heat acclimation does not reduce the impact of hyperthermia on central fatigue	Eur J Appl Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
C. Bterro-Saby; S. Dellaiaux; J. J. P. Dugas	2010	Combination of two oxidant stressors suppresses the oxidative stress and enhances the heat shock response	Metabolism	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. Calabrese; C. Cornelius; A. N. Charkoudian	2010	Cellular stress responses, mitostress and carnitine insufficiencies as critical determinants in aging	Neurochem Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. Cheung	2010	Mechanisms and modifiers of reflex induced cutaneous vasodilation and vasoconstriction in humans	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. Cheung	2010	Interconnections between thermal perception and exercise capacity in the heat	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. Cheung; S. R. Petersen	2010	Physiological strain and countermeasures with firefighting	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. Cochran; J. P. Little; M. J. M. Crowe; L. Whitehead; M. J. Dewhurst; A. Macaluso; L. K. A. Dougherty; M. Chow; W. J. P. Dugas	2010	Carbohydrate feeding during recovery alters the skeletal muscle metabolic response to repeated sprints	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. E. Folk	2010	Self-management and chronic low back pain: a qualitative study	J Adv Nurs	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Dewhurst; A. Macaluso; L. K. A. Dougherty; M. Chow; W. J. P. Dugas	2010	Effects of altered muscle temperature on neuromuscular properties in young and older women	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. A. Dougherty; M. Chow; W. J. P. Dugas	2010	Critical environmental limits for exercising heat-acclimated lean and obese boys	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	No	-	-
J. P. Dugas	2010	How hot is too hot?: Some considerations regarding temperature and performance	Int J Sports Physiol Perform	Exclude	-	No	-	-	-	-	-	No	-	-
G. E. Folk	2010	The Harvard Fatigue Laboratory: contributions to World War II	Adv Physiol Educ	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Gempp; J. E. Blatteau	2010	Preconditioning methods and mechanisms for preventing the risk of decompression sickness in scuba divers	Res Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Goto; K. Okazaki; Y. Kami	2010	Protein and carbohydrate supplementation during 5-day aerobic training enhanced plasma volume	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. S. Grebenyuk; T. V. Stupnik	2010	Long-term exercises increase the concentration of HspBP1, a co-chaperone of 70-KDa heat shock protein	Bull Exp Biol Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. J. Green; H. H. Carter; M. Z. Günendi; A. Sepici Dinçel; C. Handschin	2010	Obligatory role of hyperaemia and shear stress in microvascular adaptation to repeated heating in humans	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. Günendi; A. Sepici Dinçel; C. Handschin	2010	Does exercise affect the antioxidant system in patients with ankylosing spondylitis?	Clin Rheumatol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Harrington; G. Taylor; S. H. L. D. Hayes; C. I. Morse	2010	Regulation of skeletal muscle cell plasticity by the peroxisome proliferator-activated receptor γ coactivator 1α	J Recept Signal Transduct Mol Cell Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Harrington; G. Taylor; S. H. L. D. Hayes; C. I. Morse	2010	A community-based exercise and education scheme for stroke survivors: a randomized controlled trial	Clin Rehabil	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. D. Hayes; C. I. Morse	2010	The effects of progressive dehydration on strength and power: is there a dose response?	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Horowitz; E. Kodesh	2010	Molecular signals that shape the integrative responses of the heat-acclimated phenotype	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-	No	-	-
J. M. Johnson	2010	Exercise in a hot environment: the skin circulation	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-	No	-	-
A. R. Konopka; M. D. Douglá	2010	Molecular adaptations to aerobic exercise training in skeletal muscle of older women	J Gerontol A Biol Sci Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. N. Koumalakis; P. G. Botoni	2010	The effect of menthol application to the skin on sweating rate response during exercise in swimmers	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. A. Lira; C. R. Benton; Z. Yi	2010	PGC-1α regulation by exercise training and its influences on muscle function and insulin sensitivity	Am J Physiol Endocrinol Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. P. Little; A. Safdar; G. P. W. J. P. Dugas	2010	A practical model of low-volume high-intensity interval training induces mitochondrial biogenesis	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Lorenzo; J. R. Halliwill; M. S. Lorenzo; C. T. Minton	2010	Heat acclimation improves exercise performance	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
S. Lorenzo; C. T. Minton	2010	Heat acclimation improves cutaneous vascular function and sweating in trained cyclists	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
F. C. Magalhães; R. L. Passos; C. Magalhães Fde; F. T. Amorim	2010	Thermoregulatory efficiency is increased after heat acclimation in tropical natives	J Physiol Anthropol	Exclude	-	No	-	-	-	-	-	No	-	-
C. Magalhães Fde; F. T. Amorim	2010	Heat and exercise acclimation increases intracellular levels of Hsp72 and inhibits exercise-induced cellular stress	Cell Stress Chaperones	Exclude	-	-	-	-	-	-	-	No	-	-
M. Malan; B. Dawson; C. Goc	2010	Effect of heat exposure on thermoregulation and hockey-specific response time in field hockey goalkeepers	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
R. J. Maughan	2010	Distance running in hot environments: a thermal challenge to the elite runner	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. J. Maughan; S. M. Shirreffs	2010	Living, training and playing in the heat: challenges to the football player and strategies for coping	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Michel; P. M. Vanhoute	2010	Cellular signaling and NO production	Pflugers Arch	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Mohr; I. Mujika; J. Santisteban	2010	Examination of fatigue development in elite soccer in a hot environment: a multi-experimental approach	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Mündel; D. A. Jones	2010	The effects of swilling an L(-)-menthol solution during exercise in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. D. Nelson; M. J. Haykowsi	2010	Aerobic fitness does not influence the biventricular response to whole body passive heat stress	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. B. Nordborg; C. Lundby	2010	Relative workload determines exercise-induced increases in PGC-1α mRNA	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Nybo	2010	Cycling in the heat: performance perspectives and cerebral challenges	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Olesen; K. Kilerich; H. Pile	2010	PGC-1α-mediated adaptations in skeletal muscle	Pflugers Arch	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. L. Osterberg; S. E. Pallardy	2010	Carbohydrate exerts a mild influence on fluid retention following exercise-induced dehydration	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. T. Ozgün; S. S. Kurdak	2010	Effect of hot environmental conditions on physical activity patterns and temperature response of firefighters	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Panossian; G. Wikman; J. S. Patterson; L. Zhang	2010	Rosenrot (Rhodiola rosea): traditional use, chemical composition, pharmacology and clinical efficacy	Phytomedicine	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. Patterson; L. Zhang	2010	Hypoxia and fetal heart development	Curr Mol Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. L. Persianova-Dubrova; N. C. J. Petersen; M. R. Portus	2010	[Spa-based water procedures and complications in the course of their performance]	Vopr Kurortol Fizioter Lec	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. J. Petersen; M. R. Portus	2010	Partial heat acclimation in cricketers using a 4-day high intensity cycling protocol	Int J Sports Physiol Perform	Exclude	-	-	-	-	-	-	-	No	-	-
W. C. Ping; C. C. Keong; A. B. H. O. Portner	2010	Effects of acute supplementation of caffeine on cardiorespiratory responses during endurance running	Indian J Med Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. O. Portner	2010	Oxygen- and capacity-limitation of thermal tolerance: a matrix for integrating climate-related stressors	J Exp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Psilander; L. Wang; J. West	2010	Mitochondrial gene expression in elite cyclists: effects of high-intensity interval exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Racinais	2010	Different effects of heat exposure upon exercise performance in the morning and afternoon	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Racinais; J. Oksa	2010	Temperature and neuromuscular function	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Reed; R. Harrington; A. D. W. O. Roberts	2010	Meeting stroke survivors' perceived needs: a qualitative study of a community-based exercise and education program	Clin Rehabil	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. O. Roberts	2010	Determining a 'do not start' temperature for a marathon on the basis of adverse outcomes"	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. M. Shirreffs	2010	Hydration: special issues for playing football in warm and hot environments	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. Stapleton; D. Gagnon; G. P.	2010	Short-term exercise training does not improve whole-body heat loss when rate of metabolic heat p	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
K. A. Stokes; D. Sykes; K. L.	2010	Brief, high intensity exercise alters serum ghrelin and growth hormone concentrations but not IGF	Growth Horm IGF Res	Exclude	Yes	-	-	-	-	-	-
S. Summermatter; O. Baum;	2010	Peroxisome proliferator-activated receptor (gamma) coactivator 1 (alpha) (PGC-1 (alpha)) prom	J Biol Chem	Exclude	Yes	-	-	-	-	-	-
L. Taylor; A. W. Midgley; B.	2010	The effect of acute hypoxia on heat shock protein 72 expression and oxidative stress in vivo	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
K. Valdes; T. Marik	2010	A systematic review of conservative interventions for osteoarthritis of the hand	J Hand Ther	Exclude	Yes	-	-	-	-	-	-
S. A. Westphal; R. D. Childs;	2010	Managing diabetes in the heat: potential issues and concerns	Endocr Pract	Exclude	Yes	-	-	-	-	-	-
B. Wilk; B. W. Timmons; O.	2010	Voluntary fluid intake, hydration status, and aerobic performance of adolescent athletes in the heat	Appl Physiol Nutr Metab	Exclude	-	-	-	No	-	-	-
S. W. Yeargin; D. J. Casa; D.	2010	Thermoregulatory responses and hydration practices in heat-acclimatized adolescents during pres	J Athl Train	Exclude	-	-	-	No	-	-	-
Actn	2010	Agouti-related peptide (AgRP) in well trained wrestlers	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
F. Amorim; P. Yamada; R. Ro	2011	Effects of whole-body heat acclimation on cell injury and cytokine responses in peripheral blood	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
A. R. Bain; O. Jay	2011	Does summer in a humid continental climate elicit an acclimatization of human thermoregulatory	Eur J Appl Physiol	Exclude	-	No	-	-	No	-	-
A. Bandyopadhyay; F. W. Ping	2011	Effects of acute supplementation of caffeine and Panax ginseng on endurance running performanc	J Hum Ergol (Tokyo)	Exclude	Yes	-	-	-	-	-	-
M. Buchheit; C. Horobeanu;	2011	Effects of age and spa treatment on match running performance over two consecutive games in hi	J Sports Sci	Exclude	-	-	-	-	No	-	-
M. Buchheit; S. C. Voss; L. N;	2011	Physiological and performance adaptations to an in-season soccer camp in the heat: associatio	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
P. Castle; R. W. Mackenzie;	2011	Heat acclimation improves intermittent sprinting in the heat but additional pre-cooling offers no fi	J Sports Sci	Exclude	-	-	-	-	No	-	-
A. J. Cathcart; S. R. Murगत	2011	Combined carbohydrate-protein supplementation improves competitive endurance exercise perfor	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. D. Coso; N. Hamouti; J. F.	2011	Relevance of individual characteristics for thermoregulation during exercise in a hot-dry environn	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
H. A. Daanen; A. G. Jonkman;	2011	Optimising the acquisition and retention of heat acclimation	Int J Sports Med	Exclude	-	-	-	-	No	-	-
E. Dolan; H. O'Connor; A. Mc	2011	Nutritional, lifestyle, and weight control practices of professional jockeys	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. S. Elrobb; M. S. Alanazi;	2011	Molecular cloning and characterization of cDNA encoding a putative stress-induced heat-shock p	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; S. N. Cheuvront;	2011	Limitations of salivary osmolality as a marker of hydration status	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; M. R. Ely; S. N. Ch	2011	Marginal effects of a large caffeine dose on heat balance during exercise-heat stress	Int J Sport Nutr Exerc Me	Exclude	Yes	-	-	-	-	-	-
M. R. Ely; R. W. Kenefick; S.	2011	Surface contamination artificially elevates initial sweat mineral concentrations	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
Y. Epstein; W. O. Roberts	2011	The pathophysiology of heat stroke: an integrative view of the final common pathway	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
B. Falk; R. Dotan	2011	Temperature regulation and elite young athletes	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-
D. P. Ferguson; R. S. Bowen;	2011	Heart rate and core temperature responses of elite pit crews during automobile races	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
N. Gaoua; S. Racinais; J. Gran	2011	Alterations in cognitive performance during passive hyperthermia are task dependent	Int J Hyperthermia	Exclude	-	-	-	-	No	-	-
A. T. Garrett; N. J. Rehrer; M.	2011	Induction and decay of short-term heat acclimation in moderately and highly trained athletes	Sports Med	Exclude	-	-	-	-	No	-	-
M. Goekint; B. Roelands; E. F	2011	Influence of citalopram and environmental temperature on exercise-induced changes in BDNF	Neurosci Lett	Exclude	Yes	-	-	-	-	-	-
M. S. Hood; J. P. Little; M. A.	2011	Low-volume interval training improves muscle oxidative capacity in sedentary adults	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
G. Huang; W. Zhou; M. L. Cai	2011	Is everyone hot in the city? Spatial pattern of land surface temperatures, land cover and neighbor	J Environ Manage	Exclude	Yes	-	-	-	-	-	-
M. J. Jackson	2011	Control of reactive oxygen species production in contracting skeletal muscle	Antioxid Redox Signal	Exclude	Yes	-	-	-	-	-	-
R. Kakigi; H. Naito; Y. Ogura;	2011	Heat stress enhances mTOR signaling after resistance exercise in human skeletal muscle	J Physiol Sci	Exclude	Yes	-	-	-	-	-	-
R. W. Kenefick; S. N. Cheuvr	2011	DEET insect repellent: effects on thermoregulatory sweating and physiological strain	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. A. Kraft; J. M. Green; P. A.	2011	Effects of heat exposure and 3% dehydration achieved via hot water immersion on repeated cycle	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
M. Krause; C. Rodrigues-Kra	2011	Extracellular heat shock proteins (eHSP70) in exercise: Possible targets outside the immune syste	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
M. Kuenen; T. Gillum; K. D.	2011	Thermotolerance and heat acclimation may share a common mechanism in humans	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
J. Y. Lee; H. Wakabayashi; T.	2011	Ethnic differences in thermoregulatory responses during resting, passive and active heating: appli	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. P. Little; A. J. Cochran	2011	Regulating the regulators: the role of transcriptional regulatory proteins in the adaptive response	J Physiol	Exclude	Yes	-	-	-	-	-	-
J. P. Little; A. Safdar; D. Bish	2011	An acute bout of high-intensity interval training increases the nuclear abundance of PGC-1 $\alpha$ and	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
S. Lorenzo; C. T. Minson; T. C	2011	Lactate threshold predicting time-trial performance: impact of heat and acclimation	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. Matsumoto; M. Shimodozo	2011	Effects of thermal therapy combining sauna therapy and underwater exercise in patients with fibro	Complement Ther Clin Pri	Exclude	-	-	-	No	No	-	-
B. F. Miller; D. Ellis; M. M. R	2011	Measurement of skeletal muscle collagen breakdown by microdialysis	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
K. Miyagawa; Y. Kamijo; S. Ii	2011	Reduced hyperthermia-induced cutaneous vasodilation and enhanced exercise-induced plasma wa	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
L. H. Naylor; H. Carter; M. G.	2011	Repeated increases in blood flow, independent of exercise, enhance conduit artery vasodilator fun	Am J Physiol Heart Circ P	Exclude	Yes	-	-	-	-	-	-
F. W. Ping; C. C. Keong; A. B.	2011	Effects of acute supplementation of Panax ginseng on endurance running in a hot & humid enviro	Indian J Med Res	Exclude	Yes	-	-	-	-	-	-
S. K. Powers; E. E. Talbert; P.	2011	Reactive oxygen and nitrogen species as intracellular signals in skeletal muscle	J Physiol	Exclude	Yes	-	-	-	-	-	-
H. Sareh; M. E. Tulapurkar; N	2011	Response of mice to continuous 5-day passive hyperthermia resembles human heat acclimation	Cell Stress Chaperones	Exclude	-	-	-	No	No	-	-
M. N. Sawka; L. R. Leon; S. J	2011	Integrated physiological mechanisms of exercise performance, adaptation, and maladaptation to h	Compr Physiol	Exclude	-	No	-	-	No	-	-
P. E. Sheffield; P. J. Landrigan	2011	Global climate change and children's health: threats and strategies for prevention	Environ Health Perspect	Exclude	Yes	-	-	-	-	-	-
P. Sidhu; H. T. Peng; B. Cheur	2011	Simulation of differential drug pharmacokinetics under heat and exercise stress using a physiologi	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-
G. H. Simmons; B. J. Wong; I.	2011	Changes in the control of skin blood flow with exercise training: where do cutaneous vascular ada	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
E. S. Soteriades; D. L. Smith;	2011	Cardiovascular disease in US firefighters: a systematic review	Cardiol Rev	Exclude	Yes	-	-	-	-	-	-
L. Taylor; A. W. Midgley; B.	2011	Daily hypoxia increases basal monocyte HSP72 expression in healthy human subjects	Amino Acids	Exclude	Yes	-	-	-	-	-	-
A. Therapeutics	2011	Pharmacokinetic Study Of AGILE AG200-15 After Weekly Application Under Various Condition		Exclude	Yes	-	-	-	-	-	-
S. Vaapio; M. Salminen; T. Va	2011	Increased muscle strength improves managing in activities of daily living in fall-prone community	Aging Clin Exp Res	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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G. D. Vladutiu; P. J. Isackson; 2011		Genetic risk for malignant hyperthermia in non-anesthesia-induced myopathies	Mol Genet Metab	Exclude	Yes	-	-	-	-	-	-
H. Wakabayashi; T. Wijayanto 2011		Comparison of heat dissipation response between Malaysian and Japanese males during exercise	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
L. Wang; H. Mascher; N. Psila 2011		Resistance exercise enhances the molecular signaling of mitochondrial biogenesis induced by endurance exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
Tri 2011		Testing of C.L.A.I.M.S. patch for its irritancy, contact with skin and evaluation for use in patch studies	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
B. Aisbett; A. Wolkow; M. Spi 2012		Awake, smoky, and hot": providing an evidence-base for managing the risks associated with occupational heat stress	Appl Ergon	Exclude	Yes	-	-	-	-	-	-
F. Almduehki; O. Girard; J. Gi 2012		Hot ambient conditions do not alter intermittent cycling sprint performance	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-
J. M. Alonso; P. Edouard; G. F 2012		Determination of future prevention strategies in elite track and field: analysis of Daegu 2011 IAAF World Championships	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
L. Altan; N. Korkmaz; M. Diz 2012		Effect of Pilates training on people with ankylosing spondylitis	Rheumatol Int	Exclude	Yes	-	-	-	-	-	-
A. Ascensio; P. J. Oliveira; J. 2012		Exercise as a beneficial adjunct therapy during Doxorubicin treatment--role of mitochondria in cancer therapy	Int J Cardiol	Exclude	Yes	-	-	-	-	-	-
J. J. Augustine 2012		Running into trouble. Heat-related illnesses follow a summer race	EMS World	Exclude	Yes	-	-	-	-	-	-
M. F. Bergeron; R. Bahr; P. B 2012		International Olympic Committee consensus statement on thermoregulatory and altitude challenges	Br J Sports Med	Exclude	-	No	-	-	No	-	-
A. Burk; S. Timpmann; K. Kr 2012		Effects of heat acclimation on endurance capacity and prolactin response to exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. Castrogiovanni; R. Imbesi 2012		Oxidative stress and skeletal muscle in exercise	Ital J Anat Embryol	Exclude	Yes	-	-	-	-	-	-
J. N. Cobley; J. D. Bartlett; A. 2012		PGC-1α transcriptional response and mitochondrial adaptation to acute exercise is maintained in skeletal muscle	Biogerontology	Exclude	Yes	-	-	-	-	-	-
A. M. Costa; L. Breitenfeld; A 2012		Genetic inheritance effects on endurance and muscle strength: an update	Sports Med	Exclude	Yes	-	-	-	-	-	-
P. J. Derbyshire; H. Barr; F. D 2012		Lactate in human sweat: a critical review of research to the present day	J Physiol Sci	Exclude	Yes	-	-	-	-	-	-
M. P. Dunay; C. Jakob; T. N 2012		Evaluation of EnSeal®, an adaptive bipolar electro-surgical tissue-sealing device	Acta Vet Hung	Exclude	Yes	-	-	-	-	-	-
S. Engeli; A. L. Birkenfeld; P. 2012		Natriuretic peptides enhance the oxidative capacity of human skeletal muscle	J Clin Invest	Exclude	Yes	-	-	-	-	-	-
N. Fujii; Y. Honda; T. Ogawa; 2012		Short-term exercise-heat acclimation enhances skin vasodilation but not hyperthermic hypernea	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
D. Gagnon; A. G. Lynn; K. Bi 2012		Mean arterial pressure following prolonged exercise in the heat: influence of training status and fluid intake	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
A. T. Garrett; R. Creasy; N. J. 2012		Effectiveness of short-term heat acclimation for highly trained athletes	Eur J Appl Physiol	Exclude	-	No	-	-	No	-	-
M. Gayda; L. Bosquet; F. Paill 2012		Effects of sauna alone versus postexercise sauna baths on short-term heart rate variability in patients with cardiovascular disease	J Cardiopulm Rehabil Prev	Exclude	-	-	-	-	No	No	-
M. Gayda; F. Paillard; P. Sosn 2012		Effects of sauna alone and postexercise sauna baths on blood pressure and hemodynamic variables	J Clin Hypertens (Greenw)	Exclude	-	-	-	-	No	No	-
P. Hämaläinen; A. Ikonen; A. 12012		The effects of heat stress on cognition in persons with multiple sclerosis	Mult Scler	Exclude	-	-	-	-	No	No	-
G. L. Hartley; A. D. Flouris; N 2012		The effect of a covert manipulation of ambient temperature on heat storage and voluntary exercise	Physiol Behav	Exclude	-	-	-	-	-	No	-
Y. Heled; A. Peled; R. Yanovic 2012		Heat acclimation and performance in hypoxic conditions	Aviat Space Environ Med	Exclude	-	-	-	-	-	No	-
L. L. Hom; E. C. Lee; J. M. A 2012		Eleven days of moderate exercise and heat exposure induces acclimation without significant HSP70 expression	Cell Stress Chaperones	Exclude	-	No	-	-	-	No	-
O. Hue 2012		Living and training in a tropical environment: a challenge for aerobic exercise applied knowledge	West Indian Med J	Exclude	-	No	-	-	-	No	-
M. Iguchi; A. E. Littmann; S. 12012		Heat stress and cardiovascular, hormonal, and heat shock proteins in humans	J Athl Train	Exclude	Yes	-	-	-	-	-	-
L. James 2012		Milk protein and the restoration of fluid balance after exercise	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-
C. Jimenez; J. O. Fortrat; B. D 2012		Moderate exercise effects on orthostatic intolerance while wearing protective clothing	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
S. A. Kavouras; G. Arnaoutis; 2012		Educational intervention on water intake improves hydration status and enhances exercise performance	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
A. Maciejewska; M. Sawczuk; 2012		The PPARG1A gene Gly482Ser in Polish and Russian athletes	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
D. V. Maltseva; E. A. Ryabenk 2012		Effect of exercise on the expression of HSPBP1, PGLYRP1, and HSPA1A genes in human leukocytes	Bull Exp Biol Med	Exclude	Yes	-	-	-	-	-	-
R. Martinez; D. Jones; D. Hod 2012		Blocking the beta-adrenergic system does not affect sweat gland function during heat acclimation	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-
A. Mestre-Alfaro; M. D. Ferre 2012		Body temperature modulates the antioxidant and acute immune responses to exercise	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
I. Milisav; B. Poljsak; D. Supi 2012		Adaptive response, evidence of cross-resistance and its potential clinical use	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
R. Mora-Rodriguez 2012		Influence of aerobic fitness on thermoregulation during exercise in the heat	Exerc Sport Sci Rev	Exclude	Yes	-	-	-	-	-	-
R. Mora-Rodriguez; R. Aguad 2012		A standard blood bank donation alters the thermal and cardiovascular responses during subsequent exercise	Transfusion	Exclude	Yes	-	-	-	-	-	-
R. Mora-Rodriguez; N. Hamoi 2012		Salt and fluid loading: effects on blood volume and exercise performance	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-
NCT01672710 2012		Gulf War Illness: Evaluation of an Innovative Detoxification Program		Exclude	Yes	-	-	-	-	-	-
A. C. Niehaus; M. J. Angilletti 2012		Predicting the physiological performance of ectotherms in fluctuating thermal environments	J Exp Biol	Exclude	Yes	-	-	-	-	-	-
T. Ohori; T. Nozawa; H. Ihori; 2012		Effect of repeated sauna treatment on exercise tolerance and endothelial function in patients with cardiovascular disease	Am J Cardiol	Exclude	-	-	-	-	No	No	-
A. C. Petersen; M. J. McKenn 2012		Infusion with the antioxidant N-acetylcysteine attenuates early adaptive responses to exercise in humans	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-
P. Y. Poh; L. E. Armstrong; D. 2012		Orthostatic hypotension after 10 days of exercise-heat acclimation and 28 hours of sleep loss	Aviat Space Environ Med	Exclude	-	-	-	-	-	No	-
S. Racinais; M. Mohr; M. Buc 2012		Individual responses to short-term heat acclimatization as predictors of football performance in a professional team	Br J Sports Med	Exclude	-	No	-	-	-	No	-
A. Romberg; A. Ikonen; J. Rui 2012		The effects of heat stress on physical functioning in persons with multiple sclerosis	J Neuro Sci	Exclude	-	-	-	-	No	No	-
G. H. Ross; M. C. Sternquist 2012		Methamphetamine exposure and chronic illness in police officers: significant improvement with heat acclimation	Toxicol Ind Health	Exclude	Yes	-	-	-	-	-	-
J. L. Ruas; J. P. White; R. R 2012		A PGC-1α isoform induced by resistance training regulates skeletal muscle hypertrophy	Cell	Exclude	Yes	-	-	-	-	-	-
C. Salathé; C. Pellaton; L. Vall 2012		[Exertional heatstroke]	Rev Med Suisse	Exclude	Yes	-	No	-	-	-	-
T. G. Sazontova; O. S. Glazac 2012		[Adaptation to hypoxia and hyperoxia improves physical endurance: the role of reactive oxygen species]	Russ Fiziol Zh Im I M Sec	Exclude	Yes	-	No	-	-	-	-
L. Scheef; J. Jankowski; M. D 2012		An fMRI study on the acute effects of exercise on pain processing in trained athletes	Pain	Exclude	Yes	-	-	-	-	-	-
M. E. Sears; K. J. Kerr; R. I. E 2012		Arsenic, cadmium, lead, and mercury in sweat: a systematic review	J Environ Public Health	Exclude	Yes	-	-	-	-	-	-
M. Skein; R. Duffield; J. Cann 2012		Self-paced intermittent-sprint performance and pacing strategies following respective pre-cooling strategies	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. N. Soto Ruiz; E. Ezquerro 2012		[Pharmacological approaches to control of body temperature]	Rev Enferm	Exclude	-	No	No	-	-	No	-
N. K. Stepto; B. Benziane; G. 2012		Short-term intensified cycle training alters acute and chronic responses of PGC1α and Cytochrome c	PLoS One	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
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T. Utsuki	2013	Automatic control system of brain temperature by air-surface cooling for therapeutic hypothermia	Annu Int Conf IEEE Eng	Exclude	Yes	-	-	-	-	-	-
N. G. Versey; S. L. Halson; B.	2013	Water immersion recovery for athletes: effect on exercise performance and practical recommendations	Sports Med	Exclude	-	No	-	-	-	-	-
Z. Vesic; M. Vukasinovic-Vesi	2013	The effects of acclimatization on blood clotting parameters in exertional heat stress	Vojnosanit Pregl	Exclude	-	-	-	-	No	-	-
F. Wang; C. Gao; K. Kuklane;	2013	Effects of various protective clothing and thermal environments on heat strain of unacclimated men	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
A. T. White; T. A. Vanhaisma;	2013	Effect of passive whole body heating on central conduction and cortical excitability in multiple sclerosis	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
T. Wijayanto; S. Toramoto; Y.	2013	Passive heat exposure induced by hot water leg immersion increased oxyhemoglobin in pre-frontal cortex	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
H. E. Wright; J. Larose; T. M.	2013	Do older firefighters show long-term adaptations to work in the heat?	J Occup Environ Hyg	Exclude	-	-	-	-	No	-	-
F. Yamazaki	2013	Effectiveness of exercise-heat acclimation for preventing heat illness in the workplace	J Occup Environ Hyg	Exclude	-	No	-	-	No	-	-
Actrn	2013	Does exercise reduce the incidence of lymphoedema more than advice alone following inguinal hernia repair?	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
Actrn	2013	The impact of whole body heating on blood flow distribution and temperature regulation in chronic kidney disease	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
P. Alderson; G. Campbell; A.	2014	Thermal insulation for preventing inadvertent perioperative hypothermia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. F. Alghannam; K. Tsintzas;	2014	Post-Exercise Protein Trial: Interactions between Diet and Exercise (PEPTIDE): study protocol for a randomised controlled trial	Trials	Exclude	Yes	-	-	-	-	-	-
K. Baar	2014	Nutrition and the adaptation to endurance training	Sports Med	Exclude	Yes	-	-	-	-	-	-
M. Baillot; S. Le Bris; O. Hue	2014	Fluid replacement strategy during a 27-Km trail run in hot and humid conditions	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
M. R. Beltran Valls; I. Dimaura	2014	Explosive type of moderate-resistance training induces functional, cardiovascular, and molecular adaptations in young men	Age (Dordr)	Exclude	Yes	-	-	-	-	-	-
M. F. Bergeron	2014	Heat stress and thermal strain challenges in running	J Orthop Sports Phys Ther	Exclude	-	No	-	-	No	-	-
M. F. Bergeron	2014	Hydration and thermal strain during tennis in the heat	Br J Sports Med	Exclude	-	No	-	-	No	-	-
S. Best; M. Thompson; C. Cai	2014	Exercise-heat acclimation in young and older trained cyclists	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
D. P. Born; M. W. Hoppe; N. I.	2014	[Adaptive mechanisms and behavioural recommendations: playing football in heat, cold and high altitude]	Sportverletz Sportschaden	Exclude	Yes	-	No	-	-	-	-
L. Bottoms; M. Price	2014	The effect of arm training on thermoregulatory responses and calf volume during upper body exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. Brearley; I. Norton; D. Kir	2014	Responses of elite road motorcyclists to racing in tropical conditions: a case study	Int J Sports Physiol Perform	Exclude	Yes	-	-	-	-	-	-
H. Brinkmeier; K. Ohlendorf	2014	Chaperoning heat shock proteins: proteomic analysis and relevance for normal and dystrophin-deficient muscle	Proteomics Clin Appl	Exclude	Yes	-	-	-	-	-	-
L. A. Carlson; D. P. Ferguson;	2014	Physiological strain of stock car drivers during competitive racing	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
S. Chalmers; A. Esterman; R.	2014	Short-term heat acclimation training improves physical performance: a systematic review, and experimental study	Sports Med	Exclude	-	No	-	-	No	-	-
K. J. Chen; T. H. Chen; Y. M.	2014	High-volume plasma exchange in a patient with acute liver failure due to non-exertional heat stroke	J Clin Apher	Exclude	Yes	-	-	-	-	-	-
M. A. Cleary; M. G. Toy; R. M.	2014	Thermoregulatory, cardiovascular, and perceptual responses to intermittent cooling during exercise	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
J. N. Copley; G. K. Sakellariou	2014	Lifelong training preserves some redox-regulated adaptive responses after an acute exercise stimulus	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
J. Corbett; R. A. Neal; H. C. L.	2014	Adaptation to heat and exercise performance under cooler conditions: a new hot topic	Sports Med	Exclude	-	No	-	-	No	-	-
R. J. Costa; M. J. Crockford;	2014	Heat acclimation responses of an ultra-endurance running group preparing for hot desert-based competition	Eur J Sport Sci	Exclude	-	No	-	-	No	-	-
M. N. Cramer; O. Jay	2014	Selecting the correct exercise intensity for unbiased comparisons of thermoregulatory responses between individuals	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
J. S. Cuddy; W. S. Hailes; B. C.	2014	A reduced core to skin temperature gradient, not a critical core temperature, affects aerobic capacity	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
K. T. Cumming; T. Raastad; G	2014	Effects of vitamin C and E supplementation on endogenous antioxidant systems and heat shock protein expression	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
L. G. Dean; A. Breslin; E. Z. F.	2014	Is it hot in here? Thermoregulation and homeostasis through an exercise activity	Adv Physiol Educ	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; A. T. Lovering; M.	2014	Heat acclimation and cross tolerance to hypoxia: Bridging the gap between cellular and systemic responses	Temperature (Austin)	Exclude	-	No	-	-	No	-	-
V. E. Fernández-Ellas; A. Mar	2014	Validity of hydration non-invasive indices during the weightcutting and official weigh-in for Olympic athletes	PLoS One	Exclude	Yes	-	-	-	-	-	-
N. T. Frankenberg; G. D. Lam	2014	Small heat shock proteins translocate to the cytoskeleton in human skeletal muscle following exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Fu; W. G. Weng; H. Y. Yua	2014	Quantitative assessment of the relationship between radiant heat exposure and protective performance	J Hazard Mater	Exclude	Yes	-	-	-	-	-	-
A. T. Garrett; N. G. Goossens;	2014	Short-term heat acclimation is effective and may be enhanced rather than impaired by dehydration	Am J Hum Biol	Exclude	-	-	-	-	No	-	-
H. Gatterer; K. Schenk; L. Lar	2014	Bioimpedance identifies body fluid loss after exercise in the heat: a pilot study with body cooling	PLoS One	Exclude	Yes	-	-	-	-	-	-
O. R. Gibson; A. Dennis; T. Pi	2014	Extracellular Hsp72 concentration relates to a minimum endogenous criteria during acute exercise	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
O. Girard; R. J. Christian; S. R	2014	Heat stress does not exacerbate tennis-induced alterations in physical performance	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
O. Girard; S. Racinais; J. D. P.	2014	Tennis in hot and cool conditions decreases the rapid muscle torque production capacity of the knee	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
P. D. Glasgow; R. Ferris; C. M	2014	Cold water immersion in the management of delayed-onset muscle soreness: is dose important?	A Phys Ther Sport	Exclude	Yes	-	-	-	-	-	-
A. Y. Goharizi; R. Kwong; R. 2014	2014	Development of robust/predictive control strategies for image-guided ablative treatments using a robotic system	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
E. Grazzoli; I. Dimaura; N. M	2014	SFRP-E Young Investigator Award: B-crystallin modulation after acute exercise in skeletal muscle	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
D. Gryka; W. Pilch; M. Szarek	2014	The effect of sauna bathing on lipid profile in young, physically active, male subjects	Int J Occup Med Environ	Exclude	-	-	-	-	No	-	-
J. A. Hashmi; J. Kong; R. Spa	2014	Functional network architecture predicts psychologically mediated analgesia related to treatment of acute pain	J Neurosci	Exclude	Yes	-	-	-	-	-	-
B. A. Holliss; R. J. Burden; A.	2014	Eight weeks of intermittent hypoxic training improves submaximal physiological variables in highly trained athletes	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
O. Hue; S. Henri; M. Baillot;	2014	Thermoregulation, hydration and performance over 6 days of trail running in the tropics	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
M. Ihsan; G. Watson; H. C. F.	2014	Postexercise muscle cooling enhances gene expression of PGC-1α	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
S. Iwase; Y. Kawahara; N. Nis	2014	Effects of isotonic and isometric exercises with mist sauna bathing on cardiovascular, thermoregulatory, and metabolic responses	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
L. J. James; L. Mattin; P. Aldi	2014	Effect of whey protein isolate on rehydration after exercise	Amino Acids	Exclude	Yes	-	-	-	-	-	-
D. Jovanović; R. Karkalić; S.	2014	Physiological tolerance to uncompensated heat stress in soldiers: effects of various types of body cooling	Vojnosanit Pregl	Exclude	Yes	-	-	-	-	-	-
T. Kaldur; J. Kals; V. Öpik;	2014	Effects of heat acclimation on changes in oxidative stress and inflammation caused by endurance exercise	Oxid Med Cell Longev	Exclude	-	-	-	-	No	-	-
H. Kikuchi; N. Shiozawa; S. T	2014	Effect of repeated Waon therapy on exercise tolerance and pulmonary function in patients with chronic obstructive pulmonary disease	Int J Chron Obstruct Pulm	Exclude	-	-	-	-	No	-	-
M. S. Kovacs; L. B. Baker	2014	Recovery interventions and strategies for improved tennis performance	Br J Sports Med	Exclude	-	No	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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B. J. Lee; E. L. Emery-Sinclair	2014	The impact of submaximal exercise during heat and/or hypoxia on the cardiovascular and monetary	Extrem Physiol Med	Exclude	Yes	-	-	-	-	-	-
K. Levels; J. de Koning; I. Br	2014	Effects of radiant heat exposure on pacing pattern during a 15-km cycling time trial	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
G. W. McGarr; G. L. Hartley;	2014	Neither short-term sprint nor endurance training enhances thermal response to exercise in a hot en	J Occup Environ Hyg	Exclude	Yes	-	-	-	-	-	-
A. J. Murton; R. Billeter; F. B.	2014	Transient transcriptional events in human skeletal muscle at the outset of concentric resistance ex	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
G. Musumeci; F. Maria Trovat	2014	Effects of dietary extra-virgin olive oil on oxidative stress resulting from exhaustive exercise in ra	Acta Histochem	Exclude	Yes	-	-	-	-	-	-
V. Oplik; S. Timpmann; K. Ki	2014	Heat acclimation decreases the growth hormone response to acute constant-load exercise in the he	Growth Horm IGF Res	Exclude	-	-	-	-	No	-	-
M. J. Patterson; J. M. Stocks;	2014	Whole-body fluid distribution in humans during dehydration and recovery, before and after humid	Acta Physiol (Oxf)	Exclude	-	-	-	-	No	-	-
J. D. Périard; S. Racinais; W.	2014	Coping with heat stress during match-play tennis: does an individualised hydration regimen enhar	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
B. M. Piche; S. M. Stankorb;	2014	Attitudes, beliefs, and behaviors of active duty soldiers attending the ArmyMOVE! weight manag	Mil Med	Exclude	Yes	-	-	-	-	-	-
W. Pilch; Z. Szygula; A. K. Ty	2014	Disturbances in pro-oxidant-antioxidant balance after passive body overheating and after exercise	PLoS One	Exclude	Yes	-	-	-	-	-	-
D. B. Pyne; J. H. Guy; A. M. I	2014	Managing heat and immune stress in athletes with evidence-based strategies	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	No	-
S. Racinais; M. Buchheit; J. B	2014	Physiological and performance responses to a training camp in the heat in professional Australian	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	No	-
L. W. Raymond; T. A. Barring	2014	A thermal stress treadmill walk for clinic evaluation of candidates for hazardous materials (HazM	Int J Occup Saf Ergon	Exclude	Yes	-	-	-	-	-	-
R. A. Shanly; D. C. Nieman;	2014	Evaluation of Rhodiola rosea supplementation on skeletal muscle damage and inflammation in ru	Brain Behav Immun	Exclude	Yes	-	-	-	-	-	-
J. Smoljanić; N. B. Morris; S.	2014	Running economy, not aerobic fitness, independently alters thermoregulatory responses during tre	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
A. Stotz; K. Rapp; J. Oksa; D.	2014	Effect of a brief heat exposure on blood pressure and physical performance of older women living	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
O. Stuve; E. Marder; A. Okai;	2014	Heat exposure and bicycling trigger recurrent aseptic meningitis: a case report	BMC Neurol	Exclude	Yes	-	-	-	-	-	-
P. Sutkowsky; A. Woźniak; T. B	2014	The effect of a single Finnish sauna bath after aerobic exercise on the oxidative status in healthy n	Scand J Clin Lab Invest	Exclude	-	Yes	Yes	Yes	No	-	No
S. H. Sveaas; I. J. Berg; S. A.	2014	Efficacy of high intensity exercise on disease activity and cardiovascular risk in active axial spon	PLoS One	Exclude	Yes	-	-	-	-	-	-
J. E. Thorne; P. A. Fisher; T.	2014	Ambulance call-outs and response times in Birmingham and the impact of extreme weather and cl	Emerg Med J	Exclude	Yes	-	-	-	-	-	-
K. A. Volterman; J. Obaid; B.	2014	Effect of milk consumption on rehydration in youth following exercise in the heat	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
M. Waldron	2014	The reliability and adaptive responses of gross efficiency in hot ambient conditions	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
S. Wartig; P. Alderson; G. Cai	2014	Interventions for treating inadvertent postoperative hypothermia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
D. J. West; C. J. Cook; K. A. S	2014	Profiling the time-course changes in neuromuscular function and muscle damage over two consec	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-
A. C. White; R. M. Salgado; S	2014	Does heat acclimation improve exercise capacity at altitude? A cross-tolerance model	Int J Sports Med	Exclude	-	No	-	-	-	No	-
N. Williams; S. J. Wickes; K.	2014	Preparation for and physiological responses to competing in the Marathon des Sables: a case repo	J Sports Med Phys Fitness	Exclude	-	No	-	-	-	No	-
G. Wilson; B. Brust; J. P. Mor	2014	Weight-making strategies in professional jockeys: implications for physical and mental health and	Sports Med	Exclude	Yes	-	-	-	-	-	-
H. E. Wright; J. Larose; T. M.	2014	Moderate-intensity intermittent work in the heat results in similar low-level dehydration in young	J Occup Environ Hyg	Exclude	Yes	-	-	-	-	-	-
H. E. Wright-Beatty; T. M. Mc	2014	Inflammatory responses of older firefighters to intermittent exercise in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
P. M. Young; S. Partington; M	2014	Stressors and coping strategies of U.K. firefighters during on-duty incidents	Stress Health	Exclude	Yes	-	-	-	-	-	-
T. Zeng; J. J. Li; D. Q. Wang;	2014	Effects of heat stress on antioxidant defense system, inflammatory injury, and heat shock proteins	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
L. Zhang; Y. C. Bao	2014	Effect of acclimation training on physiological changes in a randomized controlled trial in hot-hu	Zhongguo Ying Yong She	Exclude	-	-	-	-	No	-	-
M. Zuhl; S. Schneider; K. Lan	2014	Exercise regulation of intestinal tight junction proteins	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
Actrn	2014	Day to day activities as therapeutic modalities to rehabilitate injured hands	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
T. Amano; Y. Inoue; S. Koga;	2015	Influence of exercise training with thigh compression on heat-loss responses	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
F. T. Amorim; I. T. Fonseca; C	2015	Insights into the role of heat shock protein 72 to whole-body heat acclimation in humans	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-
Y. Atomi	2015	Gravitational Effects on Human Physiology	Subcell Biochem	Exclude	Yes	-	-	-	-	-	-
M. D. Barberio; D. J. Elmer; B	2015	Systemic LPS and inflammatory response during consecutive days of exercise in heat	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
R. J. Berg; K. Inaba; M. Sulliv	2015	The impact of heat stress on operative performance and cognitive function during simulated lapar	Surgery	Exclude	Yes	-	-	-	-	-	-
C. C. Bongers; D. H. Thijssen;	2015	Precooling and percooling (cooling during exercise) both improve performance in the heat: a met	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
C. D. Bradford; S. J. Lucas; D	2015	Swimming in warm water is ineffective in heat acclimation and is non-ergogenic for swimmers	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
M. Brazaitis; N. Eimantas; L.	2015	Two strategies for the acute response to cold exposure but one strategy for the response to heat str	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
F. Brocherie; O. Girard; A. Fa	2015	Influence of weather, rank, and home advantage on football outcomes in the Gulf region	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
F. Brocherie; G. P. Millet	2015	Is the Wet-Bulb Globe Temperature (WBGT) Index Relevant for Exercise in the Heat?	Sports Med	Exclude	Yes	-	-	-	-	-	-
G. Campbell; P. Alderson; A.	2015	Warming of intravenous and irrigation fluids for preventing inadvertent perioperative hypothermi	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
E. Chauhan; A. Bali; N. Singh	2015	Cross stress adaptation: Phenomenon of interactions between homotypic and heterotypic stressors	Life Sci	Exclude	Yes	-	-	-	-	-	-
H. Chiroma; S. Abdul-kareem;	2015	Global Warming: Predicting OPEC Carbon Dioxide Emissions from Petroleum Consumption Usii	PLoS One	Exclude	Yes	-	-	-	-	-	-
J. N. Cogley; P. R. Mout; J. G	2015	Exercise improves mitochondrial and redox-regulated stress responses in the elderly: better late	Biogerontology	Exclude	Yes	-	-	-	-	-	-
R. A. Corney; C. Sunderland;	2015	The effect of hydration status on appetite and energy intake	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. Couto; P. Santos; D. Silva;	2015	Exhaled breath temperature in elite swimmers: The effects of a training session in adolescents wit	Pediatr Allergy Immunol	Exclude	Yes	-	-	-	-	-	-
M. V. De Carvalho; M. T. De /	2015	The temperature of water ingested ad libitum does not influence performance during a 40-km self	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
A. Dolci; M. B. Fortes; F. S. W	2015	Repeated muscle damage blunts the increase in heat strain during subsequent exercise heat stress	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. G. Dulloo; Y. Schutz	2015	Adaptive Thermogenesis in Resistance to Obesity Therapies: Issues in Quantifying Thrifty Ener	Curr Obes Rep	Exclude	Yes	-	-	-	-	-	-
C. G. Farmer	2015	The Evolution of Unidirectional Pulmonary Airflow	Physiology (Bethesda)	Exclude	Yes	-	-	-	-	-	-
D. Filingeri; D. Fournet; S. Hc	2015	Mild evaporative cooling applied to the torso provides thermoregulatory benefits during running i	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
K. R. Fox; P. W. Ku; M. Hills	2015	Objectively assessed physical activity and lower limb function and prospective associations with i	Age Ageing	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
N. Fujii; B. Tsuji; Y. Honda; N. 2015		Effect of short-term exercise-heat acclimation on ventilatory and cerebral blood flow responses to	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
O. R. Gibson; J. A. Mee; J. A. 2015		Isothermic and fixed intensity heat acclimation methods induce similar heat adaptation following	J Therm Biol	Exclude	-	-	-	-	No	-	-
O. R. Gibson; G. Turner; J. A. 2015		Heat acclimation attenuates physiological strain and the HSP72, but not HSP90α, mRNA responses	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. K. Gill; A. Teixeira; L. Ram 2015		Circulatory endotoxin concentration and cytokine profile in response to exertional-heat stress dur	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
O. Girard; F. Brocherie; D. J. 12015		Sprint performance under heat stress: A review	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
E. Gnaiger; R. Boushel; H. Sø 2015		Mitochondrial coupling and capacity of oxidative phosphorylation in skeletal muscle of Inuit and	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
M. C. Gomez-Cabrera; A. Sal 2015		Redox modulation of mitochondriogenesis in exercise. Does antioxidant supplementation blunt th	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
C. J. Gronlund; V. J. Berrocal; 2015		Vulnerability to extreme heat by socio-demographic characteristics and area green space among t	Environ Res	Exclude	Yes	-	-	-	-	-	-
L. T. Gruss; D. Schmitt 2015		The evolution of the human pelvis: changing adaptations to bipedalism, obstetrics and thermoreg	Philos Trans R Soc Lond	Exclude	Yes	-	-	-	-	-	-
D. M. Gubernot; G. B. Anders 2015		Characterizing occupational heat-related mortality in the United States, 2000-2010: an analysis us	Am J Ind Med	Exclude	Yes	-	-	-	-	-	-
J. H. Guy; G. B. Deakin; A. M 2015		Adaptation to hot environmental conditions: an exploration of the performance basis, procedur	Sports Med	Exclude	-	No	-	-	No	-	-
M. Horne; N. Thomas; C. Mc 2015		Patient-directed therapy during in-patient stroke rehabilitation: stroke survivors' views of feasi	Disabil Rehabil	Exclude	Yes	-	-	-	-	-	-
Z. Jastrzębski; M. Zychowska 2015		Effects of 6-week specific low-intensity training on selected aerobic capacity parameters and HSP	Genet Mol Res	Exclude	Yes	-	-	-	-	-	-
L. Jin; P. K. Park; K. A. Hong; 2015		Effect of aluminized fabrics on radiant protective performance of fire proximity suit materials	Ann Occup Hyg	Exclude	Yes	-	-	-	-	-	-
A. Karlsen; L. Nybo; S. J. Nør 2015		Time course of natural heat acclimatization in well-trained cyclists during a 2-week training camp	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
A. Karlsen; S. Racinais; M. V. 2015		Heat acclimatization does not improve VO2max or cycling performance in a cool climate in train	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
L. Ke; G. Yan; Z. Wang; S. Ya 2015		Design and assessment of novel artificial anal sphincter with adaptive transcutaneous energy tra	J Med Eng Technol	Exclude	Yes	-	-	-	-	-	-
T. Keene; M. Brearley; B. Bov 2015		Accuracy of Tympanic Temperature Measurement in Firefighters Completing a Simulated Structu	Prehosp Disaster Med	Exclude	Yes	-	-	-	-	-	-
S. Keiser; D. Fluck; F. Hüppin 2015		Heat training increases exercise capacity in hot but not in temperate conditions: a mechanistic cou	Am J Physiol Heart Circ P	Exclude	-	-	-	-	No	-	-
M. Kumar Singh; P. V. Janard 2015		Molecular characterization and expression analysis of hsp60 gene homologue of sheep blowfly, L	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
E. R. Kuras; D. M. Hondula; J 2015		Heterogeneity in individually experienced temperatures (IETs) within an urban neighborhood: ins	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
B. Larsen; R. Snow; G. Vincet 2015		Multiple Days of Heat Exposure on Firefighters' Work Performance and Physiology	PLoS One	Exclude	Yes	-	-	-	-	-	-
S. Laxminarayan; M. J. Buller 2015		Human Core Temperature Prediction for Heat-Injury Prevention	IEEE J Biomed Health Inf	Exclude	Yes	-	-	-	-	-	-
B. J. Lee; R. W. Mackenzie; V 2015		Human monocyte heat shock protein 72 responses to acute hypoxic exercise after 3 days of exerci	Biomed Res Int	Exclude	Yes	-	-	-	-	-	-
J. K. Lee; R. W. Kenefick; S. 2015		Novel Cooling Strategies for Military Training and Operations	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
S. Lee; H. Fujimura; Y. Shimo 2015		Verification of impact of morning showering and mist sauna bathing on human physiological func	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
C. A. Leicht; K. Kouda; Y. Uri 2015		Hot water immersion induces an acute cytokine response in cervical spinal cord injury	Eur J Appl Physiol	Exclude	-	-	-	-	No	No	-
N. A. Lewis; G. Howatson; K. 2015		Alterations in redox homeostasis in the elite endurance athlete	Sports Med	Exclude	Yes	-	-	-	-	-	-
J. A. Loepky 2015		Plasma volume after heat acclimation: Variations due to season, fitness and methods of measure	Acta Physiol Hung	Exclude	-	No	-	-	No	-	-
J. Madrigano; K. Ito; S. Johns 2015		A Case-Only Study of Vulnerability to Heat Wave-Related Mortality in New York City (2000-201	Environ Health Perspect	Exclude	Yes	-	-	-	-	-	-
F. E. Marino 2015		Time trial performance and pacing in heat is determined by rate of heat gain	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
R. Matsuura; T. Arimitsu; T. Y 2015		Effects of heat exposure in the absence of hyperthermia on power output during repeated cycling	Biol Sport	Exclude	-	-	-	-	No	-	-
A. Matzarakis; D. Fröhlich 2015		Sport events and climate for visitors—the case of FIFA World Cup in Qatar 2022	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
R. S. Metcalfe; F. Koumanov; 2015		Physiological and molecular responses to an acute bout of reduced-exertion high-intensity interva	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
F. Mori; S. Hanida; K. Kumah 2015		Minor contributions of the maxillary sinus to the air-conditioning performance in macaque monke	J Exp Biol	Exclude	Yes	-	-	-	-	-	-
M. I. Nilsson; L. G. MacNeil; 2015		Combined aerobic exercise and enzyme replacement therapy rejuvenates the mitochondrial-lysos	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
H. W. Nolte; T. Hew-Butler; T 2015		Exercise-associated hyponatremic encephalopathy and exertional heatstroke in a soldier: High rat	Phys Sportsmed	Exclude	Yes	-	-	-	-	-	-
S. J. Oliver; A. D. Harper Smit 2015		Two nights of sleep deprivation with or without energy restriction does not impair the thermal res	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. J. Pearson; S. R. Hussain 2015		A review on the mechanisms of blood-flow restriction resistance training-induced muscle hypert	Sports Med	Exclude	Yes	-	-	-	-	-	-
J. D. Périard; O. Jay; J. M. Alc 2015		Author's Reply to Brocherie and Millet: 'Is the Wet-Bulb Globe Temperature (WBGT) Index Rele	Sports Med	Exclude	Yes	-	-	-	-	-	-
J. D. Périard; S. Racinais 2015		Training and competing in the heat	Scand J Med Sci Sports	Exclude	-	No	-	-	No	-	-
J. D. Périard; S. Racinais; A. 2015		Response	Med Sci Sports Exerc	Exclude	-	No	-	-	No	-	-
J. D. Périard; S. Racinais; M. 2015		Adaptations and mechanisms of human heat acclimation: Applications for competitive athletes an	Scand J Med Sci Sports	Exclude	-	No	-	-	No	-	-
M. P. Poirier; D. Gagnon; B. J 2015		Whole-body heat exchange during heat acclimation and its decay	Med Sci Sports Exerc	Exclude	-	No	-	-	No	-	-
S. Qian; M. Li; G. Li; K. Liu; 2015		Environmental heat stress enhances mental fatigue during sustained attention task performing: evi	Behav Brain Res	Exclude	Yes	-	-	-	-	-	-
S. Racinais; J. M. Alonso; A. J 2015		Consensus recommendations on training and competing in the heat	Br J Sports Med	Exclude	-	No	-	-	No	-	-
S. Racinais; J. M. Alonso; A. J 2015		Consensus recommendations on training and competing in the heat	Scand J Med Sci Sports	Exclude	-	No	-	-	No	-	-
S. Racinais; J. D. Périard; A. 2015		Effect of heat and heat acclimatization on cycling time trial performance and pacing	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
V. O. o. Research; Developme 2015		Effect of Heat Exposure on Cognition in Persons With Tetraplegia		Exclude	-	-	-	-	No	No	-
P. Rodriguez-Miguelez; R. Fer 2015		Whole-body vibration improves the anti-inflammatory status in elderly subjects through toll-like	Mech Ageing Dev	Exclude	Yes	-	-	-	-	-	-
P. Schantz 2015		Along paths converging to Bengt Saltin's early contributions in exercise physiology	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
M. Schild; A. Ruhs; T. Beiter; 2015		Basal and exercise induced label-free quantitative protein profiling of m. vastus lateralis in traine	J Proteomics	Exclude	Yes	-	-	-	-	-	-
Z. J. Schlader; M. S. Ganio; J. 2015		Heat acclimation improves heat exercise tolerance and heat dissipation in individuals with extensi	J Appl Physiol (1985)	Exclude	-	-	-	-	No	No	-
M. Sobajima; T. Nozawa; Y. F 2015		Waon therapy improves quality of life as well as cardiac function and exercise capacity in patien	Int Heart J	Exclude	-	-	-	-	No	No	-
Y. Soejima; T. Munemoto; A. 2015		Effects of Waon therapy on chronic fatigue syndrome: a pilot study	Intern Med	Exclude	-	-	-	-	No	No	-
J. Stanley; A. Halliday; S. D'A 2015		Effect of sauna-based heat acclimation on plasma volume and heart rate variability	Eur J Appl Physiol	Exclude	-	No	Yes	Yes	Yes	Yes	Yes

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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J. A. Sturgeon; M. M. Tieu; L. 2015	2015	Nonlinear Effects of Noxious Thermal Stimulation and Working Memory Demands on Subjective	Pain Med	Exclude	Yes	-	-	-	-	-	-
M. Tamm; A. Jakobson; M. H. 2015	2015	Effects of heat acclimation on time perception	Int J Psychophysiol	Exclude	-	-	-	-	No	-	-
N. A. Taylor	2015	Overwhelming Physiological Regulation Through Personal Protection	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
W. T. Thomas	2015	Drought-resistant cereals: impact on water sustainability and nutritional quality	Proc Nutr Soc	Exclude	Yes	-	-	-	-	-	-
B. M. Trezza; D. Apolinario; F. 2015	2015	Environmental heat exposure and cognitive performance in older adults: a controlled trial	Age (Dordr)	Exclude	-	-	-	-	No	-	-
B. Tsuji; Y. Honda; Y. Ikebe; N. 2015	2015	Voluntary suppression of hyperthermia-induced hyperventilation mitigates the reduction in cerebral	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
J. A. Tuttle; P. C. Castle; A. J. 2015	2015	Downhill running and exercise in hot environments increase leukocyte Hsp72 (HSPA1A) and Hsp	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
I. Vaheer; S. Timpmann; M. Ae 2015	2015	Impact of acute sodium citrate ingestion on endurance running performance in a warm environme	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
C. E. Veneroso; G. P. Ramos; J. 2015	2015	Physical performance and environmental conditions: 2014 World Soccer Cup and 2016 Summer (	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-
S. Vrignaud; T. Briot; A. Laun 2015	2015	Design and stability study of a paediatric oral solution of methotrexate 2 mg/ml	Int J Pharm	Exclude	Yes	-	-	-	-	-	-
A. Walker; C. Argus; M. Drill 2015	2015	Repeat work bouts increase thermal strain for Australian firefighters working in the heat	Int J Occup Environ Health	Exclude	-	-	-	-	No	-	-
A. G. Willmott; M. Hayes; J. I 2015	2015	The reliability of a heat acclimation state test prescribed from metabolic heat production intensit	J Therm Biol	Exclude	-	-	-	-	No	-	-
S. Winter	2015	Effectiveness of targeted home-based hip exercises in individuals with non-specific chronic or rec	J Back Musculoskelet Reh	Exclude	Yes	-	-	-	-	-	-
C. Zurh; B. Schuett; M. Casje 2015	2015	Pharmacokinetics and adhesion of a transdermal patch containing ethinyl estradiol and gestodene	Clin Pharmacol Drug Dev	Exclude	Yes	-	-	-	-	-	-
Actra	2015	Can relative motion extension splinting provide an earlier return to hand function than a control	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
W. M. Adams; Y. Hosokawa; I 2016	2016	An Exertional Heat Stroke Survivor's Return to Running: An Integrated Approach on the Treatme	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-
P. F. Aguiar; S. M. Magalhães; 2016	2016	Post-exercise cold water immersion does not alter high intensity interval training-induced exerci	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
A. P. Akerman; M. Tipton; C. 2016	2016	Heat stress and dehydration in adapting for performance: Good, bad, both, or neither?	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-
T. Amano; N. Gerrett; Y. Inou 2016	2016	Determination of the maximum rate of eccrine sweat glands' ion reabsorption using the galvanic s	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. M. Andrews; C. Deehl; R. I 2016	2016	Core Temperature in Service Members With and Without Traumatic Amputations During a Prolon	Mil Med	Exclude	Yes	-	-	-	-	-	-
T. G. Bailey; N. T. Cable; G. I 2016	2016	Repeated Warm Water Immersion Induces Similar Cerebrovascular Adaptations to 8 Weeks of Me	Int J Sports Med	Exclude	-	-	-	-	No	-	-
B. N. Balmain; O. Jay; S. Sab 2016	2016	Altered thermoregulatory responses in heart failure patients exercising in the heat	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
R. Basu; V. Sarovar; B. J. Mal 2016	2016	Association Between High Ambient Temperature and Risk of Stillbirth in California	Am J Epidemiol	Exclude	Yes	-	-	-	-	-	-
R. M. Bateman; M. D. Sharpe; 2016	2016	36th International Symposium on Intensive Care and Emergency Medicine : Brussels, Belgium. I	Crit Care	Exclude	Yes	-	-	-	-	-	-
T. C. Blakeman; D. Rodriguez 2016	2016	Performance of Portable Ventilators Following Storage at Temperature Extremes	Mil Med	Exclude	Yes	-	-	-	-	-	-
M. B. Brearley	2016	Pre-deployment Heat Acclimatization Guidelines for Disaster Responders	Prehosp Disaster Med	Exclude	-	No	-	-	No	-	-
V. E. Brunt; M. J. Howard; M. 2016	2016	Passive heat therapy improves endothelial function, arterial stiffness and blood pressure in sedent	J Physiol	Exclude	-	-	-	-	No	-	-
M. Buchheit; V. Cholley; P. La 2016	2016	Psychometric and Physiological Responses to a Preseason Competitive Camp in the Heat With a (	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
J. W. Castellani; A. J. Young 2016	2016	Human physiological responses to cold exposure: Acute responses and acclimatization to prolong	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-
J. W. Castellani; E. J. Zambra 2016	2016	Does high muscle temperature accentuate skeletal muscle injury from eccentric exercise?	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
S. Chalmers; A. Esterman; R. 2016	2016	Brief Heat Training: No Improvement of the Lactate Threshold in Mild Conditions	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
M. N. Cramer; O. Jay	2016	Biophysical aspects of human thermoregulation during heat stress	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-
S. A. Cuttler; V. Kirij; C. Tyler 2016	2016	A Comparison of 2 Practical Cooling Methods on Cycling Capacity in the Heat	J Athl Train	Exclude	Yes	-	-	-	-	-	-
T. D. Dileo; J. B. Powell; H. K 2016	2016	Effect of short-term heat acclimation training on kinetics of lactate removal following maximal ex	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
I. Dimairo; N. Mercatelli; D. 2016	2016	Exercise-induced ROS in heat shock proteins response	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
Y. Epstein; R. Yanovich; Y. He 2016	2016	Heat Tolerance Test or Race Simulation Test for Return to Activity after Heat Stroke	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri 2016	2016	Effect of heat exposure and exercise on food intake regulation: A randomized crossover study in y	Metabolism	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri 2016	2016	Impaired glucose tolerance after brief heat exposure: a randomized crossover study in healthy you	Clin Sci (Lond)	Exclude	Yes	-	-	-	-	-	-
O. R. Gibson; J. A. Tuttle; P. V 2016	2016	Hsp72 and Hsp90α mRNA transcription is characterised by large, sustained changes in core temp	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
C. Granata; R. S. Oliveira; J. F 2016	2016	Mitochondrial adaptations to high-volume exercise training are rapidly reversed after a reduction	Faseb j	Exclude	Yes	-	-	-	-	-	-
T. K. Harrison; T. E. Kim; A. I 2016	2016	Feasibility of eye-tracking technology to quantify expertise in ultrasound-guided regional anesthe	J Anesth	Exclude	Yes	-	-	-	-	-	-
S. Haseba; H. Sakakima; T. Ki 2016	2016	Combined effects of repeated sauna therapy and exercise training on cardiac function and physica	Disabil Rehabil	Exclude	-	-	-	-	No	No	-
G. Hatvani-Kovacs; M. Belusl 2016	2016	Drivers and barriers to heat stress resilience	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
M. W. Heesch; R. J. Shute; J. I 2016	2016	Transcriptional control, but not subcellular location, of PGC-1α is altered following exercise in a	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
B. Hegedüs; J. Varga; A. Som 2016	2016	[Interdisciplinary rehabilitation in patients with ankylosing spondylitis]	Orv Hetil	Exclude	Yes	-	No	-	-	-	-
D. C. Henstridge; M. A. Febr 2016	2016	Heat shock proteins and exercise adaptations. Our knowledge thus far and the road still ahead	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Houssein; P. Lopes; B. Fag 2016	2016	Hydration: The New FIFA World Cup's Challenge for Referee Decision Making?	J Athl Train	Exclude	Yes	-	-	-	-	-	-
C. A. James; A. G. Willmott; J 2016	2016	Ischaemic preconditioning does not alter the determinants of endurance running performance in th	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. Joslin; J. Mularella; A. Bai; 2016	2016	Mandatory Rest Stops Improve Athlete Safety during Event Medical Coverage for Ultramarathon	Prehosp Disaster Med	Exclude	Yes	-	-	-	-	-	-
Y. Kataoka; Y. I. Kamijo; Y. O 2016	2016	Effects of hypervolemia by protein and glucose supplementation during aerobic training on therm	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
K. Kavanagh; A. T. Davis; K. 2016	2016	Effects of heated hydrotherapy on muscle HSP70 and glucose metabolism in old and young verve	Cell Stress Chaperones	Exclude	-	-	-	-	No	No	-
G. P. Kenny; H. Groeller; R. N 2016	2016	Age, human performance, and physical employment standards	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
A. Khadir; S. Kavalakatti; J. Al 2016	2016	Physical exercise alleviates ER stress in obese humans through reduction in the expression and rel	Metabolism	Exclude	Yes	-	-	-	-	-	-
M. A. King; T. L. Clanton; O. 2016	2016	Hyperthermia, dehydration, and osmotic stress: unconventional sources of exercise-induced reacti	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
T. Kjellstrom; D. Briggs; C. Fi 2016	2016	Heat, Human Performance, and Occupational Health: A Key Issue for the Assessment of Global C	Annu Rev Public Health	Exclude	Yes	-	-	-	-	-	-
J. M. Lawler; D. A. Rodriguez 2016	2016	Mitochondria in the middle: exercise preconditioning protection of striated muscle	J Physiol	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
B. J. Lee; A. Miller; R. S. Jam	2016	Cross Acclimation between Heat and Hypoxia: Heat Acclimation Improves Cellular Tolerance and	Front Physiol	Exclude	-	-	-	-	No	-	-
J. B. Lee; J. H. Kim; H. Murot	2016	Perspiration Functions in Different Ethnic, Age, and Sex Populations: Modification of Sudomotor	Curr Probl Dermatol	Exclude	Yes	-	-	-	-	-	-
L. R. Leon	2016	Common mechanisms for the adaptive responses to exercise and heat stress	J Appl Physiol (1985)	Exclude	-	No	-	-	No	-	-
L. G. Madeira; R. L. Passos; J	2016	Autonomic thermoregulatory dysfunction in neurofibromatosis type 1	Arq Neuropsiquiatr	Exclude	Yes	-	-	-	-	-	-
E. Madrid; G. Urrutia; M. Roq	2016	Active body surface warming systems for preventing complications caused by inadvertent periods	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. L. Maynard; R. Kao; D. G.	2016	Impact of personal protective equipment on clinical output and perceived exertion	J R Army Med Corps	Exclude	Yes	-	-	-	-	-	-
B. K. McFarlin; A. L. Henning	2016	A shirt containing multistage phase change material and active cooling components was associated	Ergonomics	Exclude	Yes	-	-	-	-	-	-
M. P. Meaney; D. C. Nieman;	2016	Measuring Granulocyte and Monocyte Phagocytosis and Oxidative Burst Activity in Human Blood	J Vis Exp	Exclude	Yes	-	-	-	-	-	-
J. A. Mee; O. R. Gibson; J. A.	2016	Leukocyte Hsp72 mRNA transcription does not differ between males and females during heat acclimation	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-
C. T. Minson; J. D. Cotter	2016	CrossTalk proposal: Heat acclimatization does improve performance in a cool condition	J Physiol	Exclude	-	No	-	-	No	-	-
A. C. Moore; M. J. Stacey; K.	2016	Risk factors for heat illness among British soldiers in the hot Collective Training Environment	J R Army Med Corps	Exclude	Yes	-	-	-	-	-	-
H. Nakagawa; T. Matsumura;	2016	Changes of brain monoamine levels and physiological indexes during heat acclimation in rats	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
H. Nakata; M. Oshiro; M. Nar	2016	Effects of aerobic exercise under different thermal conditions on human somatosensory processing	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
R. A. Neal; J. Corbett; H. C. N	2016	Effect of short-term heat acclimation with permissive dehydration on thermoregulation and temperature	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
L. Nybo; C. Lundby	2016	CrossTalk opposing view: Heat acclimatization does not improve exercise performance in a cool condition	J Physiol	Exclude	-	No	-	-	No	-	-
K. O'Hearn; H. C. Tingelstad;	2016	Heat exposure increases circulating fatty acids but not lipid oxidation at rest and during exercise	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
A. Osailan; G. S. Metsios; P. C	2016	Factors associated with parasympathetic activation following exercise in patients with rheumatoid arthritis	BMC Cardiovasc Disord	Exclude	Yes	-	-	-	-	-	-
J. G. Pallarés; A. Martínez-Ab	2016	Muscle contraction velocity, strength and power output changes following different degrees of heat acclimation	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-
J. D. Périard; G. J. S. Travers;	2016	Cardiovascular adaptations supporting human exercise-heat acclimation	Auton Neurosci	Exclude	-	No	-	-	No	-	-
O. J. Perkin; R. L. Travers; J.	2016	Exercise strategies to protect against the impact of short-term reduced physical activity on muscle strength	Trials	Exclude	Yes	-	-	-	-	-	-
E. Pezzolo; A. Peroni; P. Gisot	2016	Heat urticaria: a revision of published cases with an update on classification and management	Br J Dermatol	Exclude	Yes	-	-	-	-	-	-
M. P. Poirier; D. Gagnon; G. F	2016	Local versus whole-body sweating adaptations following 14 days of traditional heat acclimation	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
A. Psikuta; K. Kuklane; A. Bo	2016	Opportunities and constraints of presently used thermal manikins for thermo-physiological simulation	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
W. O. Roberts; J. C. Dorman;	2016	Recurrent Heat Stroke in a Runner: Race Simulation Testing for Return to Activity	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
P. K. Rout; R. Kaushik; N. Rai	2016	Differential expression pattern of heat shock protein 70 gene in tissues and heat stress phenotypes in mice	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
A. D. Ruddock; S. W. Thomps	2016	Combined active and passive heat exposure induced heat acclimation in a soccer referee before 2016 World Cup	Springerplus	Exclude	-	No	-	-	No	No	-
C. Schmit; R. Duffield; C. Hai	2016	Pacing Adjustments Associated With Familiarization: Heat Versus Temperate Environments	Int J Sports Physiol Perform	Exclude	Yes	-	-	-	-	-	-
H. Shen; S. Tang; T. Mahapatr	2016	Condomless Vaginal Intercourse and Its Associates among Men Who Have Sex with Men in China	PLoS One	Exclude	Yes	-	-	-	-	-	-
P. Song; S. Li; H. Wu; R. Gao;	2016	Parkin promotes proteasomal degradation of p62: implication of selective vulnerability of neurons to oxidative stress	Protein Cell	Exclude	Yes	-	-	-	-	-	-
J. Suyama; S. J. McEntire; J. C	2016	Pilot Study Examining the Effects of Atropine on Performance during Uncompensable Heat Stress	Prehosp Emerg Care	Exclude	Yes	-	-	-	-	-	-
B. D. Sylvester; D. R. Lubans;	2016	Effects of Variety Support on Exercise-Related Well-Being	Appl Psychol Health Well	Exclude	Yes	-	-	-	-	-	-
L. Taylor; B. J. Lee; O. R. Gib	2016	Effective microorganisms - X attenuates circulating superoxide dismutase following an acute bout of exercise	Res Sports Med	Exclude	Yes	-	-	-	-	-	-
M. B. Tbovich; J. B. Kiratli; I	2016	The effects of a heat acclimation protocol in persons with spinal cord injury	J Therm Biol	Exclude	-	-	-	No	No	-	-
C. J. Tyler; T. R. Coffey; G. J.	2016	Acute L-arginine supplementation has no effect on cardiovascular or thermoregulatory responses during heat acclimation	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
C. J. Tyler; T. Reeve; G. J. Ho	2016	The Effects of Heat Adaptation on Physiology, Perception and Exercise Performance in the Heat	Sports Med	Exclude	-	No	-	-	No	-	-
J. D. M. Vloothuis; M. Mulder	2016	Caregiver-mediated exercises for improving outcomes after stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
N. C. Voermans; M. Snoeck; I	2016	RYR1-related rhabdomyolysis: A common but probably underdiagnosed manifestation of skeletal muscle disease	Rev Neurol (Paris)	Exclude	Yes	-	-	-	-	-	-
A. J. Wadley; J. E. Turner; S. J	2016	Factors influencing post-exercise plasma protein carbonyl concentration	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
N. P. Walsh; S. J. Oliver	2016	Exercise, immune function and respiratory infection: An update on the influence of training and environment	Immunol Cell Biol	Exclude	Yes	-	-	-	-	-	-
S. Warrig; P. Alderson; S. R. I	2016	Intravenous nutrients for preventing inadvertent perioperative hypothermia in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. C. White; R. M. Salgado; T	2016	The effect of 10 days of heat acclimation on exercise performance in acute hypobaric hypoxia (4300 m)	Temperature (Austin)	Exclude	-	-	-	-	No	-	-
A. G. Willmott; O. R. Gibson;	2016	The effects of single versus twice daily short term heat acclimation on heat strain and 3000m running performance	J Therm Biol	Exclude	-	-	-	-	No	-	-
G. L. Wingfield; R. Gale; G. M	2016	The effect of high versus low intensity heat acclimation on performance and neuromuscular responses	J Therm Biol	Exclude	-	-	-	-	No	-	-
S. Zhi; G. Banting; Q. Li; T. A	2016	Evidence of Naturalized Stress-Tolerant Strains of Escherichia coli in Municipal Wastewater Treatment Plants	Appl Environ Microbiol	Exclude	Yes	-	-	-	-	-	-
M. J. Zurawlew; N. P. Walsh;	2016	Post-exercise hot water immersion induces heat acclimation and improves endurance exercise performance	Scand J Med Sci Sports	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
Actrn	2016	Oxytocin in Chronic Neck and Shoulder Pain	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
Actrn	2016	In individuals undergoing simultaneous bilateral total knee replacement, does making a lateral skin incision improve gait and reduce falls in people with multiple sclerosis (MS)	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
Actrn	2016	Interventions to improve gait and reduce falls in people with multiple sclerosis (MS)	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
E. L. Adams; L. W. Vanderma	2017	Effects of heat acclimation on hand cooling efficacy following exercise in the heat	J Sports Sci	Exclude	-	-	-	-	No	-	-
T. Amano; N. Fujii; G. P. Kent	2017	Do nitric oxide synthase and cyclooxygenase contribute to sweating response during passive heat acclimation?	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
L. B. Baker	2017	Sweating Rate and Sweat Sodium Concentration in Athletes: A Review of Methodology and Interpretation	Sports Med	Exclude	Yes	-	-	-	-	-	-
B. N. Balmain; S. Sabapathy;	2017	Heart Failure and Thermoregulatory Control: Can Patients With Heart Failure Handle the Heat?	J Card Fail	Exclude	Yes	-	-	-	-	-	-
C. N. Bards; S. A. Kavouras;	2017	Prescribed Drinking Leads to Better Cycling Performance than Ad Libitum Drinking	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
D. Bhattacharyya; M. Pal; T. C	2017	Effect of load carriage and natural terrain conditions on cognitive performance in desert environment	Physiol Behav	Exclude	Yes	-	-	-	-	-	-
S. H. Bishop; D. J. Szymanski	2017	The Effect of Intermittent Vest Cooling on Thermoregulation and Cardiovascular Strain in Baseball Pitchers	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
D. J. Brown; D. Fletcher	2017	Effects of Psychological and Psychosocial Interventions on Sport Performance: A Meta-Analysis	Sports Med	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
Y. Bruchim; M. Horowitz; I. A. 2017		Pathophysiology of heatstroke in dogs - revisited	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. R. Casadio; A. E. Kilding; J. 2017		From Lab to Real World: Heat Acclimation Considerations for Elite Athletes	Sports Med	Exclude	-	No	-	-	-	-	-	No	-	-
F. S. Celli 2017		Human Brown Adipose Tissue Plasticity: Hormonal and Environmental Manipulation	Hormones, Metabolism an	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Charlot; C. Faure; S. Antoui 2017		Influence of Hot and Cold Environments on the Regulation of Energy Balance Following a Single	Nutrients	Exclude	-	No	-	-	-	-	-	No	-	-
B. Chu; C. Chen; J. Li; X. Che 2017		Effects of Tibetan turnip (Brassica rapa L.) on promoting hypoxia-tolerance in healthy humans	J Ethnopharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. T. Cumming; T. Raastad; A. 2017		Vitamin C and E supplementation does not affect heat shock proteins or endogenous antioxidants	BMC Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Daniels; M. E. Loades 2017		A Novel Approach to Treating CFS and Co-morbid Health Anxiety: A Case Study	Clin Psychol Psychother	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Druryan; D. Atias; I. Ketko; 2017		The effects of smoking and nicotine ingestion on exercise heat tolerance	J Basic Clin Physiol Pharm	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. G. Dulloo; J. L. Miles-Chai 2017		Isometric thermogenesis at rest and during movement: a neglected variable in energy expenditure	Obes Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. M. Edinburg; A. Hengist; 2017		Prior exercise alters the difference between arterialised and venous glycaemia: implications for bl	Br J Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Fernandez Rojas; X. Huang 2017		Toward a functional near-infrared spectroscopy-based monitoring of pain assessment for nonverbi	J Biomed Opt	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Gerwyn; M. Maes 2017		Mechanisms Explaining Muscle Fatigue and Muscle Pain in Patients with Myalgic Encephalomye	Curr Rheumatol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
O. R. Gibson; L. Taylor; P. W. 2017		Cross-Adaptation: Heat and Cold Adaptation to Improve Physiological and Cellular Responses to	Sports Med	Exclude	-	No	-	-	-	-	-	No	-	-
O. R. Gibson; A. G. Willmott; 2017		Power Relative to Body Mass Best Predicts Change in Core Temperature During Exercise-Heat S	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Gollan; S. Chalmers; S. Ald 2017		Supplemental intermittent-day heat training and the lactate threshold	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
J. T. Gonzalez; C. J. Fuchs; J. 2017		Glucose Plus Fructose Ingestion for Post-Exercise Recovery-Greater than the Sum of Its Parts?	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Goodall; K. Thomas; M. Ba 2017		Neuromuscular changes and the rapid adaptation following a bout of damaging eccentric exercise	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. P. Handrakis; Z. Ni Guan; J. 2017		Effect of Heat Exposure on Cognition in Persons with Tetraplegia	J Neurotrauma	Exclude	-	-	-	-	-	-	No	No	-	-
A. Harris; T. F. Moe; H. R. Eri 2017		Brief intervention, physical exercise and cognitive behavioural group therapy for patients with ch	Eur J Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Hinkley; A. R. Konopka; 2017		Short-term intense exercise training reduces stress markers and alters the transcriptional response	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. L. Hunter; A. S. Shah; J. P. 2017		Fire Simulation and Cardiovascular Health in Firefighters	Circulation	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Ishiwata; H. Hasegawa; B. 2017		Involvement of serotonin in the ventral tegmental area in thermoregulation of freely moving rats	Neurosci Lett	Exclude	Yes	-	-	-	-	-	-	-	-	-
ISRCTN14415088 2017		Influence of recovery strategies upon performance and perceptions following fatiguing exercise		Exclude	Yes	-	-	-	-	-	-	-	-	-
C. A. James; A. J. Richardson; 2017		Short-term heat acclimation improves the determinants of endurance performance and 5-km runni	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	-	No	-	-
D. M. Jones; K. A. Rostomily; 2017		Cold Acclimation Does Not Alter Physiological or Perceptual Responses During Subsequent Exer	Mil Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. W. Kenefick; K. R. Heaven 2017		Effect of Physical Load on Aerobic Exercise Performance during Heat Stress	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. P. Kenny; R. McGinn 2017		Restoration of thermoregulation after exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. A. King; L. R. Leon; D. A. 2017		Unique cytokine and chemokine responses to exertional heat stroke in mice	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Krstic; W. Yuchi; H. C. Ho; 2017		The Heat Exposure Integrated Deprivation Index (HEIDI): A data-driven approach to quantifying	Environ Int	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Legault; A. Clement; G. P. 2017		Cognitive consequences of sleep deprivation, shiftwork, and heat exposure for underground mine	Appl Ergon	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. H. Lei; S. R. Stannard; B. C 2017		Influence of menstrual phase and arid vs. humid heat stress on autonomic and behavioural thermo	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
U. Lindemann; A. Stotz; N. Bi 2017		Effect of Indoor Temperature on Physical Performance in Older Adults during Days with Normal	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Lloyd; L. Pictou; M. Raccu 2017		Localized and systemic variations in central motor drive at different local skin and muscle temper	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. M. Lühring; J. P. DeLong 2017		Scaling from Metabolism to Population Growth Rate to Understand How Acclimation Temperatu	Integr Comp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Maeda 2017		Relationship between maximum oxygen uptake and peripheral vasoconstriction in a cold environm	J Physiol Anthropol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. J. Marquardt; A. B. Buletki 2017		Neurologic Injuries in Noncontact Sports	Neurol Clin	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Mazlomi; F. Golbahaei; S. 2017		The influence of occupational heat exposure on cognitive performance and blood level of stress h	Int J Occup Saf Ergon	Exclude	-	-	-	-	-	-	-	No	-	-
A. McArdle; M. J. Jackson 2017		The role of attenuated redox and heat shock protein responses in the age-related decline in skeleta	Essays Biochem	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. L. McCleave; K. M. Slatter 2017		Temperate Performance Benefits after Heat, but Not Combined Heat and Hypoxic Training	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
R. McGinn; M. P. Poirier; J. C 2017		Increasing age is a major risk factor for susceptibility to heat stress during physical activity	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Minahan; M. Melnikoff; K. 2017		Response of women using oral contraception to exercise in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. A. Miragema; P. I. Homem c 2017		Nitric oxide-heat shock protein axis in menopausal hot flashes: neglected metabolic issues of chrc	Hum Reprod Update	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Nicolò; C. Massaroni; L. P; 2017		Respiratory Frequency during Exercise: The Neglected Physiological Measure	Front Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. L. Nielsen; P. Aagaard; T. A. 2017		Blood flow restricted training leads to myocellular macrophage infiltration and upregulation of he	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Njemini; L. N. Forti; T. Me 2017		Sex difference in the heat shock response to high external load resistance training in older humans	Exp Gerontol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. R. Notley; J. Park; K. Tagar 2017		Variations in body morphology explain sex differences in thermoeffector function during compen	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. O'Reilly; H. L. Cheng; E. T. 2017		New insights in professional horse racing; in-race* heart rate data, elevated fracture risk, hydratio	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Otani; T. Goto; H. Goto; M 2017		Time-of-day effects of exposure to solar radiation on thermoregulation during outdoor exercise in	Chronobiol Int	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Pallabinsky; L. Schellen; B 2017		Thermophysiological adaptations to passive mild heat acclimation	Temperature (Austin)	Exclude	-	-	-	-	-	-	-	No	-	-
W. Park; J. Jeong 2017		Total Power Radiometer for Medical Sensor Applications Using Matched and Mismatched Noise	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Pearson; M. S. Ganio; Z. J. 2017		Post Junctional Sudomotor and Cutaneous Vascular Responses in Noninjured Skin Following Hea	J Burn Care Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. D. Périard; S. Racinais; T. T 2017		Strategies and factors associated with preparing for competing in the heat: a cohort study at the 20	Br J Sports Med	Exclude	-	No	-	-	-	-	-	No	-	-
C. P. Philp; M. Buchheit; C. M 2017		Does Short-Duration Heat Exposure at a Matched Cardiovascular Intensity Improve Intermittent-I	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	-	No	-	-
J. F. Pii; J. Lundbye-Jensen; S 2017		Performance in complex motor tasks deteriorates in hyperthermic humans	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Pollak; G. Merin; M. Horo 2017		Heat Acclimatization Protects the Left Ventricle from Increased Diastolic Chamber Stiffness Imm	Front Physiol	Exclude	-	No	-	-	-	-	-	No	-	-
L. C. D. Pomatto; K. J. A. Dav 2017		The role of declining adaptive homeostasis in ageing	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
S. K. Powers	2017	Exercise: Teaching myocytes new tricks	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. Racinais; M. G. Wilson; N.	2017	Heat acclimation has a protective effect on the central but not peripheral nervous system	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-
S. Racinais; M. G. Wilson; J.	2017	Passive heat acclimation improves skeletal muscle contractility in humans	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
R. A. Rendell; J. Prout; J. T. C.	2017	Effects of 10 days of separate heat and hypoxic exposure on heat acclimation and temperate exerc	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
E. Rivas; M. Rao; T. Castleber	2017	The change in metabolic heat production is a primary mediator of heat acclimation in adults	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
R. J. Roberge; J. H. Kim; P. Y.	2017	Umbilical temperature correlation with core and skin temperatures at rest, in the heat and during p	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
R. M. Salgado; A. C. Sheard; 12017	2017	Mitochondrial efficiency and exercise economy following heat stress: a potential role of uncoupli	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
C. Schmit; Y. Le Meur; R. Du	2017	Heat-acclimatization and pre-cooling: a further boost for endurance performance?	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
P. M. Slepian; C. R. France	2017	The effect of resilience on task persistence and performance during repeated exposure to heat pair	J Behav Med	Exclude	Yes	-	-	-	-	-	-
V. Soanatl Aguilar; J. v. d. G.	2017	Visual Data Exploration for Balance Quantification in Real-Time During Exergaming	PLoS One	Exclude	Yes	-	-	-	-	-	-
P. Songson; J. Ruffino; N. B.	2017	No effect of acute and chronic supramaximal exercise on circulating levels of the myokine SPAR	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-
K. M. A. Thompson; A. M. Cc	2017	Chronic heat exposure for health and exercise performance - cardiovascular research heats up	J Physiol	Exclude	-	No	-	-	No	-	-
M. J. Tipton; N. Collier; H. M.	2017	Cold water immersion: kill or cure?	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
T. T. Truxton; K. C. Miller	2017	Can Temperate-Water Immersion Effectively Reduce Rectal Temperature in Exertional Heat Strok	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-
G. E. Vincent; B. Aisbett; B. L.	2017	The Impact of Heat Exposure and Sleep Restriction on Firefighters' Work Performance and Physi	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
T. Wijayanto; S. Toramoto; Y.	2017	Cognitive performance during passive heat exposure in Japanese males and tropical Asian males f	J Physiol Anthropol	Exclude	Yes	-	-	-	-	-	-
A. G. B. Willmott; M. Hayes;	2017	Short-term heat acclimation prior to a multi-day desert ultra-marathon improves physiological anc	J Sports Sci	Exclude	-	No	-	-	No	-	-
J. Xu; N. Driedonks; M. J. M.	2017	Mapping quantitative trait loci for heat tolerance of reproductive traits in tomato (Solanum lycop	Mol Breed	Exclude	Yes	-	-	-	-	-	-
J. E. Yardley; S. R. Colberg	2017	Update on Management of Type 1 Diabetes and Type 2 Diabetes in Athletes	Curr Sports Med Rep	Exclude	Yes	-	-	-	-	-	-
M. Zeltner; I. Sailer; S. Mühle	2017	Randomized controlled within-subject evaluation of digital and conventional workflows for the fa	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-
F. Zhang; R. de Dear	2017	University students' cognitive performance under temperature cycles induced by direct load contri	Indoor Air	Exclude	Yes	-	-	-	-	-	-
Actrn	2017	#MindinBody: impacts of two types of exercise (Bikram yoga versus Adrenaline HIT) on persiste	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
Actrn	2017	The influence of aerobic exercise on Conditioned Pain Modulation (CPM) and Manipulation Indu	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-
Actrn	2017	The effect of post-exercise water immersion on muscular performance in athletes	<a href="https://www.cochranelibra">https://www.cochranelibra</a>	Exclude	-	-	-	-	No	Yes	No
S. J. Agosta; K. A. Joshi; K. M	2018	Upper thermal limits differ among and within component species in a tritrophic host-parasitoid-h	PLoS One	Exclude	Yes	-	-	-	-	-	-
A. F. Alghannam; J. T. Gonzal	2018	Restoration of Muscle Glycogen and Functional Capacity: Role of Post-Exercise Carbohydrate an	Nutrients	Exclude	Yes	-	-	-	-	-	-
A. E. Archer; A. T. Von Schulz	2018	Exercise, heat shock proteins and insulin resistance	Philos Trans R Soc Lond I	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; E. C. Lee; E.	2018	Interactions of Gut Microbiota, Endotoxemia, Immune Function, and Diet in Exertional Heatstrok	J Sports Med (Hindawi Pu	Exclude	Yes	-	-	-	-	-	-
C. L. Atkinson; H. H. Carter; 12018	2018	Localized cutaneous microvascular adaptation to exercise training in humans	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
B. N. Balmain; S. Sabapathy;	2018	Aging and Thermoregulatory Control: The Clinical Implications of Exercising under Heat Stress i	Biomed Res Int	Exclude	Yes	-	-	-	-	-	-
O. R. Barley; D. W. Chapman;	2018	Weight Loss Strategies in Combat Sports and Concerning Habits in Mixed Martial Arts	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
I. Belaya; M. Suwa; T. Chen; 12018	2018	Long-Term Exercise Protects against Cellular Stresses in Aged Mice	Oxid Med Cell Longev	Exclude	Yes	-	-	-	-	-	-
B. C. Bernardo; J. Y. Y. Ooi; K	2018	Understanding Key Mechanisms of Exercise-Induced Cardiac Protection to Mitigate Disease: Cur	Physiol Rev	Exclude	Yes	-	-	-	-	-	-
P. Bröde; D. Fiala; B. Lemke;	2018	Estimated work ability in warm outdoor environments depends on the chosen heat stress assessm	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
M. J. Buller; A. P. Welles; K. I	2018	Wearable physiological monitoring for human thermal-work strain optimization	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. J. Buono; M. Kolding; E. I	2018	Heat acclimation causes a linear decrease in sweat sodium ion concentration	J Therm Biol	Exclude	-	-	-	-	No	-	-
M. Burtcher; H. Gatterer; J. E	2018	Extreme Terrestrial Environments: Life in Thermal Stress and Hypoxia. A Narrative Review	Front Physiol	Exclude	Yes	-	-	-	-	-	-
M. Cernych; A. Satas; M. Brai	2018	Post-sauna recovery enhances brain neural network relaxation and improves cognitive economy i	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
R. Chou; P. Côté; K. Randhaw	2018	The Global Spine Care Initiative: applying evidence-based guidelines on the non-invasive manag	Eur Spine J	Exclude	Yes	-	-	-	-	-	-
R. Chrétien; S. Lavoie; P. Cha	2018	Reduced endogenous pain inhibition in adolescent girls with chronic pain	Scand J Pain	Exclude	Yes	-	-	-	-	-	-
J. Corbett; R. A. Rendell; H. C	2018	Inter-individual variation in the adaptive response to heat acclimation	J Therm Biol	Exclude	-	-	-	-	No	-	-
J. T. Costello; R. A. Rendell; 2018	2018	Effects of acute or chronic heat exposure, exercise and dehydration on plasma cortisol, IL-6 and C	Cytokine	Exclude	-	-	-	-	No	-	-
H. A. M. Daanen; S. Racinais;	2018	Heat Acclimation Decay and Re-Induction: A Systematic Review and Meta-Analysis	Sports Med	Exclude	-	No	-	-	-	-	-
A. A. Dalina; I. E. Kovaleva; 2018	2018	[Sestrins are Gatekeepers in the Way from Stress to Aging and Disease]	Mol Biol (Mosk)	Exclude	Yes	-	-	-	-	-	-
F. Damas; C. Ugrinowitsch; C	2018	Resistance training in young men induces muscle transcriptome-wide changes associated with mu	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; L. A. Blanchard; J.	2018	Physiological Responses to Overdressing and Exercise-Heat Stress in Trained Runners	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
K. Eschen; J. Abel; R. Granbe	2018	ACTIVE-CONTRACTING VARIABLE-STIFFNESS FABRICS FOR SELF-FITTING WEAR	Proc ASME Conf Smart N	Exclude	Yes	-	-	-	-	-	-
P. A. Falgiano; T. L. Gillum; 2018	2018	Dietary curcumin supplementation does not alter peripheral blood mononuclear cell responses to	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. D. Flouris; R. McGinn; M.	2018	Screening criteria for increased susceptibility to heat stress during work or leisure in hot environ	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-
N. Fujii; R. D. Meade; J. C. L.	2018	Effect of P2 receptor blockade on cutaneous vasodilation during rest and exercise in the heat in yc	J Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
C. M. Goertz; C. R. Long; R.	2018	Effect of Usual Medical Care Plus Chiropractic Care vs Usual Medical Care Alone on Pain and D	JAMA Netw Open	Exclude	Yes	-	-	-	-	-	-
E. D. B. Goulet; M. O. Mélan	2018	Impact of Mild Hypohydration on Muscle Endurance, Power, and Strength in Healthy, Active Old	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
K. Guirguis; R. Basu; W. K. A	2018	Heat, Disparities, and Health Outcomes in San Diego County's Diverse Climate Zones	Geohealth	Exclude	Yes	-	-	-	-	-	-
P. S. Hafén; C. N. Preece; J. R	2018	Repeated exposure to heat stress induces mitochondrial adaptation in human skeletal muscle	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. F. Harrison	2018	Approaches for testing hypotheses for the hypometric scaling of aerobic metabolic rate in animals	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
J. A. Hawley; C. Lundby; J. D	2018	Maximizing Cellular Adaptation to Endurance Exercise in Skeletal Muscle	Cell Metab	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. L. J. Heaney; S. C. Killer; I. 2018	2018	Intensified training increases salivary free light chains in trained cyclists: Indication that training	Physiol Behav	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. L. Heathcote; P. Hassmén; 2018	2018	Passive Heating: Reviewing Practical Heat Acclimation Strategies for Endurance Athletes	Front Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
G. J. Hodges; D. G. Stewart; 2018	2018	Episodic bouts of hyperaemia and shear stress improve arterial blood flow and endothelial function	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. G. Hoehne; D. M. Hondula 2018	2018	Heat exposure during outdoor activities in the US varies significantly by city, demography, and ac	Health Place	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. P. Hoekstra; N. C. Bishop; 2018	2018	Acute and chronic effects of hot water immersion on inflammation and metabolism in sedentary, c	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	-
W. R. Hood; S. N. Austad; P. I. 2018	2018	The Mitochondrial Contribution to Animal Performance, Adaptation, and Life-History Variation	Integr Comp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. C. Hung; Y. H. Liao; Y. S. 2018	2018	Hot Water Bathing Impairs Training Adaptation in Elite Teen Archers	Chin J Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
S. D. Hunter; J. Laossiripisan; 2018	2018	Effects of yoga interventions practised in heated and thermoneutral conditions on endothelium-de	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. A. James; A. J. Richardson; 2018	2018	Short-Term Heat Acclimation and Precooling, Independently and Combined, Improve 5-km Time	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	-
R. D. Johnston; G. M. Black; 2018	2018	Applied Sport Science of Australian Football: A Systematic Review	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. M. Jones; B. Roelands; S. I. 2018	2018	Impairment of exercise performance following cold water immersion is not attenuated after 7 day	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Kadlecová; T. Jirsa; O. Nov 2018	2018	Natural plant hormones cytokinins increase stress resistance and longevity of Caenorhabditis eleg	Biogerontology	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. L. Kimball; P. M. McCue; 2018	2018	Whole body heat exposure modulates acute glucose metabolism	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. Kramerova; J. A. Torres; A. 2018	2018	Calpain 3 and CaMKIIβ signaling are required to induce HSP70 necessary for adaptive muscle gr	Hum Mol Genet	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. K. Kunutsor; H. Khan; T. L. 2018	2018	Joint associations of sauna bathing and cardiorespiratory fitness on cardiovascular and all-cause m	Ann Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. A. Laukkanen; T. Laukkane 2018	2018	Combined Effect of Sauna Bathing and Cardiorespiratory Fitness on the Risk of Sudden Cardiac I	Prog Cardiovasc Dis	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Laxminarayan; V. Rakesh; 2018	2018	Individualized estimation of human core body temperature using noninvasive measurements	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. J. Lee; N. D. Clarke; J. Han 2018	2018	Whole body precooling attenuates the extracellular HSP72, IL-6 and IL-10 responses after an acu	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. G. Lee; K. R. Kim; J. Kim; 2018	2018	Effects of heat waves on daily excess mortality in 14 Korean cities during the past 20 years (1991	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. S. Leicht; A. D. Flouris; A. 2018	2018	Age alters cardiac autonomic modulations during and following exercise-induced heat stress in fe	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. S. Leicht; A. Halliday; W. I. 2018	2018	Heart rate variability responses to acute and repeated postexercise sauna in trained cyclists	Appl Physiol Nutr Metab	Exclude	-	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
R. D. Lennox; M. Cecchini-Si 2018	2018	Safety and tolerability of sauna detoxification for the protracted withdrawal symptoms of substan	Int Med Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Luther; J. Gabriel; R. P. Wa 2018	2018	The Impact of Total Body Prehabilitation on Post-Operative Outcomes After Major Abdominal Su	World J Surg	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Maclean; J. Dillon; J. A. B 2018	2018	The effect of low volume sprint interval training in patients with non-alcoholic fatty liver disease	Phys Sportsmed	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Malgoire; P. E. Tardo-Dinc 2018	2018	Uncoupling psychological from physiological markers of heat acclimatization in a military contex	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
F. E. Marino 2018	2018	The influence of thermal inputs on brain regulation of exercise: An evolutionary perspective	Prog Brain Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. McClelland; S. F. Godek 2018	2018	Effects of Cardiovascular Fitness and Body Composition on Maximal Core Temperature in Colleg	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. McGorm; L. A. Roberts; J. 2018	2018	Turning Up the Heat: An Evaluation of the Evidence for Heating to Promote Exercise Recovery, 3	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Mehriiz; P. Gosselein; I. Tari 2018	2018	The Effect of an Automated Phone Warning and Health Advisory System on Adaptation to High H	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. Mujjika; S. Halson; L. M. Bu 2018	2018	An Integrated, Multifactorial Approach to Periodization for Optimal Performance in Individual an	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. R. Notley; A. D. Flouris; G. 2018	2018	On the use of wearable physiological monitors to assess heat strain during occupational heat stres	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. R. Notley; E. A. Taylor; N. 2018	2018	Cutaneous vasomotor adaptation following repeated, isothermal heat exposures: evidence of adap	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Okerblom; W. Fletes; H. H. 2018	2018	Human-like Cmah inactivation in mice increases running endurance and decreases muscle fatigab	Proc Biol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Pankam; S. Saensiriphan; S 2018	2018	The validation and evaluation of anti-HIV testing algorithm used in mobile clinic setting for men	Asian Pac J Allergy Immu	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Papadicochou; A. L. Pissioti 2018	2018	Marginal adaptation and CAD-CAM technology: A systematic review of restorative material and	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Parris; C. J. Tyler 2018	2018	Practical Torso Cooling During Soccer-Specific Exercise in the Heat	J Athl Train	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. K. Pedersen; J. A. Wagenaar 2018	2018	Proficiency of WHO Global Foodborne Infections Network External Quality Assurance System P	J Clin Microbiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Pellevoisin; C. Videau; D. I. 2018	2018	SkinEthic™ RHE for in vitro evaluation of skin irritation of medical device extracts	Toxicol In Vitro	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. S. Perrotta; M. D. White; M 2018	2018	Efficacy of Hot Yoga as a Heat Stress Technique for Enhancing Plasma Volume and Cardiovascul	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. A. Porras-Salazar; D. P. Wyi 2018	2018	Reducing classroom temperature in a tropical climate improved the thermal comfort and the perfo	Indoor Air	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Price; M. Trbovich 2018	2018	Thermoregulation following spinal cord injury	Handb Clin Neurol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Purdom; L. Kravitz; K. Dok 2018	2018	Understanding the factors that effect maximal fat oxidation	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Ravaneli; G. B. Coombs; I. 2018	2018	Maximum Skin Wettedness after Aerobic Training with and without Heat Acclimation	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	-
K. Rinaldi; T. T. Trong; F. Riei 2018	2018	Immersion with menthol improves recovery between 2 cycling exercises in hot and humid environ	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. W. Schleh; B. C. Ruby; C. 2018	2018	Short term heat acclimation reduces heat stress, but is not augmented by dehydration	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
C. Schmit; R. Duffield; C. Hat 2018	2018	Optimizing Heat Acclimation for Endurance Athletes: High- Versus Low-Intensity Training	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	No	-	-	-
B. L. Sheahan; J. W. Fell; E. K 2018	2018	Intestinal damage following short-duration exercise at the same relative intensity is similar in tem	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Shou; J. Fan 2018	2018	Design of Nanofibrous and Microfibrous Channels for Fast Capillary Flow	Langmuir	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Skein; G. Wingfield; R. Ga 2018	2018	Sleep quantity and quality during consecutive day heat training with the inclusion of cold-water ir	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. E. Skórzyńska-Dzidusko; 2018	2018	Heat Shock Proteins as a Potential Therapeutic Target in the Treatment of Gestational Diabetes M	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. T. Spector; J. Krenz; M. Cal 2018	2018	Associations between heat exposure, vigilance, and balance performance in summer tree fruit har	Appl Ergon	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Stacey; D. R. Woods; S. 2018	2018	Heat acclimatization blunts copeptin responses to hypertonicity from dehydrating exercise in hum	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	-
M. M. J. Stacey; S. K. Delves; 2018	2018	Heart rate variability and plasma nephelines in the evaluation of heat acclimatization status	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Stephens; S. L. Halson; 2018	2018	Influence of body composition on physiological responses to post-exercise hydrotherapy	J Sports Sci	Exclude	-	-	-	-	-	-	No	-	-	-
C. J. Stevens; S. L. Heathcote; 2018	2018	Effect of two-weeks endurance training wearing additional clothing in a temperate outdoor enviro	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Suvi; M. Mooses; S. Timpr 2018	2018	Impact of sodium citrate ingestion during recovery after dehydrating exercise on rehydration and	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
M. C. Szymanski; T. L. Gillun	2018	Short-term dietary curcumin supplementation reduces gastrointestinal barrier damage and physiol	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
H. L. Taylor; C. L. Wu; Y. C.	2018	Post-Exercise Carbohydrate-Energy Replacement Attenuates Insulin Sensitivity and Glucose Tole	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Timpmann; A. C. Hackney;	2018	Influence of Rhodiola rosea on the heat acclimation process in young healthy men	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Uerlings; Z. G. Song; X. Y.	2018	Heat exposure affects jejunal tight junction remodeling independently of adenosine monophospha	Poult Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
V. V. Venkataraman; A. K. Yeg	2018	Locomotor constraints favour the evolution of the human pygmy phenotype in tropical rainforests	Proc Biol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
G. M. R. Viana; L. Silva-Fiani	2018	Field evaluation of a real time loop-mediated isothermal amplification assay (RealAmp) for malar	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Voelkel; D. Hellman; R. Sak	2018	Assessing Vulnerability to Urban Heat: A Study of Disproportionate Heat Exposure and Access to	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
E. R. Watkins; J. Gibbons; Y. I	2018	A new occupational heat tolerance test: A feasibility study	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	
E. R. Watkins; M. Hayes; P. W	2018	Practical pre-cooling methods for occupational heat exposure	Appl Ergon	Exclude	Yes	-	-	-	-	-	-	-	-	
M. D. White	2018	Panting as a human heat loss thermoeffector	Handb Clin Neurol	Exclude	Yes	-	-	-	-	-	-	-	-	
A. G. B. Willmott; O. R. Gibs	2018	Physiological and perceptual responses to exercising in restrictive heat loss attire with use of an u	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	
A. G. B. Willmott; M. Hayes;	2018	Once- and twice-daily heat acclimation confer similar heat adaptations, inflammatory responses a	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	
L. J. Wilson; E. Cockburn; K.	2018	Recovery following a marathon: a comparison of cold water immersion, whole body cryotherapy	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
M. M. Woyton; S. Kluzek; T.	2018	Partial mid-portion Achilles tear resulting in substantial improvement in pain and function in an ai	BMJ Case Rep	Exclude	Yes	-	-	-	-	-	-	-	-	
W. Zhang; P. McManus; E. Du	2018	A Raster-Based Subdividing Indicator to Map Urban Heat Vulnerability: A Case Study in Sydney,	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Zimmermann; G. Landers;	2018	Precooling With Crushed Ice: As Effective as Heat Acclimation at Improving Cycling Time-Trial	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	No	-	-	
M. J. Zurawlew; J. A. Mee; N.	2018	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptations in Endurance Trained at	Front Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Actrn	2018	Strength training in water polo players: differences between hypertrophy and power training	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-	-	-	
Actrn	2018	Effect of Brain Blood Flow on Cognition Across Healthy Adulthood	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-	-	-	
Actrn	2018	The effectiveness of preoperative heat therapy and high-intensity interval training for prehabilita	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-	-	-	
Actrn	2018	Exploring changes in blood, urine, sweat and cardiovascular function with sauna and exercise in y	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Pilgrim; K. Kim; M. J. Hill;	2018	WORK RELATED EXPOSURES: IMPACTS ON HORMONE LEVELS, ANOVULATION ANI	Fertility and sterility	Exclude	Yes	-	-	-	-	-	-	-	-	
ACTRN12619000663156	2019	Are electric fans effective for keeping people cool in both very-hot-and-dry and hot-and-humid he		Exclude	Yes	-	-	-	-	-	-	-	-	
E. L. Adams; D. J. Casa; R. A.	2019	Heat Exposure and Hypohydration Exacerbate Physiological Strain During Load Carrying	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	
A. P. Akerman; K. N. Thomas;	2019	Heat therapy vs. supervised exercise therapy for peripheral arterial disease: a 12-wk randomized,	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	No	No	-	-	
N. I. o. Allergy; I. Diseases	2019	A Double-Blind Placebo-Control Dose Escalating Study to Evaluate the Safety and Immunogenic		Exclude	Yes	-	-	-	-	-	-	-	-	
N. Bamat; J. Fierro; Y. Wang;	2019	Positive end-expiratory pressure for preterm infants requiring conventional mechanical ventilatio	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
S. R. Barnes; J. F. Ambrose; A	2019	Incidence, timing, and seasonal patterns of heat illnesses during U.S. Army basic combat training,	Msmr	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Beck; V. Peña-Vivas; S. Fle	2019	Metacognition across sensory modalities: Vision, warmth, and nociceptive pain	Cognition	Exclude	Yes	-	-	-	-	-	-	-	-	
B. E. Berkovich; A. H. Stark;	2019	Rapid Weight Loss in Competitive Judo and Taekwondo Athletes: Attitudes and Practices of Coac	Int J Sport Nutr Exerc Mel	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Bonnette; C. A. DiCesare;	2019	Injury Risk Factors Integrated Into Self-Guided Real-Time Biofeedback Improves High-Risk Bio	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-	-	-	
L. P. Boulet; J. Turmel	2019	Cough in exercise and athletes	Pulm Pharmacol Ther	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Bucht; L. Donath	2019	Sauna Yoga Superiorly Improves Flexibility, Strength, and Balance: A Two-Armed Randomized C	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
L. M. Burke; L. M. Castell; D.	2019	International Association of Athletics Federations Consensus Statement 2019: Nutrition for Athlet	Int J Sport Nutr Exerc Mel	Exclude	Yes	-	-	-	-	-	-	-	-	
C. Byrne; J. K. W. Lee	2019	The Physiological Strain Index Modified for Trained Heat-Acclimatized Individuals in Outdoor H	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	
F. Campa; H. Gatterer; H. Luk	2019	Stabilizing Bioimpedance-Vector-Analysis Measures With a 10-Minute Cold Shower After Runni	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	
A. C. V. Cavalcanti; A. J. Heni	2019	Complementary therapies in labor: randomized clinical trial	Rev Gaucha Enferm	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Cernych; N. Baranauksien	2019	Accelerated muscle contractility and decreased muscle steadiness following sauna recovery do no	Hum Mov Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Y. Chen; Y. C. Chen; K. Tu	2019	Effects of caffeine and sex on muscle performance and delayed-onset muscle soreness after exerci	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Curran; J. Campbell; M. D	2019	Type 1 diabetes impairs the mobilisation of highly-differentiated CD8+T cells during a single bou	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Didehdar; S. Sobhani	2019	The effect of cold-water immersion on physical performance	J Bodyw Mov Ther	Exclude	Yes	-	-	-	-	-	-	-	-	
D. M. Duvnjak-Zaknich; K. E.	2019	Continuous and intermittent heat acclimation and decay in team sport athletes	Eur J Sport Sci	Exclude	-	-	-	-	-	-	No	-	-	
X. Fan; W. Liu; P. Wargocki	2019	Physiological and psychological reactions of sub-tropically acclimatized subjects exposed to diffe	Indoor Air	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Farrow; C. Lutteroth; P. C.	2019	Virtual-reality exergaming improves performance during high-intensity interval training	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
C. J. Fuchs; J. T. Gonzalez; L.	2019	Fructose co-ingestion to increase carbohydrate availability in athletes	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
N. Fujii; K. Hatam; G. W. Mc	2019	Exogenous Activation of Protease-Activated Receptor 2 Attenuates Cutaneous Vasodilatation and	Skin Pharmacol Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
T. Fujimoto; B. Tsuji; Y. Sasa	2019	Low-intensity exercise delays the shivering response to core cooling	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	
M. P. Funnell; S. A. Mears; K.	2019	Blinded and unblinded hypohydration similarly impair cycling time trial performance in the heat i	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
J. J. Fyfe; J. R. Broatch; A. J.	2019	Cold water immersion attenuates anabolic signaling and skeletal muscle fiber hypertrophy, but no	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Gauer; B. K. Meyers	2019	Heat-Related Illnesses	Am Fam Physician	Exclude	Yes	-	-	-	-	-	-	-	-	
N. Gerrett; B. R. M. Kingma;	2019	Ambient Conditions Prior to Tokyo 2020 Olympic and Paralympic Games: Considerations for Ae	Front Physiol	Exclude	-	No	-	-	-	-	No	-	-	
J. T. Gonzalez; J. A. Betts	2019	Dietary sugars, exercise and hepatic carbohydrate metabolism	Proc Nutr Soc	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Gosselet; J. Béliveau; M. Hi	2019	Wireless measurement of rectal temperature during exercise: Comparing an ingestible thermomet	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	
S. L. Halson; L. M. Burke; J.	2019	Nutrition for Travel: From Jet Lag To Catering	Int J Sport Nutr Exerc Mel	Exclude	Yes	-	-	-	-	-	-	-	-	
L. Hao; Y. Xiang; A. Degen; Y	2019	Adding heat-treated rapeseed to the diet of yak improves growth performance and tenderness and	Anim Sci J	Exclude	Yes	-	-	-	-	-	-	-	-	
S. L. Heathcote; P. Hassmén;	2019	How Does a Delay Between Temperate Running Exercise and Hot-Water Immersion Alter the Acti	Front Physiol	Exclude	-	-	-	-	-	-	No	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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E. Hermand; C. Chabert; O. H	2019	Ultra-endurance events in tropical environments and countermeasures to optimize performances a	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Hesketh; S. O. Shepherd; J	2019	Passive heat therapy in sedentary humans increases skeletal muscle capillarization and eNOS con	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	-	-	No	-	-
S. P. Hoekstra; M. N. Western	2019	Modality-specific training adaptations - do they lead to a dampened acute inflammatory response	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Hosokawa; E. N. Johnson; J	2019	Knowledge and Belief Toward Heat Safety and Hydration Strategies Among Runners: A Prelimin	J Athl Train	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Hosokawa; R. L. Stearns; D	2019	Is Heat Intolerance State or Trait?	Sports Med	Exclude	-	No	-	-	-	-	-	No	-	-
D. M. Jones; S. P. Bailey; K. I	2019	Evaluation of cognitive performance and neurophysiological function during repeated immersion	Brain Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. Jung; F. Jazizadeh; T. E. Di	2019	Heat Flux Sensing for Machine-Learning-Based Personal Thermal Comfort Modeling	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Kerr; G. Morse; D. Graves; 2019	2019	A Detoxification Intervention for Gulf War Illness: A Pilot Randomized Controlled Trial	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Ketelhut; R. G. Ketelhut	2019	The blood pressure and heart rate during sauna bath correspond to cardiac responses during subm	Complement Ther Med	Exclude	-	-	-	-	-	-	-	No	-	-
L. S. Kissling; A. P. Akerman; 2019	2019	Heat-induced hypervolemia: Does the mode of acclimation matter and what are the implications f	Temperature (Austin)	Exclude	-	No	-	-	-	-	-	No	-	-
K. Krüger; T. Reichel; C. Zeil	2019	Role of heat shock proteins 70/90 in exercise physiology and exercise immunology and their diag	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. W. LeBaron; I. Laher; B. Ki	2019	Hydrogen gas: from clinical medicine to an emerging ergogenic molecule for sports athletes (1)	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. I. López-Sánchez; P. A. Han	2019	Diminishing Cognitive Capacities in an Ever Hotter World: Evidence From an Applicable Power-	Hum Factors	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Lubkowska; I. Bryczkowsk	2019	The Effects of Swimming Training in Cold Water on Antioxidant Enzyme Activity and Lipid Pero	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Martin; E. McLeod; J. Péri	2019	The Impact of Environmental Stress on Cognitive Performance: A Systematic Review	Hum Factors	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. M. Masheh; A. M. Kutz; A. 2019	2019	Making weight" during military service is related to binge eating and eating pathology for vetera	Eat Weight Disord	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. L. McCleave; K. M. Slater	2019	Impaired Heat Adaptation From Combined Heat Training and Live High, Train Low" Hypoxia"	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	-	No	-	-
D. W. McMillan; J. L. Maher; 2019	2019	Influence of upper-body continuous, resistance or high-intensity interval training (CRIT) on postp	Trials	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Morabito; A. Messeri; P. N	2019	An Occupational Heat-Health Warning System for Europe: The HEAT-SHIELD Platform	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Morán-Navarro; J. Courel-I	2019	Validity of Skin, Oral and Tympanic Temperatures During Exercise in the Heat: Effects of Wind a	Ann Biomed Eng	Exclude	Yes	-	-	-	-	-	-	-	-	-
O. Moser; M. L. Eckstein; O. 1	2019	Performance of the Freestyle Libre flash glucose monitoring (flash GM) system in individuals wit	Diabetes Obes Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. M. Muia; G. W. McGarr; M	2019	Contribution of nitric oxide synthase to cutaneous vasodilatation and sweating in men of black-A	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
NCT04053465	2019	Heat Acclimation, Hand Cooling Efficacy, and Adaptation Maintenance.		Exclude	-	-	-	-	-	-	-	No	-	-
T. E. Nightingale; J. P. Walhin	2019	Biomarkers of cardiometabolic health are associated with body composition characteristics but no	J Spinal Cord Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. G. O'Connor	2019	Sports Medicine: Exertional Heat Illness	FP Essent	Exclude	Yes	No	-	-	-	-	-	-	-	-
J. Omassoli; N. E. Hill; D. R. 1	2019	Variation in renal responses to exercise in the heat with progressive acclimatisation	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
E. Pakdel; M. Naebe; L. Sur; 2019	2019	Advanced Functional Fibrous Materials for Enhanced Thermoregulating Performance	ACS Appl Mater Interface	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. K. Pellingier; C. B. Neighbo	2019	Acute Lower Leg Heating Increases Exercise Capacity in Patients With Peripheral Artery Disease	J Cardiovasc Nurs	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. A. Pethick; H. J. Murray; P	2019	Effects of hydration status during heat acclimation on plasma volume and performance	Scand J Med Sci Sports	Exclude	-	-	-	-	-	-	-	No	-	-
J. F. Piil; C. J. Mikkelsen; N. J	2019	Heat Acclimation Does Not Protect Trained Males from Hyperthermia-Induced Impairments in C	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	-	No	-	-
R. Podstawski; K. Boryslawsk	2019	The effect of prolonged thermal stress on the physiological parameters of young, sedentary men a	Homo	Exclude	-	-	-	-	-	-	-	No	-	-
J. L. Pryor; R. R. Pryor; L. W. 2019	2019	Intermittent exercise-heat exposures and intense physical activity sustain heat acclimation adaptat	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
G. R. M. Rahimi; A. L. Albani	2019	Physiological Responses to Heat Acclimation: A Systematic Review and Meta-Analysis of Rando	J Sports Sci Med	Exclude	-	No	-	-	-	-	-	No	-	-
N. Ravaneli; W. Casasola; T. 1	2019	Heat stress and fetal risk. Environmental limits for exercise and passive heat stress during pregnar	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Ravaneli; G. Coombs; P. li	2019	Thermoregulatory adaptations with progressive heat acclimation are predominantly evident in unc	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
T. Reeve; R. Gordon; P. B. Lai	2019	Impairment of Cycling Capacity in the Heat in Well-Trained Endurance Athletes After High-Inten	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	-	No	-	-
R. Relf; A. Willmott; M. S. Fli	2019	Reliability of a wearable sweat rate monitor and routine sweat analysis techniques under heat stre	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Rivas; C. G. Crandall; O. E	2019	Exercise heat acclimation causes post-exercise hypotension and favorable improvements in lipid a	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
J. Sarris; M. de Manincor; F. F	2019	Harnessing the Four Elements for Mental Health	Front Psychiatry	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. U. Saunders; L. A. Garvicar	2019	Special Environments: Altitude and Heat	Int J Sport Nutr Exerc Me	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. J. Schlader; D. Hostler; M. 2019	2019	The Potential for Renal Injury Elicited by Physical Work in the Heat	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Siquier-Coll; I. Bartolomé; 1	2019	Effect of heat exposure and physical exercise until exhaustion in normothermic and hyperthermic	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
J. Siquier-Coll; I. Bartolomé; 1	2019	Influence of a physical exercise until exhaustion in normothermic and hyperthermic conditions on	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
C. J. Smith	2019	Pediatric Thermoregulation: Considerations in the Face of Global Climate Change	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Sotiridis; T. Debevec; U. C	2019	Heat acclimation does not affect maximal aerobic power in thermoneutral normoxic or hypoxic co	Exp Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
A. Sotiridis; P. Miliotis; U. Ci	2019	No ergogenic effects of a 10-day combined heat and hypoxic acclimation on aerobic performance	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
J. Steele; P. Androulakis-Koral	2019	Comparisons of Resistance Training and Cardio" Exercise Modalities as Countermeasures to Mic	Front Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Suvi; M. Mooses; S. Timpr	2019	Influence of Sodium Citrate Supplementation after Dehydrating Exercise on Responses of Stress	J Medicina (Kaunas)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Takakura; S. Fujimori; K. Ti	2019	Site-specific hourly resolution wet bulb globe temperature reconstruction from gridded daily resol	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Taylor; K. C. Miller	2019	Precooling, Hyperthermia, and Postexercise Cooling Rates in Humans Wearing American Footbal	J Athl Train	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Taylor; H. R. Thornton; N. 2019	2019	Alterations in core temperature during World Rugby Sevens Series tournaments in temperate and	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Turnes; R. S. O. Cruz; F. Ca	2019	The Impact of Preconditioning Strategies Designed to Improve 2000-m Rowing Ergometer Perfor	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-	No	-	-
J. H. Villafañe; K. Valdes; P. P	2019	Osteoarthritis: a call for research on central pain mechanism and personalized prevention strategie	Clin Rheumatol	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. R. Watkins; A. Walker; E. N	2019	Women Firefighters' Health and Well-Being: An International Survey	Women's Health Issues	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Weigert; M. Hoene; P. Plon	2019	Hepatokines-a novel group of exercise factors	Pflugers Arch	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. G. B. Willmott; M. Hayes; 2019	2019	Heat acclimation attenuates the increased sensations of fatigue reported during acute exercise-hea	Temperature (Austin)	Exclude	-	-	-	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance/exercise performance/capacity* or physiology during exercise***
T. Yoshihara; S. W. Chang; T. M. Yuce; M. Ulusoy; A. G. Tu	2019	Sex-specific differences in rat soleus muscle signaling pathway responses to a bout of horizontal walking	J Physiol Biochem	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Zaman; A. Yousuf; A. Begu	2019	Comparison of Marginal and Internal Adaptation of Heat-Pressed and CAD/CAM Porcelain Lami	J Prosthodont	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Zurawlew; J. A. Mee; N. V. E. Brunt; H. L. Rosenberg;	2019	Evaluation of adaptive low cost solar water pasteurization device for providing safe potable water	J Water Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Zurawlew; J. A. Mee; N. V. E. Brunt; H. L. Rosenberg;	2019	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptations That Are Retained for at Least 2 Weeks	Front Physiol	Exclude	-	No	Yes	Yes	Yes	Yes	Yes	No	Yes	
V. E. Brunt; H. L. Rosenberg;	2019	Passive Heat Therapy Lowers Systolic Blood Pressure and Improves Vascular Endothelial Function	FASEB journal	Exclude	-	-	-	-	-	-	-	No	-	-
Isrctn	2019	Heat-exchanger breathing masks during heavy exertion in cold conditions; protection or a hindrance?	<a href="http://www.who.int/trials">http://www.who.int/trials</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Lerdpornkulrat; C. Poondej	2019	The Positive Effect of Intrinsic Feedback on Motivational Engagement and Self-Efficacy in Informed Decision Making	Journal of psychoeducatio	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. K. Ma; W. F. Saad Eldin; W. T. D. Martin; M. S. Green; M. J. C. Monroe; J. S. Klein; R. I.	2019	Effects of Pyrene on Human Liver HepG2 Cells: Cytotoxicity, Oxidative Stress, and Transcription	BioMed Research Internat	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. M. Wagenmakers; K. Hei	2019	Six weeks of oral Echinacea purpurea supplementation does not enhance the production of serum immunoglobulin G	Applied physiology, nutrit	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. O. Alele; B. S. Malau-Aduli	2020	Acute effects of heat therapy on cardiovascular responses to exercise and walking endurance in people with hypertension	FASEB journal	Exclude	-	-	-	-	-	-	No	-	-	-
A. F. Alghannam; I. Temple	2020	Passive Heat Therapy in Sedentary Humans Improves Aerobic Capacity and Insulin Sensitivity	FASEB journal	Exclude	-	-	-	-	-	-	-	No	-	-
M. A. Alston; J. Lee; M. E. M.	2020	Epidemiology of Exertional Heat Illness in the Military: A Systematic Review of Observational Studies	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Amano; N. Fujii; G. P. Ken	2020	Effect of carbohydrate-protein supplementation on endurance training adaptations	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. T. Ashworth; J. D. Cotter;	2020	The ghost of temperature past: interactive effects of previous and current thermal conditions on general performance	J Exp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Bailey; C. Fuhrmann; J. Ru	2020	The relative contribution of α- and β-adrenergic sweating during heat exposure and the influence of acclimation	Exp Dermatol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Barcala-Furelos; M. Fernán	2020	Methods for improving thermal tolerance in military personnel prior to deployment	Mil Med Res	Exclude	-	No	-	-	-	-	-	No	-	-
O. R. Barley; D. W. Chapman;	2020	Wearable sensors for personal temperature exposure assessments: A comparative study	Environ Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Bidasey-Manilal; C. Y. W.	2020	Measuring the physiological impact of extreme heat on firefighters during cardiopulmonary resuscitation	Am J Emerg Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Byrne; S. M. Ludington-Hoi	2020	The Influence of Heat Acclimation and Hypohydration on Post-Weight-Loss Exercise Performance	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	-	No	-	-
Y. L. Chen; W. H. Kuan; C. L.	2020	A Study Protocol to Determine Heat-Related Health Impacts among Primary Schoolchildren in Singapore	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. C. Choo; J. J. Peiffer; J. W.	2020	Occupational Heat Stress, Thermal Comfort, and Cognitive Performance in the OR: An Integrative Review	Aorn J	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. S. Courtin; S. Maldonado	2020	Comparative Study of the Composition of Sweat from Eccrine and Apocrine Sweat Glands during Exercise	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Curran; J. P. Campbell; E.	2020	Effect of regular precooling on adaptation to training in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Foster; S. G. Hodder; A. B.	2020	Assessing thermal sensitivity using transient heat and cold stimuli combined with a Bayesian adaptive algorithm	Eur J Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. J. Fuchs; J. S. J. Smeets;	2020	The mobilisation of early mature CD56dim-CD16bright NK cells is blunted following a single bout of exercise	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Fudin; E. L. Wegryn; E. G.	2020	Individual Responses to Heat Stress: Implications for Hyperthermia and Physical Work Capacity	Front Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
T. Gasparetto; C. Nessler	2020	Hot-water immersion does not increase postprandial muscle protein synthesis rates during recovery	J Appl Physiol (1985)	Exclude	-	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
O. R. Gibson; C. A. James; J.	2020	A Randomized, Crossover, Pharmacokinetic and Adhesion Performance Study of a Lidocaine Topical Anesthetic	J Pain Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. J. Gronlund; A. J. Yang; K.	2020	Diverse Effects of Thermal Conditions on Performance of Marathon Runners	Front Psychol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Hansen; M. Oxfeldt; A. E.	2020	Heat alleviation strategies for athletic performance: A review and practitioner guidelines	Temperature (Austin)	Exclude	-	No	-	-	-	-	-	No	-	-
L. He; R. Zhang; J. Shen; Y. M.	2020	Time series analysis of total and direct associations between high temperatures and preterm births	BMJ Open	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Hermand; A. Collado; O. H.	2020	Supplement with whey protein hydrolysate in contrast to carbohydrate supports mitochondrial adaptation to heat stress	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. P. Hoekstra; N. C. Bishop;	2020	Removal of N-terminal tail changes the thermostability of the low-temperature-active exo-inulinase	Bioengineered	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Hu; T. Maeda	2020	Skin Application of 4% Menthol Enhances Running Performance in Hot and Humid Climate	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. D. Hyldahl; J. M. Peake	2020	Elevating body temperature to reduce low-grade inflammation: a welcome strategy for those unable to exercise	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Ihsan; C. R. Abbiss; W. G.	2020	Productivity and physiological responses during exposure to varying air temperatures and clothing	Indoor Air	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Ihsan; G. Watson; H. C. Cl	2020	Combining cooling or heating applications with exercise training to enhance performance and muscle mass	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
JPRN-UMIN000039669	2020	Warming to the ice bath: Don't go cool on cold water immersion just yet! Comment on: 1) Arthur et al.	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. H. Keirns; N. A. Koemel;	2020	Skeletal Muscle Microvascular Adaptations Following Regular Cold Water Immersion	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. L. Kenney	2020	Safety of autologous fat grafting for velopharyngeal insufficiency: non-randomized, single institution study	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Kim; J. C. Monroe; T. P. G.	2020	Exercise and intestinal permeability: another form of exercise-induced hormesis?	Am J Physiol Gastrointest	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Kim; J. C. Monroe; T. P. G.	2020	Psychometric limits and critical evaporative coefficients for exercising older women	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Klous; C. de Ruiters; P. Alk	2020	Local Heat Therapy to Accelerate Recovery After Exercise-Induced Muscle Damage	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	-
L. Klous; C. De Ruiters; P. Alk	2020	Skeletal muscle adaptations to heat therapy	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
M. Kordi; J. P. Folland; S. G.	2020	Sweat rate and sweat composition following active or passive heat re-acclimation: A pilot study	Temperature (Austin)	Exclude	-	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
A. C. Kozai; E. Twichett; S. N.	2020	Sweat rate and sweat composition during heat acclimation	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
O. Laitano; C. K. Garcia; A. J.	2020	Cycling-specific isometric resistance training improves peak power output in elite sprint cyclists	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Larens-Linnemann; N. Ro	2020	Workload Intensity and Rest Periods in Professional Ballet: Connotations for Injury	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Lee; P. Willeit; T. Laukkane	2020	Delayed metabolic dysfunction in myocardium following exertional heat stroke in mice	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. L. Lim	2020	Enhancing innate immunity against virus in times of COVID-19: Trying to untangle facts from fiction	World Allergy Organ J	Exclude	Yes	-	-	-	-	-	-	-	-	-
X. Liu; Z. Tian; L. Sun; J. Liu	2020	Acute effects of exercise and sauna as a single intervention on arterial compliance	Eur J Prev Cardiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Maggolino; G. E. Dahl; N.	2020	Fundamental Concepts of Human Thermoregulation and Adaptation to Heat: A Review in the Context of Climate Change	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-	-	-	-
A. L. Mahaffey	2020	Mitigating heat-related mortality risk in Shanghai, China: system dynamics modeling simulations	Environ Geochem Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Malgoyre; J. Siracusa; P. E.	2020	Estimation of maximum thermo-hygrometric index thresholds affecting milk production in Italian dairy cows	Italian J Dairy Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Chemistry in a cup of coffee: Adapting an online lab module for teaching specific heat capacity of water	Biochem Mol Biol Educ	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Four-month operational heat acclimatization positively affects the level of heat tolerance	Sci Rep	Exclude	-	-	-	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

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O. McCarthy; R. Deere; M. L. 2020		Improved Nocturnal Glycaemia and Reduced Insulin Use Following Clinical Exercise Trial Partic	Front Public Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. McCubbin; B. A. Allansé 2020		Sports Dietitians Australia Position Statement: Nutrition for Exercise in Hot Environments	Int J Sport Nutr Exerc Me	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Michnik; K. Duch; I. Pokor 2020		Differences in cryostimulation and sauna effects on post-exercise changes in blood serum of athle	Complement Ther Med	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
N. B. Morris; O. Jay; A. D. Fl 2020		Sustainable solutions to mitigate occupational heat strain - an umbrella review of physiological ef	Environ Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. N. Moss; F. M. Bayne; F. C 2020		Short-term isothermic heat acclimation elicits beneficial adaptations but medium-term elicits a mc	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
C. M. Muia; S. R. Notley; S. S 2020		Whole-body heat exchange in black-African and Caucasian men during exercise eliciting matche	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Nakamura; K. Muraishi; H. 2020		Effect of a cooling strategy combining forearm water immersion and a low dose of ice slurry inge	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
D. Nakamura; Y. Tanabe; T. Ai 2020		Low caffeine dose improves intermittent sprint performance in hot and humid environments	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Nava; M. N. Zuhl 2020		Heat acclimation-induced intracellular HSP70 in humans: a meta-analysis	Cell Stress Chaperones	Exclude	-	No	-	-	-	-	-	No	-	-
I. R. Nilssen; H. S. Koksvik; k 2020		Rehabilitation in warm climate for young adults with inflammatory arthritis: A 12-month randomi	J Rehabil Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Njemini; K. Verhaeghen; T. 2020		A Novel Bead-Based Immunoassay for the Measurement of Heat Shock Proteins 27 and 70	Pathogens	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. B. Ogden; J. L. Fallowfield 2020		Reliability of gastrointestinal barrier integrity and microbial translocation biomarkers at rest and f	Physiol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Otani; M. Kaya; H. Goto; A 2020		Rising vs. falling phases of core temperature on endurance exercise capacity in the heat	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Ouertani; A. Ouertani; M. J 2020		New Plant Growth-Promoting, Chromium-Detoxifying Microbacterium Species Isolated From a T	Front Bioeng Biotechnol	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. T. Parsons; D. Snape; J. OH 2020		Echocardiographic changes following active heat acclimation	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
S. M. Pasiakos 2020		Nutritional Requirements for Sustaining Health and Performance During Exposure to Extreme En	Annu Rev Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. D. Périard; D. B. Pyne; D. J 2020		Short-Term Repeated-Sprint Training in Hot and Cool Conditions Similarly Benefits Performance	Front Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Pham; D. Yeap; G. Escalera 2020		Wearable Sensor System to Monitor Physical Activity and the Physiological Effects of Heat Expo	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. R. Pryor; J. L. Pryor; L. W. 2020		Acute Kidney Injury Biomarker Responses to Short-Term Heat Acclimation	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Racinais; M. Ihsan 2020		Why should I test my athletes in the heat several months before Tokyo 2020?	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
S. Racinais; D. Nichols; G. Tri 2020		Health status, heat preparation strategies and medical events among elite cyclists who competed in	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
S. Racinais; J. D. Périard 2020		Benefits of heat re-acclimation in the lead-up to the Tokyo Olympics	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
A. Rapson; E. Collman; S. Fat 2020		Free light chains as an emerging biomarker in saliva: Biological variability and comparisons with	Brain Behav Immun	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. B. Raven; S. A. Romero 2020		Increasing body temperature with dynamic exercise and/or by wallowing/bathing in hot water or s	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Relf; G. Eichhorn; K. Wald 2020		Validity of a wearable sweat rate monitor and routine sweat analysis techniques using heat acclim	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. A. Rissanen; A. Häkkinen; J 2020		Acute Neuromuscular and Hormonal Responses to Different Exercise Loadings Followed by a Sa	J Strength Cond Res	Exclude	-	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
J. A. Rissanen; K. Häkkinen; J 2020		Acute Hemodynamic Responses to Combined Exercise and Sauna	Int J Sports Med	Exclude	-	-	-	-	-	-	No	No	-	No
J. F. C. Rodrigues Júnior; Z. N 2020		Thermoregulatory and metabolic responses to a half-marathon run in hot, humid conditions	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. Rodrigues; G. S. Trajano; L 2020		Effects of passive heating intervention on muscle hypertrophy and neuromuscular function: A prel	J Therm Biol	Exclude	-	No	-	-	-	-	-	No	-	-
M. Rodriguez; J. V. Piedra; M 2020		A Matter of Degrees: A Systematic Review of the Ergogenic Effect of Pre-Cooling in Highly Train	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Rossnerova; A. Izzotti; A. I 2020		The Molecular Mechanisms of Adaptive Response Related to Environmental Stress	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. Roth 2020		Reproductive physiology and endocrinology responses of cows exposed to environmental heat str	Theriogenology	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. M. Salgado; K. E. Coffman 2020		Effect of 8 days of exercise-heat acclimation on aerobic exercise performance of men in hypobaric	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	-	No	-	-
A. J. E. Seely 2020		Optimizing Our Patients' Entropy Production as Therapy? Hypotheses Originating from the Physi	Entropy (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Sekiguchi; E. M. Filep; C. I 2020		Does Dehydration Affect the Adaptations of Plasma Volume, Heart Rate, Internal Body Temperatu	J Sport Rehabil	Exclude	-	No	-	-	-	-	-	No	-	-
Z. Shahbazi; Y. C. Byun 2020		Towards a Secure Thermal-Energy Aware Routing Protocol in Wireless Body Area Network Base	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. Shang; L. Peng; P. Guo; H. 2020		Metal-Organic Frameworks as a Theranostic Nanoplatform for Combinatorial Chemophototherm	ACS Biomater Sci Eng	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Shindell; Y. Zhang; M. Sco 2020		The Effects of Heat Exposure on Human Mortality Throughout the United States	Geohealth	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Siquier-Coll; I. Bartolomé; J 2020		Effects of exposure to high temperatures on serum, urine and sweat concentrations of iron and cop	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Siquier-Coll; I. Bartolomé; J 2020		Effect of exposure to high temperatures in the excretion of cadmium and lead	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Smith; S. White 2020		Heat acclimatisation on UK exercise SAIIF SAREEA 3	BMJ Mil Health	Exclude	-	No	-	-	-	-	-	-	-	-
M. B. Smith; S. White 2020		Command application of UK military climatic guidance on Exercise SAIIF SAREEA 3	BMJ Mil Health	Exclude	-	No	-	-	-	-	-	-	-	-
K. Song; M. Richter; J. Waxen 2020		Novel Acclimatization and Acclimation Strategies for Hot Climates	Curr Sports Med Rep	Exclude	-	No	-	-	-	-	-	-	-	-
A. Sotiriadis; U. Ciuhă; T. Debi 2020		Heat acclimation does not modify autonomic responses to core cooling and the skin thermal comf	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
A. Sotiriadis; T. Debevec; U. C 2020		Aerobic but not thermoregulatory gains following a 10-day moderate-intensity training protocol	Physiol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Stager; Z. A. Cheviron 2020		Is there a role for sarcosipin in avian facultative thermogenesis in extreme cold?	Biol Lett	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. J. Stevens; M. L. Ross; J. D 2020		Core Temperature Responses to Elite Racewalking Competition	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Sugie; K. Harada; T. Takah 2020		Effectiveness of a far-infrared low-temperature sauna program on geriatric syndrome and frailty in	Geriatr Gerontol Int	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. C. S. Tan; L. K. K. Chin; I. 2020		Thermoregulation in the Aging Population and Practical Strategies to Overcome a Warmer Tomor	Proteomics	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Tavares; M. Simões; B. Mat 2020		The Acute and Longer-Term Effects of Cold Water Immersion in Highly-Trained Volleyball Athle	Front Sports Act Living	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. H. Taylor; R. S. Taylor; W. 2020		Adding web-based behavioural support to exercise referral schemes for inactive adults with chron	Health Technol Assess	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Till; J. Weakley; D. B. Rea 2020		Applied Sport Science for Male Age-Grade Rugby Union in England	Sports Med Open	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Travers; J. González-Alons 2020		Exercise heat acclimation has minimal effects on left ventricular volumes, function and systemic l	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	-	-	No	-	-
G. Travers; D. Nichols; N. Rid 2020		Heat Acclimation with Controlled Heart Rate: Influence of Hydration Status	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
L. Tumilty; N. Gregory; M. Bi 2020		No Influence of Low-, Medium-, or High-Dose Tyrosine on Exercise in a Warm Environment	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Vaidyanathan; J. Malhlay; P 2020		Heat-Related Deaths - United States, 2004-2018	MMWR Morb Mortal Wk	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.





Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
A. J. McCubbin	2021	Exertional heat stress and sodium balance: Leaders, followers, and adaptations	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. R. McGill; V. L. Simhadri;	2021	HLA Variants and Inhibitor Development in Hemophilia A: A Retrospective Case-Controlled Study	Front Med (Lausanne)	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. K. Merchant, A. Grundstein	2021	Exertional heat illnesses in marching band artists: a case series	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Y. Min, H. S. Lee; Y. S. Cho	2021	Association between income levels and prevalence of heat- and cold-related illnesses in Korean adults	BMC Public Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Misailidi; K. Mantzios; C.	2021	Environmental and Psychophysical Heat Stress in Adolescent Tennis Athletes	Int J Sports Physiol Perform	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. M. Mitchell; R. M. Salgado	2021	Heat Acclimation Improves Heat Tolerance Test Specificity in a Criteria-dependent Manner	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	-
M. Mohammady; M. Radmehi	2021	Slow versus fast subcutaneous heparin injections for prevention of bruising and site pain intensity	Cochrane Database of Systematic Reviews	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Morecchiato; M. Coppi; I. E	2021	Evaluation of extraction-free RT-PCR methods for faster and cheaper detection of SARS-CoV-2	Int J Infect Dis	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Mornas; S. Racinais; F. Bré	2021	Hyperthermia reduces electromechanical delay via accelerated electrochemical processes	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Mourtakos; A. Philippou; A	2021	The effect of prolonged intense physical exercise of special forces volunteers on their plasma proteome	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. O. Murray; J. O. Brant; J. I	2021	Exertional heat stroke leads to concurrent long-term epigenetic memory, immunosuppression and metabolic dysregulation	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. F. Nunfam; E. Afrifa-Yamo	2021	Heat exposure effect on Ghanaian mining workers: A mediated-moderation approach	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Ohko; Y. Umemoto; Y. Sak	2021	The effects of endurance exercise combined with high-temperature head-out water immersion on heat tolerance	Int J Hyperthermia	Exclude	-	-	-	-	-	-	No	-	-	-
A. Oliveira; A. Lopes; E. Corr	2021	An urban climate-based empirical model to predict present and future patterns of the Urban Thermal Environment	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Olschewski; A. Thielebein;	2021	Validation of Inactivation Methods for Arenaviruses	Viruses	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. O. Osborne; I. B. Stewart; I	2021	Short-term heat acclimation preserves knee extensor torque but does not improve 20 km self-paced running performance	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
R. J. Park; A. P. Behrer; J. Gó	2021	Learning is inhibited by heat exposure, both internationally and within the United States	Nat Hum Behav	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Perez-Quintero; J. Siquier-	2021	Three weeks of passive and intervallic heat at high temperatures (100±2 °C) in a sauna improve aerobic performance	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
J. D. Périard; T. M. H. Eijsvog	2021	Exercise under heat stress: thermoregulation, hydration, performance implications, and mitigation strategies	Physiol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. J. Pillon; R. J. F. Loos; S. M	2021	Metabolic consequences of obesity and type 2 diabetes: Balancing genes and environment for performance	Cell	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. Pokora; E. Sadowska-Krepa	2021	The Effect of Medium-Term Sauna-Based Heat Acclimation (MPHA) on Thermophysiological and Performance Responses	Int J Environ Res Public Health	Exclude	-	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
B. H. Poon; S. Prakaash; Y. S.	2021	Thermal strain and fluid balance during a 72-km military route march in a field setting	Singapore Med J	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Presbitero; V. R. Melnikov;	2021	A unifying model to estimate the effect of heat stress in the human innate immunity during physical activity	Sci Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Price	2021	A mixed treatment comparison of selected osteopathic techniques used to treat acute nonspecific low back pain	J Osteopath Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. R. Pryor; J. L. Pryor; L. W.	2021	Short term heat acclimation reduces heat strain during a first, but not second, consecutive exercise test	J Sci Med Sport	Exclude	-	-	-	-	-	-	No	-	-	-
S. Racinais; M. Alhammoud; J	2021	Epidemiology and risk factors for heat illness: 11 years of Heat Stress Monitoring Programme data	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Racinais; J. D. Périard; J. P	2021	Intensified Training Supersedes the Impact of Heat and/or Altitude for Increasing Performance in Endurance Athletes	Int J Sports Physiol Perform	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. A. P. Ramos; C. J. Brade; K.	2021	The Internal-to-External Load Ratio: A Tool to Determine the Efficacy of Heat Acclimation/Adaptation	Front Sports Act Living	Exclude	-	No	-	-	-	-	No	-	-	-
N. Ravanelli; D. Gagnon; P. Ir	2021	A retrospective analysis to determine if exercise training-induced thermoregulatory adaptations are maintained	Exp Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
B. R. Ronnestad; H. Hamarsla	2021	Five weeks of heat training increases haemoglobin mass in elite cyclists	Exp Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
G. Roussey; T. Bernard; P. Fot	2021	Heat acclimation training with intermittent and self-regulated intensity may be used as an alternative to traditional heat acclimation	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
G. N. Sandford; T. Stellingwerf	2021	Ozone pollution: a 'hidden' environmental layer for athletes preparing for the Tokyo 2020 Olympics	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Sekiguchi; C. L. Benjamin;	2021	Changes in Hydration Factors Over the Course of Heat Acclimation in Endurance Athletes	Int J Sport Nutr Exerc Metab	Exclude	-	-	-	-	-	-	No	-	-	-
P. Semenzato; F. Cagnacci; F.	2021	Behavioural heat-stress compensation in a cold-adapted ungulate: Forage-mediated responses to voluntary heat stress	Ecol Lett	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. Sivathanam; A. V. Le; Y. S	2021	Adaptive Floor Cleaning Strategy by Human Density Surveillance Mapping with a Reconfigurable Sensor Array	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Slivka; R. Shute; W. Hailes	2021	Exercise in the heat blunts improvements in aerobic power	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Smallcombe; A. Puhenth	2021	Thermoregulation During Pregnancy: a Controlled Trial Investigating the Risk of Maternal Hyperthermia	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. L. Snopkowski; N. T. Varga	2021	The requirement for physical effort reduces voluntary cooling behavior during heat exposure in humans	Physiol Behav	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Suh; H. R. Lieberman; L. T	2021	Cellular dehydration acutely degrades mood mainly in women: a counterbalanced, crossover trial	Br J Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. A. S. Taylor; J. Y. Lee; S. K	2021	Physiological interactions with personal-protective clothing, physically demanding work and global warming	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
X. Tian; Z. Fang; W. Liu	2021	Decreased humidity improves cognitive performance at extreme high indoor temperature	Indoor Air	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Travers; J. González-Alons	2021	Exercise Heat Acclimation With Dehydration Does Not Affect Vascular and Cardiac Volumes or Stroke Volume	Front Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
Z. Tu; W. Liu; J. Wang; X. Qi	2021	Biomimetic high performance artificial muscle built on sacrificial coordination network and mechanism	Nat Commun	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. D. Vandana; V. Sejian; A. N	2021	Heat stress and poultry production: impact and amelioration	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. A. Vardar; Z. B. Doğanlar;	2021	Different responses of apoptotic, inflammatory and heat shock protein gene expression to a single heat stress exposure	J Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. Vesic; V. Jakovljevic; T. Nil	2021	The influence of acclimatization on stress hormone concentration in serum during heat stress	Mol Cell Biochem	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
M. Waldron; R. Fowler; S. He	2021	Effects of Heat Acclimation and Acclimatization on Maximal Aerobic Capacity Compared to Exercise	Sports Med	Exclude	-	No	-	-	-	-	No	-	-	-
J. Walker; A. Bissas; G. P. Par	2021	Kinematic factors associated with start performance in World-class male sprinters	J Biomech	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Walter; W. W. P. O. R. Gibs	2021	Exercise hyperthermia induces greater changes in gastrointestinal permeability than equivalent passive heat stress	Physiol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. C. Wardenar; C. P. Ortega-	2021	A 5-day Heat Acclimation Program Improves Heat Stress Indicators While Maintaining Exercise Performance	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	-
R. Watkins; G. Young; M. Wei	2021	"I think we need to empower people to manage it better themselves": A qualitative interview study on heat stress	Phys Ther Sport	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. M. Weiner; J. B. Kazman; I	2021	Perceptual strain in a compensable hot environment: Accuracy and clinical correlates	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. A. Wickham; P. J. Wallace;	2021	Sex differences in the physiological adaptations to heat acclimation: a state-of-the-art review	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
A. G. B. Willmott; R. Holliss;	2021	Heat acclimation improves sweat gland function and lowers sweat sodium concentration in an adult population	J Cyst Fibros	Exclude	-	-	-	-	-	-	No	-	-	-
H. Yang; Y. L. Yang; G. Q. Li;	2021	Identifications of immune-responsive genes for adaptive traits by comparative transcriptome analysis	Sci Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Yoon; M. Kim; H. Lee; G. I	2021	S-Nitrosylation of Histone Deacetylase 2 by Neuronal Nitric Oxide Synthase as a Mechanism of Heat Stress Response	Circulation	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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S. Zhang; N. Zhu	2021	Exercise heat acclimation causes human responses and safety performance improvements	J Therm Biol	Exclude	-	-	-	-	No	-	-
Seikiguchi, Y., Benjamin, C. L.	2021	Effects of Heat Acclimatization, Heat Acclimation, and Intermittent Exercise Heat Training on T	Sports Health	Exclude	-	-	-	-	No	-	-
I. Bartolomé; J. Siquier-Coll; †	2021	3-Week passive acclimation to extreme environmental heat (100± 3 °C) in dry sauna increases ph	J Therm Biol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
N. V. Kirby; S. J. E. Lucas; O.	2021	Intermittent post-exercise sauna bathing improves markers of exercise capacity in hot and temper	Eur J Appl Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
N. V. Kirby; S. J. E. Lucas; T.	2021	Sex differences in adaptation to intermittent post-exercise sauna bathing in trained middle-distanc	Sports Med Open	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
C. Lundby; I. S. Svendsen; T.	2021	Training wearing thermal clothing and training in hot ambient conditions are equally effective me	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
R. D. McIntyre; M. J. Zurawle	2021	A comparison of heat acclimation by post-exercise hot water immersion and exercise in the heat	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
M. Sabapathy; F. Tan; S. Al Hi	2021	Effect of heat pre-conditioning on recovery following exercise-induced muscle damage	Curr Res Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
K. A. M. Waldock; O. R. Gibbs	2021	Exercise heat acclimation and post-exercise hot water immersion improve resting and exercise res	J Sci Med Sport	Exclude	-	Yes	Yes	Yes	Yes	No	Yes
S. Antoine-Jonville; K. Remin	2021	Would the (too?) normal adaptation to exercise in sickle cell trait carrier be a reflection of prevent	European journal of preve	Exclude	Yes	-	-	-	-	-	-
G. Balasekaran; J. Chua; C. N;	2021	EFFECTS OF PRECOOLING ON PHYSIOLOGICAL AND PERFORMANCE RESPONSES IN	Medicine and science in sp	Exclude	Yes	-	-	-	-	-	-
C. L. Benjamin; S. Yasuki; L.	2021	THE OPTIMAL FREQUENCY OF INTERMITTENT HEAT TRAINING TO ELICIT POSITIVE	Medicine and science in sp	Exclude	-	-	-	-	No	-	-
A. A. Bestavashvili; O. S. Gla	2021	The Effects of Intermittent Hypoxic-Hyperoxic Exposures on Lipid Profile and Inflammation in I	Frontiers in cardiovasculat	Exclude	Yes	-	-	-	-	-	-
A. Callovin; A. Fornasiero; A	2021	Effects of three-exercise sessions in the heat on endurance cycling performance	Journal of thermal biology	Exclude	-	-	-	-	No	-	-
G. Chaseling; A. Debray; H. C	2021	Acute Effect of Heat Exposure on Brachial Artery FMD: impact of Modality and Measurement Ti	FASEB journal	Exclude	-	-	-	-	No	-	-
R. B. R. d6gxxx	2021	Evaluation of a bulk-fill thermoviscous composite resin in dental restoration	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
C. De Souza; J. Uendelez-Pint	2021	The combined effects of heat acclimation and glutamine supplementation on physical performanc	Biomedical and biopharm	Exclude	-	-	-	-	No	No	-
Isrctn	2021	How does the heart and cardiovascular system adapt to training in a hot environment?	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
M. Kwon; R. Shute; B. Ruby;	2021	Exercise in the Heat Blunts Improvements in Aerobic Capacity	FASEB journal	Exclude	-	-	-	-	No	-	-
M. Misailidi; K. Mantziou; C.	2021	Environmental and Psychophysical Heat Stress in Adolescent Tennis Athletes	International journal of sp	Exclude	-	-	-	-	No	-	-
C. Wheelock; D. P. Looney; A	2021	Effect Of Dry And Wet Heat Acclimation Strategies On Exercise Endurance During Warm Water	Medicine and science in sp	Exclude	-	-	-	-	No	-	-
S. Yasuki; C. L. Benjamin; C.	2021	Effects Of Heat Acclimatization, Heat Acclimation And Intermittent Heat Training On Time-trial	Medicine and science in sp	Exclude	-	-	-	-	No	-	-
R. Ahmed; M. Ucci; D. Mume	2022	Effects of thermal sensation and acclimatization on cognitive performance of adult female student	Indoor Air	Exclude	-	-	-	-	No	-	-
S. Banerjee; A. Middel; S. Ch	2022	A regression-based three-phase approach to assess outdoor thermal comfort in informal micro-ent	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
H. Barry; P. Gendron; C. Gagr	2022	Passive heat acclimation does not modulate processing speed and executive functions during cogn	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	No
C. L. Benjamin; Y. Seikiguchi;	2022	The efficacy of weekly and bi-weekly heat training to maintain the physiological benefits of heat	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
P. Brzęk; A. Gębczyński; P. Se	2022	Significance of variation in basal metabolic rate in laboratory mice for translational experimen	J Comp Physiol B	Exclude	Yes	-	-	-	-	-	-
J. Corbett; H. C. Massey; J. T.	2022	The effect of medium-term heat acclimation on endurance performance in a temperate environme	Eur J Sport Sci	Exclude	-	-	-	-	No	-	-
T. Egawa; T. Ogawa; T. Yokok	2022	Methylglyoxal reduces molecular responsiveness to 4 weeks of endurance exercise in mouse plan	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
E. Fernández-Martínez; J. Pér	2022	Pain management and coping strategies for primary dysmenorrhea: A qualitative study among fen	Nurs Open	Exclude	Yes	-	-	-	-	-	-
J. Frampton; R. M. Edinburgh	2022	The acute effect of fasted exercise on energy intake, energy expenditure, subjective hunger and ga	Int J Obes (Lond)	Exclude	Yes	-	-	-	-	-	-
H. Fujiyoshi; T. Egawa; E. Ku	2022	TLR4-Mediated Inflammatory Responses Regulate Exercise-Induced Molecular Adaptations in M	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
J. N. Hussain; M. M. Cohen; †	2022	Infrared sauna as exercise-mimetic? Physiological responses to infrared sauna vs exercise in healt	Complement Ther Med	Exclude	-	-	-	-	No	-	-
O. Jay	2022	Can heat exposure improve exercise performance?	J Sci Med Sport	Exclude	-	No	-	-	No	-	-
J. P. Kimball; O. T. Inan; V. A.	2022	Wearable Sensors and Machine Learning for Hypovolemia Problems in Occupational, Military an	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-
L. S. Kissling; A. P. Akerman;	2022	A crossover control study of three methods of heat acclimation on the magnitude and kinetics of a	Exp Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No
S. H. Kroesen; J. Q. de Korte;	2022	Impact of thermal sensation on exercise performance in the heat: a Thermo Tokyo sub-study	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. Kumar; P. Lennon; N. Mull	2022	Using long-range freeze-preventive vaccine carriers in Nepal: A study of equipment performance,	Vaccine X	Exclude	Yes	-	-	-	-	-	-
K. Kwan; E. Helms	2022	Prevalence, Magnitude, and Methods of Weight Cutting Used by World Class Powerlifters	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
P. Ladlow; O. O'Sullivan; A. F	2022	Dysautonomia following COVID-19 is not associated with subjective limitations or symptoms bu	Heart Rhythm	Exclude	Yes	-	-	-	-	-	-
Z. Li; Z. McKenna; Z. Fennel;	2022	The combined effects of exercise-induced muscle damage and heat stress on acute kidney stress a	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
Y. A. T. Martins; R. L. F. Passi	2022	A 32-day long fieldwork in Antarctica improves heat tolerance during physical exercise	An Acad Bras Cienc	Exclude	Yes	-	-	-	-	-	-
N. S. Mazalan; G. J. Landers;	2022	A Combination of Ice Ingestion and Head Cooling Enhances Cognitive Performance during Endu	J Sports Sci Med	Exclude	Yes	-	-	-	-	-	-
J. Meng; Z. Lv; Y. Wang; C. C	2022	Identification of the redox-stress signaling threshold (RST): Increased RST helps to delay aging i	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
E. Mur-Gimeno; R. Sebio-Gar	2022	Short-term effects of two different recovery strategies on muscle contractile properties in health	J Sports Sci	Exclude	-	-	-	-	No	-	-
T. Naito; M. Haramura; K. Mi	2022	Cooling during short-term heat acclimation enhances aerobic capacity but not sweat capacity	Eur J Sport Sci	Exclude	-	-	-	-	No	-	-
C. A. Navas; G. A. Agudelo-C	2022	Thermal boldness: Volunteer exploration of extreme temperatures in fruit flies	J Insect Physiol	Exclude	Yes	-	-	-	-	-	-
N. Nishihara; J. Xiong; J. Kim	2022	Effect of adaptive opportunity on cognitive performance in warm environments	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
S. Racinais; G. Havenith; P. A;	2022	Association between thermal responses, medical events, performance, heat acclimation and health	Br J Sports Med	Exclude	-	No	-	-	No	-	-
M. B. Reid	2022	Redox Implications of Extreme Task Performance: The Case in Driver Athletes	Cells	Exclude	Yes	-	-	-	-	-	-
K. Reminy; E. T. Ngo Sock; N	2022	Strenuous exercise in warm environment is associated with improved microvascular function in si	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
R. Renteria; S. Grineski; T. C	2022	Social disparities in neighborhood heat in the Northeast United States	Environ Res	Exclude	Yes	-	-	-	-	-	-
B. R. Ronnestad; J. Hansen; T.	2022	Case Report: Heat Suit Training May Increase Hemoglobin Mass in Elite Athletes	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
W. Simmons; S. Lin; T. J. Lub	2022	Modeling complex effects of exposure to particulate matter and extreme heat during pregnancy or	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
J. Soo; S. Racinais; D. J. Bish	2022	Effects of mild heat exposure on fatigue responses during two sets of repeated sprints matched for	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
H. Štorkánová; S. Oreská; M.	2022	Hsp90 Levels in Idiopathic Inflammatory Myopathies and Their Association With Muscle Involve	Front Immunol	Exclude	Yes	-	-	-	-	-	-

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S. Syed; T. L. O'Sullivan; K. P. 2022		Extreme Heat and Pregnancy Outcomes: A Scoping Review of the Epidemiological Evidence	Int J Environ Res Public Health	Exclude	Yes	-	-	-	-	-	-
H. Tattan-Birch; J. Hartmann- 2022		Heated tobacco products for smoking cessation and reducing smoking prevalence	Cochrane Database of Systematic Reviews	Exclude	Yes	-	-	-	-	-	-
A. Walleit; A. McKune; D. Py 2022		Repeated-Sprint Exercise in the Heat Increases Indirect Markers of Gastrointestinal Damage in Women	Int J Sport Nutr Exerc Metab	Exclude	-	-	-	-	No	-	-
B. Wang; W. Zhang 2022		MARnet: multi-scale adaptive residual neural network for chest X-ray images recognition of lung	Math Biosci Eng	Exclude	Yes	-	-	-	-	-	-
E. Ashworth; J. Cotter and A. 12022		Post-exercise, passive heat acclimation with sauna or hot-water immersion provide comparable adaptations	Ergonomics	Exclude	-	Yes	Yes	Yes	Yes	No	Yes
C. P. Philp; N. W. Pitchford; J. 2022		Hot water immersion; potential to improve intermittent running performance and perception of fatigue	PLoS One	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
R. Ables; J. A. Freemas; C. S. 2022		Fluid Balance is Unlikely Modified by the Menstrual Cycle when Ad Libitum Drinking is Permitted	FASEB journal	Exclude	Yes	-	-	-	-	-	-
Actrn 2022		Cool water foot immersion, skin wetting and fan use as low-cost, at home cooling strategies for outdoor workers	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Actrn 2022		Optimising heat therapy for treating high blood pressure	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Actrn 2022		Effect of Exercise on Individuals with Chronic Neck Pain and Central Sensitisation	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Actrn 2022		Sustainable cooling strategies for use in garment factories in low- and middle-income countries	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
R. Ahmed; M. Ucci; D. Mumford 2022		Effects of thermal sensation and acclimatization on cognitive performance of adult female students	Indoor Air	Exclude	-	-	-	-	No	-	-
S. T. Al-Otaibi 2022		Physiological and biochemical parameters among a population of bakers exposed to environmental heat	Int J Occup Med Environ Health	Exclude	Yes	-	-	-	-	-	-
M. Aliahadi; M. Shafiee Motlagh 2022		Analysis of body heat tolerance of workers in a simulated warm environment based on linear mixed-effects models	PLoS One	Exclude	Yes	-	-	-	-	-	-
A. M. Aljaroudi; A. Bhattacha 2022		Effect of Cooling on Static Postural Balance while Wearing Firefighter's Protective Clothing in Heat	International journal of occupational ergonomics	Exclude	Yes	-	-	-	-	-	-
S. B. Amin; A. B. Hansen; H. 2022		High intensity exercise and passive hot water immersion cause similar post-intervention changes in physiological parameters	Journal of applied physiology	Exclude	-	-	-	-	No	-	-
M. Aoki; Y. Yamazaki; J. Otsu 2022		Influence of Heat Exposure on Motor Control Performance and Learning as Well as Physiological Adaptations	Int J Environ Res Public Health	Exclude	-	-	-	-	No	-	-
L. B. Baker; P. J. D. De Chaves 2022		Explaining variation in sweat sodium concentration: effect of individual characteristics and exercise intensity	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. Banerjee; A. Middel; S. Chi 2022		A regression-based three-phase approach to assess outdoor thermal comfort in informal micro-environments	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
I. Bartolomé; V. Toro-Román; 2022		Acute Effect of Exposure to Extreme Heat (100 ± 3 °C) on Lower Limb Maximal Resistance and Power	Int J Environ Res Public Health	Exclude	-	-	-	-	No	-	-
H. Beal; J. Corbett; D. Davis; 2022		Marathon Performance and Pacing in the Doha 2019 Women's IAAF World Championships: Exploring the Role of Heat	Int J Sports Physiol Performance	Exclude	Yes	-	-	-	-	-	-
C. L. Benjamin; Y. Sekiguchi; 2022		The efficacy of weekly and bi-weekly heat training to maintain the physiological benefits of heat acclimation	Journal of science and medicine in sport	Exclude	-	-	-	-	No	-	-
D. H. Bennett; R. E. Moran; P. 2022		Reductions in particulate matter concentrations resulting from air filtration: a randomized sham-controlled trial	Indoor air	Exclude	Yes	-	-	-	-	-	-
C. Bernard; A. Zavoriti; Q. Pu 2022		Role of macrophages during skeletal muscle regeneration and hypertrophy: Implications for immunometabolism	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
D. N. Borg; J. L. O'Brien 2022		Comment on Effects of Heat Acclimation and Acclimatization on Maximal Aerobic Capacity and Power	Sports Med	Exclude	Yes	-	-	-	-	-	-
B. Brajer-Luftmann; M. Kaczk 2022		Regulatory T cells, damage-associated molecular patterns, and myeloid-derived suppressor cells in heat stress	Medicine (Baltimore)	Exclude	Yes	-	-	-	-	-	-
H. A. Brown; T. H. Topham; B. 2022		Seasonal Heat Acclimatization in Healthy Adults: A Systematic Review	Sports Med	Exclude	Yes	-	-	-	-	-	-
P. Brzdek; A. Gębczyński; P. Se 2022		Significance of variation in basal metabolic rate in laboratory mice for translational experiments	J Comp Physiol B	Exclude	Yes	-	-	-	-	-	-
H. A. Campbell; A. P. Akerman 2022		Acute physiological and psychophysical responses to different modes of heat stress	Experimental physiology	Exclude	-	-	-	-	No	-	-
Q. Chen; Y. Liu; K. Gu; J. Yao 2022		Silk-Based Electrochemical Sensor for the Detection of Glucose in Sweat	Biomacromolecules	Exclude	Yes	-	-	-	-	-	-
K. H. Cho; S. H. Jung; M. S. C 2022		Effect of water filtration infrared-A (wIRA) sauna on inorganic ions excreted through sweat from the skin	Environ Sci Pollut Res Int	Exclude	Yes	-	-	-	-	-	-
A. Choe; Y. Kwon; Y. E. Shin; 2022		Adaptive IR- and Water-Gating Textiles Based on Shape Memory Fibers	ACS Appl Mater Interface	Exclude	Yes	-	-	-	-	-	-
G. Cil; J. Kim 2022		Extreme temperatures during pregnancy and adverse birth outcomes: Evidence from 2009 to 2018	Health Econ	Exclude	Yes	-	-	-	-	-	-
J. Connor; M. Germaine; C. G 2022		Effect of rapid weight loss incorporating hot salt water immersion on changes in body mass, blood pressure, and heart rate	European journal of applied physiology	Exclude	Yes	-	-	-	-	-	-
H. L. Cope; H. W. Hemingway 2022		Effect of Acute Heat Exposure on the Pressor Response to a Voluntary Hypoxic Apnea: a Cross-Sectional Study	FASEB journal	Exclude	Yes	-	-	-	-	-	-
R. Costello; K. M. Keane; B. J 2022		Plasma uptake of selected phenolic acids following New Zealand blackcurrant extract supplementation	Diet Suppl	Exclude	Yes	-	-	-	-	-	-
M. N. Cramer; D. Gagnon; O. 2022		Human temperature regulation under heat stress in health, disease, and injury	Physiol Rev	Exclude	Yes	-	-	-	-	-	-
S. Crosby; R. Best; K. McDon 2022		The Effects of Menthol on a Modified Three-Minute Maximal Test in the Heat	International journal of sports medicine	Exclude	Yes	-	-	-	-	-	-
J. W. Crothers; E. Ross Colgate 2022		Intradermal fractional-dose inactivated polio vaccine (iFPV) adjuvanted with double mutant enterovirus 71	Vaccine	Exclude	Yes	-	-	-	-	-	-
Ctri 2022		Effect of alternate heat and cold treatment by water and device to reduce pain and improve knee function in patients with knee osteoarthritis	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Ctri 2022		Effect of naturopathy and yoga treatments on psoriasis skin disease	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Ctri 2022		Pain Neuroscience Education intervention in chronic low back pain in India	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
J. Cui; Z. Gao; U. A. Leuenberger 2022		Repeated warm water baths decrease sympathetic activity in humans	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. A. De Barros; M. J. Macarriz 2022		Effects of sex and wet-bulb globe temperature on heart rate variability during prolonged moderate-intensity exercise	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
S. Del Ferraro; T. Falcone; M. 2022		A potential wearable solution for preventing heat strain in workplaces: The cooling effect and the physiological response to a cooling vest	Environ Res	Exclude	Yes	-	-	-	-	-	-
M. C. Dennis; P. S. R. Goods; 2022		Repeated-sprint training in heat and hypoxia: Acute responses to manipulating exercise-to-rest ratio	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-
M. C. Dennis; P. S. R. Goods; 2022		Taking the plunge: When is best for hot water immersion to complement exercise in heat and hypoxia?	J Sports Sci	Exclude	-	-	-	-	No	-	-
L. Deutsch; A. Sotiriadis; B. M 2022		Exercise and Interorgan Communication: Short-Term Exercise Training Blunts Differences in Core Temperature and Metabolites	Cosmetology	Exclude	Yes	-	-	-	-	-	-
V. Di Felice; R. Barone; E. Tr 2022		Physiaxosome: A New Nanovesicle Drug Containing Heat Shock Protein 60 for Treating Muscle Damage	Cells	Exclude	Yes	-	-	-	-	-	-
K. J. Donnan; E. L. Williams; 2022		The effect of exercise-induced fatigue and heat exposure on soccer-specific decision-making during a simulated match	PLoS One	Exclude	Yes	-	-	-	-	-	-
M. A. Doohan; I. B. Stewart; 12022		Modified Stroop task performance when wearing protective clothing in the heat: An evaluation of the effect of clothing type	Physiol Behav	Exclude	Yes	-	-	-	-	-	-
T. Egawa; T. Ogawa; T. Yokok 2022		Methylglyoxal reduces molecular responsiveness to 4 weeks of endurance exercise in mouse plantar skin	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
N. Eimantas; S. Ivanov; N. B 2022		Modulation of neuromuscular excitability in response to acute noxious heat exposure has no additive effect on muscle fatigue	Front Physiol	Exclude	Yes	-	-	-	-	-	-
S. P. Fenemor; N. D. Gill; M. 2022		Small Performance Effects of a Practical Mixed-Methods Cooling Strategy in Elite Team Sport Athletes	Research quarterly for exercise and sport	Exclude	Yes	-	-	-	-	-	-
Z. J. Fennel; F. T. Amorim; M. 2022		The heat shock connection: skeletal muscle hypertrophy and atrophy	Am J Physiol Regul Integr Comp Physiol	Exclude	Yes	-	-	-	-	-	-
E. Fernández-Martínez; J. Péri 2022		Pain management and coping strategies for primary dysmenorrhea: A qualitative study among female university students	Nurs Open	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
M. J. Foertsch; J. T. McMullar	2022	Ketamine Stability over Six Months of Exposure to Moderate and High Temperature Environmen	Prehosp Emerg Care	Exclude	Yes	-	-	-	-	-	-
J. Frampton; R. M. Edinburgh	2022	The acute effect of fasted exercise on energy intake, energy expenditure, subjective hunger and ga	Int J Obes (Lond)	Exclude	Yes	-	-	-	-	-	-
H. Fujiyoshi; T. Egawa; E. Ku	2022	TLR4-Mediated Inflammatory Responses Regulate Exercise-Induced Molecular Adaptations in M	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
C. K. Garcia; G. P. Robinson;	2022	The impact of castration on physiological responses to exertional heat stroke in mice	PLoS One	Exclude	Yes	-	-	-	-	-	-
E. Gervasoni; R. Bertoni; D. A	2022	Acute Thermoregulatory and Cardiovascular Response to Submaximal Exercise in People With M	Front Immunol	Exclude	Yes	-	-	-	-	-	-
D. A. Holdsworth; R. Chamley	2022	Comprehensive clinical assessment identifies specific neurocognitive deficits in working-age pati	PLoS One	Exclude	Yes	-	-	-	-	-	-
B. G. Horgan; S. L. Halson; E.	2022	No effect of repeated post-resistance exercise cold or hot water immersion on in-season body com	European journal of applic	Exclude	-	-	-	-	No	-	-
B. G. Horgan; N. P. West; N. T	2022	Acute Inflammatory, Anthropometric, and Perceptual (Muscle Soreness) Effects of Postresistance	Journal of strength and coi	Exclude	-	-	-	-	No	-	-
Y. Huang; H. Shi; X. Liu; X. I.	2022	Analysis of Climate and Income-Related Factors for High Regional Child Drowning Mortality in	Int J Public Health	Exclude	Yes	-	-	-	-	-	-
J. Hussain; M. Cohen; C. J. O'	2022	Detections of organophosphate and pyrethroid insecticide metabolites in urine and sweat obtained	International journal of hy	Exclude	Yes	-	-	-	-	-	-
Iret20210724051973N	2022	The effect of care application on pain and motor rehabilitation of patients	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Iret20220529055018N	2022	a new calcium silicate material in partial pulpotomy	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Isrctn	2022	Reducing fatigue in Long COVID-19: a feasibility study of a self-help intervention to reduce fatig	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
Isrctn	2022	A study to investigate the effects of two painkillers as a combination treatment for pain	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
B. W. Kaiser; C. L. Chapman;	2022	Efficacy of Hot Water Immersion versus Aerobic Exercise Training in Lowering Blood Pressure a	FASEB journal	Exclude	-	-	-	-	No	-	-
C. Karraoum; B. Haut; G. BI	2022	Is airway damage during physical exercise related to airway dehydration? Inputs from a computat	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
J. Karolkiewicz; D. C. Niemar	2022	No effects of a 4-week post-exercise sauna bathing on targeted gut microbiota and intestinal bari	BMC sports science, medi	Exclude	-	-	-	-	-	-	No
Ket	2022	Emotional Freedom Techniques vs Written Exposure Therapy vs Waiting List for Posttraumatic St	<a href="https://trialsearch.who.int/">https://trialsearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-
A. Kennedy-Hendricks; E. E.	2022	Effect of Exposure to Visual Campaigns and Narrative Vignettes on Addiction Stigma Among Hei	JAMA network open	Exclude	Yes	-	-	-	-	-	-
M. E. Keramidis; R. Kolegard	2022	Acral skin vasoreactivity and thermosensitivity to hand cooling following 5 days of intermittent w	American journal of physi	Exclude	Yes	-	-	-	-	-	-
J. P. Kimball; O. T. Inan; V. A.	2022	Wearable Sensors and Machine Learning for Hypovolemia Problems in Occupational, Military an	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-
S. H. Kroesen; J. Q. de Korte;	2022	Impact of thermal sensation on exercise performance in the heat: a Thermo Tokyo sub-study	European journal of applic	Exclude	Yes	-	-	-	-	-	-
W. H. Kuan; Y. L. Chen; C. L.	2022	Excretion of Ni, Pb, Cu, As, and Hg in Sweat under Two Sweating Conditions	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
D. B. Kulchitskaya; A. D. Fes	2022	Non-drug methods of treatment of post-thrombophlebitic syndrome	Voprosy kurortologii, fizie	Exclude	Yes	-	-	-	-	-	-
S. Kumar; P. Lennon; N. Mulli	2022	Using long-range freeze-preventive vaccine carriers in Nepal: A study of equipment performance,	Vaccine X	Exclude	Yes	-	-	-	-	-	-
A. Kutuywayo; M. Chersich; N	2022	Climate change knowledge, concerns and experiences in secondary school learners in South Afric	Jamba	Exclude	Yes	-	-	-	-	-	-
K. Kwan; E. Helms	2022	Prevalence, Magnitude, and Methods of Weight Cutting Used by World Class Powerlifters	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
P. Ladow; O. O'Sullivan; A. F	2022	Dysautonomia following COVID-19 is not associated with subjective limitations or symptoms bu	Heart Rhythm	Exclude	Yes	-	-	-	-	-	-
E. A. Larson; B. W. Kaiser; E.	2022	Systemic Cardiovascular Adjustments during Recovery from Passive Heat Stress	FASEB journal	Exclude	Yes	-	-	-	-	-	-
E. Lee; I. Kolunsarka; J. Kost	2022	Effects of regular sauna bathing in conjunction with exercise on cardiovascular function: a multi-	Am J Physiol Regul Integr	Exclude	-	Yes	Yes	Yes	No	Yes	Yes
J. K. W. Lee; B. Tan; B. R. M.	2022	Biomarkers for warfighter safety and performance in hot and cold environments	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-
J. K. W. Lee; B. Tan; H. B. Og	2022	Exertional heat stroke: nutritional considerations	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
Y. Lee; S. Lee	2022	Effects of oral ingestion of drinking water using a far-infrared-emitting tumbler on lipid profile an	Obesity facts	Exclude	Yes	-	-	-	-	-	-
Z. Li; Z. McKenna; Z. Fennel;	2022	The combined effects of exercise-induced muscle damage and heat stress on acute kidney stress a	European journal of applic	Exclude	Yes	-	-	-	-	-	-
Z. Li; Z. McKenna; Z. Fennel;	2022	The combined effects of exercise-induced muscle damage and heat stress on acute kidney stress a	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
G. Liu; Y. Liu; J. Tao; Y. Li; Y.	2022	Differential gene expression and bioinformatics analysis in sepsis secondary to pneumonia	Zhonghua wei zhong bing	Exclude	Yes	-	-	-	-	-	-
A. Lloyd; D. Fiala; C. Heyde;	2022	A mathematical model for predicting cardiovascular responses at rest and during exercise in dema	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
R. Lok; T. Woelders; M. J. var	2022	Bright Light Decreases Peripheral Skin Temperature in Healthy Men: a Forced Desynchrony Stud	Journal of biological rhyth	Exclude	Yes	-	-	-	-	-	-
K. C. Makris; P. Charisiadis;	2022	Diurnal Nonlinear Recurrence Metrics of Skin Temperature and Their Association with Metabolic	International journal of en	Exclude	Yes	-	-	-	-	-	-
M. Manware; R. Dubrow; D. C	2022	Residential and Race/Ethnicity Disparities in Heat Vulnerability in the United States	Geohealth	Exclude	Yes	-	-	-	-	-	-
E. D. Marchant; R. D. Hydahl	2022	Localized Heat Therapy Improves Mitochondrial Respiratory Capacity but Not Fat Oxidation in F	FASEB journal	Exclude	Yes	-	-	-	-	-	-
E. D. Marchant; J. P. Kaluhiok	2022	Localized Heat Therapy Improves Mitochondrial Respiratory Capacity but Not Fatty Acid Oxidat	International journal of me	Exclude	Yes	-	-	-	-	-	-
R. A. Marciniak; C. A. Wahl; I	2022	Autonomic Nervous System Response to Far-Infrared Sauna Exposure in Firefighters	Ann Work Expo Health	Exclude	Yes	-	-	-	-	-	-
Y. A. T. Martins; R. L. F. Passi	2022	A 32-day long fieldwork in Antarctica improves heat tolerance during physical exercise	An Acad Bras Cienc	Exclude	Yes	-	-	-	-	-	-
M. Mase; A. Werner; G. Putze	2022	Low Ambient Temperature Exposition Impairs the Accuracy of a Non-invasive Heat-Flux Therm	Frontiers in physiology	Exclude	Yes	-	-	-	-	-	-
A. R. D. Matthews; T. A. Asto	2022	Acute Effects of High-Intensity Interval Exercise While Wearing a Sauna Suit on Energy Expendi	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
N. S. Mazalan; G. J. Landers;	2022	Ice Ingestion Maintains Cognitive Performance during a Repeated Sprint Performance in The Hea	J Sports Sci Med	Exclude	Yes	-	-	-	-	-	-
N. S. Mazalan; G. J. Landers;	2022	A Combination of Ice Ingestion and Head Cooling Enhances Cognitive Performance during Endu	J Sports Sci Med	Exclude	Yes	-	-	-	-	-	-
D. McEwan; R. E. Rhodes; M	2022	What Happens When the Party is Over?: Sustaining Physical Activity Behaviors after Interventio	Behav Med	Exclude	Yes	-	-	-	-	-	-
M. L. McGlynn; C. Collins; W	2022	Heat Acclimation in Females Does Not Limit Aerobic Exercise Training Outcomes	International journal of en	Exclude	-	-	-	-	No	-	-
R. D. McIntyre; M. J. Zarwale	2022	A comparison of medium-term heat acclimation by post-exercise hot water immersion or exercise	Am J Physiol Regul Integr	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
R. D. Meade; A. P. Akerman;	2022	Body temperature and cardiovascular regulation in older adults during 8-hour exposures to ambie	FASEB journal	Exclude	Yes	-	-	-	-	-	-
J. Meng; Z. Lv; Y. Wang; C. C	2022	Identification of the redox-stress signaling threshold (RST): Increased RST helps to delay aging i	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
J. J. Miles; P. M. McGuigan;	2022	Biomechanical asymmetries differ between autograft types during unplanned change of directio	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
K. C. Miller; E. D. Launstein;	2022	Body Core Temperature Cooling Using Two Cold-Water Immersion Preparation Strategies	Journal of athletic training	Exclude	Yes	-	-	-	-	-	-
J. C. Monroe; J. G. Parker; S.	2022	Home-Based Leg Heat Therapy Does Not Improve Vascular Function in Patients with Symptomati	FASEB journal	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
E. Mur-Gimeno; R. Sebio-Gar	2022	Short-term effects of two different recovery strategies on muscle contractile properties in healthy	Journal of sports sciences	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Najem; M. Meeus; B. Cagn	2022	The Effect of Praying on Endogenous Pain Modulation and Pain Intensity in Healthy Religious In	Journal of religion and he	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. A. Navas; G. A. Agudelo-C	2022	Thermal boldness: Volunteer exploration of extreme temperatures in fruit flies	J Insect Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Effectiveness of Ecological Momentary Assessment Based Smoking Cessation Intervention	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Assessment of Cryotherapy's Analgesic Impact in Anti-aromatase-induced Arthralgia	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	3D Printed Titanium Mesh vs Guided Autogenous Graft	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Leg Heat Therapy in Elderly Individuals	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Pre-heated Resin Composite Restoration	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Hypothermia Prevention Measures in Osteosynthesis	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Non-inferiority Trial of Locally Manufactured Typhoid Conjugate Vaccine 'Typhocon' in Banglad	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Exercise Study in Brain and CNS Cancer	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Influences of Female Sex and Reproductive Hormones on Physiological Aspects of Heat Acclima	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	The Effects of Telerehabilitation-Based Spinal Stabilization Exercises in Stroke Patients	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	The Effects of Heated Tobacco Products Use on Lung Function and Volatile Organic Compounds	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Clinical Trial on Ceramic Partial Laminate Veneers With Different Luting Agents	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Effects of Exercise & Tart Cherry Ingestion on Heat Acclimation and Gut Microbiome	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	-	-	-	-	-	-	No	-	-	-
Net	2022	The Effect of an Acute Bout of Exercise on Serum Vitamin D Concentration	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	The Effect of Mealworm Protein Ingestion on Muscle Protein Synthesis After Running Exercise in	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	A Novel Cooling Vest to Protect Persons With SCI From Hyperthermia	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Effect of Menthol on ENDS Users' Addiction and Exposure	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Phototherapy and Radiofrequency for Cellulite	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	The Effect of Proprietary Water on Physiological and Perceptual Responses	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Preheated Composites Vs. Conventional Composites in Noncarious Cervical Lesions	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Effect of a 4-week Post-exercise Sauna Bathing on Targeted Gut Microbiota	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	-	-	-	-	-	-	-	-	-	No
Net	2022	Clinical Effectiveness of PEMF as a Treatment Adjunct to Eccentric Exercise for Achilles Tendin	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Clinical and Biochemical Assessment of Ozonated Olive Oil Mixed Bone Substitute in Treating Ir	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
Net	2022	Heat Therapy to Accelerate Muscle Recovery	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	-	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Net	2022	The Effects of 8 Weeks Post Exercise Hot Water Immersion on Vascular and Cardiometabolic Hea	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	-	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Net	2022	Chronic Passive Heating in Healthy Older Adults	<a href="https://clinicaltrials.gov/sh">https://clinicaltrials.gov/sh</a>	Exclude	-	-	-	-	-	-	-	No	-	-
N. Nishihara; J. Xiong; J. Kim	2022	Effect of adaptive opportunity on cognitive performance in warm environments	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. M. Oliveira; L. F. Sousa Fil	2022	Different dehydration levels and their impact on blood ammonia, cognitive-motor performance, a	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. O. Osborne; G. M. Minnett; I	2022	Evidence that heat acclimation training may alter sleep and incidental activity	European journal of sport	Exclude	-	-	-	-	-	-	-	No	-	-
I. T. Parsons; D. Snape; J. O'H	2022	Orthostatic tolerance following heat acclimation: a single blinded randomised controlled trial	Clinical autonomic resear	Exclude	-	-	-	-	-	-	-	No	-	-
M. Pawlowska; C. Mila-Kierz	2022	The Influence of Ambient Temperature Changes on the Indicators of Inflammation and Oxidative	Antioxidants (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. D. Périard; D. DeGroot; O. .	2022	Exertional heat stroke in sport and the military: epidemiology and mitigation	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. A. Peterson; C. Lohman; R. .	2022	Body composition does not influence conditioned pain modulation and exercise-induced hyperalg	Eur J Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. P. Philp; N. W. Pitchford; D	2022	Can ten days of heat acclimation training improve temperate-condition rowing performance in nat	PLoS One	Exclude	-	-	-	-	-	-	-	No	-	-
F. K. Pizzey; S. L. Ruediger; J	2022	Comparing the Effects of 30- and 60-min of Acute Whole-Body Passive Heat Stress on Periphera	FASEB journal	Exclude	-	-	-	-	-	-	-	No	-	-
B. H. Poon; S. Prakash; Y. S. .	2022	Thermal strain and fluid balance during a 72-km military route march in a field setting	Singapore Med J	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Protasi; B. Girolami; M. Sei	2022	Ablation of Calsequestrin-1, Ca(2+) imbalance, and susceptibility to heat stroke	Front Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Racinais; G. Havenith; P. A	2022	Association between thermal responses, medical events, performance, heat acclimation and heath	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. Rahimpour; R. Hoseini; N. .	2022	Alterations of liver enzymes and lipid profile in response to exhaustive eccentric exercise: vitamir	BMC gastroenterology	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. B. Reid	2022	Redox Implications of Extreme Task Performance: The Case in Driver Athletes	Cells	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Reminy; E. T. Ngo Sock; N	2022	Strenuous exercise in warm environment is associated with improved microvascular function in si	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Renteria; S. Grineski; T. C	2022	Social disparities in neighborhood heat in the Northeast United States	Environ Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. S. H. Roberts; S. J. Bowe; I	2022	Does game-day circadian misalignment or environmental temperature influence team performanc	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Roklicer; C. Rossi; A. Bian	2022	Prevalence of rapid weight loss in Olympic style wrestlers	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. R. Ronnestad; J. Hansen; T	2022	Case Report: Heat Suit Training May Increase Hemoglobin Mass in Elite Athletes	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	-	No	-	-
B. R. Ronnestad; O. M. Lid; J	2022	Heat suit training increases hemoglobin mass in elite cross-country skiers	Scand J Med Sci Sports	Exclude	-	-	-	-	-	-	-	No	-	-
B. R. Ronnestad; T. Urianstad;	2022	Heat Training Efficiently Increases and Maintains Hemoglobin Mass and Temperate Endurance P	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
D. Rothschild-Rodriguez; A. J	2022	The effects of exercise on complement system proteins in humans: a systematic scoping review	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. B. R. rtpfpx	2022	Effects of aquatic exercise on the function of patients with amputation	<a href="https://trialssearch.who.int/">https://trialssearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. M. Sailliant; N. Charkoudia	2022	Individual variability in achievement of short-term heat acclimation during a fixed intensity proto	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
K. B. Sedilla; T. Maeda	2022	Autonomic thermoregulatory responses and subjective thermal perceptions upon the initiation of	Journal of physiological at	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Sekiguchi; C. L. Benjamin;	2022	Effects of Heat Acclimation Following Heat Acclimatization on Whole Body Heat Exchange in Ti	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	-	No	-	-
Y. Sekiguchi; C. L. Benjamin;	2022	Using Predictive Modeling Technique to Assess Core Temperature Adaptations from Heart Rate, §	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Y. Sekiguchi, C. L. Benjamin; 2022		Effects of Heat Acclimatization, Heat Acclimation, and Intermittent Exercise Heat Training on Tir Sports Health	Tir Sports Health	Exclude	-	-	-	-	-	-	No	-	-	
J. Shaw; C. Walkington; E. Co 2022		Effectiveness of short-term isothermic-heat acclimation (4 days) on physical performance in mod	PLoS One	Exclude	-	-	-	-	-	-	No	-	-	
C. H. Shirazipour; R. C. Stone 2022		Examining the Impact of the Rio 2016 Paralympic Games on Explicit Perceptions of Paralympian Health communication	Health communication	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Simmonds; J. Cole; J. Talle 2022		Physiological and thermoregulatory effects of oral taurine supplementation on exercise tolerance	European journal of sport	Exclude	Yes	-	-	-	-	-	-	-	-	
W. Simmons; S. Lin; T. J. Lub 2022		Modeling complex effects of exposure to particulate matter and extreme heat during pregnancy or Sci Total Environ	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Sitkowski; T. Cison; Z. Szy 2022		Hematological Adaptations to Post-Exercise Sauna Bathing with No Fluid Intake: a Randomized Research quarterly for exercise	Research quarterly for exercise	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
J. Soo; S. Racinais; D. J. Bish 2022		Effects of mild heat exposure on fatigue responses during two sets of repeated sprints matched for J Sci Med Sport	J Sci Med Sport	Exclude	-	-	-	-	-	-	No	-	-	
A. Sotiridis; T. Debevec; N. G 2022		Cross-adaptation between heat and hypoxia: mechanistic insights into aerobic exercise performan	Am J Physiol Regul Integr	Exclude	-	No	-	-	-	-	-	-	-	
M. Štangar; A. Štangar; V. Šht 2022		Rapid weight loss among elite-level judo athletes: methods and nutrition in relation to competition	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	
N. Stenfors; H. Persson; A. Tu 2022		A breathing mask attenuates acute airway responses to exercise in sub-zero environment in health	European journal of applic	Exclude	Yes	-	-	-	-	-	-	-	-	
B. T. Stephenson; T. J. O'Brier 2022		Ice Slurry Ingestion Lowers Thermoregulatory Strain in Wheelchair Tennis Players During Repea	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-	-	-	
B. L. Stone; J. D. Ashley; R. M 2022		Effects of a Short-Term Heat Acclimation Protocol in Elite Amateur Boxers	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	No	-	
H. Štokánová; S. Oreská; M. 2022		Hsp90 Levels in Idiopathic Inflammatory Myopathies and Their Association With Muscle Involv	Front Immunol	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Sumi; H. Nagatsuka; K. Mi 2022		Heat acclimation does not attenuate hepcidin elevation after a single session of endurance exercis	European journal of applic	Exclude	-	-	-	-	-	-	No	-	-	
S. Syed; T. L. O'Sullivan; K. P 2022		Extreme Heat and Pregnancy Outcomes: A Scoping Review of the Epidemiological Evidence	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
S. C. C. Tan; W. H. Ang; L. S. 2022		Efficacy of Isothermic Conditioning over Military-Based Heat Acclimatization and Interval Traini	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
Tetr 2022		Early weight bearing after ankle fracture fixation rapid returns of driving: a randomized controlle	<a href="https://trialssearch.who.int/">https://trialssearch.who.int/</a>	Exclude	Yes	-	-	-	-	-	-	-	-	
S. T. Tebeck; J. D. Buckley; J. 2022		Longitudinal haematological responses to training load and heat acclimation preceding a male tea	Eur J Sport Sci	Exclude	-	-	-	-	-	-	No	No	-	
Y. Tochiara; H. Wakabayashi 2022		How humans adapt to hot climates learned from the recent research on tropical indigenes	J Physiol Anthropol	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Uchiyama; J. King; K. Wal 2022		The influence of rest break frequency and duration on physical performance and psychophysiol	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Ujszegi; R. Bertalan; N. Ujh 2022		Heat waves" experienced during larval life have species-specific consequences on life-history trai	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	
A. Velasquez-Munoz; N. Mezi 2022		Effect of a 2-step probiotic program on digestive health and performance of Holstein heifer calves	Journal of dairy science	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Waldron; R. Fowler; S. He 2022		Response to Comment on: Effects of Heat Acclimation and Acclimatization on Maximal Aerobic	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
E. S. Walker; E. O. Semmens; 2022		Efficacy of Air Filtration and Education Interventions on Indoor Fine Particulate Matter and Child	Environmental health pers	Exclude	Yes	-	-	-	-	-	-	-	-	
A. Walleit; A. McKune; D. Py 2022		Repeated-Sprint Exercise in the Heat Increases Indirect Markers of Gastrointestinal Damage in W	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Wang; W. Zhang 2022		MARnet: multi-scale adaptive residual neural network for chest X-ray images recognition of lung	Math Biosci Eng	Exclude	Yes	-	-	-	-	-	-	-	-	
Y. Wang; B. J. He; C. Kang; L. 2022		Assessment of walkability and walkable routes of a 15-min city for heat adaptation: Development	Front Public Health	Exclude	Yes	-	-	-	-	-	-	-	-	
S. R. C. Weaver; C. Rendeiro; 2022		Non-pharmacological interventions for vascular health and the role of the endothelium	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
R. S. Weller; M. J. Buono 2022		The effect of heat acclimation on the sweat lactate concentration vs. sweat rate relationship	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
C. E. Wheelock; D. P. Looney 2022		Diver Underwater Cycling Endurance After Short-Term Warm and Hot Water Acclimation	Military medicine	Exclude	-	-	-	-	-	-	No	-	-	
C. E. Wheelock; D. P. Looney 2022		Exercise during hot-water immersion in divers habituated to hot-dry and hot-wet conditions	Undersea & hyperbaric m	Exclude	-	-	-	-	-	-	No	-	-	
S. T. Wolf; T. E. Bernard; W. I 2022		Heat exposure limits for young unacclimatized males and females at low and high humidity	J Occup Environ Hyg	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Younus; T. Akhtar; H. Burq 2022		Effects of Brief Intervention of Behavioural Change on Pain, Mobility, Function, and Quality of L	Pakistan journal of medica	Exclude	Yes	-	-	-	-	-	-	-	-	
T. Zaman; T. Mukhtar; M. Wai 2022		Effects of task-oriented training on dexterous movements of hands in post stroke patients	International journal of ne	Exclude	Yes	-	-	-	-	-	-	-	-	
Z. Zhong; H. Dong; Y. Wu; S. 2022		Remote ischemic preconditioning enhances aerobic performance by accelerating regional oxygen	Frontiers in physiology	Exclude	Yes	-	-	-	-	-	-	-	-	
C. Zhu; M. Lal 2022		Preclinical Safety and Pharmacokinetics of Heat Stable Oxytocin in Sublingual Fast-Dissolving T	Pharmaceutics	Exclude	Yes	-	-	-	-	-	-	-	-	
S. P. Fenemor; M. W. Driller; 2022		Practical application of a mixed active and passive heat acclimation protocol in elite male Olympi	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-	No	-	
Y. Acar; N. Ilcin; B. Gurpinar; 2023		The effects of clinical pilates training on disease-specific indices, core stability, and balance in pat	Journal of bodywork and r	Exclude	Yes	-	-	-	-	-	-	-	-	
A. M. Cheibub; R. Muniz-San 2023		A burst of fenoterol excretion during the recovery of a weight loss protocol	J Pharm Biomed Anal	Exclude	Yes	-	-	-	-	-	-	-	-	
M. F. Chersich; F. Scorgie; V. 2023		Increasing global temperatures threaten gains in maternal and newborn health in Africa: A review	Int J Gynaecol Obstet	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Corbett; J. Wright; M. J. Tip 2023		Sex differences in response to exercise heat stress in the context of the military environment	BMJ Mil Health	Exclude	Yes	-	-	-	-	-	-	-	-	
J. A. E. Costley; J. J. Miles; E. 2023		Vertical jump impulse deficits persist from six to nine months after ACL reconstruction	Sports Biomech	Exclude	Yes	-	-	-	-	-	-	-	-	
S. P. Fenemor; M. W. Driller; 2023		Heating Up to Keep Cool: Benefits and Persistence of a Practical Heat Acclimation Protocol in El	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-	No	-	
J. Hussain; M. Cohen; C. J. O' 2023		Detections of organophosphate and pyrethroid insecticide metabolites in urine and sweat obtained	Int J Hyg Environ Health	Exclude	Yes	-	-	-	-	-	-	-	-	
L. Lei; S. Shi; D. Wang; S. Me 2023		Recent Advances in Thermoregulatory Clothing: Materials, Mechanisms, and Perspectives	ACS Nano	Exclude	Yes	-	-	-	-	-	-	-	-	
T. H. Lei; M. Fujiwara; T. Ami 2023		Induction and decay of seasonal acclimatization on whole body heat loss responses during exercis	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-	
Y. Liu; H. Feng; Y. Gui; T. Chi 2023		Flexible Stretchable, Dry-Resistant MXene Nanocomposite Conductive Hydrogel for Human Mo	Polymers (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	
M. C. Maccarone; G. Magro; 2023		Short-time effects of spa rehabilitation on pain, mood and quality of life among patients with deg	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	
A. Mornas; F. Brocherie; G. G 2023		Active Heat Acclimation Does Not Alter Muscle-Tendon Unit Properties	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
H. Otani 2023		Prior heat exposure diminishes upper-body endurance work capacity and maximal arm and leg str	Int J Biometeorol	Exclude	-	-	-	-	-	-	No	-	-	
A. N. Schroeder; Z. J. Suriano 2023		Using Wet Bulb Globe Temperature and Physiological Equivalent Temperature as Predictive Mo	Clin J Sport Med	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Sumi; H. Nagatsuka; K. Mi 2023		The Impact of Heat Acclimation on Gastrointestinal Function following Endurance Exercise in a I	Nutrients	Exclude	-	-	-	-	-	-	No	-	-	
C. Towson; D. J. Watson; S. C 2023		Soccer academy practitioners' perceptions and application of bio-banding	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	
F. Ware-Gilmore; M. Novelto; 2023		Assessing the role of family level variation and heat shock gene expression in the thermal stress r	Philos Trans R Soc Lond E	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Yamaguchi; S. Kayanuma; 2023		Adding heat stress to repeated-sprint training in hypoxia does not enhance performance improv	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	
Abbass, Ahmed M.; Elrahman 2023		Critical parameters affecting the thermal resistance of alkali-activated aluminosilicate wastes: Cur	Environmental science and	Exclude	Yes	-	-	-	-	-	-	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4a - Characteristics of excluded studies - Studies excluded by TS

Number included = 14 of 2399

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Lundby, Carsten; Hamarsland, 2023	2023	Hematological, skeletal muscle fiber, and exercise performance adaptations to heat training in elite	Journal of applied physiology	Exclude			Yes	Yes	Yes	Yes	Yes	No		
Malta, Elvis Souza; Lopes, Vii 2023	2023	Repeated cold-water immersion improves autonomic cardiac modulation following five sessions of	European journal of applied physiology	Exclude	Yes									
Manning, Ciara N.; Benjamin, 2023	2023	Environmental Stress Symptoms during Heat Acclimatization, Heat Acclimation, and Intermittent	International journal of environmental health research	Exclude		No								
Marchant, Erik D.; Nelson, W. 2023	2023	Passive heat stress induces mitochondrial adaptations in skeletal muscle.	International journal of hypertension	Exclude		Yes	Yes	Yes	Yes	Yes	Yes	No		
Matias, Alexs A.; Albin, Isabel 2023	2023	Impact of high intensity interval exercise with and without heat stress on cardiovascular and aerobic	BMC sports science, medicine and health	Exclude	Yes									
Mornas, Adèle; Brocherie, Fra 2023	2023	Active Heat Acclimation Does Not Alter Muscle-Tendon Unit Properties.	Medicine and science in sports and exercise	Exclude		Yes	Yes	Yes	Yes	Yes	Yes	No		
Niclou, Alexandra; Sarma, Ma 2023	2023	To the extreme! How biological anthropology can inform exercise physiology in extreme environments	Comparative biochemistry and physiology	Exclude	Yes									
Northway, Sarah; Jones, Doug 2023	2023	Sensitivity and specificity of using exercise heart rate in a thermoneutral environment to predict heat	International journal of sports medicine	Exclude	Yes									
Notley, Sean R.; Mitchell, Du 2023	2023	A century of exercise physiology: concepts that ignited the study of human thermoregulation. Part	European journal of applied physiology	Exclude	Yes									
Numata, Urara; Yanaoka, Tak 2023	2023	Effects of ice slurry ingestion on body temperature and softball pitching performance in a hot environment	Journal of physiological anthropology	Exclude	Yes									
O'Connell, Cameron T.; Reed, 2023	2023	Cardiorespiratory and autonomic adjustments to exercise with healthy ageing: considerations with	The Journal of physiology	Exclude	Yes									
Podversich, Federico; Tarnons 2023	2023	Effects of Aspergillus oryzae prebiotic on animal performance, nutrients digestibility, and feeding	Journal of animal science	Exclude	Yes									
Ramirez-Calero, S.; Paula, J. I 2023	2023	Neuromolecular responses in disrupted mutualistic cleaning interactions under future environmental	BMC biology	Exclude	Yes									
Rastogi, Deeksha; Christian, J 2023	2023	Exploring the Spatial Patterning of Sociodemographic Disparities in Extreme Heat Exposure at the	GeoHealth	Exclude	Yes									
Rawal, Atul; Kidehob, Christo 2023	2023	A machine learning approach for identifying variables associated with risk of developing neutralizing	Heliyon	Exclude	Yes									
Renteria, Liliana I.; Zheng, Xi 2023	2023	Ovariectomy aggravates the pathophysiological response to exertional heat stroke in mice.	Journal of applied physiology	Exclude	Yes									
Rhoads, M. L. 2023	2023	Review: Reproductive consequences of whole-body adaptations of dairy cattle to heat stress.	Animal : an international journal of animal production	Exclude	Yes									
Roxburgh, Brendon H.; Camp 2023	2023	Acute and adaptive cardiovascular and metabolic effects of passive heat therapy or high-intensity	Physiological reports	Exclude	Yes									
Saidi, Alireza; Gauvin, Chanta 2023	2023	Towards real-time thermal stress prediction systems for workers.	Journal of thermal biology	Exclude	Yes									
Steward, Charles J.; Menzies, 2023	2023	The effect of age and mitigation strategies during hot water immersion on orthostatic intolerance in	Experimental physiology	Exclude	Yes									
Sumi, Daichi; Nagatsuka, Har 2023	2023	The Impact of Heat Acclimation on Gastrointestinal Function following Endurance Exercise in a	Nutrients	Exclude		Yes	Yes	Yes	Yes	Yes	Yes	No		
Tan, Xiang Ren; Stephenson, I 2023	2023	Elevated brain temperature under severe heat exposure impairs cortical motor activity and executive	Journal of sport and health	Exclude	Yes									
Tian, Yuan; Florenciano, Isidr 2023	2023	Facile Fabrication of Flexible and High-Performing Thermoelectrics by Direct Laser Printing on	Advanced materials (Deerf	Exclude	Yes									
Toro-Román, Victor; Prieto-G 2023	2023	Effects of High Temperature Exposure on the Wingate Test Performance in Male University Students	International journal of exercise physiology	Exclude	Yes									
Towson, Chris; Watson, Demi 2023	2023	Soccer academy practitioners' perceptions and application of bio-banding.	PloS one	Exclude	Yes									
Ware-Gilmore, Fhallon; Novel 2023	2023	Assessing the role of family level variation and heat shock gene expression in the thermal stress response	Philosophical transactions of the Royal Society B	Exclude	Yes									
Western, Max J.; Welsh, Toma 2023	2023	Exercise snacking to improve physical function in pre-frail older adult memory clinic patients: a	BMC geriatrics	Exclude	Yes									
Willmott, A. G. B.; James, C. J. 2023	2023	The reliability of a portable steam sauna pod for the whole-body passive heating of humans.	Journal of thermal biology	Exclude	Yes									
Xiao, Yu; Zhang, Yuanlong; Q 2023	2023	Miniaturized Flexible Non-Contact Interface Based on Heat Shrinkage Technology.	Small methods	Exclude	Yes									
Yang, Rui; Cao, Jing; Speakm 2023	2023	Limits to sustained energy intake. XXXIII. Thyroid hormones play important roles in milk production	The Journal of experimental physiology	Exclude	Yes									
Yoshimura, Miho; Nakamura, 2023	2023	Effect of CO(2) and H(2) gas mixture in cold water immersion on recovery after eccentric loading	Heliyon	Exclude	Yes									
Zahed, Md Abu; Kim, Dong K 2023	2023	Microfluidic-Integrated Multimodal Wearable Hybrid Patch for Wireless and Continuous Physiological	ACS sensors	Exclude	Yes									
Zeng, Lingjun; Gao, Guanghu 2023	2023	Stretchable Organohydrogel with Adhesion, Self-Healing, and Environment-Tolerance for Wearable	ACS applied materials & interfaces	Exclude	Yes									
Zhai, Piyoung; Liu, Hao; Zhan 2023	2023	Correlation analysis between sleep quality and the mental health status of female sex workers during	Frontiers in endocrinology	Exclude	Yes									
Zhang, Liang; Zhang, Yu-Yan; 2023	2023	Evaluation of species thermal sensitivity with individual-based physiological performance.	Marine environmental research	Exclude	Yes									
Zhang, Yangchang; Sun, Feng 2023	2023	Ambient temperature and major structural anomalies: A retrospective study of over 2 million new	The Science of the total environment	Exclude	Yes									
Zhang, Yingqi; Gantt, Shelby J 2023	2023	Performance of Orbicella faveolata larval cohorts does not align with previously observed thermal	Global change biology	Exclude	Yes									
Berger, Nicolas J. A.; Best, Ru 2024	2024	Limits of Ultra: Towards an Interdisciplinary Understanding of Ultra-Endurance Running Performance	Sports medicine (Auckland)	Exclude	Yes									
Emery, A.; Moore, S.; Crowe, 2024	2024	The effects of short-term, progressive exercise training on disease activity in smouldering multiple	BMC cancer	Exclude	Yes									
Girard, Olivier; Peeling, Peter 2024	2024	Combining Heat and Altitude Training to Enhance Temperate, Sea-Level Performance.	International journal of sports medicine	Exclude		No						No		
Monteiro Dos Santos, Djacint 2024	2024	Twenty-first-century demographic and social inequalities of heat-related deaths in Brazilian urban	PloS one	Exclude	Yes									
Murray, Kevin O.; Brant, Jaso 2024	2024	Exertional heat stroke causes long-term skeletal muscle epigenetic reprogramming, altered gene expression	American journal of physiology	Exclude	Yes									
Notley, Sean R.; Mitchell, Du 2024	2024	A century of exercise physiology: concepts that ignited the study of human thermoregulation. Part	European journal of applied physiology	Exclude	Yes									
Sautilliet, Benoit; Bourdillon, I 2024	2024	Hot water immersion: Maintaining core body temperature above 38.5°C mitigates muscle fatigue.	Scandinavian journal of medicine and science in sports	Exclude		Yes	Yes	Yes	Yes	Yes	Yes	No		
Schroeder, Helena Trevisan; N 2024	2024	Resolution of Inflammation in Chronic Disease via Restoration of the Heat Shock Response (HSR)	Cell stress & chaperones	Exclude	Yes									
Souilla, Luc; Amedro, Pascal; 2024	2024	Children With Cardiac Disease and Heat Exposure: Catastrophic Converging Consequences?	Pediatric exercise science and fitness	Exclude	Yes									
Wan, Feiyan; Wang, Huan; Gu 2024	2024	Bromine Substitution Improves the Photothermal Performance of π-Conjugated Phototheranostic	Chemistry (Weinheim) : a European journal	Exclude	Yes									

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
N. A. Nelson; W. B. Shelley; e	1948	The influence of clothing, work, and air movement on the thermal exchanges of acclimatized men	J Clin Invest	Exclude	-	-	-	-	No	-	-
H. Krauss	1953	[Possibilities and limitations of the sauna in exercise therapy of cardiovascular diseases]	Arch Phys Ther (Leipzig)	Exclude	-	-	No	-	-	-	-
E. R. Buskirk; P. F. Iampietro;	1958	Work performance after dehydration: effects of physical conditioning and heat acclimatization	J Appl Physiol	Exclude	-	-	-	-	-	No	-
S. W. Meagher	1963	POST-TRAUMATIC VASOSPASM OF THE HAND	Med Trial Tech Q	Exclude	Yes	-	-	-	-	-	-
M. Miettinen; E. Karvinen	1963	EFFECT OF SAUNA BATH ON PHYSICAL PERFORMANCE	J Sports Med Phys Fitness	-	-	-	-	-	-	-	-
L. H. Nahum	1963	Acclimatization to heat. An exercise in the scientific method	Conn Med	-	-	-	-	-	-	-	-
N. B. Strydom; C. H. Wyndham	1963	Effect of heat on work performance in the gold mines of South Africa	Fed Proc	Exclude	-	No	-	-	-	-	-
E. Bedrak; G. Beer; K. I. Furr	1964	FIBRINOLYTIC ACTIVITY AND MUSCULAR EXERCISE IN HEAT	J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. A. Bradbury; R. H. Fox; R. I.	1964	THE EFFECT OF EXERCISE ON TEMPERATURE REGULATION	J Physiol	Exclude	-	-	-	-	No	-	-
A. Fornozza	1964	MODIFICATIONS OF THE HEMOGRAMME IN SWIMMERS AND GYMNASTS BY PHYSI	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
J. E. Greenleaf	1964	LACK OF ARTIFICIAL ACCLIMATIZATION TO HEAT IN PHYSICALLY FIT SUBJECTS	Nature	-	-	-	-	-	-	-	-
R. J. Joy; R. H. Poe; T. R. Dav	1964	THE EFFECT OF PRIOR HEAT ACCLIMATIZATION UPON MILITARY PERFORMANCE IN	Mil Med	-	-	-	-	-	-	-	-
B. Saltin	1964	AEROBIC AND ANAEROBIC WORK CAPACITY AFTER DEHYDRATION	J Appl Physiol	Exclude	-	-	-	-	No	-	-
B. Saltin	1964	CIRCULATORY RESPONSE TO SUBMAXIMAL AND MAXIMAL EXERCISE AFTER THE	J Appl Physiol	Exclude	-	-	-	-	No	-	-
B. Saltin	1964	AEROBIC WORK CAPACITY AND CIRCULATION AT EXERCISE IN MAN. WITH SPECIA	Acta Physiol Scand Suppl	Exclude	-	-	-	-	No	-	-
C. H. Wyndham; R. K. McPhee	1964	REACTIONS TO HEAT OF ABORIGINES AND CAUCASIANS	J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. H. Wyndham; B. Metz; A. I	1964	REACTIONS TO HEAT OF ARABS AND CAUCASIANS	J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. H. Wyndham; N. B. Strydom	1964	HEAT REACTIONS OF CAUCASIANS AND BANTU IN SOUTH AFRICA	J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. H. Wyndham; N. B. Strydom	1964	HEAT REACTIONS OF CAUCASIANS IN TEMPERATE, IN HOT, DRY, AND IN HOT, HUM	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. E. Greenleaf; F. Sargent, 2n	1965	Voluntary dehydration in man	J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
J. F. Wing	1965	Upper thermal tolerance limits for unimpaired mental performance	Aerosp Med	Exclude	-	-	-	-	No	-	-
J. W. Garden	1966	Plasma and sweat histamine concentrations after heat exposure and physical exercise	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. Peter; C. H. Wyndham	1966	Activity of the human eccrine sweat gland during exercise in a hot humid environment before and	J Physiol	Exclude	-	-	-	-	No	-	-
R. J. Ward; E. J. Powell; M. H	1966	An evaluation of human performance during exposure to elevated heat and humidity	J Psychol	Exclude	-	-	-	-	No	-	-
H. J. Marx; L. B. Rowell; R. I	1967	Maintenance of aortic pressure and total peripheral resistance during exercise in heat	J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. Robinson	1967	Training, acclimatization and heat tolerance	Can Med Assoc J	Exclude	-	No	-	-	-	-	-
J. A. Downey; R. C. Darling; J	1968	The effects, of heat, cold, and exercise on the peripheral circulation	Arch Phys Med Rehabil	Exclude	-	-	-	-	No	-	-
W. P. Colquhoun	1969	Effects of raised ambient temperature and event rate on vigilance performance	Aerosp Med	Exclude	-	-	-	-	No	-	-
R. Deroanne; F. Pirnay; J. M. I	1969	[Measurements of central temperature during muscular exercise carried out in a hot environment]	Int Z Angew Physiol	Exclude	-	-	No	-	-	-	-
O. G. Edholm	1969	The effect of heat on acclimatized and unacclimatized groups of very fit men	Proc R Soc Med	Exclude	-	-	-	-	No	-	-
A. J. Gold; A. Zornitzer; S. Sa	1969	Influence of season and heat on energy expenditure during rest and exercise	J Appl Physiol	Exclude	-	No	-	-	-	-	-
J. E. Greenleaf; J. S. Bosco	1969	Orthostatic intolerance after artificial heat acclimatization in physically fit subjects	Nature	Exclude	-	-	-	-	No	-	-
D. K. Mathews; E. L. Fox; D.	1969	Physiological responses during exercise and recovery in a football uniform	J Appl Physiol	Exclude	No	-	-	-	-	-	-
R. W. Schrier; J. Hano; H. I. K	1970	Renal, metabolic, and circulatory responses to heat and exercise. Studies in military recruits durin	Ann Intern Med	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.	1970	Movement of water, protein and crystalloids between vascular and extra-vascular compartments in	J Physiol	Exclude	-	-	-	-	No	-	-
C. T. Davies; C. Barnes; A. J.	1971	Body temperature in exercise. Effects of acclimatization to heat and habituation to work	Int Z Angew Physiol	-	-	-	-	-	-	-	-
P. Baumgartl; E. Knapp; A. Ai	1972	[The effect of sauna on haemodynamics and myocardial performance]	Munch Med Wochenschr	Exclude	-	-	No	-	-	-	-
A. Ghaem; J. M. Verpillat; B.	1972	[Reaction of the cutaneous circulation to muscular exercise at a high ambient temperature in non-	J Physiol (Paris)	Exclude	-	-	No	-	-	-	-
J. Kuusinen; M. Heinonen	1972	Immediate aftereffects of the Finnish sauna on psychomotor performance and mood	J Appl Psychol	Exclude	-	-	-	-	No	-	-
P. Marcus	1972	Heat acclimatization by exercise-induced elevation of body temperature	J Appl Physiol	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.	1972	Changes in plasma volume and protein content during exposures of working men to various temper	J Physiol	Exclude	-	-	-	-	No	-	-
P. Taggart; P. Parkinson; M. C.	1972	Cardiac responses to thermal, physical, and emotional stress	Br Med J	Exclude	-	-	-	No	-	-	-
B. L. Drinkwater	1973	Physiological responses of women to exercise	Exerc Sport Sci Rev	Exclude	-	-	-	-	No	-	-
O. G. Edholm; R. H. Fox; H. S	1973	Body temperature during exercise and rest in cold and hot climates	Arch Sci Physiol (Paris)	Exclude	Yes	-	-	-	-	-	-
W. F. Grether	1973	Human performance at elevated environmental temperatures	Aerosp Med	Exclude	-	-	-	-	No	-	-
T. D. Noakes	1973	Exercise-induced heat injury in South Africa	S Afr Med J	Exclude	-	No	-	-	-	-	-
C. H. Wyndham	1973	The physiology of exercise under heat stress	Annu Rev Physiol	Exclude	-	No	-	-	-	-	-
H. J. Dordel	1974	[The effects of a 14-day physical training program within the framework of a rehabilitation course	Rehabilitation (Stuttgart)	Exclude	-	-	No	-	-	-	-
C. V. Gisolfi; J. R. Copping	1974	Thermal effects of prolonged treadmill exercise in the heat	Med Sci Sports	Exclude	-	-	-	-	No	-	-
J. R. Greenleaf; J. S. Bosco; M	1974	Orthostatic tolerance in dehydrated, heat-acclimated men following exercise in the heat	Aerosp Med	Exclude	-	-	-	-	No	-	-
E. R. Nadel; K. B. Pandolf; M	1974	Mechanisms of thermal acclimation to exercise and heat	J Appl Physiol	Exclude	-	No	-	-	-	-	-
B. Nielsen	1974	Effects of changes in plasma volume and osmolality on thermoregulation during exercise	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
K. B. Pandolf; R. R. Gonzalez	1974	Physiological strain during light exercise in hot-humid environments	Aerosp Med	Exclude	-	-	-	-	No	-	-
K. B. Pandolf; E. Kamon	1974	Respiratory responses to intermittent and prolonged exercise in a hot-dry environment	Life Sci	Exclude	-	-	-	-	No	-	-
C. L. Wells; S. M. Horvath	1974	Metabolic and thermoregulatory responses of women to exercise in two thermal environments	Med Sci Sports	Exclude	-	-	-	-	No	-	-
D. P. Wyon	1974	The effects of moderate heat stress on typewriting performance	Ergonomics	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

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W. C. Adams; R. H. Fox; A. J. 1975	1975	Thermoregulation during marathon running in cool, moderate, and hot environments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
F. T. Agarkov; A. S. Pavlov 1975	1975	[Increasing human heat tolerance by means of muscle training]	Kosm Biol Aviakosm Med	Exclude	-	No	-	-	-	-	-
F. M. Davis; A. D. Baddeley; 1975	1975	Diver performance: the effect of cold	Undersea Biomed Res	Exclude	Yes	-	-	-	-	-	-
J. T. Fein; E. M. Haymes; E. R 1975	1975	Effects of daily and intermittent exposures on heat acclimation of women	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
E. Kamon 1975	1975	Ergonomics of heat and cold	Tex Rep Biol Med	Exclude	Yes	-	-	-	-	-	-
T. F. O'Donnell, Jr. 1975	1975	Acute heat stroke. Epidemiologic, biochemical, renal, and coagulation studies	Jama	Exclude	-	No	-	-	-	-	-
J. D. Ramsey; D. Dayal; B. Gi 1975	1975	Heat stress limits for the sedentary worker	Am Ind Hyg Assoc J	Exclude	-	No	-	-	-	-	-
L. C. Senay, Jr. 1975	1975	Plasma volumes and constituents of heat-exposed men before and after acclimatization	J Appl Physiol	Exclude	-	-	-	-	No	-	-
L. C. Senay, Jr.; S. Fortney 1975	1975	Untrained females: effects of submaximal exercise and heat on body fluids	J Appl Physiol	Exclude	-	-	-	-	No	-	-
E. Shvartz; N. B. Strydom; H. 1975	1975	Orthostatism and heat acclimation	J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
E. Baum, K. Brück; H. P. Schv 1976	1976	Adaptive modifications in the thermoregulatory system of long-distance runners	J Appl Physiol	Exclude	-	No	-	-	-	-	-
R. M. Bonner; M. H. Harrison 1976	1976	Effect of heat acclimatization on intravascular responses to acute heat stress in man	J Appl Physiol	Exclude	-	-	-	-	No	-	-
K. J. Collins; R. J. Brotherhoo 1976	1976	Physiological performance and work capacity of Sudanese cane cutters with Schistosoma mansoni	Am J Trop Med Hyg	Exclude	Yes	-	-	-	-	-	-
K. E. Cooper; S. Martin; P. Ri 1976	1976	Respiratory and other responses in subjects immersed in cold water	J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. H. Harrison; R. J. Edwards 1976	1976	Measurement of change in plasma volume during heat exposure and exercise	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
R. W. Hubbard; W. T. Matthev 1976	1976	The laboratory rat as a model for hyperthermic syndromes in humans	Am J Physiol	Exclude	-	No	-	-	-	-	-
E. Kamon 1976	1976	Acclimation processes by daily exercise stints at temperate conditions followed by short heat exposure	Aviat Space Environ Med	-	-	-	-	-	-	-	-
J. P. Martineaud; J. Raynaud; 1976	1976	[Hand blood flow at rest and during submaximal exercise in acute and chronic heat stress (author's review)]	J Physiol (Paris)	Exclude	-	-	No	-	-	-	-
A. Meister 1976	1976	[Heat exposure, performance reliability and efficiency]	Z Psychol Z Angew Psych	Exclude	-	-	No	-	-	-	-
D. Mitchell; L. C. Senay; C. H 1976	1976	Acclimatization in a hot, humid environment: energy exchange, body temperature, and sweating	J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. Raynaud; J. P. Martineaud; 1976	1976	Body temperatures during rest and exercise in residents and sojourners in hot climate	Int J Biometeorol	Exclude	-	No	-	-	-	-	-
L. C. Senay; D. Mitchell; C. H 1976	1976	Acclimatization in a hot, humid environment: body fluid adjustments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. Shibolet; M. C. Lancaster; 1976	1976	Heat stroke: a review	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
C. H. Wyndham; G. G. Rogers 1976	1976	Acclimatization in a hot, humid environment: cardiovascular adjustments	J Appl Physiol	Exclude	-	-	-	-	No	-	-
E. R. Buskirk 1977	1977	Temperature regulation with exercise	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-
R. Francesconi; J. Maher; G. F 1977	1977	Recurrent heat exposure: effects on levels of plasma and urinary sodium and potassium in resting men	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
R. P. Francesconi; J. T. Maher; 1977	1977	Recurrent heat exposure: enzymatic responses in resting and exercising men	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
R. Henane; R. Flandrois; J. P. 1977	1977	Increase in sweating sensitivity by endurance conditioning in man	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-
L. E. Herman; M. H. Stroud; V 1977	1977	Diaphoresis and Meniere's disease	Arch Otolaryngol	Exclude	Yes	-	-	-	-	-	-
M. Irondele; H. Freund 1977	1977	Carbohydrate and fat metabolism of unacclimatized men during and after submaximal exercise in a hot environment	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
K. V. Kuhlmeier; J. M. Millei 1977	1977	Determinants of the prescriptive zone of industrial workers	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-
P. Mairiaux; W. Nullens; R. F 1977	1977	[Evaluation of the effects of cooling clothes on the adaptation to prolonged exertion in high temperature]	Rev Inst Hyg Mines (Hass)	Exclude	-	-	No	-	-	-	-
Y. Ohira; A. Ito; S. Ikawa 1977	1977	Hemoconcentration during isometric handgrip exercise	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-
K. B. Pandolf; R. L. Burse; R. 1977	1977	Role of physical fitness in heat acclimatization, decay and reinduction	Ergonomics	Exclude	-	No	-	-	-	-	-
M. F. Roberts; C. B. Wenger; 1977	1977	Skin blood flow and sweating changes following exercise training and heat acclimation	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. J. S'Jongers; P. Vogelaere; J. 1977	1977	[Development of various physiological variables during sauna in a moderately trained male population]	Schweiz Z Sportmed	Exclude	-	-	No	-	-	-	-
L. C. Senay; R. Kok 1977	1977	Effects of training and heat acclimatization on blood plasma contents of exercising men	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Shvartz; Z. Glick; A. Maga; 1977	1977	Responses to temperate, cold, and hot environments and the effect of physical training	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
E. Shvartz; A. Meroz; A. Magi 1977	1977	Exercise and heat orthostatism and the effect of heat acclimation and physical fitness	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
E. Shvartz; Y. Shapiro; A. Mag 1977	1977	Heat acclimation, physical fitness, and responses to exercise in temperate and hot environments	J Appl Physiol Respir Env	-	-	-	-	-	-	-	-
E. Shvartz; S. Shibolet; A. Me 1977	1977	Prediction of heat tolerance from heart rate and rectal temperature in a temperate environment	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
J. A. Stolwijk 1977	1977	Responses to the thermal environment	Fed Proc	Exclude	-	No	-	-	-	-	-
H. G. Wenzel; R. Ilmarinen 1977	1977	Effects of environmental heat on performance and some physiological responses of a man during work	J Hum Ergol (Tokyo)	Exclude	-	No	-	-	No	-	-
F. de Techttermann; E. Jéquier 1978	1978	[Calorimetric study of the effect of salicylate in man during heat exposure and exercise (author's review)]	J Physiol (Paris)	Exclude	-	No	-	-	-	-	-
P. Engel; G. Hildebrandt; A. P. 1978	1978	[Studies on thermoregulatory performance of disabled persons with congenital maldevelopment of the hypothalamus]	Z Orthop Ihre Grenzgeb	Exclude	-	-	No	-	-	-	-
R. R. Gonzalez; L. G. Berglun 1978	1978	Indices of thermoregulatory strain for moderate exercise in the heat	J Appl Physiol Respir Env	Exclude	-	No	-	-	-	-	-
H. W. Lane; J. J. Cerda 1978	1978	Potassium requirements and exercise	J Am Diet Assoc	Exclude	-	No	-	-	-	-	-
T. Miura 1978	1978	Human performance under hot thermal condition of work environment	J Hum Ergol (Tokyo)	Exclude	-	No	-	-	-	-	-
S. A. Nunneley 1978	1978	Physiological responses of women to thermal stress: a review	Med Sci Sports	Exclude	-	No	-	-	-	-	-
M. Pribil; J. Matousek 1978	1978	[The effect of periodical sauna bath on certain signs of the neurovegetative system and physical fitness]	Cas Lek Cesk	Exclude	-	-	No	-	-	-	-
L. C. Senay, Jr. 1978	1978	Early response of plasma contents on exposure of working men to heat	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
E. Shvartz; Y. Shapiro; H. Birr 1978	1978	Maximal oxygen uptake, heat tolerance and rectal temperature	Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
I. Vuori; M. Makarainen; A. Ji 1978	1978	Sudden death and physical activity	Cardiology	Exclude	Yes	-	-	-	-	-	-
B. L. Drinkwater; S. M. Horva 1979	1979	Heat tolerance and aging	Med Sci Sports	Exclude	-	-	-	-	No	-	-
S. M. Fortney; L. C. Senay, Jr. 1979	1979	Effect of training and heat acclimation on exercise responses of sedentary females	J Appl Physiol Respir Env	Exclude	-	-	-	-	No	-	-
C. V. Gisolfi; J. S. Cohen 1979	1979	Relationships among training, heat acclimation, and heat tolerance in men and women: the control of heat stress	Med Sci Sports	Exclude	-	No	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.





## Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
G. L. Brengelmann	1983	Circulatory adjustments to exercise and heat stress	Annu Rev Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
M. D. Curley; R. N. Hawkins	1983	Cognitive performance during a heat acclimatization regimen	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Fellmann; G. Grizard; J. C.	1983	Human frontal sweat rate and lactate concentration during heat exposure and exercise	J Appl Physiol Respir Env	Exclude	-	-	-	-	-	-	-	No	-	-
R. P. Francesconi; M. N. Sawk	1983	Hypohydration and heat acclimation: plasma renin and aldosterone during exercise	J Appl Physiol Respir Env	Exclude	-	-	-	-	-	-	-	No	-	-
J. E. Greenleaf; P. J. Brock; L.	1983	Drinking and water balance during exercise and heat acclimation	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Hoffmann; M. Müller; H. U.	1983	[Are swimming and sauna hazardous in the rehabilitation of heart patients?]	Schweiz Med Wochenschr	Exclude	-	-	No	-	-	-	-	-	-	-
H. Kalant; A. D. Lé	1983	Effects of ethanol on thermoregulation	Pharmacol Ther	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Kubica; B. Nielsen; A. Bon	1983	Relationship between plasma volume reduction and plasma electrolyte changes after prolonged bi	Acta Physiol Pol	Exclude	-	-	-	-	-	-	-	No	-	-
G. N. Novozhilov; V. P. Koval	1983	[Physiologo-medical evaluation of regimens of preliminary heat adaptation]	Voen Med Zh	Exclude	-	-	No	-	-	-	-	-	-	-
M. L. O'Toole; A. M. Paolone;	1983	The effects of heat acclimation on plasma volume and plasma protein of females	Int J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
K. Sato; F. Sato	1983	Individual variations in structure and function of human eccrine sweat gland	Am J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; R. W. Hubbard;	1983	Effects of acute plasma volume expansion on altering exercise-heat performance	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Sawka; K. B. Pandolf; I	1983	Does heat acclimation lower the rate of metabolism elicited by muscular exercise?	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Sawka; M. M. Toner; R	1983	Hypohydration and exercise: effects of heat acclimation, gender, and environment	J Appl Physiol Respir Env	Exclude	-	-	-	-	-	-	-	No	-	-
V. M. Sharma; G. Pichan; M. I	1983	Differential effects of hot-humid and hot-dry environments on mental functions	Int Arch Occup Environ H	Exclude	-	-	-	-	-	-	-	No	-	-
H. J. Winterfeld; D. Strangfeld	1983	[Effect of sauna and walking series on blood pressure, peripheral microcirculation and performan	Z Gesamte Inn Med	Exclude	-	-	No	-	-	-	-	-	-	-
A. B. Babae; M. Charyev; G.	1984	[Blood circulation in healthy inhabitants of the arid zone of Turkmenistan. Report 2. Use of contr	Kardiologia	Exclude	-	-	No	-	-	-	-	-	-	-
J. R. Brotherhood	1984	Nutrition and sports performance	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. S. Cadarette; M. N. Sawka;	1984	Aerobic fitness and the hypohydration response to exercise-heat stress	Aviat Space Environ Med	-	-	-	-	-	-	-	-	-	-	-
J. E. Caldwell; E. Ahonen; U.	1984	Differential effects of sauna-, diuretic-, and exercise-induced hypohydration	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Danforth, Jr.; A. Burger	1984	The role of thyroid hormones in the control of energy expenditure	Clin Endocrinol Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Dixon; P. Eurman; B. E. St	1984	Hypothalamic function in amenorrheic runners	Fertil Steril	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. P. Francesconi; M. N. Sawk	1984	Hypohydration and acclimation: effects on hormone responses to exercise/heat stress	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
S. I. Gibbons; W. C. Adams	1984	Combined effects of ozone exposure and ambient heat on exercising females	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. V. Gisolfi; C. B. Wenger	1984	Temperature regulation during exercise: old concepts, new ideas	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	-
K. N. Kachanovskii	1984	[Effect of short-term thermal adaptation on indices of physical work capacity]	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-	-	-	-
M. A. Kolka; W. L. Holden; R	1984	Heat exchange following atropine injection before and after heat acclimation	J Appl Physiol Respir Env	Exclude	-	-	-	-	-	-	-	No	-	-
M. A. Kolka; L. Levine; B. S.	1984	Effects of heat acclimation on atropine-impaired thermoregulation	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
A. T. Mar'ianovich; V. S. Balal	1984	[Individual characteristics of the body's reactions to combined heat and physical loading]	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-	-	-	-
D. M. Orenstein; K. G. Henke	1984	Heat acclimation in cystic fibrosis	J Appl Physiol Respir Env	Exclude	-	No	-	-	-	-	-	-	-	-
J. S. Petrofsky; C. A. Phillips	1984	The use of functional electrical stimulation for rehabilitation of spinal cord injured patients	Cent Nerv Syst Trauma	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Pivarnik; E. M. Leeds; J	1984	Effects of endurance exercise on metabolic water production and plasma volume	J Appl Physiol Respir Env	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; R. P. Francescoi	1984	Hydration and vascular fluid shifts during exercise in the heat	J Appl Physiol Respir Env	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Sawka; R. P. Francescoi	1984	Influence of hydration level and body fluids on exercise performance in the heat	Jama	Exclude	-	No	-	-	-	-	-	-	-	-
M. N. Sawka; L. Levine; M. A	1984	Effect of atropine on the exercise-heat performance of man	Fundam Appl Toxicol	Exclude	-	-	-	-	-	-	-	No	-	-
L. E. Armstrong; D. L. Costill;	1985	Effects of dietary sodium on body and muscle potassium content during heat acclimation	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. M. Fortney; N. B. Vroman	1985	Exercise, performance and temperature control: temperature regulation during exercise and implic	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
R. P. Francesconi; M. N. Sawk	1985	Plasma hormonal responses at graded hypohydration levels during exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
C. J. Gaebelein; L. C. Senay; J	1985	Changes in blood pressure, heart rate and blood constituents during heat exposure in men with ele	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
S. Gold; M. Cahani; H. Sohmi	1985	Effects of body temperature elevation on auditory nerve-brain-stem evoked responses and EEGs i	Electroencephalogr Clin N	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Goodman; I. Cohen; J. Wal	1985	The effect of water intake on body temperature during rugby matches	S Afr Med J	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. E. Greenleaf; P. J. Brock; D.	1985	Effects of exercise-heat acclimation on fluid, electrolyte, and endocrine responses during tilt and	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
M. H. Harrison	1985	Effects on thermal stress and exercise on blood volume in humans	Physiol Rev	Exclude	-	No	-	-	-	-	-	-	-	-
S. K. Hillman; G. Delforge	1985	The use of physical agents in rehabilitation of athletic injuries	Clin Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
R. Huch	1985	[Travel, sports and pregnancy]	Geburthilfe Frauenheilkd	Exclude	-	-	No	-	-	-	-	-	-	-
A. Ivanov Yu; L. A. Korolev	1985	Heat acclimatization by controlled hypothermia	Hum Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Jauhainen; M. Laitinen; I.	1985	Lipids and apolipoproteins A-I, B and C-II and different rapid weight loss programs (weight lifter	Int J Biochem	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Katsuura; K. Nakano; Y. Sa	1985	Influence of native place on forearm blood flow at rest and during exercise in dry and humid heat	Ann Physiol Anthropol	Exclude	-	-	-	-	-	-	-	No	-	-
W. L. Kenney	1985	A review of comparative responses of men and women to heat stress	Environ Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. S. King; D. L. Costill; W. J	1985	Muscle metabolism during exercise in the heat in unacclimatized and acclimatized humans	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
G. Pichan; K. Sridharan; Y. V.	1985	Physiological acclimatization to heat after a spell of cold conditioning in tropical subjects	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Sawka; A. J. Young; B.	1985	Influence of heat stress and acclimation on maximal aerobic power	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Sawka; A. J. Young; R.	1985	Thermoregulatory and blood responses during exercise at graded hypohydration levels	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
R. J. Shephard	1985	Adaptation to exercise in the cold	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. E. Sinclair	1985	Be serious about siriasis. Guidelines for avoiding heat injury during 'dog days'	Postgrad Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Smolander; P. Kolari	1985	Laser-Doppler and plethysmographic skin blood flow during exercise and during acute heat stress	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
\*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?								
A. J. Young; M. N. Sawka; L. T. F. Barkve; K. Langseth-Mai	1985	Skeletal muscle metabolism during exercise is influenced by heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-
G. M. Budd; A. L. Hendrie; S. B. S. Cadarette; L. Levine; P. D. L. Costill	1986	Increased uptake of transdermal glyceryl trinitrate during physical exercise and during high ambient temperature	Am Heart J	Exclude	-	-	-	-	-	-	-
M. H. Harrison	1986	Behavioural temperature regulation during a motor-toboggan traverse in Antarctica	Eur J Appl Physiol Occup Physiol	Exclude	Yes	-	-	-	-	-	-
A. Danon; S. Ben-Shimon; Z. P. A. Eisenman	1986	Effects of atropine on thermoregulatory responses to exercise in different environments	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
K. Fujishima	1986	Muscle metabolism and electrolyte balance during heat acclimation	Acta Physiol Scand Suppl	Exclude	-	No	-	-	-	-	-
M. E. Patterson; A. Zeh; K. Brückner	1986	Effect of exercise and heat exposure on percutaneous absorption of methyl salicylate	Eur J Clin Pharmacol	Exclude	Yes	-	-	-	-	-	-
M. H. Harrison	1986	Hot weather, exercise, old age, and the kidneys	Geriatrics	Exclude	Yes	-	-	-	-	-	-
V. Hessemer; A. Zeh; K. Brückner	1986	Thermoregulatory responses during exercise and a hot water immersion and the affective response	Int J Biometeorol	Exclude	-	-	-	-	-	No	-
M. Ishikawa; K. Ishikawa	1986	Heat and exercise. Effects on blood volume	Sports Med	Exclude	-	No	-	-	-	-	-
J. M. Johnson; G. L. Brengel	1986	Effects of passive heat adaptation and moderate sweatless conditioning on responses to cold and heat	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	No	-
W. L. Kenney; D. A. Lewis; R. C. R. Kirby; V. A. Convertino	1986	Influence of profuse sweating on systolic time intervals	Br Heart J	Exclude	Yes	-	-	-	-	-	-
K. A. Kirsch; L. Rocker; H. von	1986	Regulation of the cutaneous circulation	Fed Proc	Exclude	-	No	-	-	-	-	-
F. Konikoff; Y. Shoenfeld; A. A. P. Kozlovskii; E. A. Lushchik	1986	A simple exercise test for the prediction of relative heat tolerance	Am Ind Hyg Assoc J	Exclude	-	-	-	-	-	No	-
J. Leblanc	1986	Plasma aldosterone and sweat sodium concentrations after exercise and heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	No	-
D. A. Lewis; E. Kamon; J. L. J. Smolander; P. Kolar; O. Ko	1986	The cardiac filling pressure following exercise and thermal stress	Yale J Biol Med	Exclude	Yes	-	-	-	-	No	-
R. K. Anderson; W. L. Kenney	1986	Effects of salt loading during exercise in a hot dry climate	Biomed Pharmacother	Exclude	-	-	-	-	-	No	-
L. E. Armstrong; D. L. Costill	1987	[Human tolerance for high-intensity contact heat exposure of the surface of the skin]	Kosm Biol Aviakosm Med	Exclude	-	-	No	-	-	-	-
L. E. Armstrong; R. W. Hubbard	1987	Thermogenesis with relation to exercise and exercise-training	Acta Med Scand Suppl	Exclude	-	No	-	-	-	-	-
L. E. Armstrong; R. W. Hubbard	1987	Physiological differences between genders. Implications for sports conditioning	Sports Med	Exclude	-	No	-	-	-	-	-
J. P. Kirwan; D. L. Costill; H. F. Koban; H. Hornak; E. Schul	1987	Prediction modeling of physiological responses and human performance in the heat	Comput Biol Med	Exclude	-	No	-	-	-	-	-
W. J. Kraemer; L. E. Armstrong	1987	Effects of exercise detraining and deacclimation to the heat on plasma volume dynamics	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	No	-
J. D. Ramsey; C. H. Lee	1987	Free and conjugated catecholamines in human plasma during physical exercise	Clin Exp Pharmacol Physiol	Exclude	Yes	-	-	-	-	-	-
J. P. Kirwan; D. L. Costill; H. F. Koban; H. Hornak; E. Schul	1987	An inquiry into the role of cardiac filling pressure in acclimation to heat	Yale J Biol Med	Exclude	-	-	-	-	-	No	-
L. E. Armstrong; R. W. Hubbard	1987	Aerobic and anaerobic responses to incremental exercise in a thermoneutral and a hot dry environment	Acta Physiol Scand	Exclude	-	-	-	-	-	No	-
L. E. Armstrong; R. W. Hubbard	1987	Effect of age on heat-activated sweat gland density and flow during exercise in dry heat	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubbard	1987	Changes in body water and electrolytes during heat acclimation: effects of dietary sodium	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubbard	1987	Heat acclimatization during summer running in the northeastern United States	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
J. H. Bittel	1987	Evaluation of a temperate environment test to predict heat tolerance	Eur J Appl Physiol Occup Physiol	Exclude	Yes	-	-	-	-	-	-
V. A. Convertino	1987	Heat debt as an index for cold adaptation in men	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
R. R. Gonzalez	1987	Fluid shifts and hydration state: effects of long-term exercise	Can J Sport Sci	Exclude	-	No	-	-	-	-	-
R. Gruca	1987	Biophysical and physiological integration of proper clothing for exercise	Exerc Sport Sci Rev	Exclude	Yes	-	-	-	-	-	-
L. E. Hart; J. R. Sutton	1987	Water loss distribution in exercising men under hot conditions	Acta Physiol Pol	Exclude	-	-	-	-	-	No	-
S. Hjertén; K. Elenbring; F. K. S. Hjärtén; K. Elenbring; F. K. S. Hjärtén	1987	Environmental considerations for exercise	Cardiol Clin	Exclude	-	No	-	-	-	-	-
R. W. Hubbard; C. B. Matthews	1987	Carrier-free zone electrophoresis, displacement electrophoresis and isoelectric focusing in a high-resolution system	J Chromatogr	Exclude	Yes	-	-	-	-	-	-
G. L. Irion	1987	Novel approaches to the pathophysiology of heatstroke: the energy depletion model	Ann Emerg Med	Exclude	-	No	-	-	-	-	-
J. P. Kirwan; D. L. Costill; H. F. Koban; H. Hornak; E. Schul	1987	Responses of distance runners and sprinters to exercise in a hot environment	Aviat Space Environ Med	Exclude	-	-	-	-	-	No	-
W. J. Kraemer; L. E. Armstrong	1987	Substrate utilization in leg muscle of men after heat acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	-	No	-
J. D. Ramsey; C. H. Lee	1987	[Secretory performance of eccrine sweat glands from the nephrologic viewpoint]	Z Gesamte Inn Med	Exclude	-	-	No	-	-	-	-
J. T. Viitasalo; H. Kyröläinen	1988	Plasma opioid peptide responses during heat acclimation in humans	Peptides	Exclude	-	-	-	-	-	No	-
A. J. Carpenter; S. A. Nunnele	1988	The impact of the sauna bath and the sauna exercise suit on physiological cost during exercise	J Sports Med Phys Fitness	Exclude	-	No	-	-	-	-	-
D. J. Coté; W. E. Prentice, Jr.; M. T. Duncan; S. M. Horvath	1988	Adenohypophyseal hormone levels during hyperthermia	Endocrinologie	Exclude	-	-	-	-	-	No	-
P. M. Gopinathan; G. Pichan;	1988	Effects of rapid weight reduction on force production and vertical jumping height	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
F. L. Kaufman; D. E. Mills; R. W. L. Kenney; R. K. Anderson	1988	Heatstroke and army training	Lancet	Exclude	Yes	No	-	-	-	-	-
W. L. Kenney; S. R. Fowler	1988	Endogenous hormones subtly alter women's response to heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	No	-
W. J. Kraemer; L. E. Armstrong	1988	Comparison of three treatment procedures for minimizing ankle sprain swelling	Phys Ther	Exclude	Yes	-	-	-	-	-	-
J. P. Libert; C. Amoros; J. Di Tizio	1988	Physiological adaptations to thermal stress in tropical Asians	Eur J Appl Physiol Occup Physiol	Exclude	-	No	-	-	-	-	-
T. Ogawa; N. Ohnishi; Y. Yam	1988	Role of dehydration in heat stress-induced variations in mental performance	Arch Environ Health	Exclude	Yes	-	-	-	-	-	-
M. E. Patterson; J. L. Logan; S.	1988	Effects of bromocriptine on sweat gland function during heat acclimatization	Horm Res	Exclude	-	-	-	-	-	No	-
M. E. Patterson; J. L. Logan; S.	1988	Responses of older and younger women to exercise in dry and humid heat without fluid replacement	Med Sci Sports Exerc	Exclude	-	-	-	-	-	No	-
M. E. Patterson; J. L. Logan; S.	1988	Methylcholine-activated eccrine sweat gland density and output as a function of age	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. E. Patterson; J. L. Logan; S.	1988	Responses of plasma human atrial natriuretic factor to high intensity submaximal exercise in the heat	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	No	-
M. E. Patterson; J. L. Logan; S.	1988	Influence of exercise in water on hormonal, metabolic and adrenergic receptor changes in man	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
M. E. Patterson; J. L. Logan; S.	1988	Thermoregulatory adjustments during continuous heat exposure	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	No	-
M. E. Patterson; J. L. Logan; S.	1988	Effect of facial cooling during heat acclimation process on adaptive changes in sweating activity	Jpn J Physiol	Exclude	-	-	-	-	-	No	-
M. E. Patterson; J. L. Logan; S.	1988	Thermoregulatory responses of middle-aged and young men during dry-heat acclimation	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
M. E. Patterson; J. L. Logan; S.	1988	Exertional heat stroke and acute renal failure in a young woman	Am J Kidney Dis	Exclude	-	No	-	-	-	-	-

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G. Pichan; K. Sridharan; R. K. J. M. Pivarnik; J. E. Wilkerson	1988	Physiological and metabolic responses to work in heat with graded hypohydration in tropical subjects	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
S. Rehenen	1988	Recovery metabolism and thermoregulation of endurance trained and heat acclimatized men	J Sports Med Phys Fitness	-	-	-	-	-	-	-	-
M. N. Sawka; R. R. Gonzalez; S. C. Shearer	1988	The sauna and sports	Ann Clin Res	Exclude	-	No	-	-	-	-	-
H. Urponen; I. Vuori; J. Hasan	1988	Polycythemia and hydration: effects on thermoregulation and blood volume during exercise-heat stress	Am J Physiol	Exclude	-	-	-	-	No	-	-
H. J. Winterfeld; H. Siewert; I. L. E. Armstrong; R. P. Frances	1988	Intestinal parasites in novice black miners. Prevalence and possible effect on heat acclimatization	S Afr Med J	Exclude	Yes	-	-	-	-	-	-
D. E. Bunnell; S. M. Horvath	1989	Self-evaluations of factors promoting and disturbing sleep: an epidemiological survey in Finland	Soc Sci Med	Exclude	Yes	-	-	-	-	-	-
B. Dawson; F. S. Pyke; A. R. D. C. Gavhed; I. Holmér	1989	[Use of walking and sauna therapy in the rehabilitation of hypertensive patients with ischemic heart disease]	Z Kardiol	Exclude	-	-	No	-	-	-	-
K. H. Kilbun; R. H. Warsaw; J. P. Knochel	1989	Plasma cortisol, renin, and aldosterone during an intense heat acclimation program	Int J Sports Med	Exclude	-	-	-	-	No	-	-
M. A. Kolka; L. A. Stephenson	1989	Interactive effects of heat, physical work, and CO exposure on metabolism and cognitive task performance	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
V. A. Kuz'menko	1989	Improvements in heat tolerance induced by interval running training in the heat and in sweat clothing	J Sports Sci	Exclude	-	-	-	-	No	-	-
P. D. Neuffer; A. J. Young; M. S. Rose; P. Fran	1989	Thermoregulatory responses of firemen to exercise in the heat	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-
M. L. O'Toole	1989	Neurobehavioral dysfunction in firemen exposed to polychlorinated biphenyls (PCBs): possible heat stroke and related heat stress disorders	Arch Environ Health	Exclude	Yes	-	-	-	-	-	-
B. C. Pramanik; C. R. Mooma	1989	Control of sweating during the human menstrual cycle	Dis Mon	Exclude	-	No	-	-	-	-	-
M. N. Sawka; R. R. Gonzalez; M. N. Sawka; A. J. Young; R. B. Zahorska-Markiewicz; M. I. L. E. Armstrong; R. W. Hubba	1989	Control of thermoregulatory sweating during exercise in the heat	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
A. V. Astrup; N. J. Christensen	1989	Human intravascular immunoglobulin responses to exercise-heat and hypohydration	Vopr Kurortol Fizioter Lec	Exclude	-	-	No	-	-	-	-
P. Delamarche; J. Bittel; J. R. J. L. Kobrick; R. F. Johnson; I. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1989	Gastric emptying during exercise: effects of heat stress and hypohydration	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
N. J. Rehrer; E. J. Beckers; F. G. P. Rodgers; A. N. Schechter	1989	Heat stress in protective clothing. Interactions among physical and physiological factors	Scand J Work Environ Health	Exclude	-	No	-	-	-	-	-
D. L. Costill; J. A. Houmard; D. L. Costill; J. D. S. Kapp; I. A. Petersen; R. J. L. Kobrick; R. F. Johnson; I. R. G. McMurray; V. L. Katz	1989	Gender differences in the cardiovascular response to exercise	Cardiovasc Clin	Exclude	Yes	-	-	-	-	-	-
P. J. Bloom; L. M. Goessens; C. J. Braden	1989	Identification of phenylthiocarbonyl amino acids for compositional analysis by thermospray liquid chromatography	Anal Biochem	Exclude	Yes	-	-	-	-	-	-
A. Burlina; M. Plebani; S. Secchi	1989	Control of thermoregulatory sweating during exercise in the heat	Am J Physiol	Exclude	-	No	-	-	-	-	-
F. Cisse; F. Martineaud; J. P. M. V. A. Convertino	1989	Human intravascular immunoglobulin responses to exercise-heat and hypohydration	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
S. Doré; G. R. Brisson; A. Fou	1989	Circadian variations in psychophysiological responses to heat exposure and exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
P. I. Gumener; L. M. Sukharev	1989	Time course of recovery and heat acclimation ability of prior exertional heatstroke patients	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
P. Hayes	1989	Evaluation of a temperate-environment test of heat tolerance in prior heatstroke patients and controls	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
G. R. Jansen; R. Binard	1989	Effects of nutrient intake on sympathoadrenal activity and thermogenic mechanisms	J Neurosci Methods	Exclude	Yes	-	-	-	-	-	-
H. Just	1989	Thermoregulation at rest and during exercise in prepubertal boys	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
V. P. Kovalenko; V. V. Skornia	1989	Effect of pyridostigmine on the exercise-heat response of man	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
M. Waluga	1990	Metabolic adaptation to decreases in energy intake due to changes in the energy cost of low energy diet	World Rev Nutr Diet	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubba	1990	HIV infection risk to nonhealth-care workers	Am Ind Hyg Assoc J	Exclude	Yes	-	-	-	-	-	-
A. Burlina; M. Plebani; S. Secchi	1990	Effects of short-term training on cardiac function during prolonged exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
F. Cisse; F. Martineaud; J. P. M. V. A. Convertino	1990	Efficiency of thermoregulatory system in man under endogenous and exogenous heat loads	Acta Physiol Pol	Exclude	-	-	-	-	No	-	-
S. Doré; G. R. Brisson; A. Fou	1990	The relative influence of physical fitness, acclimatization state, anthropometric measures and gender on heat tolerance in prior heatstroke patients and controls	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
P. I. Gumener; L. M. Sukharev	1990	The influence of exercise intensity on heat acclimation in trained subjects	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
L. E. Armstrong; C. M. Mares	1991	Two or six hyperthermia treatments as an adjunct to radiation therapy yield similar tumor responses	Int J Radiat Oncol Biol Phys	Exclude	Yes	-	-	-	-	-	-
P. J. Bloom; L. M. Goessens; C. J. Braden	1991	Effects of atropine/2-PAM chloride, heat, and chemical protective clothing on visual performance	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
A. Burlina; M. Plebani; S. Secchi	1991	Effects of nerve agent antidote and heat exposure on soldier performance in the BDU and MOPP-2	Mil Med	Exclude	Yes	-	-	-	-	-	-
F. Cisse; F. Martineaud; J. P. M. V. A. Convertino	1991	Thermoregulation in pregnancy. Implications for exercise	Sports Med	Exclude	-	No	-	-	-	-	-
S. Doré; G. R. Brisson; A. Fou	1991	Effects of dehydration on gastric emptying and gastrointestinal distress while running	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Microcirculatory adaptations in sickle cell anemia: reactive hyperemia response	Am J Physiol	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; C. M. Mares	1991	Heat illness. Fluid and electrolyte issues for pediatric and adolescent athletes	Pediatr Clin North Am	Exclude	Yes	-	-	-	-	-	-
P. J. Bloom; L. M. Goessens; C. J. Braden	1991	[Effect of physical exercise and heat on energy expenditure in obesity]	Pol Arch Med Wewn	Exclude	-	-	No	-	-	-	-
A. Burlina; M. Plebani; S. Secchi	1991	The induction and decay of heat acclimatization in trained athletes	Sports Med	Exclude	-	No	-	-	-	-	-
F. Cisse; F. Martineaud; J. P. M. V. A. Convertino	1991	Effects of order of presentation of exercise intensities and of sauna baths on perceived exertion during exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
S. Doré; G. R. Brisson; A. Fou	1991	Patterns of change over time in learned response to chronic illness among participants in a system of physical activity	Arthritis Care Res	Exclude	Yes	-	-	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Precipitation method for separating and quantifying bone and liver alkaline phosphatase isoenzymes	Clin Biochem	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; C. M. Mares	1991	[Central temperature during chronic exposure to a warm climate]	Arch Int Physiol Biochim	Exclude	-	-	No	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Blood volume: its adaptation to endurance training	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
L. E. Armstrong; C. M. Mares	1991	Contribution of hGH20K variant to blood hGH response in sauna and exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
P. I. Gumener; L. M. Sukharev	1991	[Effect of radiating heat and physical exercise on adolescents]	Gig Sanit	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; C. M. Mares	1991	Diving and hypothermia	Arctic Med Res	Exclude	Yes	-	-	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Effect of dietary protein and environmental factors on lactation performance in rats	Physiol Behav	Exclude	Yes	-	-	-	-	-	-
V. P. Kovalenko; V. V. Skornia	1991	Peripheral adaptations in congestive heart failure: a review	Am J Med	Exclude	Yes	-	-	-	-	-	-
M. Waluga	1991	[The physiological hygiene aspects of enhancing human heat resistance (a review of the literature)]	Voen Med Zh	Exclude	-	-	No	-	-	-	-
L. E. Armstrong; C. M. Mares	1991	[Effects of sauna on the values of blood circulation studied by the isometric exercise test]	Clin Ter	Exclude	-	-	No	-	-	-	-
P. I. Gumener; L. M. Sukharev	1991	Fluid replacement during sustained activity in the heat: nutrient solution vs. water	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
P. D. Neuffer; M. N. Sawka; A. R. D. C. Gavhed; I. Holmér	1991	Hypohydration does not impair skeletal muscle glycogen resynthesis after exercise	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
K. B. Pandolf	1991	Aging and heat tolerance at rest or during work	Exp Aging Res	Exclude	-	No	-	-	-	-	-
A. S. Pavlov	1991	[The effect of an improvement in the conceptual model of activity on the rate of searching for and	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-
J. Smolander, R. Ilmarinen; O	1991	An evaluation of heat stress indices (ISO 7243, ISO/DIS 7933) in the prediction of heat strain in u	Int Arch Occup Environ H	Exclude	-	-	-	-	No	-	-
H. S. Uberoi; J. S. Dugal; A. S	1991	Acute renal failure in severe exertional rhabdomyolysis	J Assoc Physicians India	Exclude	Yes	-	-	-	-	-	-
A. N. Azhaev; A. S. Kuz'min;	1992	[The performance quality of a flight trainer operator under conditions of heat discomfort]	Voen Med Zh	Exclude	-	-	No	-	-	-	-
D. A. DuBoise; J. W. Agnew	1992	Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronect	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
N. Fellmann	1992	Hormonal and plasma volume alterations following endurance exercise. A brief review	Sports Med	Exclude	Yes	-	-	-	-	-	-
H. J. Gerner; P. Engel; G. C. C	1992	The effects of sauna on tetraplegic and paraplegic subjects	Paraplegia	Exclude	-	-	-	-	No	-	-
J. M. Johnson	1992	Exercise and the cutaneous circulation	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-
W. L. Kenney; J. M. Johnson	1992	Control of skin blood flow during exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
J. Landry; H. Lambert; M. Zh	1992	Human HSP27 is phosphorylated at serines 78 and 82 by heat shock and mitogen-activated kinase	J Biol Chem	Exclude	Yes	-	-	-	-	-	-
M. A. MacKenzie; W. R. Aeng	1992	Electrocardiographic changes during steady mild hypothermia and normothermia in patients with	Clin Sci (Lond)	Exclude	-	-	-	-	No	-	-
K. D. Mittleman; T. J. Doubt;	1992	Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
R. Murray	1992	Nutrition for the marathon and other endurance sports: environmental stress and dehydration	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
K. B. Pandolf; R. W. Gange; V	1992	Human thermoregulatory responses during heat exposure after artificially induced sunburn	Am J Physiol	Exclude	Yes	-	-	-	-	-	-
G. Savourey; L. Clerc; A. L. V	1992	Blood flow and muscle bio-energetics by 31P-nuclear magnetic resonance after local cold acclime	Eur J Appl Physiol Occup	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; A. J. Young; W.	1992	Human tolerance to heat strain during exercise: influence of hydration	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. Smolander; V. Louhevaara	1992	Effect of heat stress on muscle blood flow during dynamic handgrip exercise	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
Z. P. Zunnunov	1992	[Physical work capacity as a criterion of human resistance under the hot climatic conditions of an	Fiziol Zh SSSR Im I M Se	Exclude	-	-	No	-	-	-	-
L. E. Armstrong; W. C. Curtis;	1993	Symptomatic hyponatremia during prolonged exercise in heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; R. W. Hubba	1993	Responses to moderate and low sodium diets during exercise-heat acclimation	Int J Sport Nutr	Exclude	-	-	-	-	No	-	-
A. Barnett; R. J. Maughan	1993	Response of unacclimatized males to repeated weekly bouts of exercise in the heat	Br J Sports Med	Exclude	-	-	-	-	No	-	-
J. M. Beelley; D. J. Smith; E. F	1993	Environmental hazards and health	Br Med Bull	Exclude	Yes	-	-	-	-	-	-
A. Bouchama; A. el-Yazigi; A.	1993	Alteration of taurine homeostasis in acute heatstroke	Crit Care Med	Exclude	Yes	-	-	-	-	-	-
G. L. Brengelmann	1993	Specialized brain cooling in humans?	Faseb j	Exclude	-	No	-	-	-	-	-
W. W. Briner, Jr.	1993	Physical allergies and exercise. Clinical implications for those engaged in sports activities	Sports Med	Exclude	Yes	-	-	-	-	-	-
G. M. Budd; J. R. Brotherhook	1993	Effects of acclimatization to cold baths on men's responses to whole-body cooling in air	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
A. Juul; A. Behrenscheer; T. T	1993	Impaired thermoregulation in adults with growth hormone deficiency during heat exposure and ex	Clin Endocrinol (Oxf)	Exclude	-	-	-	-	No	-	-
B. Nielsen; J. R. Hales; S. Stra	1993	Human circulatory and thermoregulatory adaptations with heat acclimation and exercise in a hot,	J Physiol	Exclude	-	-	-	-	No	-	-
K. L. Schmidt	1993	[Characteristics of physical therapy in diseases of the musculoskeletal system in the elderly]	Z Gerontol	Exclude	-	-	No	-	-	-	-
R. J. Shephard	1993	Metabolic adaptations to exercise in the cold. An update	Sports Med	Exclude	Yes	-	-	-	-	-	-
M. Torii; H. Nakayama	1993	Disappearance of seasonal variation of sweating responses in exercising man: effect of pre-heatin	J Hum Ergol (Tokyo)	Exclude	-	No	-	-	-	-	-
B. B. Yaspelkis, 3rd; G. C. Scr	1993	Carbohydrate metabolism during exercise in hot and thermoneutral environments	Int J Sports Med	Exclude	-	-	-	-	No	-	-
A. J. Young; M. N. Sawka; M.	1993	Role of thermal factors on aerobic capacity improvements with endurance training	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
D. H. Zappe; C. G. Tankersley	1993	Fluid restriction prior to cycle exercise: effects on plasma volume and plasma proteins	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
Y. Aoyagi; T. M. McLellan; R.	1994	Effects of training and acclimation on heat tolerance in exercising men wearing protective clothin	Eur J Appl Physiol Occup	Exclude	-	-	-	-	No	-	-
K. E. Cooper	1994	Some responses of the cardiovascular system to heat and fever	Can J Cardiol	Exclude	-	No	-	-	-	-	-
B. Dawson	1994	Exercise training in sweat clothing in cool conditions to improve heat tolerance	Sports Med	Exclude	-	No	-	-	-	-	-
T. J. Doubt; P. A. Deuster	1994	Fluid ingestion during exercise in 25 degrees C water at the surface and 5.5 ATA	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
B. Falk; O. Bar-Or	1994	[Responses to exercise in heat and cold among children and adolescents]	Harefuah	Exclude	-	-	No	-	-	-	-
M. A. Febbraio; R. J. Snow; M	1994	Muscle metabolism during exercise and heat stress in trained men: effect of acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
B. Fu; P. E. Nelson	1994	Conditions and constraints of food processing in space	Food Technol	Exclude	Yes	-	-	-	-	-	-
C. J. Gordon	1994	Thermoregulation in laboratory mammals and humans exposed to anticholinesterase agents	Neurotoxicol Teratol	Exclude	Yes	-	-	-	-	-	-
M. N. Janal; M. Glusman; J. P	1994	Are runners stoical? An examination of pain sensitivity in habitual runners and normally active co	Pain	Exclude	Yes	-	-	-	-	-	-
J. S. Lee	1994	Microvascular volume changes induced by exercise, heat exposure, or endotoxin injection	Am J Physiol	Exclude	-	-	-	-	No	-	-
E. L. Lloyd	1994	ABC of sports medicine. Temperature and performance--II: Heat	Bmj	Exclude	-	No	-	-	-	-	-
D. M. Lyle; P. R. Lewis; D. A.	1994	Heat exhaustion in The Sun-Herald City to Surf fun run	Med J Aust	Exclude	-	No	-	-	-	-	-
D. M. Mancini; L. Bolinger; H	1994	Validation of near-infrared spectroscopy in humans	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
T. M. McLellan; J. Frim	1994	Heat strain in the Canadian Forces chemical defence clothing: problems and solutions	Can J Appl Physiol	Exclude	-	No	-	-	-	-	-
S. J. Montain; M. N. Sawka; E	1994	Physiological tolerance to uncompensable heat stress: effects of exercise intensity, protective clot	Can J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
A. Montmayeur; A. Buguet; H	1994	Exercise and sleep in four African sportsmen living in the Sahel. A pilot study	Int J Sports Med	Exclude	-	No	-	-	-	-	-
B. Nielsen	1994	Heat stress and acclimation	Ergonomics	Exclude	-	No	-	-	-	-	-
K. B. Pandolf	1994	Heat tolerance and aging	Exp Aging Res	Exclude	-	No	-	-	-	-	-
P. F. Rosenbaum; J. E. Vena; M	1994	Occupational exposures associated with male breast cancer	Am J Epidemiol	Exclude	Yes	-	-	-	-	-	-
C. F. Sanborn; C. M. Jankowski	1994	Physiologic considerations for women in sport	Clin Sports Med	Exclude	-	No	-	-	-	-	-
M. J. Schwaber; H. P. Liss; I.	1994	Hazard of sauna use after strenuous exercise	Ann Intern Med	Exclude	-	No	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

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A. V. Shakula; V. I. Varus	1994	[The efficacy of restoring the professional health of flight personnel in a combat unit]	Lik Sprava	Exclude	-	-	-	-	-	-	-
J. L. Shaver	1994	Beyond hormonal therapies in menopause	Exp Gerontol	Exclude	Yes	-	-	-	-	-	-
C. Siewert; H. Siewert; H. J. V	1994	[The behavior of central and peripheral hemodynamics in isometric and dynamic stress in hypertensive men]	Z Kardiol	Exclude	-	-	No	-	-	-	-
Y. Aoyagi; T. M. McLellan; R.	1995	Effects of 6 versus 12 days of heat acclimation on heat tolerance in lightly exercising men wearing protective clothing	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	No	-	-
Y. Aoyagi; T. M. McLellan; R.	1995	Determination of body heat storage in clothing: calorimetry versus thermometry	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	No	-	-
O. Bar-Or	1995	The young athlete: some physiological considerations	J Sports Sci	Exclude	-	No	-	-	-	-	-
B. L. Bennett; R. D. Hagan; K.	1995	Comparison of two cool vests on heat-strain reduction while wearing a firefighting ensemble	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	No	-	-
M. F. Bergeron; L. E. Armstrong	1995	Fluid and electrolyte losses during tennis in the heat	Clin Sports Med	Exclude	-	No	-	-	-	-	-
M. A. Ciardello; L. Camardell	1995	Glucose-6-phosphate dehydrogenase from the blood cells of two antarctic teleosts: correlation with environmental temperature	Biochim Biophys Acta	Exclude	Yes	-	-	-	-	-	-
B. Falk; M. Einbinder; Y. Weii	1995	Blood lactate concentration following exercise: effects of heat exposure and of active recovery in sedentary men	Int J Sports Med	Exclude	-	-	-	-	No	-	-
L. H. Gerber; J. E. Hicks	1995	Surgical and rehabilitation options in the treatment of the rheumatoid arthritis patient resistant to medical therapy	Rheum Dis Clin North Am	Exclude	Yes	-	-	-	-	-	-
M. Jetté; J. Quenneville; J. Th	1995	Reproducibility of body temperature response to standardized test conditions when assessing clothing insulation	Ergonomics	Exclude	Yes	-	-	-	-	-	-
E. Kristal-Boneh; J. G. Glusm	1995	Physical performance and heat tolerance after chronic water loading and heat acclimation	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
R. J. Maughan; M. I. Lindinge	1995	Preparing for and competing in the heat: the human perspective	Equine Vet J Suppl	Exclude	-	No	-	-	-	-	-
J. B. Mercer	1995	Enhancing tolerance to cold exposure—how successful have we been?	Arctic Med Res	Exclude	Yes	-	-	-	-	-	-
L. G. Meyer; D. J. Horrigan; J	1995	Effects of three hydration beverages on exercise performance during 60 hours of heat exposure	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
S. J. Montain; W. A. Latzka; N	1995	Control of thermoregulatory sweating is altered by hydration level and exercise intensity	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
K. B. Pandolf; L. A. Stroschei	1995	Predicting human heat strain and performance with application to space operations	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
V. J. Paolone; A. M. Paolone	1995	Thermogenesis during rest and exercise in cold air	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-
A. L. Peterson; G. W. Talcott;	1995	Bulimic weight-loss behaviors in military versus civilian weight-management programs	Mil Med	Exclude	Yes	-	-	-	-	-	-
W. H. Saris	1995	Effects of energy restriction and exercise on the sympathetic nervous system	Int J Obes Relat Metab Dis	Exclude	Yes	-	-	-	-	-	-
J. Sasaki; A. Yamaguchi; Y. Ni	1995	Exercise at high temperature causes maternal hyperthermia and fetal anomalies in rats	Teratology	Exclude	Yes	-	-	-	-	-	-
N. Terrados; R. J. Maughan	1995	Exercise in the heat: strategies to minimize the adverse effects on performance	J Sports Sci	Exclude	-	No	-	-	-	-	-
M. Torii	1995	Maximal sweating rate in humans	J Hum Ergol (Tokyo)	Exclude	Yes	-	-	-	-	-	-
A. J. Young; M. N. Sawka; L.	1995	Metabolic and thermal adaptations from endurance training in hot or cold water	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
Y. Aoyagi; T. M. McLellan; R.	1996	Determination of body heat storage: how to select the weighting of rectal and skin temperatures for heat balance calculations	Int Arch Occup Environ Health	Exclude	Yes	-	-	-	-	-	-
G. Bates; C. Gazez; K. Cena	1996	Factors affecting heat illness when working in conditions of thermal stress	J Hum Ergol (Tokyo)	Exclude	Yes	-	-	-	-	-	-
I. K. Brenner; Y. D. Severs; P.	1996	Impact of heat exposure and moderate, intermittent exercise on cytolytic cells	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	No
M. C. Bricknell	1996	Heat illness in the army in Cyprus	Occup Med (Lond)	Exclude	Yes	-	-	-	-	-	-
R. T. Chatterton, Jr.; K. M. Vo	1996	Salivary alpha-amylase as a measure of endogenous adrenergic activity	Clin Physiol	Exclude	Yes	-	-	-	-	-	-
J. F. Clapp, 3rd	1996	Pregnancy outcome: physical activities inside versus outside the workplace	Semin Perinatol	Exclude	Yes	-	-	-	-	-	-
G. Corti; P. Mognoni; F. Saib	1996	Work tolerance and physiological responses to thermal environment wearing protective NBC clothing	Ergonomics	Exclude	Yes	-	-	-	-	-	-
A. K. el-Bakry; A. B. Channa;	1996	Heat exhaustion during mass pilgrimage—is there a diagnostic role for pulse oximetry?	Resuscitation	Exclude	Yes	-	-	-	-	-	-
G. L. Gibby; S. Lampotang; N	1996	Magneton-based inline microwave fluid warmer	J Clin Monit	Exclude	Yes	-	-	-	-	-	-
C. J. Gordon	1996	Thermoregulatory aspects of environmental exposure to anticholinesterase agents	Rev Environ Health	Exclude	Yes	-	-	-	-	-	-
J. A. Kark; P. Q. Burr; C. B. W	1996	Exertional heat illness in Marine Corps recruit training	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
W. Keatisuwan; T. Ohnaka; Y.	1996	Physiological responses of women during exercise under dry-heat condition in winter and summer	Appl Human Sci	Exclude	-	No	-	-	-	-	-
J. R. Kelly; I. Nishimura; S. D	1996	Ceramics in dentistry: historical roots and current perspectives	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-
G. P. Kenny; G. G. Giesbrecht	1996	A comparison of human thermoregulatory response following dynamic exercise and warm-water immersion	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	No	-	-
R. Kubica; A. Tyka; A. Zuchow	1996	Human acclimation to work in warm and humid environments	J Physiol Pharmacol	Exclude	-	-	-	-	No	-	-
T. M. McLellan; Y. Aoyagi	1996	Heat strain in protective clothing following hot-wet or hot-dry heat acclimation	Can J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. K. Nag; P. Bandyopadhyay;	1996	Human work capacity under combined stress of work and heat	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	No	-	-
B. Nielsen	1996	Olympics in Atlanta: a fight against physics	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
A. Puntchart; M. Vogt; H. R.	1996	Hsp70 expression in human skeletal muscle after exercise	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
S. Razmjou	1996	Mental workload in heat: toward a framework for analyses of stress states	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
J. Rico-Sanz; W. R. Frontera;	1996	Effects of hyperhydration on total body water, temperature regulation and performance of elite young men	Int J Sports Med	Exclude	-	-	-	-	No	-	-
H. Saami; J. Pentti	1996	Free-time activities among seafarers on board Finnish cargo ships	Bull Inst Marit Trop Med (Marseill)	Exclude	Yes	-	-	-	-	-	-
M. A. Tarnopolsky; N. Cipriani	1996	Effects of rapid weight loss and wrestling on muscle glycogen concentration	Clin J Sport Med	Exclude	Yes	-	-	-	-	-	-
M. Torii; M. Yamasaki; T. Sasi	1996	Effect of prewarming in the cold season on thermoregulatory responses during exercise	Br J Sports Med	Exclude	-	-	-	-	No	-	-
D. H. Zappe; G. W. Bell; H. S	1996	Age and regulation of fluid and electrolyte balance during repeated exercise sessions	Am J Physiol	Exclude	Yes	-	-	-	-	-	-
E. O. Acevedo; M. C. Meyers;	1997	Applying physiological principles and assessment techniques to swimming the English Channel	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-
Y. Aoyagi; T. M. McLellan; R.	1997	Interactions of physical training and heat acclimation. The thermophysiology of exercising in a hot environment	J Sports Med	Exclude	-	No	-	-	-	-	-
I. K. Brenner; S. Thomas; R. J	1997	Spectral analysis of heart rate variability during heat exposure and repeated exercise	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	No
I. K. Brenner; J. Zamecnik; P.	1997	The impact of heat exposure and repeated exercise on circulating stress hormones	Eur J Appl Physiol Occup Physiol	Exclude	-	-	-	-	-	-	No
J. W. Castellani; C. M. Mares	1997	Intravenous vs. oral rehydration: effects on subsequent exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
R. P. Francesconi; J. S. Willis;	1997	On the trail of potassium in heat injury	Wilderness Environ Med	Exclude	-	No	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:				Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?											
R. R. Gonzalez; T. M. McLellan; 1997	1997	Heat strain models applicable for protective clothing systems: comparison of core temperature res	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	
C. J. Gore; A. G. Hahn; C. M. 1997	1997	VO2max and haemoglobin mass of trained athletes during high intensity training	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
J. E. Greenleaf 1997	1997	Exercise thermoregulation with bed rest, confinement, and immersion deconditioning	Ann N Y Acad Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
Z. Jiráň; M. V. Jokl; H. Jiráňko 1997	1997	The assessment proposal for long-term and short-term tolerable hydrothermal microclimatic cond	Physiol Res	Exclude	Yes	-	-	-	-	-	-	-	-	
W. L. Kenney 1997	1997	Thermoregulation at rest and during exercise in healthy older adults	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	
W. A. Lutzka; M. N. Sawka; S 1997	1997	Hyperhydration: thermoregulatory effects during compensable exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
J. M. Lawler; C. C. Cline; Z. F 1997	1997	Effect of oxidative stress and acidosis on diaphragm contractile function	Am J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. P. Libert; V. Bach; G. Farge 1997	1997	Neutral temperature range in incubators: performance of equipment in current use and new develo	Crit Rev Biomed Eng	Exclude	Yes	-	-	-	-	-	-	-	-	
M. J. Luetkemeyer; M. G. Col 1997	1997	Dietary sodium and plasma volume levels with exercise	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
R. J. Maughan; S. M. Shirreffs 1997	1997	Recovery from prolonged exercise: restoration of water and electrolyte balance	J Sports Sci	Exclude	-	No	-	-	-	-	-	-	-	
C. T. Minson; W. L. Kenney 1997	1997	Age and cardiac output during cycle exercise in thermoneutral and warm environments	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
S. J. Montain; J. E. Laird; W. J 1997	1997	Aldosterone and vasopressin responses in the heat: hydration level and exercise intensity effects	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
K. S. Mudambo; W. Coutie; M 1997	1997	Plasma arginine vasopressin, atrial natriuretic peptide and brain natriuretic peptide responses to lo	Eur J Appl Physiol Occup	Exclude	-	No	-	-	-	-	-	-	-	
B. Nielsen; S. Strange; N. J. C 1997	1997	Acute and adaptive responses in humans to exercise in a warm, humid environment	Pflugers Arch	Exclude	-	-	-	-	-	-	No	-	-	
T. D. Noakes 1997	1997	1996 J.B. Wolfe Memorial Lecture. Challenging beliefs: ex Africa semper aliquid novi	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-	-	-	
D. J. Paddon-Jones; B. M. Qui 1997	1997	Effect of cryotherapy on muscle soreness and strength following eccentric exercise	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
T. H. Rammesayer 1997	1997	Effects of body core temperature and brain dopamine activity on timing processes in humans	Biol Psychol	Exclude	-	No	-	-	-	-	-	-	-	
S. Rissanen; H. Rintamäki 1997	1997	Thermal responses and physiological strain in men wearing impermeable and semipermeable prot	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Schiffmann; J. Rathgeber; I 1997	1997	Airway humidification in mechanically ventilated neonates and infants: a comparative study of a l	Crit Care Med	Exclude	Yes	-	-	-	-	-	-	-	-	
C. R. Shaw 1997	1997	The perimenopausal hot flash: epidemiology, physiology, and treatment	Nurse Pract	Exclude	Yes	-	-	-	-	-	-	-	-	
M. S. Westerterp-Plantenga; C 1997	1997	Acute effects of exercise or sauna on appetite in obese and nonobese men	Physiol Behav	Exclude	-	-	-	-	-	-	No	-	-	
Y. Aoyagi; T. M. McLellan; R. 1998	1998	Effects of endurance training and heat acclimation on psychological strain in exercising men wear	Ergonomics	Exclude	-	-	-	-	-	-	No	-	-	
L. E. Armstrong; C. M. Mares 1998	1998	Effects of training, environment, and host factors on the sweating response to exercise	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
K. D. Brandt 1998	1998	The importance of nonpharmacologic approaches in management of osteoarthritis	Am J Med	Exclude	Yes	-	-	-	-	-	-	-	-	
I. K. Brenner; S. Thomas; R. J 1998	1998	Autonomic regulation of the circulation during exercise and heat exposure. Inferences from heart	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
A. Buguet; R. Cespuoglio; M. V 1998	1998	Sleep and stress in man: an approach through exercise and exposure to extreme environments	Can J Physiol Pharmacol	Exclude	-	No	-	-	-	-	-	-	-	
M. J. Buono; J. H. Heaney; K. 1998	1998	Acclimation to humid heat lowers resting core temperature	Am J Physiol	Exclude	-	-	-	-	-	-	No	-	-	
J. W. Castellani; C. M. Mares 1998	1998	Endocrine responses during exercise-heat stress: effects of prior isotonic and hypotonic intraveno	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	No	-	-	
S. S. Cheung; T. M. McLellan 1998	1998	Heat acclimation, aerobic fitness, and hydration effects on tolerance during uncompensable heat s	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
H. Degens 1998	1998	Age-related changes in the microcirculation of skeletal muscle	Adv Exp Med Biol	Exclude	-	No	-	-	-	-	-	-	-	
W. Derave; D. De Clercq; J. B 1998	1998	The influence of exercise and dehydration on postural stability	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
E. R. Eichner 1998	1998	Treatment of suspected heat illness	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Falk 1998	1998	Effects of thermal stress during rest and exercise in the paediatric population	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
B. Falk; S. Radom-Isaac; J. R. 1998	1998	The effect of heat exposure on performance of and recovery from high-intensity, intermittent exer	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
J. S. Greiwe; K. S. Staffey; D. 1998	1998	Effects of dehydration on isometric muscular strength and endurance	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Hargreaves; M. Febbraio 1998	1998	Limits to exercise performance in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
R. Imamura; S. Rissanen; M. I 1998	1998	Manual performance in cold conditions while wearing NBC clothing	Ergonomics	Exclude	Yes	-	-	-	-	-	-	-	-	
J. M. Johnson 1998	1998	Physical training and the control of skin blood flow	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-	-	-	
S. Kargotich; C. Goodman; D. 1998	1998	The influence of exercise-induced plasma volume changes on the interpretation of biochemical pa	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
R. W. Kenefick; C. M. Mares 1998	1998	Plasma testosterone and cortisol responses to training-intensity exercise in mild and hot environm	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
W. L. Kenney 1998	1998	Heat flux and storage in hot environments	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
J. L. Kilgore; T. I. Musch; C. I 1998	1998	Physical activity, muscle, and the HSP70 response	Can J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	
W. A. Lutzka; M. N. Sawka; S 1998	1998	Hyperhydration: tolerance and cardiovascular effects during uncompensable exercise-heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
F. Marino; J. Booth 1998	1998	Whole body cooling by immersion in water at moderate temperatures	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-	-	-	
D. J. Marlin 1998	1998	Acclimation and acclimatization of the equine athlete	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
R. J. Maughan; S. M. Shirreffs 1998	1998	Dehydration, rehydration and exercise in the heat: concluding remarks	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
S. J. Montain; M. N. Sawka; V 1998	1998	Thermal and cardiovascular strain from hypohydration: influence of exercise intensity	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	
D. S. Moran; A. Shitzer; K. B. 1998	1998	A physiological strain index to evaluate heat stress	Am J Physiol	Exclude	-	No	-	-	-	-	-	-	-	
D. Müllerová; D. Matějková; J 1998	1998	[Energy expenditure at rest and obesity]	Sb Lek	Exclude	-	-	No	-	-	-	-	-	-	
R. Murray 1998	1998	Rehydration strategies—balancing substrate, fluid, and electrolyte provision	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
B. Nielsen 1998	1998	Heat acclimation—mechanisms of adaptation to exercise in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
K. B. Pandolf 1998	1998	Time course of heat acclimation and its decay	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
G. Schwarz 1998	1998	[Rhinomanometric studies of thermal modification of nasal ventilation]	Hno	Exclude	-	-	No	-	-	-	-	-	-	
Y. Shapiro; D. Moran; Y. Epsti 1998	1998	Acclimatization strategies—preparing for exercise in the heat	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
R. J. Shephard; P. N. Shek 1998	1998	Cold exposure and immune function	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Vanakoski; T. Seppälä 1998	1998	Heat exposure and drugs. A review of the effects of hyperthermia on pharmacokinetics	Clin Pharmacokinet	Exclude	-	No	-	-	-	-	-	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
J. Werner; U. Beckmann	1998	Conflicts of thermal adaptation and fever—a cybernetic approach based on physiological experiments	Fiziol Cheloveka	Exclude	-	No	-	-	-	-	-	-	-	-
Z. R. Zunnunov	1998	[The reserve potentials of patients with ischemic heart disease who live under the conditions of an	Ter Arkh	Exclude	-	-	No	-	-	-	-	-	-	-
S. I. Barr	1999	Effects of dehydration on exercise performance	Can J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
D. G. Bell; I. Jacobs; T. M. Mc	1999	Thermal regulation in the heat during exercise after caffeine and ephedrine ingestion	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
A. Burger-Kentischer; E. Mull	1999	Hypertonicity-induced accumulation of organic osmolytes in papillary interstitial cells	Kidney Int	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. S. Cadarette; S. J. Montain;	1999	Cross validation of USARIEM heat strain prediction models. U.S. ARMY Research Institute of E	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	-	No	-
S. S. Cheung; T. M. McLellan	1999	Comparison of short-term aerobic training and high aerobic power on tolerance to uncompensable	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	No	-	-	-
E. Fehrenbach; A. M. Niess	1999	Role of heat shock proteins in the exercise response	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Giannetti; M. Juneau; A. Ai	1999	Sauna-induced myocardial ischemia in patients with coronary artery disease	Am J Med	Exclude	-	-	-	-	-	-	No	-	-	-
J. E. Holley; J. W. Butler; J. M	1999	Carbon monoxide poisoning in racing car drivers	J Sports Med Phys Fitness	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Inoue; G. Havenith; W. L. f	1999	Exercise- and methylcholine-induced sweating responses in older and younger men: effect of heat	Int J Biometeorol	Exclude	-	-	-	-	-	-	-	No	-	-
C. Jimenez; B. Melin; N. Koul	1999	Plasma volume changes during and after acute variations of body hydration level in humans	Eur J Appl Physiol Occup	Exclude	-	-	-	-	-	-	-	No	-	-
R. J. Maughan	1999	Exercise in the heat: limitations to performance and the impact of fluid replacement strategies. Int	Can J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
T. M. McLellan; J. Frim; D. G	1999	Efficacy of air and liquid cooling during light and heavy exercise while wearing NBC clothing	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
D. S. Moran; M. Horowitz; U.	1999	The physiological strain index applied to heat-stressed rats	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. P. Pitsiladis; R. J. Maughan	1999	The effects of exercise and diet manipulation on the capacity to perform prolonged exercise in the	J Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
M. J. Price; I. G. Campbell	1999	Thermoregulatory responses of spinal cord injured and able-bodied athletes to prolonged upper bc	Spinal Cord	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. M. Rivera-Brown; R. Gutie	1999	Drink composition, voluntary drinking, and fluid balance in exercising, trained, heat-acclimatized	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	-
M. N. Sawka; E. F. Coyle	1999	Influence of body water and blood volume on thermoregulation and exercise performance in the h	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	-
R. J. Shephard	1999	Identifying bottlenecks in endurance performance: the conductance theorem	Can J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. J. Shephard; P. N. Shek	1999	Immune dysfunction as a factor in heat illness	Crit Rev Immunol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Singh; R. G. Sirisinghe	1999	Haematological and plasma electrolyte changes after long distance running in high heat and humi	Singapore Med J	Exclude	-	No	-	-	-	-	-	-	-	-
A. Takamata; T. Ito; K. Yaegas	1999	Effect of an exercise-heat acclimation program on body fluid regulatory responses to dehydration	Am J Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
	2000	Climatic heat stress and the exercising child and adolescent. American Academy of Pediatrics. Co	Pediatrics	Exclude	-	-	-	-	-	-	No	-	-	-
D. Amos; R. Hansen; W. M. L	2000	Physiological and cognitive performance of soldiers conducting routine patrol and reconnaissance	Mil Med	Exclude	-	No	-	-	-	-	-	-	-	-
E. R. Buskirk; P. F. Iampietro;	2000	Work performance after dehydration: effects of physical conditioning and heat acclimatization. 19	Wilderness Environ Med	Exclude	-	-	-	-	-	-	-	-	No	-
S. S. Cheung; T. M. McLellan	2000	The thermophysiology of uncompensable heat stress. Physiological manipulations and individual	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
E. Fehrenbach; A. M. Niess; E	2000	Transcriptional and translational regulation of heat shock proteins in leukocytes of endurance run	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Fehrenbach; P. Passek; A	2000	HSP expression in human leukocytes is modulated by endurance exercise	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Gleeson	2000	The scientific basis of practical strategies to maintain immunocompetence in elite athletes	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. P. Ivanov	2000	[International Conference on 'Problems of physiology under extreme conditions']	Ross Fiziol Zh Im 1 M Sec	Exclude	-	-	No	-	-	-	-	-	-	-
K. P. Ivanov	2000	[International Conference on the Problems of the Human Physiology and Cognitive Performance	Fiziol Cheloveka	Exclude	-	-	No	-	-	-	-	-	-	-
D. Kay; F. E. Marino	2000	Fluid ingestion and exercise hyperthermia: implications for performance, thermoregulation, meta	J Sports Sci	Exclude	-	No	-	-	-	-	-	-	-	-
W. A. Latzka; M. N. Sawka	2000	Hyperhydration and glycerol: thermoregulatory effects during exercise in hot climates	Can J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
M. I. Lindinger; L. J. McCutel	2000	Heat acclimation improves regulation of plasma volume and plasma Na(+) content during exercis	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
A. McArdle; M. J. Jackson	2000	Exercise, oxidative stress and ageing	J Anat	Exclude	-	No	-	-	-	-	-	-	-	-
N. Merezhinskaya; W. N. Fish	2000	Mutations in MCT1 cDNA in patients with symptomatic deficiency in lactate transport	Muscle Nerve	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Moehrle; W. Koehle; K. Di	2000	Reduction of minimal erythema dose by sweating	Photodermatol Photoimm	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. J. Montain; W. A. Latzka; M	2000	Impact of muscle injury and accompanying inflammatory response on thermoregulation during ex	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
M. R. Naghii	2000	The significance of water in sport and weight control	Nutr Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. D. Noakes	2000	Physiological models to understand exercise fatigue and the adaptations that predict or enhance at	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-	-	-	-
D. B. Pyne; M. Gleeson; W. A	2000	Training strategies to maintain immunocompetence in athletes	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Rintamaki	2000	Predisposing factors and prevention of frostbite	Int J Circumpolar Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. N. Sawka; V. A. Convertin	2000	Blood volume: importance and adaptations to exercise training, environmental stresses, and traum	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-	-	-	-
M. N. Sawka; S. J. Montain	2000	Fluid and electrolyte supplementation for exercise heat stress	Am J Clin Nutr	Exclude	-	-	-	-	-	-	-	No	-	-
E. Sohar; Y. Shapiro; Y. Epstein	2000	[Man in a hot climate—early studies of the Institute of Military Physiology]	Harefuah	Exclude	-	-	No	-	-	-	-	-	-	-
U. M. Stern; O. P. Hornstein;	2000	Do training-dependent differences in perspiration exist between healthy and atopic subjects?	J Dermatol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. A. van Nieuwenhoven; B. I	2000	Effect of dehydration on gastrointestinal function at rest and during exercise in humans	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Watt; A. P. Garnham; M.	2000	Effect of acute plasma volume expansion on thermoregulation and exercise performance in the h	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
X. J. Yu; T. D. Yang; C. Pang	2000	[Weightlessness and heat stress on astronauts]	Space Med Med Eng (Beij	Exclude	-	-	No	-	-	-	-	-	-	-
L. S. Abrams; D. M. Skee; J. f	2001	Pharmacokinetics of norelgestromin and ethinyl estradiol delivered by a contraceptive patch (Orth	J Clin Pharmacol	Exclude	-	-	-	-	-	-	-	No	-	-
A. X. Bigard; H. Sanchez; G.	2001	Effects of dehydration and rehydration on EMG changes during fatiguing contractions	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
H. K. Byrne; J. H. Wilmore	2001	The effects of a 20-week exercise training program on resting metabolic rate in previously sedent	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Castellani; A. J. Young;	2001	Thermoregulation during cold exposure after several days of exhaustive exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. J. Chan; J. U. Corselli; W. C	2001	A simple comet assay for archived sperm correlates DNA fragmentation to reduced hyperactivat	Fertil Steril	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Chan; P. A. Barraud; B. Mel	2001	Effects of fluid ingestion on cognitive function after heat stress or exercise-induced dehydration	Int J Psychophysiol	Exclude	-	-	-	-	-	-	-	No	-	-

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
M. A. Febbraio	2001	Alterations in energy metabolism during exercise and heat stress	Sports Med	Exclude	-	No	-	-	-	-	-
E. Fehrenbach; A. M. Niess; R	2001	Changes of HSP72-expression in leukocytes are associated with adaptation to exercise under con	J Leukoc Biol	Exclude	Yes	-	-	-	-	-	-
E. Fehrenbach; H. Northoff	2001	Free radicals, exercise, apoptosis, and heat shock proteins	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
D. Fiala; K. J. Lomas; M. Sto	2001	Computer prediction of human thermoregulatory and temperature responses to a wide range of en	Int J Biometeorol	Exclude	-	No	-	-	-	-	-
C. A. Finn	2001	Reproductive ageing and the menopause	Int J Dev Biol	Exclude	Yes	-	-	-	-	-	-
A. Frank; M. Belokopytov; D.	2001	Changes in heart rate variability following acclimation to heat	J Basic Clin Physiol Pharm	Exclude	Yes	-	-	-	-	-	-
A. Frank; M. Belokopytov; Y.	2001	The cumulative heat strain index—a novel approach to assess the physiological strain induced by e	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
E. M. Gass; G. C. Gass	2001	Thermoregulatory responses to repeated warm water immersion in subjects who are paraplegic	Spinal Cord	Exclude	Yes	-	-	-	-	-	-
N. Gill; G. Sleivert	2001	Effect of daily versus intermittent exposure on heat acclimation	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
G. Havenith	2001	Individualized model of human thermoregulation for the simulation of heat stress response	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
C. Jessen	2001	Selective brain cooling in mammals and birds	Jpn J Physiol	Exclude	Yes	-	-	-	-	-	-
M. Koishi; S. Yokota; T. Mae;	2001	The effects of KNK437, a novel inhibitor of heat shock protein synthesis, on the acquisition of the	Clin Cancer Res	Exclude	Yes	-	-	-	-	-	-
N. Kondo; M. Shibasaki; K. A	2001	Function of human eccrine sweat glands during dynamic exercise and passive heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
T. M. McLellan	2001	The importance of aerobic fitness in determining tolerance to uncompensable heat stress	Comp Biochem Physiol A	Exclude	-	No	-	-	-	-	-
B. Melin; N. Koulmann; C. Jir	2001	Comparison of passive heat or exercise-induced dehydration on renal water and electrolyte excret	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. B. Mitchell; E. R. Schiller;	2001	The influence of different external cooling methods on thermoregulatory responses before and aft	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
H. Ozaki; Y. Nagai; Y. Tochih;	2001	Physiological responses and manual performance in humans following repeated exposure to sever	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; W. A. Lutzka; S	2001	Physiologic tolerance to uncompensable heat: intermittent exercise, field vs laboratory	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
J. E. Schoffstall; J. D. Branch;	2001	Effects of dehydration and rehydration on the one-repetition maximum bench press of weight-trai	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
C. L. Stebbins; J. W. Daniels;	2001	Effects of caffeine and high ambient temperature on haemodynamic and body temperature respon	Clin Physiol	Exclude	-	-	-	-	No	-	-
J. M. Stocks; M. J. Patterson;	2001	Metabolic habituation following repeated resting cold-water immersion is not apparent during low	J Physiol Anthropol Appl	Exclude	Yes	-	-	-	-	-	-
Y. Takeno; Y. I. Kamijio; H. Ni	2001	Thermoregulatory and aerobic changes after endurance training in a hypobaric hypoxic and warm	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
C. Tei	2001	Thermal therapy for congestive heart failure: estimation by TEI index	J Cardiol	Exclude	-	No	-	-	-	-	-
A. van Tubergen; R. Landewe;	2001	Combined spa-exercise therapy is effective in patients with ankylosing spondylitis: a randomized	Arthritis Rheum	Exclude	-	-	-	-	No	-	-
M. Vogt; A. Puntschart; J. Gei	2001	Molecular adaptations in human skeletal muscle to endurance training under simulated hypoxic co	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. M. Walker; B. Dawson; T. F	2001	Performance enhancement in rally car drivers via heat acclimation and race simulation	Comp Biochem Physiol A	Exclude	Yes	-	-	-	-	-	-
Y. J. Zhang; H. Y. Pan; S. J. G	2001	Reverse transcription slippage over the mRNA secondary structure of the LIP1 gene	Biotechniques	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; J. Stoppani	2002	Central nervous system control of heat acclimation adaptations: an emerging paradigm	Rev Neurosci	Exclude	-	No	-	-	-	-	-
D. R. Bassett, Jr.	2002	Scientific contributions of A. V. Hill: exercise physiology pioneer	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
R. T. Burkman	2002	The transdermal contraceptive patch: a new approach to hormonal contraception	Int J Fertil Womens Med	Exclude	Yes	-	-	-	-	-	-
B. S. Cadarette; L. Levine; M.	2002	Heat strain reduction by ice-based and vapor compression liquid cooling systems with a toxic age	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
L. Casimiro; L. Brosseau; V. V	2002	Therapeutic ultrasound for the treatment of rheumatoid arthritis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. S. Denton; N. Clarke; J. Mi	2002	Non- surgical interventions for late radiation cystitis in patients who have received radical radioth	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. Fåsson; D. Stockholm; D.	2002	Molecular adaptations of neuromuscular disease-associated proteins in response to eccentric exerc	J Physiol	Exclude	-	-	-	-	No	-	-
E. Ferrer; A. Alegria; R. Farré;	2002	High-performance liquid chromatographic determination of furfural compounds in infant formula	J Chromatogr A	Exclude	Yes	-	-	-	-	-	-
A. M. Hedley; M. Climstein; F	2002	The effects of acute heat exposure on muscular strength, muscular endurance, and muscular powe	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
C. Jimenez; N. Koulmann; I. J	2002	Plasma compartment filling after exercise or heat exposure	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
W. L. Kenney; M. J. Zeman	2002	Psychrometric limits and critical evaporative coefficients for unacclimated men and women	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
K. Koppo; A. M. Jones; L. Van	2002	Effect of prior exercise on VO(2) slow component is not related to muscle temperature	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
K. C. Kregel	2002	Heat shock proteins: modifying factors in physiological stress responses and acquired thermotoler	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
K. Kunitzuka; K. Yamatsu; Y.	2002	[A correspondence behavioral approach for 6 lifestyle's improvements in a workplace]	Nihon Koshu Eisei Zasshi	Exclude	-	-	No	-	-	-	-
M. A. Leydon; C. Wall	2002	New Zealand jockeys' dietary habits and their potential impact on health	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
J. Malchaire; B. Kampmann;	2002	Assessment of the risk of heat disorders encountered during work in hot conditions	Int Arch Occup Environ H	Exclude	-	-	-	-	No	-	-
S. A. Marsh; D. G. Jenkins	2002	Physiological responses to the menstrual cycle: implications for the development of heat illness in	Sports Med	Exclude	-	No	-	-	-	-	-
C. Marzolini; A. Béguin; A. Ti	2002	Determination of lopinavir and nevirapine by high-performance liquid chromatography after solid	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
A. McArdle; A. Vasilaki; M. J.	2002	Exercise and skeletal muscle ageing: cellular and molecular mechanisms	Ageing Res Rev	Exclude	-	No	-	-	-	-	-
L. M. McCracken; R. T. Gross	2002	Multimethod assessment of treatment process in chronic low back pain: comparison of reported p	Behav Res Ther	Exclude	Yes	-	-	-	-	-	-
T. M. McLellan; S. G. Rhind;	2002	Body temperature in sedentary adults during moderate exercise: no effect from exercise the day b	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
P. Montgomery; J. A. Dennis	2002	Physical exercise for sleep problems in adults aged 60+	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. M. Moore; A. F. Timperio;	2002	Weight management and weight loss strategies of professional jockeys	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
D. S. Moran; W. L. Kenney; J.	2002	Aging and assessment of physiological strain during exercise-heat stress	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
A. L. Morgan; W. E. Sinning;	2002	Age effects on body fluid distribution during exercise in the heat	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-
M. K. Nasr; R. J. McCarthy;	2002	The role of pedometers in the assessment of intermittent claudication	Eur J Vasc Endovasc Surg	Exclude	Yes	-	-	-	-	-	-
T. Ookawara; K. Suzuk; S. Ha	2002	Transcription regulation of gene expression in human skeletal muscle in response to endurance tra	Res Commun Mol Pathol	Exclude	Yes	-	-	-	-	-	-
B. H. Pannen	2002	[Etiology and sequelae of perioperative accidental hypothermia]	Anesthesiol Reanim	Exclude	-	-	No	-	-	-	-
L. Pelland; L. Brosseau; L. Ca	2002	Electrical stimulation for the treatment of rheumatoid arthritis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



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J. J. Pilcher; E. Nadler; C. Bus	2002	Effects of hot and cold temperature exposure on performance: a meta-analytic review	Ergonomics	Exclude	-	No	-	-	-	-	-
H. Post; G. Heusch	2002	Ischemic preconditioning. Experimental facts and clinical perspective	Minerva Cardioangi	Exclude	Yes	-	-	-	-	-	-
S. Shastry; D. O. Toft; M. J. J	2002	HSP70 and HSP90 expression in leucocytes after exercise in moderately trained humans	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
D. Singer	2002	[Phylogeny of Mammalian metabolism]	Anesthesiol Intensivmed	Exclude	-	-	No	-	-	-	-
H. S. Thompson; P. M. Clarks	2002	The repeated bout effect and heat shock proteins: intramuscular HSP27 and HSP70 expression fol	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
I. Vasmatazidis; R. E. Schlegel	2002	An investigation of heat stress effects on time-sharing performance	Ergonomics	Exclude	Yes	-	-	-	-	-	-
B. Voltaire; O. Galy; O. Coste	2002	Effect of fourteen days of acclimatization on athletic performance in tropical climate	Can J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. P. Ward; J. S. Millledge	2002	Griffith Pugh, pioneer Everest physiologist	High Alt Med Biol	Exclude	Yes	-	-	-	-	-	-
H. A. Zacur; B. Hedon; D. Ma	2002	Integrated summary of Ortho Evra/Evra contraceptive patch adhesion in varied climates and cond	Fertil Steril	Exclude	Yes	-	-	-	-	-	-
Y. Boegli; G. Gremion; S. Gol	2003	Endurance training enhances vasodilation induced by nitric oxide in human skin	J Invest Dermatol	Exclude	Yes	-	-	-	-	-	-
B. Bogin; L. Rios	2003	Rapid morphological change in living humans: implications for modern human origins	Comp Biochem Physiol A	Exclude	-	No	-	-	-	-	-
M. W. Bridge; A. S. Weller; M	2003	Responses to exercise in the heat related to measures of hypothalamic serotonergic and dopamine	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. W. Bridge; A. S. Weller; M	2003	Ambient temperature and the pituitary hormone responses to exercise in humans	Exp Physiol	Exclude	-	-	-	-	No	-	-
S. N. Cheuvront; M. A. Kolka	2003	Efficacy of intermittent, regional microclimate cooling	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
G. C. Donaldson; W. R. Keatir	2003	Cardiovascular responses to heat stress and their adverse consequences in healthy and vulnerable	Int J Hyperthermia	Exclude	-	No	-	-	-	-	-
H. Faerevik; R. E. Reinertsen	2003	Effects of wearing aircrew protective clothing on physiological and cognitive responses under var	Ergonomics	Exclude	Yes	-	-	-	-	-	-
E. Fehrenbach; R. Veith; M. Si	2003	Inverse response of leukocyte heat shock proteins and DNA damage to exercise and heat	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
C. J. Gordon	2003	Role of environmental stress in the physiological response to chemical toxicants	Environ Res	Exclude	Yes	-	-	-	-	-	-
A. Gutiérrez; J. L. Mesa; J. R.	2003	Sauna-induced rapid weight loss decreases explosive power in women but not in men	Int J Sports Med	Exclude	-	-	-	-	No	-	-
P. A. Hancock; I. Vasmatazidis	2003	Effects of heat stress on cognitive performance: the current state of knowledge	Int J Hyperthermia	Exclude	-	No	-	-	-	-	-
A. E. Jeukendrup	2003	Modulation of carbohydrate and fat utilization by diet, exercise and environment	Biochem Soc Trans	Exclude	-	No	-	-	-	-	-
J. O. Jørgensen; M. Krag; J. K	2003	Exercise, hormones, and body temperature: regulation and action of GH during exercise	J Endocrinol Invest	Exclude	-	No	-	-	-	-	-
H. Kalthoff	2003	Mild dehydration: a risk factor of broncho-pulmonary disorders?	Eur J Clin Nutr	Exclude	Yes	-	-	-	-	-	-
M. Khassaf; A. McArdle; C. E	2003	Effect of vitamin C supplements on antioxidant defence and stress proteins in human lymphocytes	J Physiol	Exclude	Yes	-	-	-	-	-	-
N. Koulmann; S. Banzet; A. X	2003	[Physical activity in the heat: physiology of hydration recommendations]	Med Trop (Mars)	Exclude	-	-	No	-	-	-	-
W. J. Kraemer; L. E. Armstrong	2003	The effects of exertional heatstroke and exercise-heat acclimation on plasma beta-endorphin conc	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
J. A. Loeppky; M. V. Icenogle	2003	Body temperature, autonomic responses, and acute mountain sickness	High Alt Med Biol	Exclude	Yes	-	-	-	-	-	-
A. Michalsen; R. Lütcke; M. I	2003	Thermal hydrotherapy improves quality of life and hemodynamic function in patients with chroni	Am Heart J	Exclude	-	-	-	No	-	-	-
K. Nagiev lu	2003	[Duration-outcome relations in nonpharmacological treatment of chronic cardiac failure develop	Vopr Kurortol Fizioter Lec	Exclude	-	-	No	-	-	-	-
A. M. Niess; E. Fehrenbach;	2003	Individual differences in self-reported heat tolerance. Is there a link to the cardiorespiratory, therm	J Sports Med Phys Fitness	Exclude	-	No	-	-	-	-	-
A. M. Niess; E. Fehrenbach; R	2003	Impact of elevated ambient temperatures on the acute immune response to intensive endurance ex	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. O'Brien; S. J. Montain	2003	Hypohydration effect on finger skin temperature and blood flow during cold-water finger immersi	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
R. C. Oh; J. S. Henning	2003	Exertional heatstroke in an infantry soldier taking ephedra-containing dietary supplements	Mil Med	Exclude	-	No	-	-	-	-	-
R. A. Opliger; S. A. Steen; J.	2003	Weight loss practices of college wrestlers	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-
J. K. Ormerod; T. A. Elliott; T.	2003	Drinking behavior and perception of thirst in untrained women during 6 weeks of heat acclimatio	Int J Sport Nutr Exerc Met	Exclude	-	No	-	-	-	-	-
J. Saboisky; F. E. Marino; D. I	2003	Exercise heat stress does not reduce central activation to non-exercised human skeletal muscle	Exp Physiol	Exclude	-	-	-	-	No	-	-
B. Smalley; R. M. Janke; D. C	2003	Exertional heat illness in Air Force basic military trainees	Mil Med	Exclude	Yes	-	-	-	-	-	-
K. A. Stokes; M. E. Nevill; H.	2003	Reproducibility of the growth hormone response to sprint exercise	Growth Horm IGF Res	Exclude	Yes	-	-	-	-	-	-
R. P. Taylor; J. W. Starnes	2003	Age, cell signalling and cardioprotection	Acta Physiol Scand	Exclude	-	No	-	-	-	-	-
D. Thompson; C. Williams; P.	2003	Post-exercise vitamin C supplementation and recovery from demanding exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
H. S. Thompson; E. B. Mayna	2003	Exercise-induced HSP27, HSP70 and MAPK responses in human skeletal muscle	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
B. Voltaire; S. Berthouze-Arar	2003	Influence of a hot/wet environment on exercise performance in natives to tropical climate	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
F. Yamazaki; K. Hamasaki	2003	Heat acclimation increases skin vasodilation and sweating but not cardiac baroreflex responses in	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
P. A. Armada-da-Silva; J. Woo	2004	The effect of passive heating and face cooling on perceived exertion during exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
G. Banfi; A. Dolci; R. Verna; I	2004	Exercise raises serum heat-shock protein 70 (Hsp70) levels	Clin Chem Lab Med	Exclude	Yes	-	-	-	-	-	-
S. S. Cheung; G. G. Sleivert	2004	Lowering of skin temperature decreases isokinetic maximal force production independent of core	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. N. Cheuvront; R. Carter; R	2004	Branched-chain amino acid supplementation and human performance when hypohydrated in the h	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
E. E. Coris; A. M. Ramirez; D	2004	Heat illness in athletes: the dangerous combination of heat, humidity and exercise	Sports Med	Exclude	-	No	-	-	-	-	-
K. A. Dickson; J. B. Graham	2004	Evolution and consequences of endothermy in fishes	Physiol Biochem Zool	Exclude	Yes	-	-	-	-	-	-
L. Hirose; K. Nosaka; M. New	2004	Changes in inflammatory mediators following eccentric exercise of the elbow flexors	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
O. Hue; B. Voltaire; O. Galy;	2004	Effects of 8 days acclimation on biological and performance response in a tropical climate	J Sports Med Phys Fitness	Exclude	-	No	-	-	-	-	-
M. K. Irmak; A. Korkmaz; O.	2004	Selective brain cooling seems to be a mechanism leading to human craniofacial diversity observ	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
L. P. Kilduff; E. Georgiades; N	2004	The effects of creatine supplementation on cardiovascular, metabolic, and thermoregulatory respo	Int J Sport Nutr Exerc Met	Exclude	-	-	-	-	No	-	-
A. M. Lane; P. C. Terry; M. J.	2004	Mood responses to athletic performance in extreme environments	J Sports Sci	Exclude	-	No	-	-	-	-	-
M. Leeb	2004	Gasping for victory	Nature	Exclude	-	No	-	-	-	-	-
J. Lietava; B. Vohnout; D. Vali	2004	Comparison of hemodynamics during hyperthermal immersion and exercise testing in apparently	Ital Heart J	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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D. M. Linnane; R. M. Bracker	2004	Effects of hyperthermia on the metabolic responses to repeated high-intensity exercise	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
Y. Liu; W. Lormes; L. Wang;	2004	Different skeletal muscle HSP70 responses to high-intensity strength training and low-intensity exercise	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
R. Maughan; S. Shirreffs	2004	Exercise in the heat: challenges and opportunities	J Sports Sci	Exclude	-	No	-	-	-	-	-
M. Nimmo	2004	Exercise in the cold	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. J. Patterson; J. M. Stocks;	2004	Sustained and generalized extracellular fluid expansion following heat acclimation	J Physiol	Exclude	-	-	-	-	No	-	-
B. Peiser; T. Reilly	2004	Environmental factors in the summer Olympics in historical perspective	J Sports Sci	Exclude	-	No	-	-	-	-	-
C. D. Raeburn; M. A. Zimmer	2004	Surgical applications of organ preconditioning	Minerva Chir	Exclude	Yes	-	-	-	-	-	-
D. V. Reising; P. M. Sandersor	2004	Minimal instrumentation may compromise failure diagnosis with an ecological interface	Hum Factors	Exclude	Yes	-	-	-	-	-	-
C. L. Shields; G. G. Giesbrech	2004	The effects of a moderate physical activity program on thermoregulatory responses in a warm environment	Can J Appl Physiol	Exclude	-	No	-	-	-	-	-
D. Simar; D. Malatesta; C. Ko	2004	Effect of age on Hsp72 expression in leukocytes of healthy active people	Exp Gerontol	Exclude	-	-	-	-	No	-	-
A. B. Stein; X. L. Tang; Y. Gu	2004	Delayed adaptation of the heart to stress: late preconditioning	Stroke	Exclude	-	No	-	-	-	-	-
J. M. Steinacker; W. Lormes;	2004	New aspects of the hormone and cytokine response to training	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
E. Steultjens; J. J. Dekker; L.	2004	Occupational therapy for rheumatoid arthritis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. A. Stokes; M. E. Nevill; P.	2004	Effect of 6 weeks of sprint training on growth hormone responses to sprinting	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
R. Tucker; L. Rauch; Y. X. Ha	2004	Impaired exercise performance in the heat is associated with an anticipatory reduction in skeletal muscle mass	PLoS Arch	Exclude	-	-	-	-	No	-	-
S. Uno; T. Abo; T. Tanaka; H.	2004	In vitro sealing performance of two one-step adhesive systems in cervical cavities	J Adhes Dent	Exclude	Yes	-	-	-	-	-	-
E. Villanueva; M. H. Bennett;	2004	Hyperbaric oxygen therapy for thermal burns	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Whitham; S. L. Halson; G.	2004	Leukocyte heat shock protein expression before and after intensified training	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-
Q. Zhou; R. X. Xu; S. Z. Zhan	2004	[Hemotheological changes in hot and humid environment]	Di Yi Jun Yi Da Xue Xue	Exclude	-	-	No	-	-	-	-
S. Angapat; V. M. Gorenflo; J.	2005	Accelerating perfusion process optimization by scanning non-steady-state responses	Biotechnol Bioeng	Exclude	Yes	-	-	-	-	-	-
L. E. Armstrong; C. M. Mares	2005	Heat acclimation and physical training adaptations of young women using different contraceptive methods	Am J Physiol Endocrinol	Exclude	-	-	-	-	No	-	-
I. Bautmans; R. Njemini; S. V.	2005	Biochemical changes in response to intensive resistance exercise training in the elderly	Gerontology	Exclude	Yes	-	-	-	-	-	-
L. Boyer; S. Robitail; D. Debe	2005	[Media and public health: example of heat wave during summer 2003]	Rev Epidemiol Sante Publ	Exclude	-	-	No	-	-	-	-
T. K. Day; D. Grimshaw	2005	An observational study on the spectrum of heat-related illness, with a proposal on classification	J R Army Med Corps	Exclude	-	No	-	-	-	-	-
F. Haman; F. Péronnet; G. P. K	2005	Partitioning oxidative fuels during cold exposure in humans: muscle glycogen becomes dominant	J Physiol	Exclude	Yes	-	-	-	-	-	-
J. Hassi; M. Rytönen; J. Kota	2005	Impacts of cold climate on human heat balance, performance and health in circumpolar areas	Int J Circumpolar Health	Exclude	Yes	-	-	-	-	-	-
S. J. Laing; D. Gwynne; J. Bla	2005	Salivary IgA response to prolonged exercise in a hot environment in trained cyclists	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
G. I. Lancaster; Q. Khan; P. D	2005	The physiological regulation of toll-like receptor expression and function in humans	J Physiol	Exclude	Yes	-	-	-	-	-	-
K. F. Leinfelder	2005	Indirect posterior composite resins	Compend Contin Educ De	Exclude	Yes	-	-	-	-	-	-
J. Leppaluoto; T. Pääkkönen;	2005	Pituitary and autonomic responses to cold exposures in man	Acta Physiol Scand	Exclude	Yes	-	-	-	-	-	-
D. Low; T. Cable; A. Purvis	2005	Exercise thermoregulation and hyperlactaemia	Ergonomics	Exclude	-	-	-	-	No	-	-
A. Masuda; Y. Koga; M. Hatta	2005	The effects of repeated thermal therapy for patients with chronic pain	Psychother Psychosom	Exclude	Yes	-	-	-	-	-	-
H. Miyamoto; H. Kai; H. Naki	2005	Safety and efficacy of repeated sauna bathing in patients with chronic systolic heart failure: a preliminary study	J Card Fail	Exclude	-	-	-	No	-	-	-
M. L. Ong; E. Y. Ng	2005	A global bioheat model with self-tuning optimal regulation of body temperature using Hebbian feedback	Med Phys	Exclude	Yes	-	-	-	-	-	-
J. S. Petrofsky; S. Lee; C. Patt	2005	Sweat production during global heating and during isometric exercise in people with diabetes	Med Sci Monit	Exclude	Yes	-	-	-	-	-	-
J. Radons; G. Multhoff	2005	Immunostimulatory functions of membrane-bound and exported heat shock protein 70	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
A. P. Russell	2005	PGC-1alpha and exercise: important partners in combating insulin resistance	Curr Diabetes Rev	Exclude	Yes	-	-	-	-	-	-
M. Saat; R. G. Sirisinghe; R. S	2005	Decay of heat acclimation during exercise in cold and exposure to cold environment	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. Saat; R. G. Sirisinghe; R. S	2005	Effects of short-term exercise in the heat on thermoregulation, blood parameters, sweat secretion and heart rate	J Physiol Anthropol Appl	Exclude	-	No	-	-	-	-	-
M. Saat; Y. Tochihara; N. Hasl	2005	Effects of exercise in the heat on thermoregulation of Japanese and Malaysian males	J Physiol Anthropol Appl	Exclude	-	No	-	-	-	-	-
A. C. Spetz; K. Ellefsen; E. T	2005	Calcitonin gene-related peptide during sweating in young healthy women	Gynecol Obstet Invest	Exclude	Yes	-	-	-	-	-	-
R. C. Spreafico; I. Krejci; D. I	2005	Clinical performance and marginal adaptation of class II direct and semidirect composite restorations	J Dent	Exclude	Yes	-	-	-	-	-	-
A. T. Strachan; J. B. Leiper; R	2005	Serotonin2C receptor blockade and thermoregulation during exercise in the heat	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
D. Thompson; S. Basu-Modak	2005	Exercise-induced expression of heme oxygenase-1 in human lymphocytes	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
B. G. Vainer	2005	FPA-based infrared thermography as applied to the study of cutaneous perspiration and stimulated sweating	Phys Med Biol	Exclude	-	-	-	-	No	-	-
J. G. Valdivia Uría; O. Regojo	2005	[Transurethral resection with saline solution: a technological achievement not yet assimilated by the medical community]	Arch Esp Urol	Exclude	-	-	No	-	-	-	-
D. C. Wallace	2005	The mitochondrial genome in human adaptive radiation and disease: on the road to therapeutics at the cellular level	Gene	Exclude	Yes	-	-	-	-	-	-
N. Webborn; M. J. Price; P. C.	2005	Effects of two cooling strategies on thermoregulatory responses of tetraplegic athletes during repeated exercise	J Appl Physiol (1985)	Exclude	-	-	-	No	-	-	-
S. S. Bruce-Low; D. Cotterell	2006	Heart rate variability during high ambient heat exposure	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
C. Byrne; J. K. Lee; S. A. Che	2006	Continuous thermoregulatory responses to mass-participation distance running in heat	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
S. N. Cheuvront; R. Carter; R	2006	No effect of moderate hypohydration or hyperthermia on anaerobic exercise performance	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
V. G. Coffey; A. Shield; B. J.	2006	Interaction of contractile activity and training history on mRNA abundance in skeletal muscle from untrained humans	Am J Physiol Endocrinol	Exclude	Yes	-	-	-	-	-	-
V. G. Coffey; Z. Zhong; A. Sh	2006	Early signaling responses to divergent exercise stimuli in skeletal muscle from well-trained human subjects	Am J Physiol Endocrinol	Exclude	Yes	-	-	-	-	-	-
C. Fernández-de-Las-Peñas; C	2006	One-year follow-up of two exercise interventions for the management of patients with ankylosing spondylitis	Am J Phys Med Rehabil	Exclude	Yes	-	-	-	-	-	-
C. P. Fischer; N. J. Hiscock; S	2006	Vitamin E isoform-specific inhibition of the exercise-induced heat shock protein 72 expression in skeletal muscle	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
A. D. Flouris; S. S. Cheung; J	2006	Influence of body heat content on hand function during prolonged cold exposures	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
S. D. French; M. Cameron; B. 2006		Superficial heat or cold for low back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
D. Girlich; T. Naas; P. Nordm 2006		Regulation of class D beta-lactamase gene expression in <i>Ralstonia pickettii</i>	Microbiology (Reading)	Exclude	Yes	-	-	-	-	-	-
N. W. Gonzalez; T. E. Bernard 2006		Maximum sustainable work rate for five protective clothing ensembles with respect to moisture v	J Occup Environ Hyg	Exclude	Yes	-	-	-	-	-	-
S. R. Gray; G. De Vito; M. A. 2006		Skeletal muscle ATP turnover and muscle fiber conduction velocity are elevated at higher muscle	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
A. M. Hile; J. M. Anderson; K 2006		Creatine supplementation and anterior compartment pressure during exercise in the heat in dehydr	J Athl Train	Exclude	-	-	-	-	No	-	-
O. Hue; B. Voltaire; C. Hertog 2006		Heart rate, thermoregulatory and humoral responses during a 9-day cycle race in a hot and humid	Int J Sports Med	Exclude	-	No	-	-	-	-	-
A. M. Joseph; H. Pilegaard; A. 2006		Control of gene expression and mitochondrial biogenesis in the muscular adaptation to endurance	Essays Biochem	Exclude	-	No	-	-	-	-	-
Y. Kamijo; H. Nose 2006		Heat illness during working and preventive considerations from body fluid homeostasis	Ind Health	Exclude	-	No	-	-	-	-	-
C. L. Lim; L. T. Mackinnon 2006		The roles of exercise-induced immune system disturbances in the pathology of heat stroke: the di	Sports Med	Exclude	-	No	-	-	-	-	-
Y. Liu; L. Gampert; K. Nethin 2006		Response and function of skeletal muscle heat shock protein 70	Front Biosci	Exclude	-	No	-	-	-	-	-
C. Magalhães Fde; C. A. Macé 2006		Possible biphasic sweating response during short-term heat acclimation protocol for tropical nativ	J Physiol Anthropol	Exclude	-	-	-	-	No	-	-
E. B. Manukhina; H. F. Down 2006		Role of nitric oxide in cardiovascular adaptation to intermittent hypoxia	Exp Biol Med (Maywood)	Exclude	Yes	-	-	-	-	-	-
H. C. Marshall; R. A. Ferguso 2006		Human resting extracellular heat shock protein 72 concentration decreases during the initial adapt	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
N. H. McInnis; W. S. Journey 2006		15 degrees head-down tilt attenuates the postexercise reduction in cutaneous vascular conductance	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. R. Miller; M. D. Puruggana 2006		Molecular population genetics and phenotypic diversification of two populations of the thermophi	Appl Environ Microbiol	Exclude	Yes	-	-	-	-	-	-
T. Mündel; J. King; E. Collacc 2006		Drink temperature influences fluid intake and endurance capacity in men during exercise in a hot,	Exp Physiol	Exclude	-	-	-	-	No	-	-
J. Oksa; H. Rintamäki; T. Mak 2006		The effect of training of military skills on performance in cold environment	Mil Med	Exclude	Yes	-	-	-	-	-	-
M. J. Quod; D. T. Martini; P B 2006		Cooling athletes before competition in the heat: comparison of techniques and practical considerat	Sports Med	Exclude	Yes	-	-	-	-	-	-
S. Racinais; K. Chamari; Y. Hi 2006		Effect of an acute hot and dry exposure in moderately warm and humid environment on muscle pe	Int J Sports Med	Exclude	-	-	-	-	No	-	-
T. Reilly; B. Drust; W. Gregso 2006		Thermoregulation in elite athletes	Curr Opin Clin Nutr Metal	Exclude	-	No	-	-	-	-	-
A. M. Rivera-Brown; T. W. R 2006		Exercise tolerance in a hot and humid climate in heat-acclimatized girls and women	Int J Sports Med	Exclude	-	-	-	-	No	-	-
R. L. Sharp 2006		Role of sodium in fluid homeostasis with exercise	J Am Coll Nutr	Exclude	Yes	-	-	-	-	-	-
M. Shibusaki; T. E. Wilson; C. 2006		Neural control and mechanisms of eccrine sweating during heat stress and exercise	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
N. A. Taylor 2006		Challenges to temperature regulation when working in hot environments	Ind Health	Exclude	-	No	-	-	-	-	-
R. Tucker; T. Marle; E. V. Lan 2006		The rate of heat storage mediates an anticipatory reduction in exercise intensity during cycling at	J Physiol	Exclude	-	-	-	-	No	-	-
V. V. Upreti; M. Khurana; D S 2006		Determination of endogenous glycosaminoglycans derived disaccharides in human plasma by HP	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
M. M. Wallen; D. Gillies 2006		Intra-articular steroids and splints/rest for children with juvenile idiopathic arthritis and adults wi	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
N. P. Walsh; M. Whitham 2006		Exercising in environmental extremes : a greater threat to immune function?	Sports Med	Exclude	-	No	-	-	-	-	-
T. L. Weissgerber; L. A. Wolfé 2006		Physiological adaptation in early human pregnancy: adaptation to balance maternal-fetal demands	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
J. E. Wingo; K. J. Cureton 2006		Maximal oxygen uptake after attenuation of cardiovascular drift during heat stress	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
J. E. Wingo; K. J. Cureton 2006		Body cooling attenuates the decrease in maximal oxygen uptake associated with cardiovascular drif	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. W. Yeargin; D. J. Casa; L. F 2006		Heat acclimatization and hydration status of American football players during initial summer wor	J Strength Cond Res	Exclude	-	No	-	-	-	-	-
L. E. Armstrong; D. J. Casa; N 2007		American College of Sports Medicine position stand. Exertional heat illness during training and c	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
T. Bender; G. Nagy; I. Barna; 2007		The effect of physical therapy on beta-endorphin levels	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. Buguet 2007		Sleep under extreme environments: effects of heat and cold exposure, altitude, hyperbaric pressur	J Neurol Sci	Exclude	Yes	-	-	-	-	-	-
M. J. Buono; K. D. Ball; F. W. 2007		Sodium ion concentration vs. sweat rate relationship in humans	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
A. J. Busch; K. A. Barber; T. J 2007		Exercise for treating fibromyalgia syndrome	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Cecchini; V. LoPresti 2007		Drug residues store in the body following cessation of use: impacts on neuroendocrine balance an	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
C. K. Chang; C. P. Chang; S. Y 2007		Oxidative stress and ischemic injuries in heat stroke	Prog Brain Res	Exclude	-	No	-	-	-	-	-
S. S. Cheung 2007		Neuropsychological determinants of exercise tolerance in the heat	Prog Brain Res	Exclude	-	No	-	-	-	-	-
M. Cleary; D. Ruiz; L. Eberm 2007		Dehydration, cramping, and exertional rhabdomyolysis: a case report with suggestions for recover	J Sport Rehabil	Exclude	-	-	-	-	No	-	-
E. E. Coris; S. Walz; J. Konin; 2007		Return to activity considerations in a football player predisposed to exertional heat illness: a case	J Sport Rehabil	Exclude	-	No	-	-	-	-	-
O. V. Grishin; N. V. Ustuzanin 2007		The influence of cold on energy expenditure at rest and during exercise in person in the North	Alaska Med	Exclude	Yes	-	-	-	-	-	-
P. A. Hancock; J. M. Ross; J. I 2007		A meta-analysis of performance response under thermal stressors	Hum Factors	Exclude	-	No	-	-	-	-	-
Y. Hellsten; J. J. Nielsen; J. Ly 2007		Antioxidant supplementation enhances the exercise-induced increase in mitochondrial uncoupling	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
D. J. Hornyey; D. Farrow; I. M 2007		Caffeine, carbohydrate, and cooling use during prolonged simulated tennis	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
M. Horowitz 2007		Heat acclimation and cross-tolerance against novel stressors: genomic-physiological linkage	Prog Brain Res	Exclude	-	No	-	-	-	-	-
M. Horowitz; S. D. Robinson 2007		Heat shock proteins and the heat shock response during hyperthermia and its modulation by altere	Prog Brain Res	Exclude	-	No	-	-	-	-	-
D. Jezova; Z. Radikova; M. Vi 2007		Growth hormone response to different consecutive stress stimuli in healthy men: is there any diff	Stress	Exclude	-	-	-	-	No	-	-
A. C. Laerda; F. Gripp; L. O. 2007		Acute heat exposure increases high-intensity performance during sprint cycle exercise	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
A. Loregian; M. C. Scarpa; S. 2007		Measurement of ribavirin and evaluation of its stability in human plasma by high-performance liq	J Chromatogr B Analyt Te	Exclude	Yes	-	-	-	-	-	-
R. Lovell; L. Madden; S. Carr 2007		The time-profile of the PBMC HSP70 response to in vitro heat shock appears temperature-depend	Amino Acids	Exclude	Yes	-	-	-	-	-	-
R. J. Lovell; I. Kirke; J. Siegle 2007		Soccer half-time strategy influences thermoregulation and endurance performance	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
D. Markovitch; R. M. Tyrrell; 2007		The effect of prior exercise on ex vivo induction of heme oxygenase-1 in human lymphocytes	Free Radic Res	Exclude	Yes	-	-	-	-	-	-
S. J. Montain; S. N. Cheuvron 2007		Sweat mineral-element responses during 7 h of exercise-heat stress	Int J Sport Nutr Exerc Met	Exclude	-	No	-	-	-	-	-
R. Mora-Rodriguez; J. Del Co 2007		Separate and combined effects of airflow and rehydration during exercise in the heat	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



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F. Fiati; M. Jemni; A. Kacem; 2008		Effect of hyperthermia and physical activity on circulating growth hormone	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
M. J. Gibala; S. L. McGee; 2008		Metabolic adaptations to short-term high-intensity interval training: a little pain for a lot of gain?	Exerc Sport Sci Rev	Exclude	Yes	-	-	-	-	-	-
K. L. Gilbert; K. A. Stokes; G. 2008		Growth hormone responses to 3 different exercise bouts in 18- to 25- and 40- to 50-year-old men	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
C. M. Gosling; B. J. Gabb; J. 2008		The incidence of heat casualties in sprint triathlon: the tale of two Melbourne race events	J Sci Med Sport	Exclude	-	No	-	-	-	-	-
N. Graham; A. Gross; C. H. G 2008		Mechanical traction for neck pain with or without radiculopathy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. R. Gray; K. Söderlund; R. A 2008		ATP and phosphocreatine utilization in single human muscle fibres during the development of ma	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
H. J. Green; E. Bombardier; T. 2008		Metabolic, enzymatic, and transporter responses in human muscle during three consecutive days c	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
A. Hadid; R. Yanovich; T. Ertl 2008		Effect of a personal ambient ventilation system on physiological strain during heat stress wearing	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. Hargreaves; 2008		Physiological limits to exercise performance in the heat	J Sci Med Sport	Exclude	-	No	-	-	-	-	-
D. A. Judelson; C. M. Maresch; 2008		Effect of hydration state on resistance exercise-induced endocrine markers of anabolism, catabolism	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
A. Jung; P. Strauss; H. J. Lindl 2008		Influence of moderate cycling on scrotal temperature	Int J Androl	Exclude	Yes	-	-	-	-	-	-
B. Kampmann; P. Brode; M. S 2008		Lowering of resting core temperature during acclimation is influenced by exercise stimulus	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
A. C. Kayani; J. P. Morton; A. 2008		The exercise-induced stress response in skeletal muscle: failure during aging	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-
R. W. Kenefick; A. St Pierre; J 2008		Effect of increased plasma osmolality on cold-induced thirst attenuation	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
G. A. Khomenok; A. Hadid; O 2008		Hand immersion in cold water alleviating physiological strain and increasing tolerance to uncompe	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
R. M. Laing; S. T. Sims; C. A. 2008		Differences in wearer response to garments for outdoor activity	Ergonomics	Exclude	Yes	-	-	-	-	-	-
G. P. Lambert; 2008		Intestinal barrier dysfunction, endotoxemia, and gastrointestinal symptoms: the 'canary in the coal	Med Sport Sci	Exclude	-	No	-	-	-	-	-
C. L. Lim; C. Byrne; J. K. Lee 2008		Human thermoregulation and measurement of body temperature in exercise and clinical settings	Ann Acad Med Singap	Exclude	-	No	-	-	-	-	-
R. Lovell; L. Madden; L. R. M 2008		Effects of active and passive hyperthermia on heat shock protein 70 (HSP70)	Amino Acids	Exclude	-	-	-	-	No	-	-
J. A. Lumini; J. Magalhães; P. 2008		Beneficial effects of exercise on muscle mitochondrial function in diabetes mellitus	Sports Med	Exclude	Yes	-	-	-	-	-	-
C. A. Machado-Moreira; F. Wi 2008		Local differences in sweat secretion from the head during rest and exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
D. J. Mahoney; A. Safdar; G. 2008		Gene expression profiling in human skeletal muscle during recovery from eccentric exercise	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
F. E. Marino; 2008		Comparative thermoregulation and the quest for athletic supremacy	Med Sport Sci	Exclude	-	No	-	-	-	-	-
F. E. Marino; 2008		The evolutionary basis of thermoregulation and exercise performance	Med Sport Sci	Exclude	-	No	-	-	-	-	-
J. P. McClung; J. D. Hasday; J 2008		Exercise-heat acclimation in humans alters baseline levels and ex vivo heat inducibility of HSP72	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
T. L. Merry; P. N. Ainslie; R. 2008		Fitness alters fluid regulatory but not behavioural responses to hypohydrated exercise	Physiol Behav	Exclude	Yes	-	-	-	-	-	-
K. J. Milne; E. G. Noble; 2008		Response of the myocardium to exercise: sex-specific regulation of hsp70	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
R. Mora-Rodríguez; J. Del Co 2008		Thermoregulatory responses to constant versus variable-intensity exercise in the heat	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
J. P. Morton; D. P. Maclaren; J 2008		Trained men display increased basal heat shock protein content of skeletal muscle	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
M. Mugford; D. Elbourne; D. 2008		Extracorporeal membrane oxygenation for severe respiratory failure in newborn infants	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
T. Mündel; 2008		Exercise heat stress and metabolism	Med Sport Sci	Exclude	-	No	-	-	-	-	-
M. D. Nelson; L. A. Stuart-Hill 2008		Hypervolemia and blood alkalinity: effect on physiological strain in a warm environment	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
M. Newell; J. Newell; S. Gran 2008		Fluid and electrolyte balance in elite Gaelic football players	Ir Med J	Exclude	Yes	-	-	-	-	-	-
M. H. Noweir; A. O. Bafail; I. 2008		Study of heat exposure during Hajj (pilgrimage)	Environ Monit Assess	Exclude	Yes	-	-	-	-	-	-
A. Panossian; G. Wikman; 2008		Pharmacology of Schisandra chinensis Baill.: an overview of Russian research and uses in medicir	J Ethnopharmacol	Exclude	Yes	-	-	-	-	-	-
C. Papadopoulos; J. Doyle; J. 2008		The effect of the hypohydration on the lactate threshold in a hot and humid environment	J Sports Med Phys Fitness	Exclude	-	-	-	-	No	-	-
M. Philippova; D. Ivanov; M. 2008		Identification of proteins associating with glycosylphosphatidylinositol- anchored T-cadherin on t	Mol Cell Biol	Exclude	Yes	-	-	-	-	-	-
M. J. Quod; D. T. Martin; P. B 2008		Practical precooling: effect on cycling time trial performance in warm conditions	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
D. E. Rae; G. J. Knobel; T. Mi 2008		Heatstroke during endurance exercise: is there evidence for excessive endothermy?	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
A. M. Rivera-Brown; F. A. Ra 2008		Voluntary drinking and hydration in trained, heat-acclimatized girls exercising in a hot and humid	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
K. S. Röckl; C. A. Witczak; L. 2008		Signaling mechanisms in skeletal muscle: acute responses and chronic adaptations to exercise	IUBMB Life	Exclude	Yes	-	-	-	-	-	-
J. Romeo; D. Jiménez-Pavón; 2008		Immunological changes after a single bout of moderate-intensity exercise in a hot environment	J Physiol Biochem	Exclude	-	-	-	-	No	-	-
R. M. Rossi; W. Bolli; R. Stän 2008		Performance of firefighters' protective clothing after heat exposure	Int J Occup Saf Ergon	Exclude	-	-	-	-	No	-	-
M. Rothmaier; M. Weder; A. M 2008		Design and performance of personal cooling garments based on three-layer laminates	Med Biol Eng Comput	Exclude	Yes	-	-	-	-	-	-
T. Rowland; S. Hagenbuch; D. 2008		Exercise tolerance and thermoregulatory responses during cycling in boys and men	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
M. E. Sandström; J. C. Siegler 2008		The effect of 15 consecutive days of heat-exercise acclimation on heat shock protein 70	Cell Stress Chaperones	Exclude	-	No	-	-	-	-	-
J. M. Saxton; I. Zwierska; K. 12008		Effect of upper- and lower-limb exercise training on circulating soluble adhesion molecules, hs-C	Eur J Vasc Endovase Surg	Exclude	Yes	-	-	-	-	-	-
N. A. Shein; N. Grigoriadis; A 2008		Differential neuroprotective properties of endogenous and exogenous erythropoietin in a mouse m	J Neurotrauma	Exclude	Yes	-	-	-	-	-	-
N. A. Shevchuk; 2008		Hydrotherapy as a possible neuroleptic and sedative treatment	Med Hypotheses	Exclude	Yes	-	-	-	-	-	-
S. E. Simmons; T. Mündel; D. 2008		The effects of passive heating and head-cooling on perception of exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. Sunderland; J. G. Morris; N 2008		A heat acclimation protocol for team sports	Br J Sports Med	Exclude	-	-	-	-	No	-	-
A. A. Thambirajah; K. Sleigh; 2008		Differential heat shock protein responses to strenuous standardized exercise in chronic fatigue syn	Clin Invest Med	Exclude	Yes	-	-	-	-	-	-
H. Toko; T. Mimamoto; I. Kon 2008		Role of heat shock transcriptional factor 1 and heat shock proteins in cardiac hypertrophy	Trends Cardiovasc Med	Exclude	-	-	-	-	-	-	-
M. Umehara; A. Yamaguchi; S 2008		Repeated waon therapy improves pulmonary hypertension during exercise in patients with severe	J Cardiol	Exclude	Yes	-	-	-	-	-	-
J. Vaile; S. Halson; N. Gill; B. 2008		Effect of hydrotherapy on recovery from fatigue	Int J Sports Med	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
J. Vaile; S. Halson; N. Gill; B. 2008		Effect of hydrotherapy on the signs and symptoms of delayed onset muscle soreness	Eur J Appl Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
				Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?				
J. E. Wingo; D. A. Low; D. M. 2008		Heat acclimation of an adult female with a large surface area of grafted skin	J Burn Care Res	Exclude	-	No	-	-	-	-	-
Y. Xie; B. Guo; J. Li; G. Ku; I. 2008		Adaptive and robust methods of reconstruction (ARMOR) for thermoacoustic tomography	IEEE Trans Biomed Eng	Exclude	Yes	-	-	-	-	-	-
Y. Xie; L. Wang; J. He; T. Wu 2008		Acupuncture for dysphagia in acute stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. M. Yamamoto; D. A. Judels 2008		Effects of hydration state and resistance exercise on markers of muscle damage	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
W. K. Yeo; C. D. Paton; A. P. 2008		Skeletal muscle adaptation and performance responses to once a day versus twice every second day	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
X. Zhu; M. Proctor; A. Bensor 2008		Chinese herbal medicine for primary dysmenorrhoea	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
H. Zouhal; C. Jacob; P. Delam 2008		Catecholamines and the effects of exercise, training and gender	Sports Med	Exclude	-	No	-	-	-	-	-
C. R. Abbiss; P. B. Laursen 2009		Do changes in heat storage mediate an anticipatory regulation of exercise intensity?	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
J. Alametsa; A. Värri; J. Viik; 2009		Ballistocardiographic studies with acceleration and electromechanical film sensors	Med Eng Phys	Exclude	Yes	-	-	-	-	-	-
W. Ament; G. J. Verkerke 2009		Exercise and fatigue	Sports Med	Exclude	Yes	No	-	-	-	-	-
M. J. Barwood; P. S. Newton; 2009		Ventilated vest and tolerance for intermittent exercise in hot, dry conditions with military clothing	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
J. R. Basford; J. K. Oh; T. G. / 2009		Safety, acceptance, and physiologic effects of sauna bathing in people with chronic heart failure: a	Arch Phys Med Rehabil	Exclude	-	-	-	-	No	-	-
A. E. Beaudin; M. E. Clegg; N 2009		Adaptation of exercise ventilation during an actively-induced hyperthermia following passive heat	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
M. F. Bergeron 2009		Youth sports in the heat: recovery and scheduling considerations for tournament play	Sports Med	Exclude	Yes	-	-	-	-	-	-
M. F. Bergeron; M. D. Laird; I 2009		Repeated-bout exercise in the heat in young athletes: physiological strain and perceptual response	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
T. N. Board; S. Brunskill; C. I. 2009		Processed versus fresh frozen bone for impaction bone grafting in revision hip arthroplasty	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. J. Buono; T. R. Numan; R. 2009		Is active sweating during heat acclimation required for improvements in peripheral sweat gland fu	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
J. G. Burniston 2009		Adaptation of the rat cardiac proteome in response to intensity-controlled endurance exercise	Proteomics	Exclude	Yes	-	-	-	-	-	-
F. Chekov lu 2009		[Life support of the Mars exploration crew. Control of a zeolite system for carbon dioxide remova	Aviakosm Ekolog Med	Exclude	-	-	No	-	-	-	-
K. S. Cheng; Y. Yuan; Z. Li; P. 2009		The performance of a reduced-order adaptive controller when used in multi-antenna hyperthermia	Phys Med Biol	Exclude	Yes	-	-	-	-	-	-
V. G. Coffey; B. Jemiole; J. E. 2009		Effect of consecutive repeated sprint and resistance exercise bouts on acute adaptive responses in	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
E. E. Coris; S. Mehra; S. M. W 2009		Gastrointestinal temperature trends in football linemen during physical exertion under heat stress	South Med J	Exclude	Yes	-	-	-	-	-	-
J. Del Coso; E. Estevez; R. M. 2009		Caffeine during exercise in the heat: thermoregulation and fluid-electrolyte balance	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
M. Del Sal; E. Barbieri; P. Gar 2009		Physiologic responses of firefighter recruits during a supervised live-fire work performance test	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
K. A. Dougherty; M. Chow; W. 2009		Responses of lean and obese boys to repeated summer exercise in the heat bouts	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
C. J. Edmonds; B. Jeffes 2009		Does having a drink help you think? 6-7-Year-old children show improvements in cognitive perfo	Appetite	Exclude	Yes	-	-	-	-	-	-
M. D. Ferrer; P. Tauler; A. Sur 2009		Antioxidant regulatory mechanisms in neutrophils and lymphocytes after intense exercise	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
A. T. Garrett; N. G. Goossens; 2009		Induction and decay of short-term heat acclimation	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. Gernonpré; J. M. Pontier; E 2009		Pre-dive vibration effect on bubble formation after a 30-m dive requiring a decompression stop	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
F. B. Gillison; S. M. Skevingtr 2009		The effects of exercise interventions on quality of life in clinical and healthy populations; a meta-	Soc Sci Med	Exclude	Yes	-	-	-	-	-	-
S. J. Grant; A. Bensoussan; D. 2009		Chinese herbal medicines for people with impaired glucose tolerance or impaired fasting blood gl	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
P. C. Guess; J. R. Strub; N. St 2009		All-ceramic partial coverage restorations--midterm results of a 5-year prospective clinical splitm	J Dent	Exclude	Yes	-	-	-	-	-	-
M. S. Harkins 2009		Exercise regulates heat shock proteins and nitric oxide	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-
M. Hedreville; P. Connes; M. 2009		Central retinal vein occlusion in a sickle cell trait carrier after a cycling race	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
R. M. Hobson; E. L. Clapp; P. 2009		Exercise capacity in the heat is greater in the morning than in the evening in man	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
T. Horvath; B. C. Madi; I. M. 2009		Interventions for preventing late postnatal mother-to-child transmission of HIV	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
R. L. Hwang; T. P. Lin; C. P. C 2009		Investigating the adaptive model of thermal comfort for naturally ventilated school buildings in Ti	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
O. Jay; G. P. Kenny 2009		Current evidence does not support an anticipatory regulation of exercise intensity mediated by rat	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
G. Jendritzky; B. Tinz 2009		The thermal environment of the human being on the global scale	Glob Health Action	Exclude	Yes	-	-	-	-	-	-
G. Kaceroovsky-Bielez; M. Cf 2009		Short-term exercise training does not stimulate skeletal muscle ATP synthesis in relatives of huma	Diabetes	Exclude	Yes	-	-	-	-	-	-
T. Kallmich; R. Keitzer; E. Pu 2009		Exercise-induced hyperthermia in childhood: a case report and pilot study	Acta Paediatr	Exclude	-	No	-	-	-	-	-
A. N. Kavazis 2009		Exercise preconditioning of the myocardium	Sports Med	Exclude	-	No	-	-	-	-	-
R. W. Kenefick; B. R. Ely; S. 2009		Prior heat stress: effect on subsequent 15-min time trial performance in the heat	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
N. A. Kenny; J. S. Warland; R 2009		Part A: Assessing the performance of the COMFA outdoor thermal comfort model on subjects per	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
J. C. Launay; G. Savourey 2009		Cold adaptations	Ind Health	Exclude	Yes	-	-	-	-	-	-
H. Liang; B. Balas; P. Tantiwo 2009		Whole body overexpression of PGC-1alpha has opposite effects on hepatic and muscle insulin ser	Am J Physiol Endocrinol	Exclude	Yes	-	-	-	-	-	-
S. M. Marcora 2009		The rate of heat storage is not a sensed variable that influences exercise performance	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
F. E. Marino 2009		Self-paced endurance performance in the heat is explained by anticipatory regulation	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
F. Z. Marques; M. A. Markus; 2009		Hormesis as a pro-healthy aging intervention in human beings?	Dose Response	Exclude	-	No	-	-	-	-	-
M. F. McCarty; J. Barroso-Ari 2009		Regular thermal therapy may promote insulin sensitivity while boosting expression of endothelial	Med Hypotheses	Exclude	-	No	-	-	-	-	-
J. P. Morton; L. Croft; J. D. B 2009		Reduced carbohydrate availability does not modulate training-induced heat shock protein adaptati	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
J. P. Morton; K. Holloway; P. 2009		Exercise training-induced gender-specific heat shock protein adaptations in human skeletal muscul	Muscle Nerve	Exclude	-	No	-	-	-	-	-
J. P. Morton; A. C. Kayani; A. 2009		The exercise-induced stress response of skeletal muscle, with specific emphasis on humans	Sports Med	Exclude	-	No	-	-	-	-	-
L. Nybo 2009		Self-paced endurance performance in the heat is explained by anticipatory regulation	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
P. O'Connor; D. Hyde; J. Clari 2009		Torso heating of divers in cold water	Aviat Space Environ Med	Exclude	Yes	-	-	-	-	-	-
K. Okazaki; M. Goto; H. Nose 2009		Protein and carbohydrate supplementation increases aerobic and thermoregulatory capacities	J Physiol	Exclude	-	No	-	-	-	-	-

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
K. Okazaki; T. Ichinose; H. M. 2009	2009	Impact of protein and carbohydrate supplementation on plasma volume expansion and thermoregulation during exercise	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
M. L. Pall	2009	Do sauna therapy and exercise act by raising the availability of tetrahydrobiopterin?	Med Hypotheses	Exclude	-	No	-	-	-	-	-
M. J. Price; C. Boyd; V. L. Go 2009	2009	The physiological effects of pre-event and mid-event cooling during intermittent running in the heat	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-
D. B. Pyne; I. Mujika; T. Reill 2009	2009	Peaking for optimal performance: Research limitations and future directions	J Sports Sci	Exclude	-	No	-	-	-	-	-
S. Radaković; J. Marić; M. Su 2009	2009	[Influence of acclimatization on serum enzyme changes in soldiers during exertional heat stress]	Vojnosanit Pregl	Exclude	-	No	-	-	-	-	-
J. P. Raynaud; M. Augès; L. L. 2009	2009	Adhesiveness of a new testosterone-in-adhesive matrix patch after extreme conditions	Int J Pharm	Exclude	Yes	-	-	-	-	-	-
W. J. Rea; Y. Pan; B. Griffiths 2009	2009	The treatment of patients with mycotoxin-induced disease	Toxicol Ind Health	Exclude	Yes	-	-	-	-	-	-
B. Roelands; M. Goekint; L. E 2009	2009	Time trial performance in normal and high ambient temperature: is there a role for 5-HT?	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
B. Roelands; H. Hasegawa; P. 2009	2009	Performance and thermoregulatory effects of chronic bupropion administration in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
G. Rosen; P. Hasler; M. T. Sm 2009	2009	Implementation of a Hebbian chemoreceptor model for diffusive source localization	Biosystems	Exclude	Yes	-	-	-	-	-	-
H. R. Sandrow-Feinberg; J. Iz 2009	2009	Forced exercise as a rehabilitation strategy after unilateral cervical spinal cord contusion injury	J Neurotrauma	Exclude	Yes	-	-	-	-	-	-
V. K. Singh; P. Vats; S. Kishna 2009	2009	Body composition & cardiovascular functions in healthy males acclimatized to desert & high altitude	Indian J Med Res	Exclude	-	No	-	-	-	-	-
V. L. Stakhursky; O. Arabe; K. 2009	2009	Real-time MRI-guided hyperthermia treatment using a fast adaptive algorithm	Phys Med Biol	Exclude	-	-	-	-	No	-	-
N. T. Van Duijnhoven; T. W. J. 2009	2009	Effect of functional electrostimulation on impaired skin vasodilator responses to local heating in skin	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
K. Vissing; M. L. Bayer; K. O. 2009	2009	Heat shock protein translocation and expression response is attenuated in response to repeated eccentric exercise	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-
K. A. Vuori; J. K. Ahlskog; L. 2009	2009	TransLISA, a novel quantitative, nonradioactive assay for transcription factor DNA-binding analysis	Febs j	Exclude	Yes	-	-	-	-	-	-
F. Beck; F. Gillson; M. Standl 2010	2010	A theoretical investigation of the development of physical activity habits in retirement	Br J Health Psychol	Exclude	Yes	-	-	-	-	-	-
J. A. Betts; C. Williams 2010	2010	Short-term recovery from prolonged exercise: exploring the potential for protein ingestion to accelerate recovery	Sports Med	Exclude	Yes	-	-	-	-	-	-
D. P. Blondin; I. Dépaule; P. In 2010	2010	Effects of two glucose ingestion rates on substrate utilization during moderate-intensity shivering	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. Brazaitis; A. Skurvydas 2010	2010	Heat acclimation does not reduce the impact of hyperthermia on central fatigue	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. Berrero-Saby; S. Dellioux; J. 2010	2010	Combination of two oxidant stressors suppresses the oxidative stress and enhances the heat shock response	Metabolism	Exclude	-	-	-	-	No	-	-
V. Calabrese; C. Cornelius; A. 2010	2010	Cellular stress responses, mitostress and carnitine insufficiencies as critical determinants in aging	Neurochem Res	Exclude	Yes	-	-	-	-	-	-
N. Charkoudian 2010	2010	Mechanisms and modifiers of reflex induced cutaneous vasodilation and vasoconstriction in humans	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
S. S. Cheung 2010	2010	Interconnections between thermal perception and exercise capacity in the heat	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
S. S. Cheung; S. R. Petersen; 2010	2010	Physiological strain and countermeasures with firefighting	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
A. J. Cochran; J. P. Little; M. J. 2010	2010	Carbohydrate feeding during recovery alters the skeletal muscle metabolic response to repeated sessions of exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Crowe; L. Whitehead; M. J. 2010	2010	Self-management and chronic low back pain: a qualitative study	J Adv Nurs	Exclude	Yes	-	-	-	-	-	-
S. Dewhurst; A. Macaluso; L. 2010	2010	Effects of altered muscle temperature on neuromuscular properties in young and older women	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
K. A. Dougherty; M. Chow; W. 2010	2010	Critical environmental limits for exercising heat-acclimated lean and obese boys	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. P. Dugas 2010	2010	How hot is too hot? Some considerations regarding temperature and performance	Int J Sports Physiol Perform	Exclude	-	No	-	-	-	-	-
G. E. Folk 2010	2010	The Harvard Fatigue Laboratory: contributions to World War II	Adv Physiol Educ	Exclude	Yes	-	-	-	-	-	-
E. Gemp; J. E. Blatteau 2010	2010	Preconditioning methods and mechanisms for preventing the risk of decompression sickness in scuba divers	Res Sports Med	Exclude	Yes	-	-	-	-	-	-
M. Goto; K. Okazaki; Y. Kami 2010	2010	Protein and carbohydrate supplementation during 5-day aerobic training enhanced plasma volume expansion	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
E. S. Grebenyuk; T. V. Stupnik 2010	2010	Long-term exercises increase the concentration of HspBPI, a co-chaperone of 70-KDa heat shock protein	Bull Exp Biol Med	Exclude	-	-	-	-	No	-	-
D. J. Green; H. H. Carter; M. 2010	2010	Obligatory role of hyperaemia and shear stress in microvascular adaptation to repeated heating in humans	J Physiol	Exclude	-	-	-	-	No	-	-
Z. Günendi; A. Sepici Dinçel; 2010	2010	Does exercise affect the antioxidant system in patients with ankylosing spondylitis?	Clin Rheumatol	Exclude	Yes	-	-	-	-	-	-
C. Handschin 2010	2010	Regulation of skeletal muscle cell plasticity by the peroxisome proliferator-activated receptor γ coactivator 1α	J Recept Signal Transduct Mol Cell Physiol	Exclude	-	No	-	-	-	-	-
R. Harrington; G. Taylor; S. H. 2010	2010	A community-based exercise and education scheme for stroke survivors: a randomized controlled trial	Clin Rehabil	Exclude	Yes	-	-	-	-	-	-
L. D. Hayes; C. I. Morse 2010	2010	The effects of progressive dehydration on strength and power: is there a dose response?	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
M. Horowitz; E. Kodesh 2010	2010	Molecular signals that shape the integrative responses of the heat-acclimated phenotype	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
J. M. Johnson 2010	2010	Exercise in a hot environment: the skin circulation	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
V. Kaushik; T. Malik; S. R. Sa 2010	2010	Interventions for acute otitis externa	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
A. R. Konopka; M. D. Dougl 2010	2010	Molecular adaptations to aerobic exercise training in skeletal muscle of older women	J Gerontol A Biol Sci Med Sci	Exclude	Yes	-	-	-	-	-	-
S. N. Kounalakis; P. G. Botoni 2010	2010	The effect of menthol application to the skin on sweating rate response during exercise in swimmers	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
V. A. Lira; C. R. Benton; Z. Yi 2010	2010	PGC-1α regulation by exercise training and its influences on muscle function and insulin sensitivity	Am J Physiol Endocrinol Metab	Exclude	Yes	-	-	-	-	-	-
J. P. Little; A. Safdar; G. P. Wi 2010	2010	A practical model of low-volume high-intensity interval training induces mitochondrial biogenesis in skeletal muscle	J Physiol	Exclude	Yes	-	-	-	-	-	-
S. Lorenzo; J. R. Halliwill; M. 2010	2010	Heat acclimation improves exercise performance	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. Lorenzo; C. T. Minson 2010	2010	Heat acclimation improves cutaneous vascular function and sweating in trained cyclists	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
F. C. Magalhães; R. L. Passos; 2010	2010	Thermoregulatory efficiency is increased after heat acclimation in tropical natives	J Physiol Anthropol	Exclude	Yes	-	-	-	-	-	-
C. Magalhães Fde; F. T. Amor 2010	2010	Heat and exercise acclimation increases intracellular levels of Hsp72 and inhibits exercise-induced cellular stress	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
M. Malan; B. Dawson; C. Goc 2010	2010	Effect of heat exposure on thermoregulation and hockey-specific response time in field hockey goalkeepers	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-
R. J. Maughan 2010	2010	Distance running in hot environments: a thermal challenge to the elite runner	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
R. J. Maughan; S. M. Shirreffs 2010	2010	Living, training and playing in the heat: challenges to the football player and strategies for coping	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
T. Michel; P. M. Vanhoutte 2010	2010	Cellular signaling and NO production	Pflugers Arch	Exclude	Yes	-	-	-	-	-	-
M. Mohr; I. Mujika; J. Santisteban 2010	2010	Examination of fatigue development in elite soccer in a hot environment: a multi-experimental approach	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
T. Mündel; D. A. Jones 2010	2010	The effects of swilling an L(-)-menthol solution during exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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M. D. Nelson; M. J. Haykows	2010	Aerobic fitness does not influence the biventricular response to whole body passive heat stress	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
N. B. Nordsborg; C. Lundby;	2010	Relative workload determines exercise-induced increases in PGC-1alpha mRNA	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
L. Nybo	2010	Cycling in the heat: performance perspectives and cerebral challenges	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
J. Olesen; K. Kiliereich; H. Pile	2010	PGC-1alpha-mediated adaptations in skeletal muscle	Pflugers Arch	Exclude	-	No	-	-	-	-	-
K. L. Osterberg; S. E. Pallardy	2010	Carbohydrate exerts a mild influence on fluid retention following exercise-induced dehydration	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
K. T. Ozgunen; S. S. Kurdak;	2010	Effect of hot environmental conditions on physical activity patterns and temperature response of f	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
A. Panossian; G. Wikman; J. S	2010	Rosemroot (Rhodiola rosea): traditional use, chemical composition, pharmacology and clinical eff	Phytomedicine	Exclude	Yes	-	-	-	-	-	-
A. J. Patterson; L. Zhang	2010	Hypoxia and fetal heart development	Curr Mol Med	Exclude	Yes	-	-	-	-	-	-
A. L. Persianova-Dubrova; N	2010	[Spa-based water procedures and complications in the course of their performance]	Vopr Kurortol Fizioter Lec	Exclude	-	-	No	-	-	-	-
C. J. Petersen; M. R. Portus; I	2010	Partial heat acclimation in cricketers using a 4-day high intensity cycling protocol	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
W. C. Ping; C. C. Keong; A. B	2010	Effects of acute supplementation of caffeine on cardiorespiratory responses during endurance runn	Indian J Med Res	Exclude	Yes	-	-	-	-	-	-
H. O. Portner	2010	Oxygen- and capacity-limitation of thermal tolerance: a matrix for integrating climate-related stre	J Exp Biol	Exclude	Yes	-	-	-	-	-	-
N. Psilander; L. Wang; J. West	2010	Mitochondrial gene expression in elite cyclists: effects of high-intensity interval exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. Racinais	2010	Different effects of heat exposure upon exercise performance in the morning and afternoon	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
S. Racinais; J. Oksa	2010	Temperature and neuromuscular function	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
M. Reed; R. Harrington; A. Di	2010	Meeting stroke survivors' perceived needs: a qualitative study of a community-based exercise and	Clin Rehabil	Exclude	Yes	-	-	-	-	-	-
W. O. Roberts	2010	Determining a do not start" temperature for a marathon on the basis of adverse outcomes"	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
S. M. Shirreffs	2010	Hydration: special issues for playing football in warm and hot environments	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
J. Stapleton; D. Gagnon; G. P.	2010	Short-term exercise training does not improve whole-body heat loss when rate of metabolic heat p	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
K. A. Stokes; D. Sykes; K. L.	2010	Brief, high intensity exercise alters serum ghrelin and growth hormone concentrations but not IGF	Growth Horm IGF Res	Exclude	Yes	-	-	-	-	-	-
M. N. Storm-Versloot; C. G. V	2010	Topical silver for preventing wound infection	Cochrane Database of Sys	Exclude	-	-	-	-	-	-	-
S. Summermatter; O. Baum; C	2010	Peroxisome proliferator-activated receptor [gamma] coactivator 1 [alpha] (PGC-1 [alpha]) prom	J Biol Chem	Exclude	Yes	-	-	-	-	-	-
L. Taylor; A. W. Midgley; B. C	2010	The effect of acute hypoxia on heat shock protein 72 expression and oxidative stress in vivo	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
K. Valdes; T. Marik	2010	A systematic review of conservative interventions for osteoarthritis of the hand	J Hand Ther	Exclude	Yes	-	-	-	-	-	-
B. F. Walker; S. D. French; W	2010	Combined chiropractic interventions for low-back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. A. Westphal; R. D. Childs;	2010	Managing diabetes in the heat: potential issues and concerns	Endocr Pract	Exclude	-	No	-	-	-	-	-
B. Wilk; B. W. Timmons; O. E	2010	Voluntary fluid intake, hydration status, and aerobic performance of adolescent athletes in the hea	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
S. W. YeARGIN; D. J. Casa; D. J	2010	Thermoregulatory responses and hydration practices in heat-acclimatized adolescents during pres	J Athl Train	Exclude	-	No	-	-	-	-	-
G. V. Zammit; H. B. Menz; S.	2010	Interventions for treating osteoarthritis of the big toe joint	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
F. Amorim; P. Yamada; R. Rok	2011	Effects of whole-body heat acclimation on cell injury and cytokine responses in peripheral blood	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
A. R. Bain; O. Jay	2011	Does summer in a humid continental climate elicit an acclimatization of human thermoregulatory	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
A. Bandyopadhyay; F. W. Ping	2011	Effects of acute supplementation of caffeine and Panax ginseng on endurance running performanc	J Hum Ergol (Tokyo)	Exclude	Yes	-	-	-	-	-	-
M. Buchheit; C. Horobeanu; A	2011	Effects of age and spa treatment on match running performance over two consecutive games in hi	J Sports Sci	Exclude	-	-	-	-	No	-	-
M. Buchheit; S. C. Voss; L. N	2011	Physiological and performance adaptations to an in-season soccer camp in the heat: associations v	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
P. Castle; R. W. Mackenzie; N	2011	Heat acclimation improves intermittent sprinting in the heat but additional pre-cooling offers no fi	J Sports Sci	Exclude	-	-	-	-	No	-	-
A. J. Cathcart; S. R. Murgatroy	2011	Combined carbohydrate-protein supplementation improves competitive endurance exercise perfor	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. D. Coso; N. Hamouti; J. F.	2011	Relevance of individual characteristics for thermoregulation during exercise in a hot-dry environn	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
H. A. Daanen; A. G. Jonkman;	2011	Optimising the acquisition and retention of heat acclimation	Int J Sports Med	Exclude	-	-	-	-	No	-	-
E. Dolan; H. O'Connor; A. Mc	2011	Nutritional, lifestyle, and weight control practices of professional jockeys	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. S. Elrobb; M. S. Alanazi; V	2011	Molecular cloning and characterization of cDNA encoding a putative stress-induced heat-shock pi	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; S. N. Cheuvront; R.	2011	Limitations of salivary osmolality as a marker of hydration status	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
B. R. Ely; M. R. Ely; S. N. Ch	2011	Marginal effects of a large caffeine dose on heat balance during exercise-heat stress	Int J Sport Nutr Exerc Med	Exclude	-	-	-	-	No	-	-
M. R. Ely; R. W. Kenefick; S.	2011	Surface contamination artificially elevates initial sweat mineral concentrations	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
Y. Epstein; W. O. Roberts	2011	The pathophysiology of heat stroke: an integrative view of the final common pathway	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
B. Falk; R. Dotan	2011	Temperature regulation and elite young athletes	Med Sport Sci	Exclude	-	-	No	-	-	-	-
D. P. Ferguson; R. S. Bowen;	2011	Heart rate and core temperature responses of elite pit crews during automobile races	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
N. Gaoua; S. Racinais; J. Gran	2011	Alterations in cognitive performance during passive hyperthermia are task dependent	Int J Hyperthermia	Exclude	-	-	-	-	No	-	-
A. T. Garrett; N. J. Rehrer; M.	2011	Induction and decay of short-term heat acclimation in moderately and highly trained athletes	Sports Med	Exclude	-	-	-	-	No	-	-
M. Goekint; B. Roelands; E. F	2011	Influence of citalopram and environmental temperature on exercise-induced changes in BDNF	Neurosci Lett	Exclude	Yes	-	-	-	-	-	-
M. S. Hood; J. P. Little; M. A.	2011	Low-volume interval training improves muscle oxidative capacity in sedentary adults	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
G. Huang; W. Zhou; M. L. Cai	2011	Is everyone hot in the city? Spatial pattern of land surface temperatures, land cover and neighborh	J Environ Manage	Exclude	Yes	-	-	-	-	-	-
M. J. Jackson	2011	Control of reactive oxygen species production in contracting skeletal muscle	Antioxid Redox Signal	Exclude	Yes	-	-	-	-	-	-
R. Kakigi; H. Naito; Y. Ogura;	2011	Heat stress enhances mTOR signaling after resistance exercise in human skeletal muscle	J Physiol Sci	Exclude	-	-	-	-	-	-	No
R. W. Kenefick; S. N. Cheuvr	2011	DEET insect repellent: effects on thermoregulatory sweating and physiological strain	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. A. Kraft; J. M. Green; P. A.	2011	Effects of heat exposure and 3% dehydration achieved via hot water immersion on repeated cycle	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
M. Krause; C. Rodrigues-Krai	2011	Extracellular heat shock proteins (eHSP70) in exercise: Possible targets outside the immune syste	Med Hypotheses	Exclude	-	No	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
M. Kuennen; T. Gillum; K. De	2011	Thermotolerance and heat acclimation may share a common mechanism in humans	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
J. Y. Lee; H. Wakabayashi; T.	2011	Ethnic differences in thermoregulatory responses during resting, passive and active heating: applica	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. P. Little; A. J. Cochran	2011	Regulating the regulators: the role of transcriptional regulatory proteins in the adaptive response to	J Physiol	Exclude	Yes	-	-	-	-	-	-
J. P. Little; A. Safdar; D. Bish	2011	An acute bout of high-intensity interval training increases the nuclear abundance of PGC-1α and	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
Z. L. Liu; J. P. Liu; A. L. Zhan	2011	Chinese herbal medicines for hypercholesterolemia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. Lorenzo; C. T. Minson; T. C	2011	Lactate threshold predicting time-trial performance: impact of heat and acclimation	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. Matsumoto; M. Shimodozo	2011	Effects of thermal therapy combining sauna therapy and underwater exercise in patients with fibro	Complement Ther Clin Pri	Exclude	-	No	-	-	-	-	-
J. Mehrholz; J. Kugler; M. Pol	2011	Water-based exercises for improving activities of daily living after stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. F. Miller; D. Ellis; M. M. R	2011	Measurement of skeletal muscle collagen breakdown by microdialysis	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
K. Miyagawa; Y. Kamijo; S. Ii	2011	Reduced hyperthermia-induced cutaneous vasodilation and enhanced exercise-induced plasma wa	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
L. H. Naylor; H. Carter; M. G.	2011	Repeated increases in blood flow, independent of exercise, enhance conduit artery vasodilator fun	Am J Physiol Heart Circ P	Exclude	Yes	-	-	-	-	-	-
F. W. Ping; C. C. Keong; A. Bi	2011	Effects of acute supplementation of Panax ginseng on endurance running in a hot & humid enviro	Indian J Med Res	Exclude	Yes	-	-	-	-	-	-
S. K. Powers; E. E. Talbert; P.	2011	Reactive oxygen and nitrogen species as intracellular signals in skeletal muscle	J Physiol	Exclude	-	No	-	-	-	-	-
H. Sareh; M. E. Tulapurkar; N	2011	Response of mice to continuous 5-day passive hyperthermia resembles human heat acclimation	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
M. N. Sawka; L. R. Leon; S. J	2011	Integrated physiological mechanisms of exercise performance, adaptation, and maladaptation to h	Compr Physiol	Exclude	-	No	-	-	-	-	-
P. E. Sheffield; P. J. Landrigan	2011	Global climate change and children's health: threats and strategies for prevention	Environ Health Perspect	Exclude	Yes	-	-	-	-	-	-
P. Sidhu; H. T. Peng; B. Cheur	2011	Simulation of differential drug pharmacokinetics under heat and exercise stress using a physiologi	Can J Physiol Pharmacol	Exclude	Yes	-	-	-	-	-	-
G. H. Simmons; B. J. Wong; I.	2011	Changes in the control of skin blood flow with exercise training: where do cutaneous vascular ada	Exp Physiol	Exclude	-	No	-	-	-	-	-
E. S. Soteriades; D. L. Smith;	2011	Cardiovascular disease in US firefighters: a systematic review	Cardiol Rev	Exclude	-	No	-	-	-	-	-
L. Taylor; A. W. Midgley; B. C	2011	Daily hypoxia increases basal monocyte HSP72 expression in healthy human subjects	Amino Acids	Exclude	Yes	-	-	-	-	-	-
L. J. Teixeira; J. S. Valbuza; G	2011	Physical therapy for Bell's palsy (idiopathic facial paralysis)	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. Vaapio; M. Salminen; T. Va	2011	Increased muscle strength improves managing in activities of daily living in fall-prone communit	Aging Clin Exp Res	Exclude	Yes	-	-	-	-	-	-
G. D. Vladutiu; J. I. Isackson;	2011	Genetic risk for malignant hyperthermia in non-anesthesia-induced myopathies	Mol Genet Metab	Exclude	Yes	-	-	-	-	-	-
H. Wakabayashi; T. Wijayanto	2011	Comparison of heat dissipation response between Malaysian and Japanese males during exercise i	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
L. Wang; H. Mascher; N. Psila	2011	Resistance exercise enhances the molecular signaling of mitochondrial biogenesis induced by end	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
B. Aishett; A. Wolkow; M. Spi	2012	Awake, smoky, and hot": providing an evidence-base for managing the risks associated with occup	Appl Ergon	Exclude	Yes	-	-	-	-	-	-
F. Almhede; O. Girard; J. Gi	2012	Hot ambient conditions do not alter intermittent cycling sprint performance	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
J. M. Alonso; P. Edouard; G. F	2012	Determination of future prevention strategies in elite track and field: analysis of Daegu 2011 IAA	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
L. Altan; N. Korkmaz; M. Diz	2012	Effect of Pilates training on people with ankylosing spondylitis	Rheumatol Int	Exclude	Yes	-	-	-	-	-	-
A. Ascensao; P. J. Oliveira; J.	2012	Exercise as a beneficial adjunct therapy during Doxorubicin treatment--role of mitochondria in ca	Int J Cardiol	Exclude	-	No	-	-	-	-	-
N. L. Ashworth; L. E. Satkuna	2012	Treatment for spasticity in amyotrophic lateral sclerosis/motor neuron disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. J. Augustine	2012	Running into trouble. Heat-related illnesses follow a summer race	EMS World	Exclude	-	No	-	-	-	-	-
M. F. Bergeron; R. Bahr; P. Bi	2012	International Olympic Committee consensus statement on thermoregulatory and altitude challeng	Br J Sports Med	Exclude	-	No	-	-	-	-	-
C. Bleakley; S. McDonough;	2012	Cold-water immersion (cryotherapy) for preventing and treating muscle soreness after exercise	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. Burk; S. Timpmann; K. Kr	2012	Effects of heat acclimation on endurance capacity and prolactin response to exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. Castrogiovanni; R. Imbesi	2012	Oxidative stress and skeletal muscle in exercise	Ital J Anat Embryol	Exclude	-	No	-	-	-	-	-
J. N. Cogley; J. D. Bartlett; A.	2012	PGC-1α transcriptional response and mitochondrial adaptation to acute exercise is maintained in s	Biogerontology	Exclude	Yes	-	-	-	-	-	-
A. M. Costa; L. Breitenfeld;	2012	Genetic inheritance effects on endurance and muscle strength: an update	Sports Med	Exclude	Yes	-	-	-	-	-	-
T. L. M. de Backer; R. Vander	2012	Nafidrofuryl for intermittent claudication	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
P. J. Derbyshire; H. Barr; F. D	2012	Lactate in human sweat: a critical review of research to the present day	J Physiol Sci	Exclude	-	No	-	-	-	-	-
M. P. Dunay; C. Jakab; T. Nén	2012	Evaluation of EnSeal®, an adaptive bipolar electro-surgical tissue-sealing device	Acta Vet Hung	Exclude	Yes	-	-	-	-	-	-
S. Engeli; A. L. Birkenfeld; P.	2012	Natriuretic peptides enhance the oxidative capacity of human skeletal muscle	J Clin Invest	Exclude	Yes	-	-	-	-	-	-
N. Fujii; Y. Honda; T. Ogawa;	2012	Short-term exercise-heat acclimation enhances skin vasodilation but not hyperthermic hypernea	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
D. Gagnon; A. G. Lynn; K. Bi	2012	Mean arterial pressure following prolonged exercise in the heat: influence of training status and fi	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
A. T. Garrett; R. Creasy; N. J.	2012	Effectiveness of short-term heat acclimation for highly trained athletes	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
M. Gayda; L. Bosquet; F. Paill	2012	Effects of sauna alone versus postexercise sauna baths on short-term heart rate variability in patie	J Cardiopulm Rehabil Pre	Exclude	-	-	-	-	Yes	No	-
M. Gayda; F. Paillard; P. Sosn	2012	Effects of sauna alone and postexercise sauna baths on blood pressure and hemodynamic variable	J Clin Hypertens (Greenw)	Exclude	-	-	-	-	-	No	-
L. D. Gillespie; M. C. Roberts	2012	Interventions for preventing falls in older people living in the community	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. Gross; M. Forget; K. St Ge	2012	Patient education for neck pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
P. Hämläinen; A. Ikonen; A.	2012	The effects of heat stress on cognition in persons with multiple sclerosis	Mult Scler	Exclude	-	-	-	-	No	-	-
G. L. Hartley; A. D. Flouris;	2012	The effect of a covert manipulation of ambient temperature on heat storage and voluntary exercise	Physiol Behav	Exclude	-	-	-	-	No	-	-
Y. Heled; A. Peled; R. Yanovic	2012	Heat acclimation and performance in hypoxic conditions	Aviat Space Environ Med	Exclude	-	-	-	-	No	-	-
L. L. Hom; E. C. Lee; J. M. A	2012	Eleven days of moderate exercise and heat exposure induces acclimation without significant HSP	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
Y. Huang; T. Wu; L. Zeng; S.	2012	Chinese medicinal herbs for sore throat	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
O. Hue	2012	Living and training in a tropical environment: a challenge for aerobic exercise applied knowledge	West Indian Med J	Exclude	-	No	-	-	-	-	-
M. Iguchi; A. E. Littmann; S.	2012	Heat stress and cardiovascular, hormonal, and heat shock proteins in humans	J Athl Train	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

## Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
L. James	2012	Milk protein and the restoration of fluid balance after exercise	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Jimenez; J. O. Forrat; B. D	2012	Moderate exercise effects on orthostatic intolerance while wearing protective clothing	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
S. A. Kavouras; G. Armaoutis;	2012	Educational intervention on water intake improves hydration status and enhances exercise performance	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-	-	-	-
A. Maciejewska; M. Sawczuk;	2012	The PPARGC1A gene Gly482Ser in Polish and Russian athletes	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. V. Maltseva; E. A. Ryabenk	2012	Effect of exercise on the expression of HSPBP1, PGLYRP1, and HSPA1A genes in human leukocytes	Bull Exp Biol Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Martinez; D. Jones; D. Hod	2012	Blocking the beta-adrenergic system does not affect sweat gland function during heat acclimation	Auton Neurosci	Exclude	-	-	-	-	-	-	-	No	-	-
A. Mestre-Alfaro; M. D. Ferre	2012	Body temperature modulates the antioxidant and acute immune responses to exercise	Free Radic Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. Milisav; B. Poljsak; D. Supt	2012	Adaptive response, evidence of cross-resistance and its potential clinical use	Int J Mol Sci	Exclude	-	No	-	-	-	-	-	-	-	-
R. Mora-Rodriguez	2012	Influence of aerobic fitness on thermoregulation during exercise in the heat	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	-
R. Mora-Rodriguez; R. Aguad	2012	A standard blood bank donation alters the thermal and cardiovascular responses during subsequent exercise	Transfusion	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Mora-Rodriguez; N. Hamo	2012	Salt and fluid loading: effects on blood volume and exercise performance	Med Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. C. Niehaus; M. J. Angilletti;	2012	Predicting the physiological performance of ectotherms in fluctuating thermal environments	J Exp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Ohori; T. Nozawa; H. Ihori;	2012	Effect of repeated sauna treatment on exercise tolerance and endothelial function in patients with hypertension	Am J Cardiol	Exclude	-	-	-	-	-	-	No	-	-	-
M. J. Page; D. O'Connor; V. P	2012	Exercise and mobilisation interventions for carpal tunnel syndrome	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. C. Petersen; M. J. McKenn	2012	Infusion with the antioxidant N-acetylcysteine attenuates early adaptive responses to exercise in humans	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. Y. Pohl; L. E. Armstrong; D.	2012	Orthostatic hypotension after 10 days of exercise-heat acclimation and 28 hours of sleep loss	Aviat Space Environ Med	Exclude	-	No	-	-	-	-	-	-	-	-
S. Racinais; M. Mohr; M. Buc	2012	Individual responses to short-term heat acclimatisation as predictors of football performance in a professional team	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
A. Romberg; A. Ikonen; J. Rui	2012	The effects of heat stress on physical functioning in persons with multiple sclerosis	J Neurol Sci	Exclude	-	-	-	-	-	-	No	-	-	-
G. H. Ross; M. C. Sternquist	2012	Methamphetamine exposure and chronic illness in police officers: significant improvement with treatment	Toxicol Ind Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. L. Ruas; J. P. White; R. R	2012	A PGC-1α isoform induced by resistance training regulates skeletal muscle hypertrophy	Cell	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Salathé; C. Pellaton; L. Vall	2012	[Exertional heatstroke]	Rev Med Suisse	Exclude	-	-	No	-	-	-	-	-	-	-
T. G. Sazonova; O. S. Glazac	2012	[Adaptation to hypoxia and hyperoxia improves physical endurance: the role of reactive oxygen species]	Russ Fiziol Zh Im 1 M Sec	Exclude	-	-	No	-	-	-	-	-	-	-
L. Scheef; J. Jankowski; M. D	2012	An fMRI study on the acute effects of exercise on pain processing in trained athletes	Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. E. Sears; K. J. Kerr; R. I. E	2012	Arsenic, cadmium, lead, and mercury in sweat: a systematic review	J Environ Public Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Skein; R. Duffield; J. Cann	2012	Self-paced intermittent-sprint performance and pacing strategies following respective pre-cooling and non-cooling protocols	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
M. N. Soto Ruiz; E. Ezquerro	2012	[Pharmacological approaches to control of body temperature]	Rev Enferm	Exclude	-	-	No	-	-	-	-	-	-	-
N. K. Stepto; B. Benziame; G.	2012	Short-term intensified cycle training alters acute and chronic responses of PGC1α and Cytochrome c oxidase	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Summermatter; C. Handsch	2012	PGC-1α and exercise in the control of body weight	Int J Obes (Lond)	Exclude	-	No	-	-	-	-	-	-	-	-
M. E. Symonds; M. Pope; H. I	2012	Adipose tissue development during early life: novel insights into energy balance from small and large animal models	Proc Nutr Soc	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Tanaka; M. Shimoda; T. Ishi	2012	Influences of raised ambient temperature on cardiorespiratory performance in a 3-minute step test	J Hum Ergol (Tokyo)	Exclude	-	-	-	-	-	-	-	No	-	-
L. Taylor; A. R. Hillman; A. W	2012	Hypoxia-mediated prior induction of monocyte-expressed HSP72 and HSP32 provides protection against heat stress	Amino Acids	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Tobias; J. Diaz; C. Linares	2012	A cautionary note to prevent the heat effects on human health	Sci Total Environ	Exclude	-	No	-	-	-	-	-	-	-	-
B. Tsuji; Y. Honda; N. Fujii;	2012	Comparison of hyperthermic hyperventilation during passive heating and prolonged light and moderate intensity exercise	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
B. Amatya; F. Khan; L. La Ma	2013	Non pharmacological interventions for spasticity in multiple sclerosis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Amendola; K. J. Stuber;	2013	Nonoperative treatment for lumbar spinal stenosis with neurogenic claudication	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. F. Archer; F. Z. Stanczyk;	2013	Pharmacokinetics and adhesion of the Agile transdermal contraceptive patch (AG200-15) during exercise	Contraception	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Artopoulos; A. S. Juszczak;	2013	Three-dimensional processing deformation of three denture base materials	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. F. Bergeron	2013	Reducing sports heat illness risk	Pediatr Rev	Exclude	-	No	-	-	-	-	-	-	-	-
C. Brade; B. Dawson; K. Wall	2013	Effect of precooling and acclimation on repeat-sprint performance in heat	J Sports Sci	Exclude	-	-	-	-	-	-	-	No	-	-
M. B. Brearley; M. F. Heaney;	2013	Physiological responses of medical team members to a simulated emergency in tropical field conditions	Prehosp Disaster Med	Exclude	-	No	-	-	-	-	-	-	-	-
M. Buchheit; S. Racinais; J. B	2013	Adding heat to the live-high train-low altitude model: a practical insight from professional football players	Br J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
M. J. Buller; W. J. Tharion; S.	2013	Estimation of human core temperature from sequential heart rate observations	Physiol Meas	Exclude	-	No	-	-	-	-	-	-	-	-
P. C. Castle; B. P. Kularatne;	2013	Partial heat acclimation of athletes with spinal cord lesion	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
C. J. Cook; C. M. Beaven	2013	Individual perception of recovery is related to subsequent sprint performance	Br J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
N. J. Crystal; D. H. Townson;	2013	Effect of cryotherapy on muscle recovery and inflammation following a bout of damaging exercise	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. A. Dyer; N. D. Harris; E. Je	2013	Activity levels after pulmonary rehabilitation - what really happens?	Physiotherapy	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. P. Earnest; N. M. Johannse	2013	Dose effect of cardiorespiratory exercise on metabolic syndrome in postmenopausal women	Am J Cardiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. P. Earnest; M. Lupo; J. Thi	2013	Interval training in men at risk for insulin resistance	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. R. Ely; K. J. Sollandek; S. N	2013	Hypohydration and acute thermal stress affect mood state but not cognition or dynamic postural balance	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
Y. Epstein; Y. Heled; I. Ketko;	2013	The effect of air permeability characteristics of protective garments on the induced physiological responses during heat stress	Ann Occup Hyg	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Folkesson; A. L. Mackey;	2013	The expression of heat shock protein in human skeletal muscle: effects of muscle fibre phenotype and exercise	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. B. Fortes; U. Di Felice; A.	2013	Muscle-damaging exercise increases heat strain during subsequent exercise heat stress	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
T. Gillum; M. Kuennen; C. Ge	2013	Sex differences in heat shock protein 72 expression in peripheral blood mononuclear cells to acute heat stress	Int J Endocrinol Metab	Exclude	-	-	-	-	-	-	-	No	-	-
O. Girard; D. J. Bishop; S. Rai	2013	Hot conditions improve power output during repeated cycling sprints without modifying neuromuscular fatigue	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
D. Hodge; D. Jones; R. Martin	2013	Time course of the attenuation of sympathetic nervous activity during active heat acclimation	Auton Neurosci	Exclude	-	-	-	-	-	-	-	No	-	-
F. Item; A. Nocito; S. Thöny;	2013	Combined whole-body vibration, resistance exercise, and sustained vascular occlusion increases forearm muscle mass	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
\*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
L. Jiang; L. Deng; T. Wu	2013	Chinese medicinal herbs for influenza	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. C. Johnson; F. W. Kolkhors	2013	Specific exercise heat stress protocol for a triathlete's return from exertional heat stroke	Curr Sports Med Rep	Exclude	-	No	-	-	-	-	-	-	-	-
B. J. Kim; Y. Seo; J. H. Kim; I	2013	Effect of caffeine intake on finger cold-induced vasodilation	Wilderness Environ Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Kishore; K. Ray; J. P. Anan	2013	Tyrosine ameliorates heat induced delay in event related potential P300 and contingent negative v	Brain Cogn	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. Kroeling; A. Gross; N. Graf	2013	Electrotherapy for neck pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Larose; H. E. Wright; J. Sta	2013	Whole body heat loss is reduced in older males during short bouts of intermittent exercise	Am J Physiol Regul Integ	Exclude	-	-	-	-	-	-	-	No	-	-
J. F. Lee; S. R. Brown; A. P. L	2013	Effect of an aerodynamic helmet on head temperature, core temperature, and cycling power comp	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Li; R. G. McGee; G. K. Ish	2013	Interventions for the symptoms and signs resulting from jellyfish stings	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Lipp; G. Lusardi	2013	Systemic antimicrobial prophylaxis for percutaneous endoscopic gastrostomy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. L. Liu; L. Z. Xie; J. Zhu; G	2013	Herbal medicines for fatty liver diseases	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. E. López-Diazguerrero; V.	2013	[Hormesis: What doesn't kill you makes you stronger]	Gae Med Mex	Exclude	-	-	No	-	-	-	-	-	-	-
R. J. Maughan; N. L. Meyer	2013	Hydration during intense exercise training	Nestle Nutr Inst Workshop	Exclude	-	No	-	-	-	-	-	-	-	-
B. P. McDermott; D. J. Casa; I	2013	Thermoregulation and stress hormone recovery after exercise dehydration: comparison of rehydra	J Athl Train	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. M. McLellan; H. A. Daanen	2013	Encapsulated environment	Compr Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. J. McNamara; Z. J. McKeo	2013	Water-based exercise training for chronic obstructive pulmonary disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
U. R. Mikkelsen; G. Paulsen; I	2013	The heat shock protein response following eccentric exercise in human skeletal muscle is unaffec	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
R. Mora-Rodriguez; N. Hamoi	2013	Fluid ingestion is more effective in preventing hyperthermia in aerobically trained than untrained	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	-	No	-	-
C. X. Muñoz; E. C. Johnson; J	2013	Assessment of hydration biomarkers including salivary osmolality during passive and active dehy	Eur J Clin Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. O'Brien; B. S. Cadarette	2013	Quantification of head sweating during rest and exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
E. Perrier; A. Demazières; N.	2013	Circadian variation and responsiveness of hydration biomarkers to changes in daily water intake	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. L. Persianova-Dubrova; N	2013	[Thermal therapy for the management of cardiovascular pathology]	Vopr Kurortol Fizioter Lec	Exclude	-	-	No	-	-	-	-	-	-	-
N. Psilander; P. Frank; M. Flo	2013	Exercise with low glycogen increases PGC-1α gene expression in human skeletal muscle	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Roelands; J. de Koning; C.	2013	Neurophysiological determinants of theoretical concepts and mechanisms involved in pacing	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Sanchez-Gomar	2013	Sestrins: novel antioxidant and AMPK-modulating functions regulated by exercise?	J Cell Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Sawa; H. Ihara; T. Ida; S. Fi	2013	Formation, signaling functions, and metabolisms of nitrated cyclic nucleotide	Nitric Oxide	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. E. Schriener; K. Lee; S. Tru	2013	Extension of Drosophila lifespan by Rhodiola rosea through a mechanism independent from dieta	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. Shen; T. Wang; C. Li	2013	[Study on real-time wearable monitoring system for human heat and cold stresses]	Sheng Wu Yi Xue Gong C	Exclude	-	-	No	-	-	-	-	-	-	-
R. J. Shephard	2013	Ramadan and sport: minimizing effects upon the observant athlete	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Sobajima; T. Nozawa; H. I	2013	Repeated sauna therapy improves myocardial perfusion in patients with chronically occluded coro	Int J Cardiol	Exclude	-	-	-	-	-	-	No	-	-	-
J. M. Stapleton; J. E. Yardley;	2013	Whole-body heat loss during exercise in the heat is not impaired in type 1 diabetes	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	-
R. L. Stearns; L. N. Belval; D.	2013	Two environmental symptoms questionnaires during 10 days of exercise-heat acclimation	Aviat Space Environ Med	Exclude	-	-	-	-	-	-	-	No	-	-
T. Stellingwerff	2013	Contemporary nutrition approaches to optimize elite marathon performance	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-	-	-	-
G. Sun; S. Qian; Q. Jiang; K.	2013	Hyperthermia-induced disruption of functional connectivity in the human brain network	PLoS One	Exclude	-	-	-	-	-	-	-	No	-	-
J. Tesarz; A. Gerhardt; K. Schi	2013	Alterations in endogenous pain modulation in endurance athletes: an experimental study using qu	Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Tian; X. Guo; X. Wang; Z.	2013	Chromium picolinate supplementation for overweight or obese adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. E. Turner; S. J. Bennett; J. P	2013	The antioxidant enzyme peroxiredoxin-2 is depleted in lymphocytes seven days after ultra-endura	Free Radic Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Utsuki	2013	Automatic control system of brain temperature by air-surface cooling for therapeutic hypothermia	Annu Int Conf IEEE Eng I	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. G. Versey; S. L. Halson; B.	2013	Water immersion recovery for athletes: effect on exercise performance and practical recommenda	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
Z. Vesić; M. Vukasinović-Vesi	2013	The effects of acclimatization on blood clotting parameters in exertional heat stress	Vojnosanit Pregl	Exclude	-	-	-	-	-	-	-	No	-	-
J. P. Vogel; H. M. West; T. Do	2013	Titrated oral misoprostol for augmenting labour to improve maternal and neonatal outcomes	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Wang; C. Gao; K. Kuklane;	2013	Effects of various protective clothing and thermal environments on heat strain of unacclimated m	Ind Health	Exclude	-	-	-	-	-	-	-	No	-	-
A. T. White; T. A. Vanhantsma;	2013	Effect of passive whole body heating on central conduction and cortical excitability in multiple sc	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	-
T. Wijayanto; S. Toramoto; Y.	2013	Passive heat exposure induced by hot water leg immersion increased oxyhemoglobin in pre-front	Int J Biometeorol	Exclude	-	-	-	-	-	-	-	No	-	-
H. E. Wright; J. Larose; T. M.	2013	Do older firefighters show long-term adaptations to work in the heat?	J Occup Environ Hyg	Exclude	-	No	-	-	-	-	-	-	-	-
F. Yamazaki	2013	Effectiveness of exercise-heat acclimation for preventing heat illness in the workplace	J uoeh	Exclude	-	-	-	-	-	-	-	No	-	-
P. Alderson; G. Campbell; A.	2014	Thermal insulation for preventing inadvertent perioperative hypothermia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. F. Alghannam; K. Tsintzas;	2014	Post-Exercise Protein Trial: Interactions between Diet and Exercise (PEPTIDE): study protocol fo	Trials	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Baar	2014	Nutrition and the adaptation to endurance training	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
M. Baillet; S. Le Bris; O. Hue	2014	Fluid replacement strategy during a 27-Km trail run in hot and humid conditions	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
E. Bandeira-Echtler; K. Berge	2014	Levothyroxine or minimally invasive therapies for benign thyroid nodules	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Beggs; Z. H. Wong; S. Kaul	2014	High-flow nasal cannula therapy for infants with bronchiolitis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. R. Beltran Valls; I. Dimaur	2014	Explosive type of moderate-resistance training induces functional, cardiovascular, and molecular	Age (Dordr)	Exclude	-	No	-	-	-	-	-	-	-	-
M. F. Bergeron	2014	Hydration and thermal strain during tennis in the heat	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
M. F. Bergeron	2014	Heat stress and thermal strain challenges in running	J Orthop Sports Phys Ther	Exclude	-	No	-	-	-	-	-	-	-	-
S. Best; M. Thompson; C. Cai	2014	Exercise-heat acclimation in young and older trained cyclists	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
J. Bidonde; A. J. Busch; S. C.	2014	Aquatic exercise training for fibromyalgia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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D. P. Born; M. W. Hoppe; N. I. 2014	2014	[Adaptive mechanisms and behavioural recommendations: playing football in heat, cold and high altitude]	Sportverletz Sportschaden	Exclude	-	-	-	-	-	-	-
L. Bottoms; M. Price 2014	2014	The effect of arm training on thermoregulatory responses and calf volume during upper body exercise	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
M. Brearley; I. Norton; D. Kin 2014	2014	Responses of elite road motorcyclists to racing in tropical conditions: a case study	Int J Sports Physiol Perform	Exclude	-	No	-	-	-	-	-
H. Brinkmeier; K. Ohlendorf 2014	2014	Chaperoning heat shock proteins: proteomic analysis and relevance for normal and dystrophin-deficient muscle	Proteomics Clin Appl	Exclude	Yes	-	-	-	-	-	-
K. E. A. Burns; F. Lellouche; J. 2014	2014	Automated weaning and spontaneous breathing trial systems versus non-automated weaning strategies for weaning time	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. E. A. Burns; F. Lellouche; J. 2014	2014	Automated weaning and SBT systems versus non-automated weaning strategies for weaning time	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. A. Carlson; D. P. Ferguson; J. 2014	2014	Physiological strain of stock car drivers during competitive racing	J Therm Biol	Exclude	-	No	-	-	-	-	-
S. Chalmers; A. Esterman; R. 2014	2014	Short-term heat acclimation training improves physical performance: a systematic review, and experimental validation	Sports Med	Exclude	-	No	-	-	-	-	-
K. J. Chen; T. H. Chen; Y. M. 2014	2014	High-volume plasma exchange in a patient with acute liver failure due to non-exertional heat stroke	J Clin Apher	Exclude	-	No	-	-	-	-	-
M. A. Cleary; M. G. Toy; R. N. 2014	2014	Thermoregulatory, cardiovascular, and perceptual responses to intermittent cooling during exercise	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
J. N. Copley; G. K. Sakellariou 2014	2014	Lifelong training preserves some redox-regulated adaptive responses after an acute exercise stimulus	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
J. Corbett; R. A. Neal; H. C. L. 2014	2014	Adaptation to heat and exercise performance under cooler conditions: a new hot topic	Sports Med	Exclude	-	No	-	-	-	-	-
R. J. Costa; M. J. Crookford; J. 2014	2014	Heat acclimation responses of an ultra-endurance running group preparing for hot desert-based competition	Eur J Sport Sci	Exclude	-	No	-	-	-	-	-
M. N. Cramer; O. Jay 2014	2014	Selecting the correct exercise intensity for unbiased comparisons of thermoregulatory responses between conditions	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. S. Cuddy; W. S. Haines; B. C. 2014	2014	A reduced core to skin temperature gradient, not a critical core temperature, affects aerobic capacity	J Therm Biol	Exclude	-	-	-	-	No	-	-
K. T. Cumming; T. Raastad; G. 2014	2014	Effects of vitamin C and E supplementation on endogenous antioxidant systems and heat shock protein expression	Physiol Rep	Exclude	-	-	-	-	No	-	-
L. G. Dean; A. Breslin; E. Z. F. 2014	2014	Is it hot in here? Thermoregulation and homeostasis through an exercise activity	Adv Physiol Educ	Exclude	-	No	-	-	-	-	-
S. Derry; P. R. L. Matthews; P. 2014	2014	Salicylate-containing rubefacients for acute and chronic musculoskeletal pain in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. C. Dumville; C. Munson; J. 2014	2014	Negative pressure wound therapy for partial-thickness burns	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. R. Ely; A. T. Lovering; M. J. 2014	2014	Heat acclimation and cross tolerance to hypoxia: Bridging the gap between cellular and systemic responses	Temperature (Austin)	Exclude	-	No	-	-	-	-	-
V. E. Fernández-Ellias; A. Mar 2014	2014	Validity of hydration non-invasive indices during the weightcutting and official weigh-in for Olympic athletes	PLoS One	Exclude	Yes	-	-	-	-	-	-
N. T. Frankenberg; G. D. Lam 2014	2014	Small heat shock proteins translocate to the cytoskeleton in human skeletal muscle following eccentric exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Fu; W. G. Weng; H. Y. Yua 2014	2014	Quantitative assessment of the relationship between radiant heat exposure and protective performance	J Hazard Mater	Exclude	Yes	-	-	-	-	-	-
A. T. Garrett; N. G. Goossens; J. 2014	2014	Short-term heat acclimation is effective and may be enhanced rather than impaired by dehydration	Am J Hum Biol	Exclude	-	-	-	-	No	-	-
H. Gatterer; K. Schenk; L. Lar 2014	2014	Bioimpedance identifies body fluid loss after exercise in the heat: a pilot study with body cooling	PLoS One	Exclude	Yes	-	-	-	-	-	-
O. R. Gibson; A. Dennis; T. Pi 2014	2014	Extracellular Hsp72 concentration relates to a minimum endogenous criteria during acute exercise	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
O. Girard; R. J. Christian; S. R. 2014	2014	Heat stress does not exacerbate tennis-induced alterations in physical performance	Br J Sports Med	Exclude	-	No	-	-	-	-	-
O. Girard; S. Racinais; J. D. P. 2014	2014	Tennis in hot and cool conditions decreases the rapid muscle torque production capacity of the knee	Br J Sports Med	Exclude	-	-	-	-	No	-	-
P. D. Glasgow; R. Ferris; C. M. 2014	2014	Cold water immersion in the management of delayed-onset muscle soreness: is dose important?	J Phys Ther Sport	Exclude	Yes	-	-	-	-	-	-
A. Y. Goharizi; R. Kwong; R. 2014	2014	Development of robust/predictive control strategies for image-guided ablative treatments using a robotic system	Int J Hyperthermia	Exclude	Yes	-	-	-	-	-	-
E. Grazioli; I. Dimauro; N. M. 2014	2014	SFRP-1 Young Investigator Award: β-crystallin modulation after acute exercise in skeletal muscle	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
D. Gryka; W. Pilch; M. Szarek 2014	2014	The effect of sauna bathing on lipid profile in young, physically active, male subjects	Int J Occup Med Environ Hyg	Exclude	-	-	-	-	No	-	-
J. A. Hashmi; J. Kong; R. Spai 2014	2014	Functional network architecture predicts psychologically mediated analgesia related to treatment of acute pain	J Neurosci	Exclude	Yes	-	-	-	-	-	-
B. A. Holliss; R. J. Burden; A. 2014	2014	Eight weeks of intermittent hypoxic training improves submaximal physiological variables in highly trained athletes	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
O. Hue; S. Henri; M. Baillot; J. 2014	2014	Thermoregulation, hydration and performance over 6 days of trail running in the tropics	Int J Sports Med	Exclude	-	No	-	-	-	-	-
M. Ihsan; G. Watson; H. C. Cl 2014	2014	Postexercise muscle cooling enhances gene expression of PGC-1α	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
S. Iwase; Y. Kawahara; N. Nis 2014	2014	Effects of isotonic and isometric exercises with mist sauna bathing on cardiovascular, thermoregulatory and perceptual responses	Int J Biometeorol	Exclude	-	-	-	-	No	-	-
L. J. James; L. Mattin; P. Aldi 2014	2014	Effect of whey protein isolate on rehydration after exercise	Amino Acids	Exclude	Yes	-	-	-	-	-	-
D. Jovanović; R. Karkalić; S. J. 2014	2014	Physiological tolerance to uncompensated heat stress in soldiers: effects of various types of body cooling	Vojnosanit Pregl	Exclude	Yes	-	-	-	-	-	-
T. Kaldur; J. Kals; V. Ööpik; N. 2014	2014	Effects of heat acclimation on changes in oxidative stress and inflammation caused by endurance exercise	Oxid Med Cell Longev	Exclude	-	-	-	-	No	-	-
D. Kendrick; A. Kumar; H. Ca 2014	2014	Exercise for reducing fear of falling in older people living in the community	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
H. Kikuchi; N. Shiozawa; S. T. 2014	2014	Effect of repeated Waon therapy on exercise tolerance and pulmonary function in patients with chronic obstructive pulmonary disease	Int J Chron Obstruct Pulm Dis	Exclude	-	-	-	-	No	-	-
M. S. Kovač; L. B. Baker 2014	2014	Recovery interventions and strategies for improved tennis performance	Br J Sports Med	Exclude	-	No	-	-	-	-	-
F. Kunath; H. R. Grobe; G. Rü 2014	2014	Non-steroidal antiandrogen monotherapy compared with luteinising hormone-releasing hormone agonist monotherapy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. J. Lee; E. L. Emery-Sinclair 2014	2014	The impact of submaximal exercise during heat and/or hypoxia on the cardiovascular and metabolic responses	Extrem Physiol Med	Exclude	-	-	-	-	No	-	-
K. Levels; J. de Koning; I. Bri 2014	2014	Effects of radiant heat exposure on pacing pattern during a 15-km cycling time trial	J Sports Sci	Exclude	-	-	-	-	No	-	-
Y. Liu; J. P. Liu; Y. Xia 2014	2014	Chinese herbal medicines for treating osteoporosis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. Macartney; A. Heywood; P. 2014	2014	Vaccines for post-exposure prophylaxis against varicella (chickenpox) in children and adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
G. W. McGarr; G. L. Hartley; J. 2014	2014	Neither short-term sprint nor endurance training enhances thermal response to exercise in a hot environment	J Occup Environ Hyg	Exclude	-	-	-	-	No	-	-
T. Miles; N. Johnson 2014	2014	Vaginal dilator therapy for women receiving pelvic radiotherapy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. J. Murton; R. Billeter; F. B. 2014	2014	Transient transcriptional events in human skeletal muscle at the outset of concentric resistance exercise	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
G. Musumeci; F. Maria Trovat 2014	2014	Effects of dietary extra-virgin olive oil on oxidative stress resulting from exhaustive exercise in rats	Acta Histochem	Exclude	Yes	-	-	-	-	-	-
V. Oopik; S. Timpmann; K. Ki 2014	2014	Heat acclimation decreases the growth hormone response to acute constant-load exercise in the heat	Growth Horm IGF Res	Exclude	-	-	-	-	No	-	-
M. J. Patterson; J. M. Stocks; J. 2014	2014	Whole-body fluid distribution in humans during dehydration and recovery, before and after humid heat exposure	Acta Physiol (Oxf)	Exclude	-	-	-	-	No	-	-
J. D. Périard; S. Racinais; W. J. 2014	2014	Coping with heat stress during match-play tennis: does an individualised hydration regimen enhance performance?	Br J Sports Med	Exclude	-	No	-	-	-	-	-
B. M. Piche; S. M. Stankorb; J. 2014	2014	Attitudes, beliefs, and behaviors of active duty soldiers attending the ArmyMOVE! weight management program	Mil Med	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
W. Pilch; Z. Szygula; A. K. Ty	2014	Disturbances in pro-oxidant-antioxidant balance after passive body overheating and after exercise	PLoS One	Exclude	-	-	-	-	No	-	-
D. B. Pyne; J. H. Guy; A. M. I	2014	Managing heat and immune stress in athletes with evidence-based strategies	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-
S. Racinais; M. Buchheit; J. B	2014	Physiological and performance responses to a training camp in the heat in professional Australian	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
L. W. Raymond; T. A. Barring	2014	A thermal stress treadmill walk for clinic evaluation of candidates for hazardous materials (HazM)	Int J Occup Saf Ergon	Exclude	Yes	-	-	-	-	-	-
R. A. Shanely; D. C. Nieman;	2014	Evaluation of Rhodiola rosea supplementation on skeletal muscle damage and inflammation in ru	Brain Behav Immun	Exclude	Yes	-	-	-	-	-	-
J. Smoljanic; N. B. Morris; S.	2014	Running economy, not aerobic fitness, independently alters thermoregulatory responses during tre	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
A. P. Soares; R. B. Andriolo; /	2014	Botulinum toxin for myofascial pain syndromes in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. Stotz; K. Rapp; J. Oksa; D.	2014	Effect of a brief heat exposure on blood pressure and physical performance of older women living	Int J Environ Res Public H	Exclude	Yes	-	-	-	No	-	-
O. Stuve; E. Marder; A. Okai;	2014	Heat exposure and bicycling trigger recurrent aseptic meningitis: a case report	BMC Neurol	Exclude	-	No	-	-	-	-	-
P. Sutkowy; A. Woźniak; T. B	2014	The effect of a single Finnish sauna bath after aerobic exercise on the oxidative status in healthy n	Scand J Clin Lab Invest	Exclude	-	-	-	-	No	-	-
S. H. Sveaas; I. J. Berg; S. A.	2014	Efficacy of high intensity exercise on disease activity and cardiovascular risk in active axial spon	PLoS One	Exclude	-	-	-	-	No	-	-
D. R. Thomson; H. Sadideen;	2014	Wound drainage following groin dissection for malignant disease in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. E. Thorne; P. A. Fisher; T.	2014	Ambulance call-outs and response times in Birmingham and the impact of extreme weather and cl	Emerg Med J	Exclude	Yes	-	-	-	-	-	-
A. Torrego; I. Solá; A. M. Mu	2014	Bronchial thermoplasty for moderate or severe persistent asthma in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. A. Volterman; J. Obeid; B.	2014	Effect of milk consumption on rehydration in youth following exercise in the heat	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
M. Waldron	2014	The reliability and adaptive responses of gross efficiency in hot ambient conditions	Int J Sports Med	Exclude	-	-	-	-	No	-	-
Y. F. Wang; H. F. Que; Y. J. W	2014	Chinese herbal medicines for treating skin and soft-tissue infections	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
D. J. West; C. J. Cook; K. A. S	2014	Profiling the time-course changes in neuromuscular function and muscle damage over two consec	J Sci Med Sport	Exclude	Yes	-	-	-	-	-	-
A. C. White; R. M. Salgado; S	2014	Does heat acclimation improve exercise capacity at altitude? A cross-tolerance model	Int J Sports Med	Exclude	-	No	-	-	-	-	-
N. Williams; S. J. Wickes; K.	2014	Preparation for and physiological responses to competing in the Marathon des Sables: a case repo	J Sports Med Phys Fitness	Exclude	-	No	-	-	-	-	-
G. Wilson; B. Drust; J. P. Mor	2014	Weight-making strategies in professional jockeys: implications for physical and mental health and	Sports Med	Exclude	-	No	-	-	-	-	-
H. E. Wright; J. Larose; T. M.	2014	Moderate-intensity intermittent work in the heat results in similar low-level dehydration in young	J Occup Environ Hyg	Exclude	-	-	-	-	No	-	-
H. E. Wright-Beatty; T. M. Mc	2014	Inflammatory responses of older firefighters to intermittent exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
P. M. Young; S. Partington; M	2014	Stressors and coping strategies of U.K. firefighters during on-duty incidents	Stress Health	Exclude	Yes	-	-	-	-	-	-
T. Zeng; J. J. Li; D. Q. Wang;	2014	Effects of heat stress on antioxidant defense system, inflammatory injury, and heat shock proteins	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
L. Zhang; Y. C. Bao	2014	Effect of acclimation training on physiological changes in a randomized controlled trial in hot-hu	Zhongguo Ying Yong She	Exclude	-	-	-	-	No	-	-
M. Zuhl; S. Schneider; K. Lan	2014	Exercise regulation of intestinal tight junction proteins	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
T. Amano; Y. Inoue; S. Koga;	2015	Influence of exercise training with thigh compression on heat-loss responses	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
F. T. Amorim; I. T. Fonseca; C	2015	Insights into the role of heat shock protein 72 to whole-body heat acclimation in humans	Temperature (Austin)	Exclude	-	No	-	-	-	-	-
Y. Atomi	2015	Gravitational Effects on Human Physiology	Subcell Biochem	Exclude	Yes	-	-	-	-	-	-
A. Atwan; J. R. Ingram; R. Ab	2015	Oral fumaric acid esters for psoriasis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. D. Barberio; D. J. Elmer; F	2015	Systemic LPS and inflammatory response during consecutive days of exercise in heat	Int J Sports Med	Exclude	-	-	-	-	No	-	-
R. J. Berg; K. Inaba; M. Sulliv	2015	The impact of heat stress on operative performance and cognitive function during simulated lapar	Surgery	Exclude	Yes	-	-	-	-	-	-
C. C. Bongers; D. H. Thijssen;	2015	Precooling and percooling (cooling during exercise) both improve performance in the heat: a met	Br J Sports Med	Exclude	-	No	-	-	-	-	-
C. D. Bradford; S. J. Lucas; D	2015	Swimming in warm water is ineffective in heat acclimation and is non-ergogenic for swimmers	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
M. Brazaitis; N. Eimantas; L.	2015	Two strategies for the acute response to cold exposure but one strategy for the response to heat str	Int J Hyperthermia	Exclude	-	-	-	-	No	-	-
L. Bricker; N. Medley; J. J. Pr	2015	Routine ultrasound in late pregnancy (after 24 weeks' gestation)	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
F. Brocherie; O. Girard; A. Fai	2015	Influence of weather, rank, and home advantage on football outcomes in the Gulf region	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
F. Brocherie; G. P. Millet	2015	Is the Wet-Bulb Globe Temperature (WBGT) Index Relevant for Exercise in the Heat?	Sports Med	Exclude	Yes	-	-	-	-	-	-
G. Campbell; P. Alderson; A. I	2015	Warming of intravenous and irrigation fluids for preventing inadvertent perioperative hypothermi	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. K. W. Chan; A. M. Glenny;	2015	Interventions for the treatment of oral and oropharyngeal cancers: targeted therapy and immunoth	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
E. Chauhan; A. Bali; N. Singh	2015	Cross stress adaptation: Phenomenon of interactions between homotypic and heterotypic stressors	Life Sci	Exclude	-	No	-	-	-	-	-
H. Chiroma; S. Abdul-kareem;	2015	Global Warming: Predicting OPEC Carbon Dioxide Emissions from Petroleum Consumption Usii	PLoS One	Exclude	Yes	-	-	-	-	-	-
J. N. Cobley; P. R. Moutl; J. G	2015	Exercise improves mitochondrial and redox-regulated stress responses in the elderly: better late	Biogerontology	Exclude	Yes	-	-	-	-	-	-
R. A. Corney; C. Sunderland;	2015	The effect of hydration status on appetite and energy intake	J Sports Sci	Exclude	Yes	-	-	-	-	-	-
M. Couto; P. Santos; D. Silva;	2015	Exhaled breath temperature in elite swimmers: The effects of a training session in adolescents wit	Pediatr Allergy Immunol	Exclude	-	-	-	-	No	-	-
M. V. De Carvalho; M. T. De /	2015	The temperature of water ingested ad libitum does not influence performance during a 40-km self	J Sports Med Phys Fitness	Exclude	-	-	-	-	-	-	-
A. Dolei; M. B. Fortes; F. S. W	2015	Repeated muscle damage blunts the increase in heat strain during subsequent exercise heat stress	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
A. G. Dulloo; Y. Schutz	2015	Adaptive Thermogenesis in Resistance to Obesity Therapies: Issues in Quantifying Thrifty Ener	Curr Obes Rep	Exclude	Yes	-	-	-	-	-	-
J. C. Dumville; E. McFarlane;	2015	Preoperative skin antiseptics for preventing surgical wound infections after clean surgery	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Eccleston; L. Hearn; A. C.	2015	Psychological therapies for the management of chronic neuropathic pain in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. G. Farmer	2015	The Evolution of Unidirectional Pulmonary Airflow	Physiology (Bethesda)	Exclude	Yes	-	-	-	-	-	-
D. Filingeri; D. Fournet; S. H	2015	Mild evaporative cooling applied to the torso provides thermoregulatory benefits during running i	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
K. R. Fox; P. W. Ku; M. Hills	2015	Objectively assessed physical activity and lower limb function and prospective associations with	Age Ageing	Exclude	Yes	-	-	-	-	-	-
H. Franke; G. Fryer; R. Ostelo	2015	Muscle energy technique for non-specific low-back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
N. Fujii; B. Tsuji; Y. Honda; N	2015	Effect of short-term exercise-heat acclimation on ventilatory and cerebral blood flow responses to	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
				Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?				
O. R. Gibson; J. A. Mee; J. A. 2015	2015	Isothermic and fixed intensity heat acclimation methods induce similar heat adaptation following	J Therm Biol	Exclude	-	No	-	-	-	-	-
O. R. Gibson; G. Turner; J. A. 2015	2015	Heat acclimation attenuates physiological strain and the HSP72, but not HSP90α, mRNA responses	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-
S. K. Gill; A. Teixeira; L. Ram 2015	2015	Circulatory endotoxin concentration and cytokine profile in response to exertional-heat stress during	Exerc Immunol Rev	Exclude	-	-	-	-	-	-	-
O. Girard; F. Brocherie; D. J. 1.2015	2015	Sprint performance under heat stress: A review	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
E. Gnaiger; R. Boushel; H. Sø 2015	2015	Mitochondrial coupling and capacity of oxidative phosphorylation in skeletal muscle of Inuit and	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
M. C. Gomez-Cabrera; A. Sali 2015	2015	Redox modulation of mitochondriogenesis in exercise. Does antioxidant supplementation blunt the	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
C. J. Gronlund; V. J. Berrocal; 2015	2015	Vulnerability to extreme heat by socio-demographic characteristics and area green space among the	Environ Res	Exclude	Yes	-	-	-	-	-	-
A. Gross; T. M. Kay; J. P. Paq 2015	2015	Exercises for mechanical neck disorders	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. Gross; P. Langevin; S. J. Bi 2015	2015	Manipulation and mobilisation for neck pain contrasted against an inactive control or another acti	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. T. Gruss; D. Schmitt 2015	2015	The evolution of the human pelvis: changing adaptations to bipedalism, obstetrics and thermoreg	Philos Trans R Soc Lond I	Exclude	Yes	-	-	-	-	-	-
D. M. Gubernot; G. B. Anders 2015	2015	Characterizing occupational heat-related mortality in the United States, 2000-2010: an analysis us	Am J Ind Med	Exclude	Yes	-	-	-	-	-	-
J. H. Guy; G. B. Deakin; A. M 2015	2015	Adaptation to hot environmental conditions: an exploration of the performance basis, procedures i	Sports Med	Exclude	-	No	-	-	-	-	-
H. H. G. Handoll; J. Elliott 2015	2015	Rehabilitation for distal radial fractures in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. Hooper; A. Abdelhamid; N. 2015	2015	Clinical symptoms, signs and tests for identification of impending and current water-loss dehydra	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Horne; N. Thomas; C. Mc 2015	2015	Patient-directed therapy during in-patient stroke rehabilitation: stroke survivors' views of feasibili	Disabil Rehabil	Exclude	Yes	-	-	-	-	-	-
Z. Jastrzębski; M. Zychowska 2015	2015	Effects of 6-week specific low-intensity training on selected aerobic capacity parameters and HSP	Genet Mol Res	Exclude	Yes	-	-	-	-	-	-
L. Jin; P. K. Park; K. A. Hong; 2015	2015	Effect of aluminized fabrics on radiant protective performance of fire proximity suit materials	Ann Occup Hyg	Exclude	Yes	-	-	-	-	-	-
A. Karlsen; L. Nybo; S. J. Not 2015	2015	Time course of natural heat acclimatization in well-trained cyclists during a 2-week training camp	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
A. Karlsen; S. Racinais; M. V. 2015	2015	Heat acclimatization does not improve VO2max or cycling performance in a cool climate in train	Scand J Med Sci Sports	Exclude	-	-	-	-	-	No	-
L. Ke; G. Yan; Z. Wang; S. Ya 2015	2015	Design and assessment of novel artificial anal sphincter with adaptive transcuteaneous energy trans	J Med Eng Technol	Exclude	Yes	-	-	-	-	-	-
T. Keene; M. Brearley; B. Bov 2015	2015	Accuracy of Tympanic Temperature Measurement in Firefighters Completing a Simulated Structu	Prehosp Disaster Med	Exclude	Yes	-	-	-	-	-	-
S. Keiser; D. Flück; F. Hüppin 2015	2015	Heat training increases exercise capacity in hot but not in temperate conditions: a mechanistic cou	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	No	-
M. Kumar Singh; P. V. Janard 2015	2015	Molecular characterization and expression analysis of hsp60 gene homologue of sheep blowfly, L	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
E. R. Kuras; D. M. Hondula; J 2015	2015	Heterogeneity in individually experienced temperatures (IETs) within an urban neighborhood: ins	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
B. Larsen; R. Snow; G. Vincet 2015	2015	Multiple Days of Heat Exposure on Firefighters' Work Performance and Physiology	PLoS One	Exclude	-	-	-	-	-	No	-
S. Laxminarayan; M. J. Buller 2015	2015	Human Core Temperature Prediction for Heat-Injury Prevention	IEEE J Biomed Health Inf	Exclude	-	No	-	-	-	-	-
B. J. Lee; R. W. Mackenzie; V 2015	2015	Human monocyte heat shock protein 72 responses to acute hypoxic exercise after 3 days of exerci	Biomed Res Int	Exclude	-	-	-	-	-	No	-
J. K. Lee; R. W. Kenefick; S. 1. 2015	2015	Novel Cooling Strategies for Military Training and Operations	J Strength Cond Res	Exclude	-	No	-	-	-	-	-
S. Lee; H. Fujimura; Y. Shimo 2015	2015	Verification of impact of morning showering and mist sauna bathing on human physiological func	Int J Biometeorol	Exclude	-	-	-	-	-	No	-
C. A. Leicht; K. Kouda; Y. Uri 2015	2015	Hot water immersion induces an acute cytokine response in cervical spinal cord injury	Eur J Appl Physiol	Exclude	-	-	-	-	-	No	-
N. A. Lewis; G. Howatson; K. 2015	2015	Alterations in redox homeostasis in the elite endurance athlete	Sports Med	Exclude	Yes	-	-	-	-	-	-
S. D. Liddle; V. Pennick 2015	2015	Interventions for preventing and treating low-back and pelvic pain during pregnancy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. A. Loeppky 2015	2015	Plasma volume after heat acclimation: Variations due to season, fitness and methods of measure	Acta Physiol Hung	Exclude	-	No	-	-	-	-	-
J. Madrigano; K. Ito; S. Johns 2015	2015	A Case-Only Study of Vulnerability to Heat Wave-Related Mortality in New York City (2000-201	Environ Health Perspect	Exclude	Yes	-	-	-	-	-	-
F. E. Marino 2015	2015	Time trial performance and pacing in heat is determined by rate of heat gain	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
A. J. Marti-Carvajal; C. Gluu 2015	2015	Growth factors for treating diabetic foot ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
R. Matsuura; T. Arimitsu; T. Y 2015	2015	Effects of heat exposure in the absence of hyperthermia on power output during repeated cycling	Biol Sport	Exclude	-	-	-	-	-	No	-
A. Matzarakis; D. Fröhlich 2015	2015	Sport events and climate for visitors—the case of FIFA World Cup in Qatar 2022	Int J Biometeorol	Exclude	-	No	-	-	-	-	-
L. J. Maxwell; J. Zochling; A. 2015	2015	TNF-α inhibitors for ankylosing spondylitis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
E. McInnes; A. Jammali-Blasi 2015	2015	Support surfaces for pressure ulcer prevention	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
R. S. Metcalfe; F. Koumanov; 2015	2015	Physiological and molecular responses to an acute bout of reduced-exertion high-intensity interva	Eur J Appl Physiol	Exclude	-	-	-	-	-	No	-
F. Mori; S. Hanida; K. Kumah 2015	2015	Minor contributions of the maxillary sinus to the air-conditioning performance in macaque monke	J Exp Biol	Exclude	Yes	-	-	-	-	-	-
M. I. Nilsson; L. G. MacNeil; 2015	2015	Combined aerobic exercise and enzyme replacement therapy rejuvenates the mitochondrial-lysosc	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
H. W. Nolte; T. Hew-Butler; T 2015	2015	Exercise-associated hyponatremic encephalopathy and exertional heatstroke in a soldier: High rat	Phys Sportsmed	Exclude	-	No	-	-	-	-	-
S. J. Oliver; A. D. Harper Smi 2015	2015	Two nights of sleep deprivation with or without energy restriction does not impair the thermal res	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. J. Pearson; S. R. Hussain 2015	2015	A review on the mechanisms of blood-flow restriction resistance training-induced muscle hypertro	Sports Med	Exclude	-	No	-	-	-	-	-
J. D. Périard; O. Jay; J. M. Alc 2015	2015	Author's Reply to Brocherie and Millet: 'Is the Wet-Bulb Globe Temperature (WBGT) Index Rele	Sports Med	Exclude	-	No	-	-	-	-	-
J. D. Périard; S. Racinais 2015	2015	Training and competing in the heat	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
J. D. Périard; S. Racinais; A. 1. 2015	2015	Response	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
J. D. Périard; S. Racinais; M. 1. 2015	2015	Adaptations and mechanisms of human heat acclimation: Applications for competitive athletes an	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
M. P. Poirier; D. Gagnon; B. J. 2015	2015	Whole-body heat exchange during heat acclimation and its decay	Med Sci Sports Exerc	Exclude	-	-	-	-	-	No	-
S. Qian; M. Li; G. Li; K. Liu; 2015	2015	Environmental heat stress enhances mental fatigue during sustained attention task performing: evi	Behav Brain Res	Exclude	-	-	-	-	-	No	-
S. Racinais; J. M. Alonso; A. J 2015	2015	Consensus recommendations on training and competing in the heat	Br J Sports Med	Exclude	-	No	-	-	-	-	-
S. Racinais; J. M. Alonso; A. J 2015	2015	Consensus recommendations on training and competing in the heat	Scand J Med Sci Sports	Exclude	-	No	-	-	-	-	-
S. Racinais; J. D. Périard; A. 1. 2015	2015	Effect of heat and heat acclimatization on cycling time trial performance and pacing	Med Sci Sports Exerc	Exclude	-	-	-	-	-	No	-
P. Rodriguez-Miguelez; R. Fer 2015	2015	Whole-body vibration improves the anti-inflammatory status in elderly subjects through toll-like	Mech Ageing Dev	Exclude	Yes	-	-	-	-	-	-

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
M. Salehi; A. S. Wenick; H. A. P. Schantz	2015	Interventions for central serous chorioretinopathy: a network meta-analysis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Schild; A. Ruhs; T. Beiter;	2015	Along paths converging to Bengt Saltin's early contributions in exercise physiology	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
Z. J. Schlader; M. S. Gano; J. M. Sobajima; T. Nozawa; Y. F. Y. Soejima; T. Munemoto; A. J. Stanley; A. Halliday; S. D'A	2015	Basal and exercise induced label-free quantitative protein profiling of m. vastus lateralis in trained	J Proteomics	Exclude	Yes	-	-	-	-	-	-
J. A. Sturgeon; M. M. Tieu; L. M. Tamm; A. Jakobson; M. H. N. A. Taylor	2015	Heat acclimation improves heat exercise tolerance and heat dissipation in individuals with extensive	J Appl Physiol (1985)	Exclude	-	-	-	No	-	-	-
W. T. Thomas	2015	Waon therapy improves quality of life as well as cardiac function and exercise capacity in patients	Int Heart J	Exclude	Yes	-	-	-	-	-	-
B. M. Trezza; D. Apolinario; F. B. Tsuji; Y. Honda; Y. Ikebe; N. L. Turner-Stokes; A. Pick; A. J. Tuttle; P. C. Castle; A. J. I. Vaheer; S. Timpmann; M. A. E. C. E. Veneroso; G. P. Ramos; A. P. Verhagen; S. M. A. Bien	2015	Effects of Waon therapy on chronic fatigue syndrome: a pilot study	Intern Med	Exclude	Yes	-	-	-	-	-	-
S. V. Rignaud; T. Briot; A. Laun	2015	Effect of sauna-based heat acclimation on plasma volume and heart rate variability	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-
A. G. Willmott; M. Hayes; J. S. Winter	2015	Nonlinear Effects of Noxious Thermal Stimulation and Working Memory Demands on Subjective	Pain Med	Exclude	Yes	-	-	-	-	-	-
A. W. Arzosek; J. Woron; J. Dobi	2015	Effects of heat acclimation on time perception	Int J Psychophysiol	Exclude	-	-	-	-	No	-	-
L. Wu; G. Norman; J. C. Dum	2015	Overwhelming Physiological Regulation Through Personal Protection	J Strength Cond Res	Exclude	-	No	-	-	-	-	-
Q. Zhang; Z. Sun; J. Yue	2015	Drought-resistant cereals: impact on water sustainability and nutritional quality	Proc Nutr Soc	Exclude	Yes	-	-	-	-	-	-
M. B. Brearley	2016	Environmental heat exposure and cognitive performance in older adults: a controlled trial	Age (Dordr)	Exclude	-	-	-	-	No	-	-
J. W. Castellani; A. J. Young	2016	Voluntary suppression of hyperthermia-induced hyperventilation mitigates the reduction in cerebral	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
J. W. Castellani; E. J. Zambas	2016	Multi-disciplinary rehabilitation for acquired brain injury in adults of working age	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. Chalmers; A. Esterman; R. M. N. Cramer; O. Jay	2016	Downhill running and exercise in hot environments increase leukocyte Hsp72 (HSPA1A) and Hsp	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. A. Cuttelli; V. Kiri; C. Tyler	2016	Impact of acute sodium citrate ingestion on endurance running performance in a warm environme	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
S. A. Dileo; J. B. Powell; H. K. I. Dimauuro; N. Mercatelli; D. Y. Epstein; R. Yanovich; Y. He	2016	Physical performance and environmental conditions: 2014 World Soccer Cup and 2016 Summer C	Temperature (Austin)	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Balneootherapy (or spa therapy) for rheumatoid arthritis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Design and stability study of a paediatric oral solution of methotrexate 2 mg/ml	Int J Pharm	Exclude	Yes	-	-	-	-	-	-
O. R. Gibson; J. A. Tuttle; P. V. C. Granata; R. S. Oliveira; J. F. T. K. Harrison; T. E. Kim; A. I. S. Haseba; H. Sakakima; T. Ki	2016	Repeat work bouts increase thermal strain for Australian firefighters working in the heat	Int J Occup Environ Health	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	The reliability of a heat acclimation state test prescribed from metabolic heat production intensitie	J Therm Biol	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Effectiveness of targeted home-based hip exercises in individuals with non-specific chronic or rec	J Back Musculoskelet Reh	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Topical clonidine for neuropathic pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Dressings for treating foot ulcers in people with diabetes: an overview of systematic reviews	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Massage therapy for preventing pressure ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Pharmacokinetics and adhesion of a transdermal patch containing ethinyl estradiol and gestodene	Clin Pharmacol Drug Dev	-	-	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	An Exertional Heat Stroke Survivor's Return to Running: An Integrated Approach on the Treatme	J Sport Rehabil	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Post-exercise cold water immersion does not alter high intensity interval training-induced exercis	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Heat stress and dehydration in adapting for performance: Good, bad, both, or neither?	Temperature (Austin)	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Determination of the maximum rate of eccrine sweat glands' ion reabsorption using the galvanic s	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Core Temperature in Service Members With and Without Traumatic Amputations During a Prolon	Mil Med	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Physical exercise for the treatment of non-ulcerated chronic venous insufficiency	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Repeated Warm Water Immersion Induces Similar Cerebrovascular Adaptations to 8 Weeks of Me	Int J Sports Med	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Altered thermoregulatory responses in heart failure patients exercising in the heat	Physiol Rep	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Association Between High Ambient Temperature and Risk of Stillbirth in California	Am J Epidemiol	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	36th International Symposium on Intensive Care and Emergency Medicine : Brussels, Belgium. 1	Crit Care	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Methods of milk expression for lactating women	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Performance of Portable Ventilators Following Storage at Temperature Extremes	Mil Med	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Pre-deployment Heat Acclimatization Guidelines for Disaster Responders	Prehosp Disaster Med	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Passive heat therapy improves endothelial function, arterial stiffness and blood pressure in sedent	J Physiol	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Psychometric and Physiological Responses to a Preseason Competitive Camp in the Heat With a C	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Human physiological responses to cold exposure: Acute responses and acclimatization to prolong	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Does high muscle temperature accentuate skeletal muscle injury from eccentric exercise?	Physiol Rep	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Brief Heat Training: No Improvement of the Lactate Threshold in Mild Conditions	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Biophysical aspects of human thermoregulation during heat stress	Auton Neurosci	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	A Comparison of 2 Practical Cooling Methods on Cycling Capacity in the Heat	J Athl Train	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Fentanyl for neuropathic pain in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Effect of short-term heat acclimation training on kinetics of lactate removal following maximal ex	J Sports Med Phys Fitness	Exclude	-	-	-	-	Yes	No	-
C. Faure; K. Charlot; S. Henri	2016	Exercise-induced ROS in heat shock proteins response	Free Radic Biol Med	Exclude	-	No	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Heat Tolerance Test or Race Simulation Test for Return to Activity after Heat Stroke	Med Sci Sports Exerc	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Impaired glucose tolerance after brief heat exposure: a randomized crossover study in healthy you	Clin Sci (Lond)	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Effect of heat exposure and exercise on food intake regulation: A randomized crossover study in y	Metabolism	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Hsp72 and Hsp90α mRNA transcription is characterised by large, sustained changes in core temp	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
C. Faure; K. Charlot; S. Henri	2016	Mitochondrial adaptations to high-volume exercise training are rapidly reversed after a reduction	Faseb j	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Feasibility of eye-tracking technology to quantify expertise in ultrasound-guided regional anesthe	J Anesth	Exclude	Yes	-	-	-	-	-	-
C. Faure; K. Charlot; S. Henri	2016	Combined effects of repeated sauna therapy and exercise training on cardiac function and physica	Disabil Rehabil	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
G. Hatvani-Kovacs; M. Belusl 2016		Drivers and barriers to heat stress resilience	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
C. F. Heal; J. L. Banks; P. D. I 2016		Topical antibiotics for preventing surgical site infection in wounds healing by primary intention	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. W. Heesch; R. J. Shute; J. 12016		Transcriptional control, but not subcellular location, of PGC-1α is altered following exercise in a	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
B. Hegedüs; J. Varga; A. Somf 2016		[Interdisciplinary rehabilitation in patients with ankylosing spondylitis]	Orv Hetil	Exclude	-	-	No	-	-	-	-
D. C. Henstridge; M. A. Febr 2016		Heat shock proteins and exercise adaptations. Our knowledge thus far and the road still ahead	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
G. J. Hofmeyr; J. A. K. Kiiza 2016		Amnioinfusion for chorioamnionitis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Houssein; P. Lopes; B. Fag 2016		Hydration: The New FIFA World Cup's Challenge for Referee Decision Making?	J Athl Train	Exclude	Yes	-	-	-	-	-	-
C. A. James; A. G. Willmott; # 2016		Ischaemic preconditioning does not alter the determinants of endurance running performance in th	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
S. Jongstra; J. K. Harrison; T. 2016		Antihypertensive withdrawal for the prevention of cognitive decline	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. Joslin; J. Mularella; A. Bail; 2016		Mandatory Rest Stops Improve Athlete Safety during Event Medical Coverage for Ultramarathon	Prehosp Disaster Med	Exclude	-	No	-	-	-	-	-
Y. Kataoka; Y. I. Kamijo; Y. O 2016		Effects of hypervolemia by protein and glucose supplementation during aerobic training on therm	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
K. Kavanagh; A. T. Davis; K. 2016		Effects of heated hydrotherapy on muscle HSP70 and glucose metabolism in old and young verve	Cell Stress Chaperones	Exclude	-	-	-	-	No	-	-
G. P. Kenny; H. Groeller; R. N 2016		Age, human performance, and physical employment standards	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-
A. Khadir; S. Kavalakatt; J. Al 2016		Physical exercise alleviates ER stress in obese humans through reduction in the expression and re	Metabolism	Exclude	-	-	-	-	No	-	-
M. A. King; T. L. Clanton; O. 2016		Hyperthermia, dehydration, and osmotic stress: unconventional sources of exercise-induced reacti	Am J Physiol Regul Integr	Exclude	-	No	-	-	-	-	-
T. Kjellstrom; D. Briggs; C. Fr 2016		Heat, Human Performance, and Occupational Health: A Key Issue for the Assessment of Global C	Ann Rev Public Health	Exclude	-	No	-	-	-	-	-
J. M. Lawler; D. A. Rodriguez 2016		Mitochondria in the middle: exercise preconditioning protection of striated muscle	J Physiol	Exclude	Yes	-	-	-	-	-	-
B. J. Lee; A. Miller; R. S. Jam 2016		Cross Acclimation between Heat and Hypoxia: Heat Acclimation Improves Cellular Tolerance an	Front Physiol	Exclude	-	-	-	-	No	-	-
J. B. Lee; J. H. Kim; H. Murot 2016		Perspiration Functions in Different Ethnic, Age, and Sex Populations: Modification of Sudomotor	Curr Probl Dermatol	Exclude	Yes	-	-	-	-	-	-
L. R. Leon 2016		Common mechanisms for the adaptive responses to exercise and heat stress	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
N. Lindson-Hawley; J. Hartm 2016		Interventions to reduce harm from continued tobacco use	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Ma; J. Xie; H. Wang; J. Li; 2016		Radioiodine therapy versus antithyroid medications for Graves' disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
L. G. Madeira; R. L. Passos; J 2016		Autonomic thermoregulatory dysfunction in neurofibromatosis type 1	Arq Neuropsiquiatr	Exclude	Yes	-	-	-	-	-	-
E. Madrid; G. Urrutia; M. Roq 2016		Active body surface warming systems for preventing complications caused by inadvertent periop	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. M. Matthews; R. Fu; T. Dai 2016		Intranasal or transdermal nicotine for the treatment of postoperative pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. L. Maynard; R. Kao; D. G. 2016		Impact of personal protective equipment on clinical output and perceived exertion	J R Army Med Corps	Exclude	Yes	-	-	-	-	-	-
B. K. McFarlin; A. L. Henning 2016		A shirt containing multistage phase change material and active cooling components was associat	Ergonomics	Exclude	Yes	-	-	-	-	-	-
M. P. Meaney; D. C. Nieman; 2016		Measuring Granulocyte and Monocyte Phagocytosis and Oxidative Burst Activity in Human Bloo	J Vis Exp	Exclude	Yes	-	-	-	-	-	-
J. A. Mee; O. R. Gibson; J. A. 2016		Leukocyte Hsp72 mRNA transcription does not differ between males and females during heat acc	Temperature (Austin)	Exclude	-	-	-	-	No	-	-
C. T. Minson; J. D. Cotter 2016		CrossTalk proposal: Heat acclimatization does improve performance in a cool condition	J Physiol	Exclude	-	No	-	-	-	-	-
A. C. Moore; M. J. Stacey; K. 2016		Risk factors for heat illness among British soldiers in the hot Collective Training Environment	J R Army Med Corps	Exclude	-	No	-	-	-	-	-
E. R. Moore; N. Bergman; G. 2016		Early skin-to-skin contact for mothers and their healthy newborn infants	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
H. Nakagawa; T. Matsumura; 2016		Changes of brain monoamine levels and physiological indexes during heat acclimation in rats	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
H. Nakata; M. Oshiro; M. Nan 2016		Effects of aerobic exercise under different thermal conditions on human somatosensory processin	Am J Physiol Regul Integr	Exclude	-	-	-	-	No	-	-
R. A. Neal; J. Corbett; H. C. N 2016		Effect of short-term heat acclimation with permissive dehydration on thermoregulation and tempe	Scand J Med Sci Sports	Exclude	-	-	-	-	No	-	-
L. Nybo; C. Lundby 2016		CrossTalk opposing view: Heat acclimatization does not improve exercise performance in a cool c	J Physiol	Exclude	-	No	-	-	-	-	-
K. O'Hearn; H. C. Tingelstad; 2016		Heat exposure increases circulating fatty acids but not lipid oxidation at rest and during exercise	J Therm Biol	Exclude	-	-	-	-	No	-	-
A. Osailan; G. S. Metsios; P. C 2016		Factors associated with parasympathetic activation following exercise in patients with rheumatoid	BMC Cardiovasc Disord	Exclude	-	No	-	-	-	-	-
M. J. Page; S. Green; B. McBi 2016		Manual therapy and exercise for rotator cuff disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. G. Pallares; A. Martinez-Ab 2016		Muscle contraction velocity, strength and power output changes following different degrees of hy	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-
J. D. Périard; G. J. S. Travers; 2016		Cardiovascular adaptations supporting human exercise-heat acclimation	Auton Neurosci	Exclude	-	No	-	-	-	-	-
O. J. Perkin; R. L. Travers; J. 2016		Exercise strategies to protect against the impact of short-term reduced physical activity on muscle	Trials	Exclude	-	No	-	-	-	-	-
S. Peters; M. J. Page; M. W. C 2016		Rehabilitation following carpal tunnel release	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
E. Pezzolo; A. Peroni; P. Giso 2016		Heat urticaria: a revision of published cases with an update on classification and management	Br J Dermatol	Exclude	Yes	-	-	-	-	-	-
M. P. Poirier; D. Gagnon; G. P 2016		Local versus whole-body sweating adaptations following 14 days of traditional heat acclimation	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
A. Psikuta; K. Kuklane; A. Bo 2016		Opportunities and constraints of presently used thermal manikins for thermo-physiological simula	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
W. O. Roberts; J. C. Dorman; 2016		Recurrent Heat Stroke in a Runner: Race Simulation Testing for Return to Activity	Med Sci Sports Exerc	Exclude	-	No	-	-	-	-	-
P. K. Rout; R. Kaushtik; N. Rai 2016		Differential expression pattern of heat shock protein 70 gene in tissues and heat stress phenotypes	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-
A. D. Ruddock; S. W. Thomps 2016		Combined active and passive heat exposure induced heat acclimation in a soccer referee before 20	Springerplus	Exclude	-	No	-	-	-	-	-
B. T. Saragiotto; G. C. Macha 2016		Paracetamol for low back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. T. Saragiotto; C. G. Maher; 2016		Motor control exercise for chronic non-specific low-back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Schmit; R. Duffield; C. Hai 2016		Pacing Adjustments Associated With Familiarization: Heat Versus Temperate Environments	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
H. Shen; S. Tang; T. Mahapatr 2016		Condomless Vaginal Intercourse and Its Associates among Men Who Have Sex with Men in Chin	PLoS One	Exclude	Yes	-	-	-	-	-	-
W. Siemens; C. Xander; J. J. N 2016		Pharmacological interventions for pruritus in adult palliative care patients	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
K. M. Smart; B. M. Wand; N. 2016		Physiotherapy for pain and disability in adults with complex regional pain syndrome (CRPS) type	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
P. Song; S. Li; H. Wu; R. Gao; 2016		Parkin promotes proteasomal degradation of p62: implication of selective vulnerability of neuron	Protein Cell	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. Suyama; S. J. McEntire; J. C 2016		Pilot Study Examining the Effects of Atropine on Performance during Uncompensable Heat Stress	Prehosp Emerg Care	Exclude	-	No	-	-	-	-	-	-	-	-
B. D. Sylvestre; D. R. Lubans; 2016		Effects of Variety Support on Exercise-Related Well-Being	Appl Psychol Health Well	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Taylor; B. J. Lee; O. R. Gib 2016		Effective microorganism - X attenuates circulating superoxide dismutase following an acute bout	Res Sports Med	Exclude	-	-	-	-	-	-	No	-	-	-
M. B. Trbovich; J. B. Kiratti; 2016		The effects of a heat acclimation protocol in persons with spinal cord injury	J Therm Biol	Exclude	-	-	-	-	-	No	-	-	-	-
C. J. Tyler; T. R. Coffey; G. J. 2016		Acute L-arginine supplementation has no effect on cardiovascular or thermoregulatory responses	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
C. J. Tyler; T. Reeve; G. J. Ho 2016		The Effects of Heat Adaptation on Physiology, Perception and Exercise Performance in the Heat:	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
V. Tzortziou Brown; M. Undei 2016		Professional interventions for general practitioners on the management of musculoskeletal conditi	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. C. Voermans; M. Snoeck; F 2016		RYR1-related rhabdomyolysis: A common but probably underdiagnosed manifestation of skeletal	Rev Neurol (Paris)	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. Wadley; J. E. Turner; S. / 2016		Factors influencing post-exercise plasma protein carbonyl concentration	Free Radic Res	Exclude	-	No	-	-	-	-	-	-	-	-
N. P. Walsh; S. J. Oliver 2016		Exercise, immune function and respiratory infection: An update on the influence of training and e	Immunol Cell Biol	Exclude	-	No	-	-	-	-	-	-	-	-
S. Warttig; P. Alderson; S. R. 1 2016		Intravenous nutrients for preventing inadvertent perioperative hypothermia in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. C. White; R. M. Salgado; T 2016		The effect of 10 days of heat acclimation on exercise performance in acute hypobaric hypoxia (43	Temperature (Austin)	Exclude	-	-	-	-	-	-	No	-	-	-
A. G. Willmott; O. R. Gibson; 2016		The effects of single versus twice daily short term heat acclimation on heat strain and 3000m run	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
G. L. Wingfield; R. Gale; G. N 2016		The effect of high versus low intensity heat acclimation on performance and neuromuscular respo	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
T. Xiong; H. Chen; R. Luo; D. 2016		Hyperbaric oxygen therapy for people with autism spectrum disorder (ASD)	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Y. Yakoub; R. A. Salam; F. 2016		Vitamin D supplementation for preventing infections in children under five years of age	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Zaina; C. Tomkins-Lane; E. 2016		Surgical versus non-surgical treatment for lumbar spinal stenosis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Zhi; G. Banting; Q. Li; T. A 2016		Evidence of Naturalized Stress-Tolerant Strains of Escherichia coli in Municipal Wastewater Trea	Appl Environ Microbiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
X. Zhu; Y. Liew; Z. L. Liu 2016		Chinese herbal medicine for menopausal symptoms	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Zurawlew; N. P. Walsh; 2016		Post-exercise hot water immersion induces heat acclimation and improves endurance exercise per	Scand J Med Sci Sports	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E. L. Adams; L. W. Vanderma 2017		Effects of heat acclimation on hand cooling efficacy following exercise in the heat	J Sports Sci	Exclude	-	-	-	-	-	-	No	-	-	-
T. Amano; N. Fujii; G. P. Ken 2017		Do nitric oxide synthase and cyclooxygenase contribute to sweating response during passive heat	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	-
L. B. Baker 2017		Sweating Rate and Sweat Sodium Concentration in Athletes: A Review of Methodology and Intra	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
B. N. Balmain; S. Sabapathy; 2017		Heart Failure and Thermoregulatory Control: Can Patients With Heart Failure Handle the Heat?	J Card Fail	Exclude	-	-	-	-	-	No	-	-	-	-
C. N. Bardis; S. A. Kavouras; 2017		Prescribed Drinking Leads to Better Cycling Performance than Ad Libitum Drinking	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	-
D. Bhattacharyya; M. Pal; T. C 2017		Effect of load carriage and natural terrain conditions on cognitive performance in desert environm	Physiol Behav	Exclude	-	-	-	-	-	-	No	-	-	-
J. Bidonde; A. J. Busch; I. van 2017		Whole body vibration exercise training for fibromyalgia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. H. Bishop; D. J. Szymanski 2017		The Effect of Intermittent Vest Cooling on Thermoregulation and Cardiovascular Strain in Baseba	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	-
D. J. Brown; D. Fletcher 2017		Effects of Psychological and Psychosocial Interventions on Sport Performance: A Meta-Analysis	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
Y. Bruchim; M. Horowitz; I. A 2017		Pathophysiology of heatstroke in dogs - revisited	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. R. Casadio; A. E. Kilding; J. 2017		From Lab to Real World: Heat Acclimation Considerations for Elite Athletes	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
F. S. Celi 2017		Human Brown Adipose Tissue Plasticity: Hormonal and Environmental Manipulation	Hormones, Metabolism an	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Chamberlain; A. O'Mara-E 2017		Psychosocial interventions for supporting women to stop smoking in pregnancy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. Charlot; C. Faure; S. Antoi 2017		Influence of Hot and Cold Environments on the Regulation of Energy Balance Following a Single	Nutrients	Exclude	-	-	-	-	-	-	No	-	-	-
K. Cheng; A. Law; M. Guo; L. 2017		Acupuncture for acute hordeolum	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
B. Chu; C. Chen; J. Li; X. Ch 2017		Effects of Tibetan turnip (Brassica rapa L.) on promoting hypoxia-tolerance in healthy humans	J Ethnopharmacol	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Cullum; Z. Liu 2017		Therapeutic ultrasound for venous leg ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. T. Cumming; T. Raastad; A 2017		Vitamin C and E supplementation does not affect heat shock proteins or endogenous antioxidants	BMC Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Daniels; M. E. Loades 2017		A Novel Approach to Treating CFS and Co-morbid Health Anxiety: A Case Study	Clin Psychol Psychother	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Drayan; D. Atlas; I. Ketko; 2017		The effects of smoking and nicotine ingestion on exercise heat tolerance	J Basic Clin Physiol Pharm	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. G. Dulloo; J. L. Miles-Chai 2017		Isometric thermogenesis at rest and during movement: a neglected variable in energy expenditure	Obes Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Eccleston; E. Fisher; K. H. 2017		Interventions for the reduction of prescribed opioid use in chronic non-cancer pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. M. Edinburgh; A. Hengist; 2017		Prior exercise alters the difference between arterialised and venous glycaemia: implications for bl	Br J Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Fernandez Rojas; X. Huang 2017		Toward a functional near-infrared spectroscopy-based monitoring of pain assessment for nonverbi	J Biomed Opt	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Gerwyn; M. Maes 2017		Mechanisms Explaining Muscle Fatigue and Muscle Pain in Patients with Myalgic Encephalomye	Curr Rheumatol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
O. R. Gibson; L. Taylor; P. W. 2017		Cross-Adaptation: Heat and Cold Adaptation to Improve Physiological and Cellular Responses to	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
O. R. Gibson; A. G. Willmott; 2017		Power Relative to Body Mass Best Predicts Change in Core Temperature During Exercise-Heat S	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	-
S. Gollan; S. Chalmers; S. Ald 2017		Supplemental intermittent-day heat training and the lactate threshold	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	-
J. T. Gonzalez; C. J. Fuchs; J. 2017		Glucose Plus Fructose Ingestion for Post-Exercise Recovery-Greater than the Sum of Its Parts?	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Goodall; K. Thomas; M. Ba 2017		Neuromuscular changes and the rapid adaptation following a bout of damaging eccentric exercise	Acta Physiol (Oxf)	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. P. Handrakis; Z. Ni Guan; J. 2017		Effect of Heat Exposure on Cognition in Persons with Tetraplegia	J Neurotrauma	Exclude	-	-	-	-	-	-	No	-	-	-
K. B. Harding; J. P. Peña-Rosi 2017		Iodine supplementation for women during the preconception, pregnancy and postpartum period	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Harris; T. F. Moe; H. R. Eri 2017		Brief intervention, physical exercise and cognitive behavioural group therapy for patients with chi	Eur J Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. M. Hinkley; A. R. Konopka; 2017		Short-term intense exercise training reduces stress markers and alters the transcriptional response	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-	-
A. L. Hunter; A. S. Shah; J. P. 2017		Fire Simulation and Cardiovascular Health in Firefighters	Circulation	Exclude	-	-	-	-	-	-	No	-	-	-
T. Ishiwata; H. Hasegawa; B. 2017		Involvement of serotonin in the ventral tegmental area in thermoregulation of freely moving rats	Neurosci Lett	Exclude	Yes	-	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

												*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold	
												**Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.	
Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:								
				Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
C. A. James; A. J. Richardson; 2017		Short-term heat acclimation improves the determinants of endurance performance and 5-km run	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	No	-	-
M. I. Johnson; L. S. Claydon; 2017		Transcutaneous electrical nerve stimulation (TENS) for fibromyalgia in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
D. M. Jones; K. A. Rostomily; 2017		Cold Acclimation Does Not Alter Physiological or Perceptual Responses During Subsequent Exer	Mil Med	Exclude	Yes	-	-	-	-	-	-	-	-
Z. Y. Ju; K. Wang; H. S. Cui; 2017		Acupuncture for neuropathic pain in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
R. W. Kenefick; K. R. Heaven 2017		Effect of Physical Load on Aerobic Exercise Performance during Heat Stress	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-
G. P. Kenny; R. McGinn 2017		Restoration of thermoregulation after exercise	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-
M. A. King; L. R. Leon; D. A. 2017		Unique cytokine and chemokine responses to exertional heat stroke in mice	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-
N. Krstic; W. Yuchi; H. C. Ho; 2017		The Heat Exposure Integrated Deprivation Index (HEIDI): A data-driven approach to quantifying	Environ Int	Exclude	-	No	-	-	-	-	-	-	-
S. Kumbargere Nagraj; R. P. C 2017		Interventions for managing taste disturbances	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
G. Legault; A. Clement; G. P. 2017		Cognitive consequences of sleep deprivation, shiftwork, and heat exposure for underground miner	Appl Ergon	Exclude	Yes	-	-	-	-	-	-	-	-
T. H. Lei; S. R. Stannard; B. G 2017		Influence of menstrual phase and arid vs. humid heat stress on autonomic and behavioural thermo	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-
U. Lindemann; A. Stotz; N. Bi 2017		Effect of Indoor Temperature on Physical Performance in Older Adults during Days with Normal	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-
A. Lloyd; L. Pictou; M. Racu 2017		Localized and systemic variations in central motor drive at different local skin and muscle temper	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-
T. M. Lühring; J. P. DeLong 2017		Scaling from Metabolism to Population Growth Rate to Understand How Acclimation Temperatu	Integr Comp Biol	Exclude	Yes	-	-	-	-	-	-	-	-
T. Maeda 2017		Relationship between maximum oxygen uptake and peripheral vasoconstriction in a cold environ	J Physiol Anthropol	Exclude	Yes	-	-	-	-	-	-	-	-
R. J. Marquardt; A. B. Buletko 2017		Neurologic Injuries in Noncontact Sports	Neurol Clin	Exclude	Yes	-	-	-	-	-	-	-	-
A. Mazlomi; F. Golbabaee; S. 2017		The influence of occupational heat exposure on cognitive performance and blood level of stress h	Int J Occup Saf Ergon	Exclude	Yes	-	-	-	-	-	-	-	-
A. McArdle; M. J. Jackson 2017		The role of attenuated redox and heat shock protein responses in the age-related decline in skeleta	Essays Biochem	Exclude	-	No	-	-	-	-	-	-	-
E. L. McCleave; K. M. Slatter 2017		Temperate Performance Benefits after Heat, but Not Combined Heat and Hypoxic Training	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-
R. McGinn; M. P. Poirier; J. C 2017		Increasing age is a major risk factor for susceptibility to heat stress during physical activity	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-	-	-
C. Minahan; M. Melnikoff; K. 2017		Response of women using oral contraception to exercise in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-
A. A. Miragem; P. I. Homem c 2017		Nitric oxide-heat shock protein axis in menopausal hot flashes: neglected metabolic issues of chr	Hum Reprod Update	Exclude	Yes	-	-	-	-	-	-	-	-
L. Ng; F. Khan; C. A. Young; 2017		Symptomatic treatments for amyotrophic lateral sclerosis/motor neuron disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
A. Nicolò; C. Massaroni; L. Pi 2017		Respiratory Frequency during Exercise: The Neglected Physiological Measure	Front Physiol	Exclude	Yes	-	-	-	-	-	-	-	-
J. L. Nielsen; P. Aagaard; T. A 2017		Blood flow restricted training leads to myocellular macrophage infiltration and upregulation of he	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-
V. H. Nieto Estrada; D. Molan 2017		Interventions for preventing high altitude illness: Part 1. Commonly-used classes of drugs	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
R. Njemini; L. N. Forti; T. Me 2017		Sex difference in the heat shock response to high external load resistance training in older humans	Exp Gerontol	Exclude	Yes	-	-	-	-	-	-	-	-
S. R. Notley; J. Park; K. Tagar 2017		Variations in body morphology explain sex differences in thermoeffector function during compen	Exp Physiol	Exclude	-	No	-	-	-	-	-	-	-
J. O'Reilly; H. L. Cheng; E. T. 2017		New insights in professional horse racing; in-race" heart rate data, elevated fracture risk, hydrat	J Sports Sci	Exclude	Yes	-	-	-	-	-	-	-	-
J. E. O'Shea; J. O'Gorman; A. 2017		Orotracheal intubation in infants performed with a stylet versus without a stylet	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
E. G. Ostinelli; M. J. Brooke- 2017		Haloperidol for psychosis-induced aggression or agitation (rapid tranquillisation)	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
H. Otani; T. Goto; H. Goto; M 2017		Time-of-day effects of exposure to solar radiation on thermoregulation during outdoor exercise in	Chronobiol Int	Exclude	-	No	-	-	-	-	-	-	-
H. Pallubinsky; L. Schellen; B 2017		Thermophysiological adaptations to passive mild heat acclimation	Temperature (Austin)	Exclude	-	-	-	-	-	-	No	-	-
W. Park; J. Jeong 2017		Total Power Radiometer for Medical Sensor Applications Using Matched and Mismatched Noise	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-
J. Pearson; M. S. Ganio; Z. J. 2017		Post Junctional Sudomotor and Cutaneous Vascular Responses in Noninjured Skin Following Hea	J Burn Care Res	Exclude	Yes	-	-	-	-	-	-	-	-
J. D. Périard; S. Racinais; T. T 2017		Strategies and factors associated with preparing for competing in the heat: a cohort study at the 20	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-
C. P. Philp; M. Buchheit; C. M 2017		Does Short-Duration Heat Exposure at a Matched Cardiovascular Intensity Improve Intermittent-I	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	No	-	-
J. F. Pii; J. Lundbye-Jensen; S 2017		Performance in complex motor tasks deteriorates in hyperthermic humans	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-
A. Pollak; G. Merin; M. Horov 2017		Heat Acclimatization Protects the Left Ventricle from Increased Diastolic Chamber Stiffness Imm	Front Physiol	Exclude	-	No	-	-	-	-	-	-	-
L. C. D. Pomatto; K. J. A. Dav 2017		The role of declining adaptive homeostasis in ageing	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-
S. K. Powers 2017		Exercise: Teaching myocytes new tricks	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-
S. Racinais; M. G. Wilson; N. 2017		Heat acclimation has a protective effect on the central but not peripheral nervous system	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-
S. Racinais; M. G. Wilson; J. 2017		Passive heat acclimation improves skeletal muscle contractility in humans	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-
M. K. Ranchordas; D. Rogers 2017		Antioxidants for preventing and reducing muscle soreness after exercise	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
I. A. Rankin; H. Sargeant; H. I 2017		Low-level laser therapy for carpal tunnel syndrome	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-
R. A. Rendell; J. Prout; J. T. C 2017		Effects of 10 days of separate heat and hypoxic exposure on heat acclimation and temperate exerc	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-
E. Rivas; M. Rao; T. Castleber 2017		The change in metabolic heat production is a primary mediator of heat acclimation in adults	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-
R. J. Roberge; J. H. Kim; P. Y 2017		Umbilical temperature correlation with core and skin temperatures at rest, in the heat and during p	Int J Hyperthermia	Exclude	-	-	-	-	-	-	No	-	-
R. M. Salgado; A. C. Sheard; 2017		Mitochondrial efficiency and exercise economy following heat stress: a potential role of uncoupli	Physiol Rep	Exclude	Yes	-	-	-	-	-	-	-	-
C. Schmit; Y. Le Meur; R. Dul 2017		Heat-acclimatization and pre-cooling: a further boost for endurance performance?	Scand J Med Sci Sports	Exclude	-	-	-	-	-	-	No	-	-
P. M. Slepian; C. R. France 2017		The effect of resilience on task persistence and performance during repeated exposure to heat pair	J Behav Med	Exclude	-	No	-	-	-	-	-	-	-
V. Soanacat Aguilari; J. v. d. G. 2017		Visual Data Exploration for Balance Quantification in Real-Time During Exergaming	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-
P. Songson; J. Ruffino; N. B. 2017		No effect of acute and chronic supramaximal exercise on circulating levels of the myokine SPAR	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-	-	-
K. M. A. Thompson; A. M. Cg 2017		Chronic heat exposure for health and exercise performance - cardiovascular research heats up	J Physiol	Exclude	-	No	-	-	-	-	-	-	-
M. J. Tipton; N. Collier; H. M. 2017		Cold water immersion: kill or cure?	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-
T. T. Truxton; K. C. Miller 2017		Can Temperate-Water Immersion Effectively Reduce Rectal Temperature in Exertional Heat Strok	J Sport Rehabil	Exclude	-	No	-	-	-	-	-	-	-

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
G. E. Vincent; B. Aisbett; B. I. 2017	2017	The Impact of Heat Exposure and Sleep Restriction on Firefighters' Work Performance and Physi	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
R. M. Walker; B. M. Gillespie 2017	2017	Foam dressings for treating pressure ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. J. Westby; J. C. Dumville; 2017	2017	Dressings and topical agents for treating pressure ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
T. Wijayanto; S. Toramoto; Y. 2017	2017	Cognitive performance during passive heat exposure in Japanese males and tropical Asian males	J Physiol Anthropol	Exclude	-	-	-	-	No	-	-
A. G. B. Willmott; M. Hayes; 2017	2017	Short-term heat acclimation prior to a multi-day desert ultra-marathon improves physiological anc	J Sports Sci	Exclude	-	-	-	-	No	-	-
C. S. Wysong; H. A. Bradley 2017	2017	Beta-blockers for hypertension	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. Xu; N. Driedonks; M. J. M. 2017	2017	Mapping quantitative trait loci for heat tolerance of reproductive traits in tomato (Solanum lycopersicum)	Mol Breed	Exclude	Yes	-	-	-	-	-	-
J. E. Yardley; S. R. Colberg 2017	2017	Update on Management of Type 1 Diabetes and Type 2 Diabetes in Athletes	Curr Sports Med Rep	Exclude	-	No	-	-	-	-	-
M. Zeltner; I. Sailer; S. Muhle 2017	2017	Randomized controlled within-subject evaluation of digital and conventional workflows for the fabrication of prostheses	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-
F. Zhang; R. de Dear 2017	2017	University students' cognitive performance under temperature cycles induced by direct load control	Indoor Air	Exclude	Yes	-	-	-	-	-	-
S. J. Agosta; K. A. Joshi; K. M. 2018	2018	Upper thermal limits differ among and within component species in a tritrophic host-parasitoid system	PLoS One	Exclude	Yes	-	-	-	-	-	-
A. F. Alghannam; J. T. Gonzal 2018	2018	Restoration of Muscle Glycogen and Functional Capacity: Role of Post-Exercise Carbohydrate and Protein	Nutrients	Exclude	Yes	-	-	-	-	-	-
B. Amaty; J. Young; F. Khan 2018	2018	Non-pharmacological interventions for chronic pain in multiple sclerosis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. E. Archer; A. T. Von Schulz 2018	2018	Exercise, heat shock proteins and insulin resistance	Philos Trans R Soc Lond B Biol Sci	Exclude	-	No	-	-	-	-	-
L. E. Armstrong; E. C. Lee; E. 2018	2018	Interactions of Gut Microbiota, Endotoxemia, Immune Function, and Diet in Exertional Heatstroke	J Sports Med (Hindawi Publ	Exclude	-	No	-	-	-	-	-
C. L. Atkinson; H. H. Carter; I. 2018	2018	Localised cutaneous microvascular adaptation to exercise training in humans	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
B. N. Balmain; S. Sabapathy; 2018	2018	Aging and Thermoregulatory Control: The Clinical Implications of Exercising under Heat Stress	Biomed Res Int	Exclude	-	No	-	-	-	-	-
O. R. Barley; D. W. Chapman; 2018	2018	Weight Loss Strategies in Combat Sports and Concerning Habits in Mixed Martial Arts	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
P. M. Bath; H. S. Lee; L. F. Ev 2018	2018	Swallowing therapy for dysphagia in acute and subacute stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
I. Belaya; M. Suwa; T. Chen; I. 2018	2018	Long-Term Exercise Protects against Cellular Stresses in Aged Mice	Oxid Med Cell Longev	Exclude	Yes	-	-	-	-	-	-
B. C. Bernardo; J. Y. Y. Ooi; K. 2018	2018	Understanding Key Mechanisms of Exercise-Induced Cardiac Protection to Mitigate Disease	Curr Physiol Rev	Exclude	-	No	-	-	-	-	-
K. A. Birnie; M. Noel; C. T. C. 2018	2018	Psychological interventions for needle-related procedural pain and distress in children and adolescents	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
P. Bröde; D. Fiala; B. Lemke; 2018	2018	Estimated work ability in warm outdoor environments depends on the chosen heat stress assessment method	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
M. J. Buller; A. P. Welles; K. I. 2018	2018	Wearable physiological monitoring for human thermal-work strain optimization	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
M. J. Buono; M. Kolding; E. I. 2018	2018	Heat acclimation causes a linear decrease in sweat sodium ion concentration	J Therm Biol	Exclude	-	-	-	-	No	-	-
M. Bartscher; H. Gatterer; J. F. 2018	2018	Extreme Terrestrial Environments: Life in Thermal Stress and Hypoxia. A Narrative Review	Front Physiol	Exclude	-	No	-	-	-	-	-
M. Cernych; A. Satas; M. Brai; 2018	2018	Post-sauna recovery enhances brain neural network relaxation and improves cognitive economy in young men	Int J Hyperthermia	Exclude	-	-	-	-	No	-	-
E. S. Y. Chan; D. T. Bautista; 2018	2018	Traditional Chinese herbal medicine for vascular dementia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
R. Chou; P. Côté; K. Randhaw 2018	2018	The Global Spine Care Initiative: applying evidence-based guidelines on the non-invasive management of low back pain	Eur Spine J	Exclude	Yes	-	-	-	-	-	-
R. Chrétien; S. Lavoie; P. Cha 2018	2018	Reduced endogenous pain inhibition in adolescent girls with chronic pain	Scand J Pain	Exclude	Yes	-	-	-	-	-	-
J. Corbett; R. A. Rendell; H. C. 2018	2018	Inter-individual variation in the adaptive response to heat acclimation	J Therm Biol	Exclude	-	-	-	-	No	-	-
J. T. Costello; R. A. Rendell; 2018	2018	Effects of acute or chronic heat exposure, exercise and dehydration on plasma cortisol, IL-6 and C-reactive protein	Cytokine	Exclude	-	-	-	-	No	-	-
H. A. M. Daanen; S. Racinais; 2018	2018	Heat Acclimation Decay and Re-Induction: A Systematic Review and Meta-Analysis	Sports Med	Exclude	-	No	-	-	-	-	-
A. A. Dalina; I. E. Kovaleva; 2018	2018	[Sestrins are Gatekeepers in the Way from Stress to Aging and Disease]	Mol Biol (Mosk)	Exclude	Yes	-	-	-	-	-	-
F. Damas; C. Ugrinowitsch; C. 2018	2018	Resistance training in young men induces muscle transcriptome-wide changes associated with muscle fiber type composition	Eur J Appl Physiol	Exclude	Yes	-	-	-	No	-	-
B. R. Ely; L. A. Blanchard; J. 2018	2018	Physiological Responses to Overdressing and Exercise-Heat Stress in Trained Runners	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
K. Eschen; J. Abel; R. Granbe 2018	2018	ACTIVE-CONTRACTING VARIABLE-STIFFNESS FABRICS FOR SELF-FITTING WEARABLES	Proc ASME Conf Smart Mater	Exclude	Yes	-	-	-	-	-	-
P. A. Falgiano; T. L. Gillum; Z. 2018	2018	Dietary curcumin supplementation does not alter peripheral blood mononuclear cell responses to heat stress	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
E. Fisher; E. Law; J. Dudeney 2018	2018	Psychological therapies for the management of chronic and recurrent pain in children and adolescents	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. D. Flouris; R. McGinn; M. 2018	2018	Screening criteria for increased susceptibility to heat stress during work or leisure in hot environments	Temperature (Austin)	Exclude	-	No	-	-	-	-	-
J. V. A. Franco; T. Turk; J. H. 2018	2018	Non-pharmacological interventions for treating chronic prostatitis/chronic pelvic pain syndrome	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
N. Fujii; R. D. Meade; J. C. L. 2018	2018	Effect of P2 receptor blockade on cutaneous vasodilation during rest and exercise in the heat in young men	J Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
C. M. Goertz; C. R. Long; R. 2018	2018	Effect of Usual Medical Care Plus Chiropractic Care vs Usual Medical Care Alone on Pain and Disability	JAMA Netw Open	Exclude	Yes	-	-	-	-	-	-
E. D. B. Goulet; M. O. Mélan 2018	2018	Impact of Mild Hypohydration on Muscle Endurance, Power, and Strength in Healthy, Active Old Men	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
K. Guirguis; R. Basu; W. K. A. 2018	2018	Heat, Disparities, and Health Outcomes in San Diego County's Diverse Climate Zones	Geohealth	Exclude	Yes	-	-	-	-	-	-
P. S. Hafén; C. N. Preece; J. R. 2018	2018	Repeated exposure to heat stress induces mitochondrial adaptation in human skeletal muscle	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. F. Harrison 2018	2018	Approaches for testing hypotheses for the hypometric scaling of aerobic metabolic rate in animals	Am J Physiol Regul Integr Comp Physiol	Exclude	Yes	-	-	-	-	-	-
J. A. Hawley; C. Lundby; J. D. 2018	2018	Maximizing Cellular Adaptation to Endurance Exercise in Skeletal Muscle	Cell Metab	Exclude	-	No	-	-	-	-	-
J. L. J. Heaney; S. C. Killer; I. 2018	2018	Intensified training increases salivary free light chains in trained cyclists: Indication that training-induced muscle damage is not solely due to exercise	Physiol Behav	Exclude	Yes	-	-	-	-	-	-
S. L. Heathcote; P. Hassmén; 2018	2018	Passive Heating: Reviewing Practical Heat Acclimation Strategies for Endurance Athletes	Front Physiol	Exclude	-	No	-	-	-	-	-
G. J. Hodges; D. G. Stewart; 2018	2018	Episodic bouts of hyperaemia and shear stress improve arterial blood flow and endothelial function in young men	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
C. G. Hoehne; D. M. Hondula 2018	2018	Heat exposure during outdoor activities in the US varies significantly by city, demography, and acclimation	Health Place	Exclude	Yes	-	-	-	-	-	-
S. P. Hoekstra; N. C. Bishop; 2018	2018	Acute and chronic effects of hot water immersion on inflammation and metabolism in sedentary young men	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
W. R. Hood; S. N. Austad; P. F. 2018	2018	The Mitochondrial Contribution to Animal Performance, Adaptation, and Life-History Variation	Integr Comp Biol	Exclude	Yes	-	-	-	-	-	-
S. Hopewell; O. Adedire; B. J. 2018	2018	Multifactorial and multiple component interventions for preventing falls in older people living in the community	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
T. C. Hung; Y. H. Liao; Y. S. 2018	2018	Hot Water Bathing Impairs Training Adaptation in Elite Teen Archers	Chin J Physiol	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
S. D. Hunter, J. Laosiripisan, J. 2018		Effects of yoga interventions practised in heated and thermoneutral conditions on endothelium-de	Exp Physiol	Exclude	-	-	-	-	No	-	-
M. Hurley, K. Dickson, R. Ha 2018		Exercise interventions and patient beliefs for people with hip, knee or hip and knee osteoarthritis:	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. A. James, A. J. Richardson; 2018		Short-Term Heat Acclimation and Precooling, Independently and Combined, Improve 5-km Time	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
R. D. Johnston; G. M. Black; 2018		Applied Sport Science of Australian Football: A Systematic Review	Sports Med	Exclude	-	No	-	-	-	-	-
D. M. Jones; B. Roelands; S. 2018		Impairment of exercise performance following cold water immersion is not attenuated after 7 day	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
A. Kadlecová; T. Jirsa; O. Nov 2018		Natural plant hormones cytokinins increase stress resistance and longevity of Caenorhabditis eleg	Biogerontology	Exclude	Yes	-	-	-	-	-	-
A. L. Kimball; P. M. McCue; 2018		Whole body heat exposure modulates acute glucose metabolism	Int J Hyperthermia	Exclude	-	-	-	-	No	-	-
I. Kramerova; J. A. Torres; A. 2018		Calpain 3 and CaMKIIβ signaling are required to induce HSP70 necessary for adaptive muscle gr	Hum Mol Genet	Exclude	Yes	-	-	-	-	-	-
S. K. Kumator; H. Khan; T. Li 2018		Joint associations of sauna bathing and cardiorespiratory fitness on cardiovascular and all-cause n	Ann Med	Exclude	-	No	-	-	-	-	-
J. A. Laukkanen; T. Laukkanen 2018		Combined Effect of Sauna Bathing and Cardiorespiratory Fitness on the Risk of Sudden Cardiac I	Prog Cardiovasc Dis	Exclude	-	No	-	-	-	-	-
S. Laxminarayan; V. Rakesh; 2018		Individualized estimation of human core body temperature using noninvasive measurements	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
B. J. Lee; N. D. Clarke; J. Han 2018		Whole body precooling attenuates the extracellular HSP72, IL-6 and IL-10 responses after an acu	J Sports Sci	Exclude	-	-	-	-	No	-	-
D. G. Lee; K. R. Kim; J. Kim; 2018		Effects of heat waves on daily excess mortality in 14 Korean cities during the past 20 years 1991	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
A. S. Leicht; A. D. Flouris; A. 2018		Age alters cardiac autonomic modulations during and following exercise-induced heat stress in fe	Temperature (Austin)	Exclude	-	-	-	-	No	-	-
A. S. Leicht; A. Halliday; W. 2018		Heart rate variability responses to acute and repeated postexercise sauna in trained cyclists	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	No	-
R. D. Lennox; M. Cecechini-St 2018		Safety and tolerability of sauna detoxification for the protracted withdrawal symptoms of substan	J Int Med Res	Exclude	Yes	-	-	-	-	-	-
A. Luthar; J. Gabriel; R. P. Wa 2018		The Impact of Total Body Prehabilitation on Post-Operative Outcomes After Major Abdominal Su	World J Surg	Exclude	-	No	-	-	-	-	-
C. MacLean; J. Dillon; J. A. B 2018		The effect of low volume sprint interval training in patients with non-alcoholic fatty liver disease	Phys Sportsmed	Exclude	Yes	-	-	-	-	-	-
A. Makrgeorgou; J. Leonardi- 2018		Probiotics for treating eczema	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. Malgoire; P. E. Tardo-Dinc 2018		Uncoupling psychological from physiological markers of heat acclimatization in a military contex	J Therm Biol	Exclude	-	-	-	-	No	-	-
F. E. Marino 2018		The influence of thermal inputs on brain regulation of exercise: An evolutionary perspective	Prog Brain Res	Exclude	-	No	-	-	-	-	-
J. McCleery; R. P. Abraham; I 2018		Vitamin and mineral supplementation for preventing dementia or delaying cognitive decline in pe	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. M. McClelland; S. F. Godek 2018		Effects of Cardiovascular Fitness and Body Composition on Maximal Core Temperature in Colleg	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-
H. McGorm; L. A. Roberts; J. 2018		Turning Up the Heat: An Evaluation of the Evidence for Heating to Promote Exercise Recovery, 3	Sports Med	Exclude	-	No	-	-	-	-	-
K. Mehriiz; P. Gosselein; I. Tan 2018		The Effect of an Automated Phone Warning and Health Advisory System on Adaptation to High F	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
R. Milligan; M. Paul; M. Rich 2018		Vaccines for preventing typhoid fever	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
I. Mujika; S. Halson; L. M. Bu 2018		An Integrated, Multifactorial Approach to Periodization for Optimal Performance in Individual an	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
G. Norman; M. J. Westby; A. 2018		Dressings and topical agents for treating venous leg ulcers	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. R. Notley; A. D. Flouris; G. 2018		On the use of wearable physiological monitors to assess heat strain during occupational heat stres	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-
S. R. Notley; E. A. Taylor; N. 2018		Cutaneous vasomotor adaptation following repeated, isothermal heat exposures: evidence of adap	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
J. Okerblom; W. Fletes; H. H. 2018		Human-like Cmah inactivation in mice increases running endurance and decreases muscle fatigab	Proc Biol Sci	Exclude	Yes	-	-	-	-	-	-
T. Pankam; S. Saensiriphan; S 2018		The validation and evaluation of anti-HIV testing algorithm used in mobile clinic setting for men	Asian Pac J Allergy Immu	Exclude	Yes	-	-	-	-	-	-
S. Papadouchou; A. L. Pissioti 2018		Marginal adaptation and CAD-CAM technology: A systematic review of restorative material and	J Prosthet Dent	Exclude	Yes	-	-	-	-	-	-
K. Parris; C. J. Tyler 2018		Practical Torso Cooling During Soccer-Specific Exercise in the Heat	J Athl Train	Exclude	Yes	-	-	-	-	-	-
S. K. Pedersen; J. A. Wagenaar 2018		Proficiency of WHO Global Foodborne Infections Network External Quality Assurance System P	J Clin Microbiol	Exclude	Yes	-	-	-	-	-	-
C. Pellevoisin; C. Videau; D. 2018		SkinEthic™ RHE for in vitro evaluation of skin irritation of medical device extracts	Toxicol In Vitro	Exclude	Yes	-	-	-	-	-	-
A. S. Perrotta; M. D. White; N 2018		Efficacy of Hot Yoga as a Heat Stress Technique for Enhancing Plasma Volume and Cardiovascul	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
J. A. Porras-Salazar; D. P. Wy 2018		Reducing classroom temperature in a tropical climate improved the thermal comfort and the perfo	Indoor Air	Exclude	Yes	-	-	-	-	-	-
M. J. Price; M. Trbovich 2018		Thermoregulation following spinal cord injury	Handb Clin Neurol	Exclude	Yes	-	-	-	-	-	-
J. Pryce; L. Choi; M. Richards 2018		Insecticide space spraying for preventing malaria transmission	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
T. Purdom; L. Kravitz; K. Dok 2018		Understanding the factors that affect maximal fat oxidation	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-
N. Ravanelli; G. B. Coombs; I 2018		Maximum Skin Wetness after Aerobic Training with and without Heat Acclimation	Med Sci Sports Exerc	Exclude	-	-	-	-	No	-	-
K. Rinaldi; T. T. Trong; F. Riei 2018		Immersion with menthol improves recovery between 2 cycling exercises in hot and humid enviro	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
A. W. S. Rutjes; D. A. Denton; 2018		Vitamin and mineral supplementation for maintaining cognitive function in cognitively healthy pe	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. W. Schleh; B. C. Ruby; C. 2018		Short term heat acclimation reduces heat stress, but is not augmented by dehydration	J Therm Biol	Exclude	-	-	-	-	No	-	-
C. Schmitz; R. Duffield; C. Hat 2018		Optimizing Heat Acclimation for Endurance Athletes: High- Versus Low-Intensity Training	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
B. L. Sheahan; J. W. Fell; E. K 2018		Intestinal damage following short-duration exercise at the same relative intensity is similar in tem	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
D. Shou; J. Fan 2018		Design of Nanofibrous and Microfibrous Channels for Fast Capillary Flow	Langmuir	Exclude	Yes	-	-	-	-	-	-
D. Simancas-Racines; I. Arevi 2018		Interventions for treating acute high altitude illness	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. Skein; G. Wingfield; R. Ga 2018		Sleep quantity and quality during consecutive day heat training with the inclusion of cold-water ir	J Therm Biol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No
K. E. Skórzyńska-Dzidusko; 2018		Heat Shock Proteins as a Potential Therapeutic Target in the Treatment of Gestational Diabetes M	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-
V. Small-Faugeron; A. M. Gle 2018		Pulp treatment for extensive decay in primary teeth	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. T. Spector; J. Krenz; M. Cal 2018		Associations between heat exposure, vigilance, and balance performance in summer tree fruit har	Appl Ergon	Exclude	-	No	-	-	-	-	-
G. St George; A. Morgan; J. M 2018		Injectable local anaesthetic agents for dental anaesthesia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
M. J. Stacey; D. R. Woods; S. 2018		Heat acclimatization blunts copeptin responses to hypertonicity from dehydrating exercise in hum	Physiol Rep	Exclude	-	-	-	-	No	-	-
M. M. J. Stacey; S. K. Delves; 2018		Heart rate variability and plasma nephelines in the evaluation of heat acclimatization status	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

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J. M. Stephens; S. L. Halson; C. J. Stevens; S. L. Heathcote; S. Suvi; M. Mooses; S. Timpr	2018	Influence of body composition on physiological responses to post-exercise hydrotherapy	J Sports Sci	Exclude	-	-	-	-	-	-	No
M. C. Szymanski; T. L. Gillun	2018	Effect of two-weeks endurance training wearing additional clothing in a temperate outdoor environment	Temperature (Austin)	Exclude	-	-	-	-	-	-	-
H. L. Taylor; C. L. Wu; Y. C.	2018	Impact of sodium citrate ingestion during recovery after dehydrating exercise on rehydration and	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
H. Thabrew; K. Stasiak; S. E.	2018	Short-term dietary curcumin supplementation reduces gastrointestinal barrier damage and physiol	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
S. Timpmann; A. C. Hackney;	2018	Post-Exercise Carbohydrate-Energy Replacement Attenuates Insulin Sensitivity and Glucose Tole	Nutrients	Exclude	Yes	-	-	-	-	-	-
J. Uerlings; Z. G. Song; X. Y.	2018	E-Health interventions for anxiety and depression in children and adolescents with long-term phy	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. T. van der Steen; H. J. A. Sn	2018	Influence of Rhodiola rosea on the heat acclimation process in young healthy men	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
V. V. Venkataraman; A. K. Yeg	2018	Heat exposure affects jejunal tight junction remodeling independently of adenosine monophospha	Poult Sci	Exclude	Yes	-	-	-	-	-	-
G. M. R. Viana; L. Silva-Flanr	2018	Music-based therapeutic interventions for people with dementia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. Visser; M. H. McLachlan; N	2018	Locomotor constraints favour the evolution of the human pygmy phenotype in tropical rainforests	Proc Biol Sci	Exclude	Yes	-	-	-	-	-	-
J. Voelkel; D. Hellman; R. Sak	2018	Field evaluation of a real time loop-mediated isothermal amplification assay (RealAmp) for malar	PLoS One	Exclude	Yes	-	-	-	-	-	-
E. R. Watkins; J. Gibbons; Y. I	2018	Community-based supplementary feeding for food insecure, vulnerable and malnourished popula	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
E. R. Watkins; M. Hayes; P. W	2018	Assessing Vulnerability to Urban Heat: A Study of Disproportionate Heat Exposure and Access to	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
M. D. White	2018	A new occupational heat tolerance test: A feasibility study	J Therm Biol	Exclude	-	No	-	-	-	-	-
A. G. B. Willmott; O. R. Gibs	2018	Practical pre-cooling methods for occupational heat exposure	Appl Ergon	Exclude	-	-	-	-	No	-	-
A. G. B. Willmott; M. Hayes;	2018	Panting as a human heat loss thermoeffector	Handb Clin Neurol	Exclude	Yes	-	-	-	-	-	-
L. J. Wilson; E. Cockburn; K.	2018	Physiological and perceptual responses to exercising in restrictive heat loss attire with use of an u	Temperature (Austin)	Exclude	-	-	-	-	No	-	-
M. M. Woyton; S. Kluzek; T.	2018	Once- and twice-daily heat acclimation confer similar heat adaptations, inflammatory responses a	Physiol Rep	Exclude	-	-	-	-	No	-	-
W. Zhang; P. McManus; E. Di	2018	Recovery following a marathon: a comparison of cold water immersion, whole body cryotherapy	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-
M. Zimmermann; G. Landers;	2018	Partial mid-portion Achilles tear resulting in substantial improvement in pain and function in an ai	BMJ Case Rep	Exclude	Yes	-	-	-	-	-	-
M. J. Zurawlew; J. A. Mee; N.	2018	A Raster-Based Subdividing Indicator to Map Urban Heat Vulnerability: A Case Study in Sydney,	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
E. L. Adams; D. J. Casa; R. A.	2019	Precooling With Crushed Ice: As Effective as Heat Acclimation at Improving Cycling Time-Trial	Int J Sports Physiol Perfor	Exclude	-	-	-	-	No	-	-
A. P. Akerman; K. N. Thomas;	2019	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptations in Endurance Trained a	Front Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes
S. Al Said; S. Alabed; K. Kaie	2019	Heat Exposure and Hypohydration Exacerbate Physiological Strain During Load Carrying	J Strength Cond Res	Exclude	-	-	-	-	No	-	-
J. V. D. Albuquerque; B. N. G.	2019	Heat therapy vs. supervised exercise therapy for peripheral arterial disease: a 12-wk randomized,	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	-	-
M. Armour; C. C. Ee; D. Naid	2019	Non-vitamin K antagonist oral anticoagulants (NOACs) post- percutaneous coronary intervention	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
S. R. Barnes; J. F. Ambrose; A	2019	Interventions for morphea	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. Beck; V. Peña-Vivas; S. Fle	2019	Exercise for dysmenorrhoea	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
B. E. Berkovich; A. H. Stark;	2019	Incidence, timing, and seasonal patterns of heat illnesses during U.S. Army basic combat training,	Msmr	Exclude	-	No	-	-	-	-	-
J. Bidonde; A. J. Busch; C. L.	2019	Metacognition across sensory modalities: Vision, warmth, and nociceptive pain	Cognition	Exclude	Yes	-	-	-	-	-	-
S. Bonnette; C. A. DiCesare;	2019	Rapid Weight Loss in Competitive Judo and Taekwondo Athletes: Attitudes and Practices of Coac	Int J Sport Nutr Exerc Met	Exclude	-	No	-	-	-	-	
L. P. Boulet; J. Turmel	2019	Mixed exercise training for adults with fibromyalgia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
T. Brown; T. H. M. Moore; L.	2019	Injury Risk Factors Integrated Into Self-Guided Real-Time Biofeedback Improves High-Risk Bioi	J Sport Rehabil	Exclude	Yes	-	-	-	-	-	-
H. Bucht; L. Donath	2019	Cough in exercise and athletes	Pulm Pharmacol Ther	Exclude	Yes	-	-	-	-	-	-
L. M. Burke; L. M. Castell; D.	2019	Interventions for preventing obesity in children	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
J. Burns; H. Boogaard; S. Pol;	2019	Sauna Yoga Superiorly Improves Flexibility, Strength, and Balance: A Two-Armed Randomized C	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	No
C. Byrne; J. K. W. Lee	2019	International Association of Athletics Federations Consensus Statement 2019: Nutrition for Athlet	Int J Sport Nutr Exerc Met	Exclude	-	No	-	-	-	-	-
F. Campa; H. Gatterer; H. Luk	2019	Interventions to reduce ambient particulate matter air pollution and their effect on health	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
A. C. V. Cavalcanti; A. J. Heni	2019	The Physiological Strain Index Modified for Trained Heat-Acclimated Individuals in Outdoor H	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-
M. Cernych; N. Baranauksieni	2019	Stabilizing Biomechanical-Vector-Analysis Measures With a 10-Minute Cold Shower After Runni	Int J Sports Physiol Perfor	Exclude	Yes	-	-	-	-	-	-
H. Y. Chen; Y. C. Chen; K. Tu	2019	Complementary therapies in labor: randomized clinical trial	Rev Gaucha Enferm	Exclude	Yes	-	-	-	-	-	-
T. E. Cooper; J. R. Hambleton	2019	Accelerated muscle contractility and decreased muscle steadiness following sauna recovery do no	Hum Mov Sci	Exclude	-	-	-	-	No	-	-
M. Curran; J. Campbell; M. D	2019	Effects of caffeine and sex on muscle performance and delayed-onset muscle soreness after exerci	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. A. de Moraes Silva; L. C.	2019	Pharmacological interventions for painful sickle cell vaso-occlusive crises in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
D. Didehdar; S. Sobhani	2019	Type 1 diabetes impairs the mobilisation of highly-differentiated CD8+T cells during a single bou	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-
D. M. Duvnjak-Zaknich; K. E.	2019	Balneotherapy for chronic venous insufficiency	Cochrane Database of Sys	Exclude	-	No	-	-	-	-	-
X. Fan; W. Liu; P. Wargocki	2019	The effect of cold-water immersion on physical performance	J Bodyw Mov Ther	Exclude	Yes	-	-	-	-	-	-
M. Farrow; C. Lutteroth; P. C.	2019	Continuous and intermittent heat acclimation and decay in team sport athletes	Eur J Sport Sci	Exclude	-	-	-	-	No	-	-
E. Fisher; E. Law; J. Dudeny;	2019	Physiological and psychological reactions of sub-tropically acclimatized subjects exposed to diffe	Indoor Air	Exclude	Yes	-	-	-	-	-	-
J. V. A. Franco; T. Turk; J. H.	2019	Virtual-reality exergaming improves performance during high-intensity interval training	Eur J Sport Sci	Exclude	Yes	-	-	-	-	-	-
C. J. Fuchs; J. T. Gonzalez; L.	2019	Psychological therapies (remotely delivered) for the management of chronic and recurrent pain in	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
N. Fujii; K. Hatam; G. W. Mc	2019	Pharmacological interventions for treating chronic prostatitis/chronic pelvic pain syndrome	Cochrane Database of Sys	-	-	-	-	-	-	-	-
T. Fujimoto; B. Tsuji; Y. Sasak	2019	Fructose co-ingestion to increase carbohydrate availability in athletes	J Physiol	Exclude	Yes	-	-	-	-	-	-
M. P. Funnell; S. A. Mears; K.	2019	Exogenous Activation of Protease-Activated Receptor 2 Attenuates Cutaneous Vasodilatation and	Skin Pharmacol Integ	Exclude	Yes	-	-	-	-	-	-
		Low-intensity exercise delays the shivering response to core cooling	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-
		Blinded and unblinded hypohydration similarly impair cycling time trial performance in the heat i	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. J. Fyfe; J. R. Brootch; A. J. R. Gauer; B. K. Meyers	2019	Cold water immersion attenuates anabolic signaling and skeletal muscle fiber hypertrophy, but not heat-related illnesses	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
N. Gerrett; B. R. M. Kingma; J. T. Gonzalez; J. A. Betts	2019	Ambient Conditions Prior to Tokyo 2020 Olympic and Paralympic Games: Considerations for Acclimation	Front Physiol	Exclude	Yes	-	-	-	-	-	-
J. Gosselin; J. Béliveau; M. H. S. M. Goudet; B. A. Bogin; N. S. L. Halson; L. M. Burke; J. L. Hao; Y. Xiang; A. Degen; Y. S. L. Heathcote; P. Hassmén; E. Hermand; C. Chabert; O. H. K. Hesketh; S. O. Shephard; J. S. P. Hoekstra; M. N. Western	2019	Wireless measurement of rectal temperature during exercise: Comparing an ingestible thermometry with a rectal probe	J Therm Biol	Exclude	Yes	-	-	-	-	-	-
Y. Hosokawa; E. N. Johnson; Y. Hosokawa; R. L. Stearns; E. C. Hwang; J. H. Jung; M. B. D. M. Jones; S. P. Bailey; K. I. W. Jung; F. Jazizadeh; T. E. Di. K. Kerr; G. Morse; D. Graves; S. Ketelhut; R. G. Ketelhut	2019	Nutritional interventions for preventing stunting in children (birth to 59 months) living in urban slums	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
L. S. Kissling; A. P. Akerman; K. Krüger; T. Reichel; C. Zeil	2019	Nutrition for Travel: From Jet Lag To Catering	Int J Sport Nutr Exerc Metab	Exclude	Yes	-	-	-	-	-	-
E. Law; E. Fisher; C. Eccles	2019	Adding heat-treated rapeseed to the diet of yak improves growth performance and tenderness and reduces the risk of heat stress	Anim Sci J	Exclude	Yes	-	-	-	-	-	-
T. W. LeBaron; I. Laher; B. Ki	2019	How Does a Delay Between Temperate Running Exercise and Hot-Water Immersion Alter the Acclimation Response?	Front Physiol	Exclude	-	-	-	-	No	-	-
J. I. López-Sánchez; P. A. Han	2019	Ultra-endurance events in tropical environments and countermeasures to optimize performance	Int J Hyperthermia	Exclude	-	No	-	-	-	-	-
A. Lubkowska; I. Bryczkowska	2019	Passive heat therapy in sedentary humans increases skeletal muscle capillarization and eNOS content	Am J Physiol Heart Circ Physiol	Exclude	-	-	-	-	No	-	-
K. Martin; E. McLeod; J. Péri	2019	Modality-specific training adaptations - do they lead to a dampened acute inflammatory response?	Appl Physiol Nutr Metab	Exclude	-	-	-	-	No	-	-
M. Morabito; A. Messeri; P. N. R. Morán-Navarro; J. Courel-2019	2019	Knowledge and Belief Toward Heat Safety and Hydration Strategies Among Runners: A Preliminary Study	J Athl Train	Exclude	-	No	-	-	-	-	-
O. Moser; M. L. Eckstein; O. C. M. Muia; G. W. McGarr; M. P. Natale; M. Ruospo; V. M. S. T. E. Nightingale; J. P. Walhin	2019	Is Heat Intolerance State or Trait?	Sports Med	Exclude	-	No	-	-	-	-	-
F. G. O'Connor	2019	Aquablation of the prostate for the treatment of lower urinary tract symptoms in men with benign prostatic hyperplasia	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
J. P. Regnaud; T. Davergne; C. L. M. Reinart; L. Forsetlund; R. Relf; A. Willmott; M. S. F. Rivas; C. G. Crandall; O. E. Sakai; Y. Yasufuku; T. Kam	2019	Evaluation of cognitive performance and neurophysiological function during repeated immersion in cold water	Brain Res	Exclude	Yes	-	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	Heat Flux Sensing for Machine-Learning-Based Personal Thermal Comfort Modeling	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-
E. Law; E. Fisher; C. Eccles	2019	A Detoxification Intervention for Gulf War Illness: A Pilot Randomized Controlled Trial	Int J Environ Res Public Health	Exclude	Yes	-	-	-	-	-	-
J. I. López-Sánchez; P. A. Han	2019	The blood pressure and heart rate during sauna bath correspond to cardiac responses during submaximal exercise	Complement Ther Med	Exclude	-	-	-	-	No	-	-
A. Lubkowska; I. Bryczkowska	2019	Heat-induced hypervolemia: Does the mode of acclimation matter and what are the implications for heat stress?	Temperature (Austin)	Exclude	-	-	-	-	No	-	-
K. Martin; E. McLeod; J. Péri	2019	Role of heat shock proteins 70/90 in exercise physiology and exercise immunology and their diagnostic utility	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-
M. Morabito; A. Messeri; P. N. R. Morán-Navarro; J. Courel-2019	2019	Psychological interventions for parents of children and adolescents with chronic illness	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
O. Moser; M. L. Eckstein; O. C. M. Muia; G. W. McGarr; M. P. Natale; M. Ruospo; V. M. S. T. E. Nightingale; J. P. Walhin	2019	Hydrogen gas: from clinical medicine to an emerging ergogenic molecule for sports athletes (1)	Can J Physiol Pharmacol	Exclude	-	No	-	-	-	-	-
F. G. O'Connor	2019	Diminishing Cognitive Capacities in an Ever Hotter World: Evidence From an Applicable Power-Law Model	Hum Factors	Exclude	Yes	-	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	The Effects of Swimming Training in Cold Water on Antioxidant Enzyme Activity and Lipid Peroxidation	Int J Environ Res Public Health	Exclude	Yes	-	-	-	-	-	-
E. Law; E. Fisher; C. Eccles	2019	The Impact of Environmental Stress on Cognitive Performance: A Systematic Review	Hum Factors	Exclude	-	No	-	-	-	-	-
J. I. López-Sánchez; P. A. Han	2019	Making weight during military service is related to binge eating and eating pathology for veterans	Eat Weight Disord	Exclude	Yes	-	-	-	-	-	-
A. Lubkowska; I. Bryczkowska	2019	Impaired Heat Adaptation From Combined Heat Training and Live High, Train Low Hypoxia	Int J Sports Physiol Perform	Exclude	-	-	-	-	No	-	-
K. Martin; E. McLeod; J. Péri	2019	Influence of upper-body continuous, resistance or high-intensity interval training (CRIT) on post-exercise heat stress	Trials	Exclude	-	-	-	-	No	-	-
M. Morabito; A. Messeri; P. N. R. Morán-Navarro; J. Courel-2019	2019	An Occupational Heat-Health Warning System for Europe: The HEAT-SHIELD Platform	Int J Environ Res Public Health	Exclude	Yes	-	-	-	-	-	-
O. Moser; M. L. Eckstein; O. C. M. Muia; G. W. McGarr; M. P. Natale; M. Ruospo; V. M. S. T. E. Nightingale; J. P. Walhin	2019	Validity of Skin, Oral and Tympanic Temperatures During Exercise in the Heat: Effects of Wind and Humidity	Ann Biomed Eng	Exclude	-	No	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	Performance of the Freestyle Libre flash glucose monitoring (flash GM) system in individuals with type 2 diabetes	Diabetes Obes Metab	Exclude	Yes	-	-	-	-	-	-
E. Law; E. Fisher; C. Eccles	2019	Contribution of nitric oxide synthase to cutaneous vasodilatation and sweating in men of black-African descent	Exp Physiol	Exclude	Yes	-	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	Interventions for improving sleep quality in people with chronic kidney disease	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
T. E. Nightingale; J. P. Walhin	2019	Biomarkers of cardiometabolic health are associated with body composition characteristics but not with heat stress	J Spinal Cord Med	Exclude	Yes	-	-	-	-	-	-
F. G. O'Connor	2019	Sports Medicine: Exertional Heat Illness	FP Essent	Exclude	-	No	-	-	-	-	-
J. Omassoli; N. E. Hill; D. R. E. Pakdel; M. Naebe; L. Sun; T. K. Pellinger; C. B. Neighbo	2019	Variation in renal responses to exercise in the heat with progressive acclimatisation	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
W. A. Pethick; H. J. Murray; P. J. F. Pii; C. J. Mikkelsen; N. J. R. Podstawski; K. Boryslawski	2019	Advanced Functional Fibrous Materials for Enhanced Thermoregulating Performance	ACS Appl Mater Interface	Exclude	Yes	-	-	-	-	-	-
J. L. Pryor; R. R. Pryor; L. W. G. R. M. Rahimi; A. L. Albani	2019	Acute Lower Leg Heating Increases Exercise Capacity in Patients With Peripheral Artery Disease	J Cardiovasc Nurs	Exclude	-	-	-	-	No	-	-
N. Ravanelli; W. Casasola; T. N. Ravanelli; G. Coombs; P. T. Reeve; R. Gordon; P. B. Lai	2019	Effects of hydration status during heat acclimation on plasma volume and performance	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-
J. P. Regnaud; T. Davergne; C. L. M. Reinart; L. Forsetlund; R. Relf; A. Willmott; M. S. F. Rivas; C. G. Crandall; O. E. Sakai; Y. Yasufuku; T. Kam	2019	Heat Acclimation Does Not Protect Trained Males from Hyperthermia-Induced Impairments in Cardiovascular Function	Int J Environ Res Public Health	Exclude	-	-	-	-	No	-	-
J. S. P. Hoekstra; M. N. Western	2019	The effect of prolonged thermal stress on the physiological parameters of young, sedentary men	Homo	Exclude	-	No	-	-	-	-	-
E. Law; E. Fisher; C. Eccles	2019	Intermittent exercise-heat exposures and intense physical activity sustain heat acclimation adaptations	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
J. S. P. Hoekstra; M. N. Western	2019	Physiological Responses to Heat Acclimation: A Systematic Review and Meta-Analysis of Randomized Controlled Trials	J Sports Sci Med	Exclude	-	No	-	-	-	-	-
N. Ravanelli; W. Casasola; T. N. Ravanelli; G. Coombs; P. T. Reeve; R. Gordon; P. B. Lai	2019	Heat stress and fetal risk. Environmental limits for exercise and passive heat stress during pregnancy	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-
J. P. Regnaud; T. Davergne; C. L. M. Reinart; L. Forsetlund; R. Relf; A. Willmott; M. S. F. Rivas; C. G. Crandall; O. E. Sakai; Y. Yasufuku; T. Kam	2019	Thermoregulatory adaptations with progressive heat acclimation are predominantly evident in unacclimated individuals	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	-
J. S. P. Hoekstra; M. N. Western	2019	Impairment of Cycling Capacity in the Heat in Well-Trained Endurance Athletes After High-Intensity Interval Training	Int J Sports Physiol Perform	Exclude	-	-	-	-	No	-	-
J. P. Regnaud; T. Davergne; C. L. M. Reinart; L. Forsetlund; R. Relf; A. Willmott; M. S. F. Rivas; C. G. Crandall; O. E. Sakai; Y. Yasufuku; T. Kam	2019	Exercise programmes for ankylosing spondylitis	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
L. M. Reinart; L. Forsetlund; R. Relf; A. Willmott; M. S. F. Rivas; C. G. Crandall; O. E. Sakai; Y. Yasufuku; T. Kam	2019	Interventions for ulceration and other skin changes caused by nerve damage in leprosy	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	Reliability of a wearable sweat rate monitor and routine sweat analysis techniques under heat stress	J Therm Biol	Exclude	-	-	-	-	No	-	-
E. Law; E. Fisher; C. Eccles	2019	Exercise heat acclimation causes post-exercise hypotension and favorable improvements in lipid metabolism	J Therm Biol	Exclude	-	-	-	-	No	-	-
K. Sakai; Y. Yasufuku; T. Kam	2019	Repetitive peripheral magnetic stimulation for impairment and disability in people after stroke	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-
J. S. P. Hoekstra; M. N. Western	2019	Harvesting the Four Elements for Mental Health	Front Psychiatry	Exclude	Yes	-	-	-	-	-	-
P. U. Saunders; L. A. Garvica	2019	Special Environments: Altitude and Heat	Int J Sport Nutr Exerc Metab	Exclude	-	No	-	-	-	-	-
Z. J. Schlader; D. Hostler; M. J. Siquier-Coll; I. Bartolomé	2019	The Potential for Renal Injury Elicited by Physical Work in the Heat	Nutrients	Exclude	-	No	-	-	-	-	-
J. Siquier-Coll; I. Bartolomé	2019	Effect of heat exposure and physical exercise until exhaustion in normothermic and hyperthermic conditions	J Therm Biol	Exclude	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
J. Siquier-Coll; I. Bartolomé; C. J. Smith	2019	Influence of a physical exercise until exhaustion in normothermic and hyperthermic conditions on Pediatric Thermoregulation: Considerations in the Face of Global Climate Change	J Therm Biol Nutrients	Exclude Exclude	- Yes	- -	- -	- -	- -	- -	- -	No -	- -	- -
A. Sotiriadis; T. Debevec; U. C. A. Sotiriadis; P. Miliotis; U. C. Steele; P. Androulakis-Koral	2019	Heat acclimation does not affect maximal aerobic power in thermoneutral normoxic or hypoxic conditions: No ergogenic effects of a 10-day combined heat and hypoxic acclimation on aerobic performance	Exp J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
S. Suvi; M. Mooses; S. Timpr	2019	Comparisons of Resistance Training and Cardio* Exercise Modalities as Countermeasures to Microclimate	Front Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
J. Takakura; S. Fujimori; K. T. Taylor; K. C. Miller	2019	Influence of Sodium Citrate Supplementation after Dehydrating Exercise on Responses of Stress Hormones	Medicina (Kaunas)	Exclude	-	-	-	-	-	-	-	No	-	-
J. Taylor; K. C. Miller	2019	Site-specific hourly resolution wet bulb globe temperature reconstruction from gridded daily resolution	Int J Biometeorol	Exclude	-	No	-	-	-	-	-	-	-	-
L. Taylor; H. R. Thornton; N. T. Turnes; R. S. O. Cruz; F. Ca	2019	Precooling, Hyperthermia, and Postexercise Cooling Rates in Humans Wearing American Football Uniforms	J Athl Train	Exclude	-	-	-	-	-	-	-	No	-	-
J. H. Villafañe; K. Valdes; P. P. E. R. Watkins; A. Walker; E. M. Weigert; M. Hoene; P. Plon	2019	Alterations in core temperature during World Rugby Sevens Series tournaments in temperate and subtropical climates	Eur J Sport Sci	Exclude	-	No	-	-	-	-	-	-	-	-
A. G. B. Willmott; M. Hayes; T. Yoshihara; S. W. Chang; T. M. Yuce; M. Ulusoy; A. G. Tu	2019	The Impact of Preconditioning Strategies Designed to Improve 2000-m Rowing Ergometer Performance	Int J Sports Physiol Perform	Exclude	-	No	-	-	-	-	-	-	-	-
S. Zaman; A. Yousuf; A. Begu	2019	Osteoarthritis: a call for research on central pain mechanism and personalized prevention strategies	Clin Rheumatol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Zurawlew; J. A. Mee; N. F. O. Alele; B. S. Malau-Aduli	2020	Women Firefighters' Health and Well-Being: An International Survey	Womens Health Issues	Exclude	-	No	-	-	-	-	-	-	-	-
A. F. Alghannam; I. Temple	2020	Hepatokines-a novel group of exercise factors	Pflugers Arch	Exclude	-	No	-	-	-	-	-	-	-	-
M. A. Alston; J. Lee; M. E. Mi	2020	Heat acclimation attenuates the increased sensations of fatigue reported during acute exercise-heat stress	Temperature (Austin)	Exclude	-	-	-	-	-	-	-	No	-	-
T. Amamo; N. Fujii; G. P. Ken	2020	Sex-specific differences in rat soleus muscle signaling pathway responses to a bout of horizontal running	J Physiol Biochem	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. T. Ashworth; J. D. Cotter; E. Bailey; C. Fuhrmann; J. Ru	2020	Comparison of Marginal and Internal Adaptation of Heat-Pressed and CAD/CAM Porcelain Laminate Veneers	J Prosthodont	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Barcala-Furelos; M. Fernán	2020	Evaluation of adaptive low cost solar water pasteurization device for providing safe potable water in rural areas	J Water Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
O. R. Barclay; D. W. Chapman	2020	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptations That Are Retained for at Least 24 Hours	Front Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F. O. Alele; B. S. Malau-Aduli	2020	Epidemiology of Exertional Heat Illness in the Military: A Systematic Review of Observational Studies	Int J Environ Res Public Health	Exclude	-	No	-	-	-	-	-	-	-	-
A. S. Cahill; L. M. Carey; N. A. M. Canteras; J. C. C. Baptista	2020	Effect of carbohydrate-protein supplementation on endurance training adaptations	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
Y. L. Chen; W. H. Kuan; C. L. 2020	2020	The ghost of temperature past: interactive effects of previous and current thermal conditions on glucose metabolism	J Exp Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. C. Choo; J. J. Peiffer; J. W. A. C. S. Courtin; S. Maldonado	2020	The relative contribution of α- and β-adrenergic sweating during heat exposure and the influence of acclimation	Exp Dermatol	Exclude	-	-	-	-	-	-	-	No	-	-
M. Curran; J. P. Campbell; E. C. E. East; E. D. F. Dorward	2020	Methods for improving thermal tolerance in military personnel prior to deployment	Mil Med Res	Exclude	-	No	-	-	-	-	-	-	-	-
B. Elsner; J. Kugler; M. Pohl; J. Foster; S. G. Hodder; A. B. C. J. Fuchs; J. S. J. Smeets; J. J. Fudin; E. L. Wegryn; E. Gr	2020	Wearable sensors for personal temperature exposure assessments: A comparative study	Environ Res	Exclude	Yes	No	-	-	-	-	-	No	-	-
T. Gasparetto; C. Nessler	2020	Measuring the physiological impact of extreme heat on lifeguards during cardiopulmonary rescue training	Am J Emerg Med	Exclude	-	No	-	-	-	-	-	-	-	-
O. R. Gibson; C. A. James; J. 2020	2020	The Influence of Heat Acclimation and Hypohydration on Post-Weight-Loss Exercise Performance	Int J Sports Physiol Perform	Exclude	-	-	-	-	-	-	-	No	-	-
C. J. Gronlund; A. J. Yang; K. M. Hansen; M. Oxfeldt; A. E. L. He; R. Zhang; J. Shen; Y. M. E. Hermand; A. Collado; O. H. S. P. Hoekstra; N. C. Bishop; C. J. Hoogewerf; M. J. Hop; S. Hu; T. Maeda	2020	A Study Protocol to Determine Heat-Related Health Impacts among Primary Schoolchildren in Scotland	Int J Environ Res Public Health	Exclude	-	No	-	-	-	-	-	-	-	-
R. D. Hyldahl; J. M. Peake	2020	Occupational Heat Stress, Thermal Comfort, and Cognitive Performance in the OR: An Integrative Review	Aorn J	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Ihsan; C. R. Abbiss; W. Gr	2020	Implementation interventions to promote the uptake of evidence-based practices in stroke rehabilitation	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. Ihsan; G. Watson; H. C. Cl	2020	Transverse versus vertical groin incision for femoral artery approach	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. Jakob; Y. M. Tesfamariam; T. Jefferson; C. B. Del Mar; B. H. Keims; N. A. Koemel; W. L. Kenney	2020	Comparative Study of the Composition of Sweat from Eccrine and Apocrine Sweat Glands during Exercise	Int J Environ Res Public Health	Exclude	-	-	-	-	-	-	-	No	-	-
K. Kim; J. C. Monroe; T. P. Gi	2020	Effect of regular precooling on adaptation to training in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
		Assessing thermal sensitivity using transient heat and cold stimuli combined with a Bayesian adaptive model	Eur J Pain	Exclude	Yes	-	-	-	-	-	-	-	-	-
		The mobilisation of early mature CD56dim-CD16bright NK cells is blunted following a single bout of exercise	Exerc Immunol Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Local cooling for relieving pain from perineal trauma sustained during childbirth	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Transcranial direct current stimulation (tDCS) for improving activities of daily living, and physical function in people with stroke	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Individual Responses to Heat Stress: Implications for Hyperthermia and Physical Work Capacity	Front Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
		Hot-water immersion does not increase postprandial muscle protein synthesis rates during recovery	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
		A Randomized, Crossover, Pharmacokinetic and Adhesion Performance Study of a Lidocaine Topical Anesthetic	J Pain Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Diverse Effects of Thermal Conditions on Performance of Marathon Runners	Front Psychol	Exclude	-	No	-	-	-	-	-	-	-	-
		Heat alleviation strategies for athletic performance: A review and practitioner guidelines	Temperature (Austin)	Exclude	-	No	-	-	-	-	-	-	-	-
		Time series analysis of total and direct associations between high temperatures and preterm births	BMJ Open	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Supplement with whey protein hydrolysate in contrast to carbohydrate supports mitochondrial adaption to exercise	J Int Soc Sports Nutr	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Removal of N-terminal tail changes the thermostability of the low-temperature-active exo-inulinase	Bioengineered	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Skin Application of 4% Menthol Enhances Running Performance in Hot and Humid Climate	Int J Sports Med	Exclude	-	-	-	-	-	-	-	No	-	-
		Elevating body temperature to reduce low-grade inflammation: a welcome strategy for those unable to exercise	Exerc Immunol Rev	Exclude	-	No	-	-	-	-	-	-	-	-
		Topical treatment for facial burns	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Productivity and physiological responses during exposure to varying air temperatures and clothing	Indoor Air	Exclude	-	-	-	-	-	-	-	No	-	-
		Combining cooling or heating applications with exercise training to enhance performance and muscle mass	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
		Warming to the ice bath: Don't go cool on cold water immersion just yet! Comment on: 1) Arthur	Temperature (Austin)	Exclude	-	No	-	-	-	-	-	-	-	-
		Skeletal Muscle Microvascular Adaptations Following Regular Cold Water Immersion	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Bisphosphonates or RANK-ligand-inhibitors for men with prostate cancer and bone metastases: a systematic review	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Physical interventions to interrupt or reduce the spread of respiratory viruses	Cochrane Database of Sys Rev	Exclude	Yes	-	-	-	-	-	-	-	-	-
		Exercise and intestinal permeability: another form of exercise-induced hormesis?	Am J Physiol Gastrointest Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
		Psychometric limits and critical evaporative coefficients for exercising older women	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
		Local Heat Therapy to Accelerate Recovery After Exercise-Induced Muscle Damage	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
K. Kim; J. C. Monroe; T. P. G.	2020	Skeletal muscle adaptations to heat therapy	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
L. Klous; C. De Ruiter; P. Alk	2020	Sweat rate and sweat composition during heat acclimation	J Therm Biol	Exclude	-	-	-	-	-	-	-	-	-	-
L. Klous; C. de Ruiter; P. Alk	2020	Sweat rate and sweat composition following active or passive heat re-acclimation: A pilot study	Temperature (Austin)	Exclude	-	-	-	-	-	-	-	-	-	-
Y. Ko; J. Kang; S. H. Seol; J.	2020	Effectiveness of skin-heating using a water-perfused suit as passive and post-exercise heat acclimation	J Therm Biol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	No
Y. Ko; S. H. Seol; J. Kang; J.	2020	Adaptive changes in physiological and perceptual responses during 10-day heat acclimation training	J Physiol Anthropol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
M. Kordi; J. P. Folland; S. Gov	2020	Cycling-specific isometric resistance training improves peak power output in elite sprint cyclists	Scand J Med Sci Sports	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. C. Kozai; E. Twitchett; S.	2020	Workload Intensity and Rest Periods in Professional Ballet: Connotations for Injury	Int J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
O. Laitano; C. K. Garcia; A. J.	2020	Delayed metabolic dysfunction in myocardium following exertional heat stroke in mice	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. Langhorne; S. Ramachandri	2020	Organised inpatient (stroke unit) care for stroke: network meta-analysis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Larenas-Linnemann; N. Ro	2020	Enhancing innate immunity against virus in times of COVID-19: Trying to untangle facts from fiction	World Allergy Organ J	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Lee; P. Willeit; T. Laukkane	2020	Acute effects of exercise and sauna as a single intervention on arterial compliance	Eur J Prev Cardiol	Exclude	-	-	-	-	-	-	-	No	-	-
C. L. Lim	2020	Fundamental Concepts of Human Thermoregulation and Adaptation to Heat: A Review in the Context of Heat Stress	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-	-	-	-
X. Liu; Z. Tian; L. Sun; J. Liu	2020	Mitigating heat-related mortality risk in Shanghai, China: system dynamics modeling simulations	Environ Geochem Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. K. Lorentzen; C. Davis; L.	2020	Interventions for frostbite injuries	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Maggolino; G. E. Dahl; N.	2020	Estimation of maximum thermo-hygrometric index thresholds affecting milk production in Italian dairy cows	J Dairy Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. L. Mahaffey	2020	Chemistry in a cup of coffee: Adapting an online lab module for teaching specific heat capacity of coffee	Biochem Mol Biol Educ	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Malgouyre; J. Siracusa; P. E.	2020	Four-month operational heat acclimatization positively affects the level of heat tolerance 6 months later	Sci Rep	Exclude	-	-	-	-	-	-	-	No	-	-
O. McCarthy; R. Deere; M. L.	2020	Improved Nocturnal Glycaemia and Reduced Insulin Use Following Clinical Exercise Trial Participants	Front Public Health	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. McCubbin; B. A. Allans	2020	Sports Dietitians Australia Position Statement: Nutrition for Exercise in Hot Environments	Int J Sport Nutr Exerc Met	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. A. Mendes; I. Lima; T. Sou	2020	Motor neuroprosthesis for promoting recovery of function after stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Michnik; K. Duch; I. Pokot	2020	Differences in cryostimulation and sauna effects on post-exercise changes in blood serum of athletes	Complement Ther Med	Exclude	-	-	-	-	-	-	-	No	-	-
R. Milligan; A. Daher; G. Vill	2020	Primaquine alternative dosing schedules for preventing malaria relapse in people with Plasmodium falciparum	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. B. Morris; O. Jay; A. D. Fl	2020	Sustainable solutions to mitigate occupational heat strain - an umbrella review of physiological effects of heat stress	Environ Health	Exclude	-	No	-	-	-	-	-	-	-	-
J. N. Moss; F. M. Bayne; F. C	2020	Short-term isothermic heat acclimation elicits beneficial adaptations but medium-term elicits a maladaptive response	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
C. M. Muia; S. R. Notley; S.	2020	Whole-body heat exchange in black-African and Caucasian men during exercise eliciting matched heat stress	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Nakamura; K. Muraishi; H.	2020	Effect of a cooling strategy combining forearm water immersion and a low dose of ice slurry ingestion on heat tolerance	J Therm Biol	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. Nakamura; Y. Tanabe; T. A	2020	Low caffeine dose improves intermittent sprint performance in hot and humid environments	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
R. Nava; M. N. Zuhl	2020	Heat acclimation-induced intracellular HSP70 in humans: a meta-analysis	Cell Stress Chaperones	Exclude	-	No	-	-	-	-	-	-	-	-
I. R. Nilssen; H. S. Koksvisk; B	2020	Rehabilitation in warm climate for young adults with inflammatory arthritis: A 12-month randomised controlled trial	J Rehabil Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Njemini; K. Verhaeghen; T.	2020	A Novel Bead-Based Immunoassay for the Measurement of Heat Shock Proteins 27 and 70	Pathogens	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. B. Ogden; J. L. Fallowfield	2020	Reliability of gastrointestinal barrier integrity and microbial translocation biomarkers at rest and during exercise	Physiol Rep	Exclude	-	-	-	-	-	-	-	No	-	-
C. B. Oliveira; C. G. Maher; B	2020	Epidural corticosteroid injections for lumbosacral radicular pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. Otani; M. Kaya; H. Goto; A	2020	Rising vs. falling phases of core temperature on endurance exercise capacity in the heat	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
R. Ouertani; A. Ouertani; M.	2020	New Plant Growth-Promoting, Chromium-Detoxifying Microbacterium Species Isolated From a Hot Spring	Front Bioeng Biotechnol	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Palareti; G. Melotti; F. Cass	2020	Psychological interventions for people with hemophilia	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
W. R. Parry Smith; A. Papadogi	2020	Uterotonic agents for first-line treatment of postpartum haemorrhage: a network meta-analysis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. T. Parsons; D. Snape; J. O'H	2020	Echocardiographic changes following active heat acclimation	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
S. M. Pasiakos	2020	Nutritional Requirements for Sustaining Health and Performance During Exposure to Extreme Environments	Annu Rev Nutr	Exclude	-	No	-	-	-	-	-	-	-	-
J. D. Périard; D. B. Pyne; D. J	2020	Short-Term Repeated-Sprint Training in Hot and Cool Conditions Similarly Benefits Performance	Front Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
S. Pham; D. Yeap; G. Escalera	2020	Wearable Sensor System to Monitor Physical Activity and the Physiological Effects of Heat Exposure	Sensors (Basel)	Exclude	-	No	-	-	-	-	-	-	-	-
M. Pinart; J. R. Rueda; G. A.	2020	Interventions for American cutaneous and mucocutaneous leishmaniasis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. R. Pryor; J. L. Pryor; L. W.	2020	Acute Kidney Injury Biomarker Responses to Short-Term Heat Acclimation	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	-	No	-	-
S. Racinais; M. Ihsan	2020	Why should I test my athletes in the heat several months before Tokyo 2020?	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
S. Racinais; D. Nichols; G. Tri	2020	Health status, heat preparation strategies and medical events among elite cyclists who competed in the heat	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
S. Racinais; J. D. Périard	2020	Benefits of heat re-acclimation in the lead-up to the Tokyo Olympics	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-
A. Rapson; E. Collman; S. Fat	2020	Free light chains as an emerging biomarker in saliva: Biological variability and comparisons with creatinine	Brain Behav Immun	Exclude	Yes	-	-	-	-	-	-	-	-	-
P. B. Raven; S. A. Romero	2020	Increasing body temperature with dynamic exercise and/or by wallowing/bathing in hot water or steam	J Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
R. Relif; G. Eichhorn; K. Wald	2020	Validity of a wearable sweat rate monitor and routine sweat analysis techniques using heat acclimation	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
J. A. Rissanen; A. Häkkinen; J	2020	Acute Neuromuscular and Hormonal Responses to Different Exercise Loadings Followed by a Sauna	J Strength Cond Res	Exclude	-	-	-	-	-	-	-	No	-	-
J. A. Rissanen; K. Häkkinen; J	2020	Acute Hemodynamic Responses to Combined Exercise and Sauna	Int J Sports Med	Exclude	-	-	-	-	-	-	No	-	-	-
J. F. C. Rodrigues Júnior; Z. N	2020	Thermoregulatory and metabolic responses to a half-marathon run in hot, humid conditions	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
P. Rodrigues; G. S. Trajano; L.	2020	Effects of passive heating intervention on muscle hypertrophy and neuromuscular function: A preliminary study	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
M. Rodríguez; J. V. Piedra; M.	2020	A Matter of Degrees: A Systematic Review of the Ergogenic Effect of Pre-Cooling in Highly Trained Athletes	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-	-	-	-
A. Rosnerova; A. Izzotti; A. I	2020	The Molecular Mechanisms of Adaptive Response Related to Environmental Stress	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
Z. Roth	2020	Reproductive physiology and endocrinology responses of cows exposed to environmental heat stress	Theriogenology	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. M. Salgado; K. E. Coffman	2020	Effect of 8 days of exercise-heat acclimation on aerobic exercise performance of men in hypobaric hypoxia	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	-	No	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
A. J. E. Seely	2020	Optimizing Our Patients' Entropy Production as Therapy? Hypotheses Originating from the Physi	Entropy (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	
Y. Sekiguchi, E. M. Filep, C. I	2020	Does Dehydration Affect the Adaptations of Plasma Volume, Heart Rate, Internal Body Temperat	J Sport Rehabil	Exclude	-	-	-	-	-	-	-	-	-	
Z. Shahbazi, Y. C. Byun	2020	Towards a Secure Thermal-Energy Aware Routing Protocol in Wireless Body Area Network Base	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	No	-	-	
W. Shang, L. Peng, P. Guo, H.	2020	Metal-Organic Frameworks as a Theranostic Nanopatform for Combinatorial Chemophototherm	ACS Biomater Sci Eng	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Shindell, Y. Zhang, M. Sco	2020	The Effects of Heat Exposure on Human Mortality Throughout the United States	Geohealth	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Siquier-Coll, I. Bartolomé, †	2020	Effects of exposure to high temperatures on serum, urine and sweat concentrations of iron and cop	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
J. Siquier-Coll, I. Bartolomé, †	2020	Effect of exposure to high temperatures in the excretion of cadmium and lead	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
M. Smith, S. White	2020	Heat acclimatisation on UK exercise SAIF SAREEA 3	BMJ Mil Health	Exclude	Yes	-	-	-	-	-	-	-	-	
M. B. Smith, S. White	2020	Command application of UK military climatic guidance on Exercise SAIF SAREEA 3	BMJ Mil Health	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Song, M. Richter, J. Waxen	2020	Novel Acclimatization and Acclimation Strategies for Hot Climates	Curr Sports Med Rep	Exclude	-	No	-	-	-	-	-	-	-	
A. Sotiriadis, U. Cluha, T. Debi	2020	Heat acclimation does not modify autonomic responses to core cooling and the skin thermal conf	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
A. Sotiriadis, T. Debevec, U. C	2020	Aerobic but not thermoregulatory gains following a 10-day moderate-intensity training protocol a	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	
M. Stager, Z. A. Cheviron	2020	Is there a role for sarcoplipin in avian facultative thermogenesis in extreme cold?	Biol Lett	Exclude	Yes	-	-	-	-	-	-	-	-	
C. J. Stevens, M. L. Ross, J. D	2020	Core Temperature Responses to Elite Racewalking Competition	Int J Sports Physiol Perform	Exclude	-	No	-	-	-	-	-	-	-	
C. J. Stevens, M. L. R. Ross, †	2020	Postexercise Hot-Water Immersion Does Not Further Enhance Heat Adaptation or Performance in	Int J Sports Physiol Perform	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
M. Sugie, K. Harada, T. Takah	2020	Effectiveness of a far-infrared low-temperature sauna program on geriatric syndrome and frailty i	Geriatr Gerontol Int	Exclude	-	No	-	-	-	-	-	-	-	
C. C. S. Tan, L. K. K. Chin, I.	2020	Thermoregulation in the Aging Population and Practical Strategies to Overcome a Warmer Tomor	Proteomics	Exclude	-	No	-	-	-	-	-	-	-	
F. Tavares, M. Simões, B. Mat	2020	The Acute and Longer-Term Effects of Cold Water Immersion in Highly-Trained Volleyball Athle	Front Sports Act Living	Exclude	Yes	-	-	-	-	-	-	-	-	
A. H. Taylor, R. S. Taylor, W.	2020	Adding web-based behavioural support to exercise referral schemes for inactive adults with chron	Health Technol Assess	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Till, J. Weakley, D. B. Rea	2020	Applied Sport Science for Male Age-Grade Rugby Union in England	Sports Med Open	Exclude	Yes	-	-	-	-	-	-	-	-	
G. Travers, J. González-Alons	2020	Exercise heat acclimation has minimal effects on left ventricular volumes, function and systemi	Am J Physiol Heart Circ P	Exclude	-	-	-	-	-	-	No	-	-	
G. Travers, D. Nichols, N. Rid	2020	Heat Acclimation with Controlled Heart Rate: Influence of Hydration Status	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
L. Tumilty, N. Gregory, M. Bi	2020	No Influence of Low-, Medium-, or High-Dose Tyrosine on Exercise in a Warm Environment	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	No	-	-	
A. Vaidyanathan, J. Malilay, P	2020	Heat-Related Deaths - United States, 2004-2018	MMWR Morb Mortal Wk	Exclude	Yes	-	-	-	-	-	-	-	-	
W. H. van der Gaag, P. Roelf	2020	Non-steroidal anti-inflammatory drugs for acute low back pain	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
J. K. Vanos, W. M. Thomas, A	2020	A multi-scalar climatological analysis in preparation for extreme heat at the Tokyo 2020 Olympic	Temperature (Austin)	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Vogel, D. Niederer, G. Jung	2020	Exercise-Induced Vascular Adaptations under Artificially Versus Pathologically Reduced Blood F	Cells	Exclude	Yes	-	-	-	-	-	-	-	-	
M. Waldron, G. Papavasileiou	2020	Concurrent adaptations in maximal aerobic capacity, heat tolerance, microvascular blood flow and	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
H. J. Wang, C. S. Lee, R. S. Z.	2020	Adaptive thermogenesis enhances the life-threatening response to heat in mice with an Ryr1 muta	Nat Commun	Exclude	Yes	-	-	-	-	-	-	-	-	
X. Wang, H. Zhang, Q. Xie, Y	2020	SISNAT Interacts with HSP40, a Molecular Chaperone, to Regulate Melatonin Biosynthesis and F	Plant Cell Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
B. G. Wardle, G. K. Ambler, †	2020	Atherectomy for peripheral arterial disease	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
R. Watkins, G. Young, M. Wei	2020	Nobody says to you come back in six months and we'll see how you're doing": a qualitative interv	BMC Musculoskelet Diso	Exclude	Yes	-	-	-	-	-	-	-	-	
A. E. Welford, S. Lanham-Net	2020	Influence of combined vitamin D(3) supplementation and resistance exercise training on musculo	BMJ Open	Exclude	Yes	-	-	-	-	-	-	-	-	
A. C. d. C. Williams, E. Fisher	2020	Psychological therapies for the management of chronic pain (excluding headache) in adults	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
B. D. Willingham, T. J. Raglar	2020	Betaine Supplementation May Improve Heat Tolerance: Potential Mechanisms in Humans	Nutrients	Exclude	-	No	-	-	-	-	-	-	-	
M. G. Wilson, J. D. Périard, C	2020	Does passive heat acclimation impact the athlete's heart continuum?	Eur J Prev Cardiol	Exclude	-	No	-	-	-	-	-	-	-	
Y. Wu, X. Wang, J. Wu, R. Wi	2020	Performance of heat-health warning systems in Shanghai evaluated by using local heat-related ill	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	
X. Xue, M. Qiu, Y. Li, Q. M.	2020	Creating an Eco-Friendly Building Coating with Smart Subambient Radiative Cooling	Adv Mater	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Yamaguchi, N. Kasai, N. H	2020	Acute performance and physiological responses to repeated-sprint exercise in a combined hot and	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	
J. Y. Zhou, D. G. Huang, M. Z	2020	Wnt/β-catenin-mediated heat exposure inhibits intestinal epithelial cell proliferation and stem cell	J Cell Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	
L. E. Ziganshina, T. Abakumo	2020	Cerebrolysin for acute ischaemic stroke	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Abrard, M. Bertrand, T. De	2021	Physiological, cognitive and neuromuscular effects of heat exposure on firefighters after a live tra	Int J Occup Saf Ergon	Exclude	-	No	-	-	-	-	-	-	-	
J. W. Agnew, A. L. Roy, S. B.	2021	Pain sensitivity increases more in younger runners during an ultra-marathon	Scand J Pain	Exclude	-	No	-	-	-	-	-	-	-	
M. Ajaz, I. M. Almanjahie, J.	2021	Mathematical estimation of fluid concentration in human skin during water immersion	J Adv Res	Exclude	Yes	-	-	-	-	-	-	-	-	
U. Akbar, Q. L. Li, M. A. Akn	2021	Nexus between agro-ecological efficiency and carbon emission transfer: evidence from China	Environ Sci Pollut Res Int	Exclude	Yes	-	-	-	-	-	-	-	-	
P. Alkemade, N. Gerrett, T. M.	2021	Individual characteristics associated with the magnitude of heat acclimation adaptations	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	
A. Altarriba-Bartes, J. Peña, J.	2021	The use of recovery strategies by Spanish first division soccer teams: a cross-sectional survey	Phys Sportsmed	Exclude	Yes	-	-	-	-	-	-	-	-	
S. B. Amin, A. B. Hansen, H.	2021	Whole body passive heating versus dynamic lower body exercise: a comparison of peripheral hem	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	No	-	-	
C. P. Anderson, E. J. Pekas, S.	2021	Microvascular Dysfunction in Peripheral Artery Disease: Is Heat Therapy a Viable Treatment?	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Arede, S. Cumming, D. Johi	2021	The effects of maturity matched and un-matched opposition on physical performance and spatial	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	
M. N. Baranuskas, K. Consta	2021	Heat Versus Altitude Training for Endurance Performance at Sea Level	Exerc Sport Sci Rev	Exclude	-	No	-	-	-	-	-	-	-	
C. Barden, K. A. Stokes, C. D	2021	Utilising a Behaviour Change Model to Improve Implementation of the Activate Injury Preventio	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	
I. Bartolomé, J. Siquier-Coll, †	2021	3-Week passive acclimation to extreme environmental heat (100± 3 °C) in dry sauna increases ph	J Therm Biol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
I. Bartolomé, J. Siquier-Coll, †	2021	Effect of Handgrip Training in Extreme Heat on the Development of Handgrip Maximal Isometric	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	No	-	-	
B. Basakci Calik, M. Pekesen	2021	Investigation of the effectiveness of aerobic exercise training in individuals with ankylosing spon	Mod Rheumatol	Exclude	-	-	-	-	-	-	No	-	-	
S. Bellmunt-Montoya, J. M. E	2021	CHIVA method for the treatment of chronic venous insufficiency	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
C. L. Benjamin; Y. Sekiguchi; 2021		Heat Acclimation Following Heat Acclimatization Elicits Additional Physiological Improvements	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	-	-	No	-
E. Bezuglov; A. Lazarev; V. K. 2021		The Prevalence of Use of Various Post-Exercise Recovery Methods after Training among Elite En	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-	-	-	-
A. Bony-Westphal; F. A. Häge 2021		What Is the Impact of Energy Expenditure on Energy Intake?	Nutrients	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. Bouscaren; R. Faricier; G. 2021		Heat Acclimatization, Cooling Strategies, and Hydration during an Ultra-Trail in Warm and Humi	Nutrients	Exclude	-	No	-	-	-	-	-	-	-	-
M. J. Buller; S. K. Delves; A. 2021		On the real-time prevention and monitoring of exertional heat illness in military personnel	J Sci Med Sport	Exclude	-	No	-	-	-	-	-	-	-	-
A. Callovi; A. Fornasiero; A. 2021		Effects of three-exercise sessions in the heat on endurance cycling performance	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
X. Cao; A. Sandberg; J. E. Ara 2021		Evaluation of Spin Columns for Human Plasma Depletion to Facilitate MS-Based Proteomics An	J Proteome Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. M. Carey; S. E. Apple; Z. A 2021		Diarrheal pathogens trigger rapid evolution of the guanylate cyclase-C signaling axis in bats	Cell Host Microbe	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. Chacko; S. Patel; A. Galor; 2021		Heat Exposure and Multiple Sclerosis-A Regional and Temporal Analysis	Int J Environ Res Public H	Exclude	-	-	-	-	-	-	No	-	-	-
C. L. Chapman; H. W. Hess; R 2021		Occupational heat exposure and the risk of chronic kidney disease of nontraditional origin in the U	Am J Physiol Regul Integr	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. L. Chapman; B. D. Johnson 2021		Kidney physiology and pathophysiology during heat stress and the modification by exercise, dehy	Temperature (Austin)	Exclude	-	No	-	-	-	-	-	-	-	-
G. K. Chaseling; D. Filingeri; 2021		Blunted sweating does not alter the rise in core temperature in people with multiple sclerosis exen	Am J Physiol Regul Integr	Exclude	-	-	-	-	-	-	No	-	-	-
J. Chmielowska-Bak; J. Decki 2021		Plant Recovery after Metal Stress-A Review	Plants (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
U. Ciuhă; A. Sotiridis; T. Mlin 2021		Heat acclimation enhances the cold-induced vasodilation response	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
L. G. M. Coelho; J. B. Ferreira 2021		Head pre-cooling improves 5-km time-trial performance in male amateur runners in the heat	Scand J Med Sci Sports	Exclude	-	-	-	-	-	-	-	No	-	-
G. B. Coombs; J. C. Tremblay 2021		Distinct contributions of skin and core temperatures to flow-mediated dilation of the brachial arter	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
L. C. Costa-Beber; T. G. Heck 2021		HSP70 as a biomarker of the thin threshold between benefit and injury due to physical exercise w	Cell Stress Chaperones	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. Costello; K. M. Keane; B. J. 2021		Plasma uptake of selected phenolic acids following New Zealand blackcurrant extract supplement	J Diet Suppl	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. D'Amico; R. Fiore; D. Capri 2021		Function and Fiber-Type Specific Distribution of Hsp60 and αB-Crystallin in Skeletal Muscles: R	Biology (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	-
D. de Melo-Marins; J. B. Farir 2021		Redox balance during exercise in the heat in healthy adults: A systematic review	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
M. C. Dennis; P. S. R. Goods; 2021		Increased air temperature during repeated-sprint training in hypoxia amplifies changes in muscle c	Eur J Sport Sci	-	-	-	-	-	-	-	-	-	-	-
S. Dervis; K. L. Dobson; T. S. 2021		Heat loss responses at rest and during exercise in pregnancy: A scoping review	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
S. E. Diamond; R. A. Martin 2021		Physiological adaptation to cities as a proxy to forecast global-scale responses to climate change	J Exp Biol	Exclude	-	No	-	-	-	-	-	-	-	-
I. Dimauro; E. Grazioli; V. Lis 2021		Systemic Response of Antioxidants, Heat Shock Proteins, and Inflammatory Biomarkers to Short-	Oxid Med Cell Longev	Exclude	-	No	-	-	-	-	-	-	-	-
K. Donnan; E. L. Williams; N. 2021		The Effects of Heat Exposure During Intermittent Exercise on Physical and Cognitive Performanc	Percept Mot Skills	Exclude	-	-	-	-	-	-	-	No	-	-
J. O. Ellis; B. J. Lee; J. E. Tur 2021		One night of sleep fragmentation does not affect exercise-induced leukocyte trafficking or mitoge	Physiol Behav	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. A. Faghy; P. I. Brown; N. J 2021		A flow resistive inspiratory muscle training mask worn during high-intensity interval training doe	Eur J Appl Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. T. Farrow; J. Maher; D. Th 2021		Effect of high-intensity interval training on cardiometabolic component risks in persons with para	Exp Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. Foster; J. W. Smallcombe; S 2021		Aerobic fitness as a parameter of importance for labour loss in the heat	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
M. A. Francisco; C. Colbert; E 2021		Hemodynamics of post-exercise vs. post hot water immersion recovery	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
N. Fujii; G. W. McGarr; S. R. 2021		Effects of short-term heat acclimation on whole-body heat exchange and local nitric oxide syntha	Exp Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
R. M. Gale; N. Etxebarria; K. 2021		Cycling-based repeat sprint training in the heat enhances running performance in team sport playe	Eur J Sport Sci	Exclude	-	-	-	-	-	-	-	No	-	-
C. M. Gee; M. A. Lacroix; W. 2021		Cardiovascular responses to heat acclimatisation in athletes with spinal cord injury	J Sci Med Sport	Exclude	-	-	-	-	-	-	No	-	-	-
N. Gerrett; P. Alkemade; H. D. 2021		Heat Reacclimation Using Exercise or Hot Water Immersion	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
T. D. Gibbons; P. N. Ainslie; R 2021		Influence of the mode of heating on cerebral blood flow, non-invasive intracranial pressure and th	J Physiol	Exclude	Yes	-	-	-	-	-	-	-	-	-
G. D. Gokuy; R. Durkan; P. O. 2021		Evaluation of physical properties of polyamide and methacrylate based denture base resins polym	Niger J Clin Pract	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. M. Greenfield; F. G. Pereir 2021		Short-term hot water immersion results in substantial thermal strain and partial heat acclimation; c	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
D. P. Griswold; A. Gempeler; 2021		Personal protective equipment for reducing the risk of COVID-19 infection among health care wo	J Trauma Acute Care Surg	Exclude	Yes	-	-	-	-	-	-	-	-	-
F. Grossmann; J. L. Flueck; C. 2021		The Thermoregulatory and Thermal Responses of Individuals With a Spinal Cord Injury During E	Front Physiol	Exclude	-	-	-	-	-	-	No	-	-	-
E. Gur Kabul; B. Basakci Cali 2021		The efficacy of manual soft-tissue mobilization in ankylosing spondylitis: A randomized controlle	Int J Rheum Dis	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. G. Halsey; C. M. Bryce 2021		Are humans evolved specialists for running in the heat? Man vs. horse races provide empirica	Exp Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
A. Haroutunian; F. T. Amorir 2021		Change in Exercise Performance and Markers of Acute Kidney Injury Following Heat Acclimatio	Nutrients	Exclude	-	-	-	-	-	-	-	No	-	-
J. Hartmann-Boyce; J. Living 2021		Behavioural interventions for smoking cessation: an overview and network meta-analysis	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
K. N. Henderson; L. G. Killen 2021		The Cardiometabolic Health Benefits of Sauna Exposure in Individuals with High-Stress Occupat	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-	-	-	-
A. Houzelle; J. A. Jørgensen; 2021		Human skeletal muscle mitochondrial dynamics in relation to oxidative capacity and insulin sensi	Diabetologia	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. Jiang; X. Shen; Y. Dun; M. 2021		Exercise combined with trimetazidine improves anti-fatal stress capacity through enhancing autop	Int J Med Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Jiang; J. L. Warren; N. Scov 2021		Using logic regression to characterize extreme heat exposures and their health associations: a time	BMC Med Res Methodol	Exclude	-	No	-	-	-	-	-	-	-	-
D. A. Johnson-Bonson; B. J. N 2021		Interactive effects of acute exercise and carbohydrate-energy replacement on insulin sensitivity in	J Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. C. Jordan; C. G. R. Perry; J 2021		Promoting a pro-oxidant state in skeletal muscle: Potential dietary, environmental, and exercise in	Free Radic Biol Med	Exclude	-	No	-	-	-	-	-	-	-	-
J. Jung; C. K. Uejio; T. E. Ade 2021		Using social security number to identify sub-populations vulnerable to the health impacts from ex	Environ Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Kaisinova; A. Achabueva; J 2021		[NATURAL THERAPEUTIC FACTORS IN MEDICAL REHABILITATION OF PATIENTS WITH] Georgian Med News		Exclude	-	-	No	-	-	-	-	-	-	-
K. Kim; J. Jung; C. Schollaert 2021		A Comparative Assessment of Cooling Center Preparedness across Twenty-Five U.S. Cities	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. K. Kim; Y. Lee; H. Yoon; J. 2021		Adaptation of Extended Reality Smart Glasses for Core Nursing Skill Training Among Undergrad	J Med Internet Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. King 2021		Could mitochondria help athletes to make gains?	Nature	Exclude	-	No	-	-	-	-	-	-	-	-
N. V. Kirby; S. J. E. Lucas; O. 2021		Intermittent post-exercise sauna bathing improves markers of exercise capacity in hot and temper	Eur J Appl Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N. V. Kirby; S. J. E. Lucas; T. 2021		Sex differences in adaptation to intermittent post-exercise sauna bathing in trained middle-distan	Sports Med Open	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
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S. K. Korang; C. Nava; S. P. N	2021	Antibiotics for hospital-acquired pneumonia in neonates and children	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. S. Kumar; J. Bart; C. Barto	2021	Core Temperature Liability Predicts Sympathetic Interruption and Cognitive Performance during F	J Neurotrauma	Exclude	-	-	-	-	-	-	-	No	-	-
S. K. Kunutsor; J. A. Laukkan	2021	High fitness levels, frequent sauna bathing and risk of pneumonia in a cohort study: Are there po	Eur J Clin Invest	Exclude	-	No	-	-	-	-	-	-	-	-
K. Lanza; C. P. Durand	2021	Heat-Moderating Effects of Bus Stop Shelters and Tree Shade on Public Transport Ridership	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-	-	-	-
T. H. Lei; M. Fujiwara; N. Gei	2021	The effect of seasonal acclimatization on whole body heat loss response during exercise in a hot h	J Appl Physiol (1985)	Exclude	-	No	-	-	-	-	-	-	-	-
T. H. Lei; F. Wang	2021	Looking ahead of 2021 Tokyo Summer Olympic Games: How Does Humid Heat Affect Endurance	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
A. Lester; G. L. Vickers; L. M	2021	Exercise-induced amplification of mitogen-stimulated oxidative burst in whole blood is strongly i	Physiol Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
X. Li; B. Ma; J. Dai; C. Sui; D	2021	Metalized polyamide heterostructure as a moisture-responsive actuator for multimodal adaptive p	Sci Adv	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. S. Lin; P. T. Lin; Y. S. Tsai;	2021	Interventions for bacterial folliculitis and boils (furuncles and carbuncles)	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. E. Loades; T. Chalder; A. S	2021	Anticipation of and response to exercise in adolescents with CFS: An experimental study	J Psychosom Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Lovas; B. Szilágyi; E. Bosz	2021	Reaction Kinetics Modeling of eHsp70 Induced by Norepinephrine in Response to Exercise Stress	Int J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. Lundby; I. S. Svendsen; T.	2021	Training wearing thermal clothing and training in hot ambient conditions are equally effective me	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
H. Luze; S. P. Nischwitz; J. Fi	2021	The Impact of Thermal Stress on Cognition and the Use of Cooling Wear for Alleviation - an Expi	J Burn Care Res	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. J. Macartney; S. R. Notley;	2021	Effect of exercise-heat acclimation on cardiac autonomic modulation in type 2 diabetes: a pilot stu	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	-	No	-	-
B. L. MacLean; K. MacLean;	2021	Monitoring heat strain: the effect of sensor type and location on single-site and mean skin temper	Int Arch Occup Environ H	Exclude	Yes	-	-	-	-	-	-	-	-	-
C. MacMaster; M. Portas; G. I	2021	The effect of bio-banding on the anthropometric, physical fitness and functional movement charac	PLoS One	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. L. Maher; K. D. Anderson; I	2021	Development and deployment of an at-home strength and conditioning program to support a phasi	Spinal Cord	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. H. Manfredi	2021	Overheating or overcooling: heat transfer in the spot to fight against the pandemic obesity	Rev Endocr Metab Disord	Exclude	-	No	-	-	-	-	-	-	-	-
Z. A. Mang; Z. J. Fennel; R. A	2021	Heat acclimation during low-intensity exercise increases VO2max and Hsp72, but not markers of	Exp Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
E. B. Manukhina; V. E. Tselik	2021	Cardiac injury in rats with experimental posttraumatic stress disorder and mechanisms of its limit	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	-
H. D. Mao; X. Li; S. Y. Liu; L.	2021	Exertional rhabdomyolysis in newly enrolled cadets of a military academy	Muscle Nerve	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. J. Martin; M. V. Niedzwieci	2021	Chronic Intermittent Mild Whole-Body Hypothermia Is Therapeutic in a Mouse Model of ALS	Cells	Exclude	Yes	-	-	-	-	-	-	-	-	-
E. Maund; D. J. Plews; G. A	2021	Temperate performance and metabolic adaptations following endurance training performed under	Physiol Rep	Exclude	-	-	-	-	-	-	-	No	-	-
N. S. Mazalan; G. J. Landers;	2021	Head Cooling Prior to Exercise in the Heat Does Not Improve Cognitive Performance	J Sports Sci Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
O. McCarthy; R. Deere; R. Ch	2021	Extent and prevalence of post-exercise and nocturnal hypoglycemia following peri-exercise bolus	Nutr Metab Cardiovasc Di	Exclude	Yes	-	-	-	-	-	-	-	-	-
M. F. McCarty	2021	Nutraceutical, Dietary, and Lifestyle Options for Prevention and Treatment of Ventricular Hypertr	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. J. McCubbin	2021	Exertional heat stress and sodium balance: Leaders, followers, and adaptations	Auton Neurosci	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. R. McGill; V. L. Simhadri; J	2021	HLA Variants and Inhibitor Development in Hemophilia A: A Retrospective Case-Controlled Stud	Front Med (Lausanne)	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. D. McInyre; M. J. Zurawle	2021	A comparison of heat acclimation by post-exercise hot water immersion and exercise in the heat	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R. K. Merchant; A. Grundstein	2021	Exertional heat illnesses in marching band artists: a case series	Int J Biometeorol	Exclude	-	No	-	-	-	-	-	-	-	-
J. Y. Min; H. S. Lee; Y. S. Cho	2021	Association between income levels and prevalence of heat- and cold-related illnesses in Korean a	BMC Public Health	Exclude	-	No	-	-	-	-	-	-	-	-
M. Misailidi; K. Mantzios; C.	2021	Environmental and Psychophysical Heat Stress in Adolescent Tennis Athletes	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-	-	-	-
K. M. Mitchell; R. M. Salgado	2021	Heat Acclimation Improves Heat Tolerance Test Specificity in a Criteria-dependent Manner	Med Sci Sports Exerc	Exclude	-	-	-	-	-	-	-	No	-	-
F. Morecchiato; M. Coppi; I. F	2021	Evaluation of extraction-free RT-PCR methods for faster and cheaper detection of SARS-CoV-2 u	Int J Infect Dis	Exclude	Yes	-	-	-	-	-	-	-	-	-
A. Mornas; S. Racinais; F. Br	2021	Hyperthermia reduces electromechanical delay via accelerated electrochemical processes	J Appl Physiol (1985)	Exclude	-	-	-	-	-	-	-	No	-	-
S. Mourtakos; A. Philippou; A	2021	The effect of prolonged intense physical exercise of special forces volunteers on their plasma prot	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	-
K. O. Murray; J. O. Brant; J. I	2021	Exertional heat stroke leads to concurrent long-term epigenetic memory, immunosuppression and	J Physiol	Exclude	-	No	-	-	-	-	-	-	-	-
A. H. Musters; S. Mashayekhi	2021	Phototherapy for atopic eczema	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
L. C. U. Nakano; D. G. Caciop	2021	Treatment for telangiectasias and reticular veins	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. F. Nunfam; E. Afrifa-Yamo	2021	Heat exposure effect on Ghanaian mining workers: A mediated-moderation approach	Sci Total Environ	Exclude	-	No	-	-	-	-	-	-	-	-
H. Ohko; Y. Umemoto; Y. Sak	2021	The effects of endurance exercise combined with high-temperature head-out water immersion on	Int J Hyperthermia	Exclude	-	-	-	-	-	-	-	No	-	-
A. Oliveira; A. Lopes; E. Cori	2021	An urban climate-based empirical model to predict present and future patterns of the Urban Therm	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-	-	-	-
S. Olschewski; A. Thielebein;	2021	Validation of Inactivation Methods for Arenaviruses	Viruses	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. O. Osborne; I. B. Stewart; I	2021	Short-term heat acclimation preserves knee extensor torque but does not improve 20 km self-pace	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	-	No	-	-
R. J. Park; A. P. Behrer; J. Goc	2021	Learning is inhibited by heat exposure, both internationally and within the United States	Nat Hum Behav	Exclude	-	No	-	-	-	-	-	-	-	-
M. Perez-Quintero; J. Siquier-	2021	Three weeks of passive and intervallic heat at high temperatures (100±2 °C) in a sauna improve a	J Therm Biol	Exclude	-	-	-	-	-	-	-	No	-	-
J. D. Périard; T. M. H. Eijsvog	2021	Exercise under heat stress: thermoregulation, hydration, performance implications, and mitigation	Physiol Rev	Exclude	-	No	-	-	-	-	-	-	-	-
E. Persad; C. A. A. O'Loughlin	2021	Surgical or radiological treatment for varicoceles in subfertile men	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
V. Piechotta; A. Adams; M. Hi	2021	Antiemetics for adults for prevention of nausea and vomiting caused by moderately or highly eme	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	-
N. J. Pillon; R. J. F. Loos; S. N	2021	Metabolic consequences of obesity and type 2 diabetes: Balancing genes and environment for per	Cell	Exclude	Yes	-	-	-	-	-	-	-	-	-
I. Pokora; E. Sadowska-Krepa	2021	The Effect of Medium-Term Sauna-Based Heat Acclimation (MPHA) on Thermophysiological an	Int J Environ Res Public H	Include	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. H. Poon; S. Prakash; Y. S.	2021	Thermal strain and fluid balance during a 72-km military route march in a field setting	Singapore Med J	Exclude	-	No	-	-	-	-	-	-	-	-
A. Presbitero; V. R. Melnikov;	2021	A unifying model to estimate the effect of heat stress in the human innate immunity during physic	Sci Rep	Exclude	Yes	-	-	-	-	-	-	-	-	-
J. W. Price	2021	A mixed treatment comparison of selected osteopathic techniques used to treat acute nonspecific l	J Osteopath Med	Exclude	Yes	-	-	-	-	-	-	-	-	-
R. R. Pryor; J. L. Pryor; L. W.	2021	Short term heat acclimation reduces heat strain during a first, but not second, consecutive exercis	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	-
S. Racinais; M. Alhammoud; J	2021	Epidemiology and risk factors for heat illness: 11 years of Heat Stress Monitoring Programme dat	Br J Sports Med	Exclude	-	No	-	-	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
S. Racinais; J. D. Périard; J. Pi 2021		Intensified Training Supersedes the Impact of Heat and/or Altitude for Increasing Performance in	Int J Sports Physiol Perfor	Exclude	-	-	-	-	-	-	No	-	-	
J. A. P. Ramos; C. J. Brade; K. 2021		The Internal-to-External Load Ratio: A Tool to Determine the Efficacy of Heat Acclimation/Accli	Front Sports Act Living	Exclude	-	No	-	-	-	-	-	-	-	
N. Ravanelli; D. Gagnon; P. In 2021		A retrospective analysis to determine if exercise training-induced thermoregulatory adaptations ar	Exp Physiol	Exclude	-	No	-	-	-	-	-	-	-	
B. R. Ronnestad; H. Hamarsla 2021		Five weeks of heat training increases haemoglobin mass in elite cyclists	Exp Physiol	Exclude	-	-	-	-	-	-	No	-	-	
G. Roussey; T. Bernard; P. Foi 2021		Heat acclimation training with intermittent and self-regulated intensity may be used as an alternat	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
M. Sabapathy; F. Tan; S. Al H 2021		Effect of heat pre-conditioning on recovery following exercise-induced muscle damage	Curr Res Physiol	Exclude	-	-	-	-	-	-	No	-	-	
G. N. Sandford; T. Stellingwei 2021		Ozone pollution: a 'hidden' environmental layer for athletes preparing for the Tokyo 2020 Olympi	Br J Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
Y. Sekiguchi; C. L. Benjamin; 2021		Changes in Hydration Factors Over the Course of Heat Acclimation in Endurance Athletes	Int J Sport Nutr Exerc Me	Exclude	-	-	-	-	-	-	No	-	-	
P. Semenzato; F. Cagnacci; F. 2021		Behavioural heat-stress compensation in a cold-adapted ungulate: Forage-mediated responses to v	Ecol Lett	Exclude	Yes	-	-	-	-	-	-	-	-	
V. Sivathanam; A. V. Le; Y. S 2021		Adaptive Floor Cleaning Strategy by Human Density Surveillance Mapping with a Reconfigurabl	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	
D. Slivka; R. Shute; W. Hailes 2021		Exercise in the heat blunts improvements in aerobic power	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	
J. W. Smallcombe; A. Puhenth 2021		Thermoregulation During Pregnancy: a Controlled Trial Investigating the Risk of Maternal Hyper	Sports Med	Exclude	Yes	-	-	-	-	-	-	-	-	
R. L. Snopkowski; N. T. Varga 2021		The requirement for physical effort reduces voluntary cooling behavior during heat exposure in hu	Physiol Behav	Exclude	-	-	-	-	-	-	No	-	-	
H. Suh; H. R. Lieberman; L. T 2021		Cellular dehydration acutely degrades mood mainly in women: a counterbalanced, crossover trial	Br J Nutr	Exclude	-	-	-	-	-	-	No	-	-	
G. M. J. Taylor; N. Lindson; A 2021		Smoking cessation for improving mental health	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
N. A. S. Taylor; J. Y. Lee; S. K 2021		Physiological interactions with personal-protective clothing, physically demanding work and glob	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	
X. Tian; Z. Fang; W. Liu 2021		Decreased humidity improves cognitive performance at extreme high indoor temperature	Indoor Air	Exclude	-	-	-	-	-	-	No	-	-	
G. Travers; J. González-Alons 2021		Exercise Heat Acclimation With Dehydration Does Not Affect Vascular and Cardiac Volumes or S	Front Physiol	Exclude	-	-	-	-	-	-	No	-	-	
Z. Tu; W. Liu; J. Wang; X. Qi 2021		Biomimetic high performance artificial muscle built on sacrificial coordination network and mech	Nat Commun	Exclude	-	No	-	-	-	-	-	-	-	
G. D. Vandana; V. Sejian; A. N 2021		Heat stress and poultry production: impact and amelioration	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	
S. A. Vardar; Z. B. Doğanlar; (2021		Different responses of apoptotic, inflammatory and heat shock protein gene expression to a single	Appl Physiol Nutr Metab	Exclude	Yes	-	-	-	-	-	-	-	-	
Z. Vesic; V. Jakovljevic; T. Nil 2021		The influence of acclimatization on stress hormone concentration in serum during heat stress	Mol Cell Biochem	Exclude	-	-	-	-	-	-	No	-	-	
K. A. M. Waldock; O. R. Gibs 2021		Exercise heat acclimation and post-exercise hot water immersion improve resting and exercise res	J Sci Med Sport	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
M. Waldron; R. Fowler; S. He 2021		Effects of Heat Acclimation and Acclimatisation on Maximal Aerobic Capacity Compared to Exer	Sports Med	Exclude	-	No	-	-	-	-	-	-	-	
J. Walker; A. Bissas; G. P. Pari 2021		Kinematic factors associated with start performance in World-class male sprinters	J Biomech	Exclude	Yes	-	-	-	-	-	-	-	-	
E. Walter; W. W. P; O. R. Gibs 2021		Exercise hyperthermia induces greater changes in gastrointestinal permeability than equivalent pa	Physiol Rep	Exclude	-	-	-	-	-	-	No	-	-	
F. C. Wardenaar; C. P. Ortega- 2021		A 5-day Heat Acclimation Program Improves Heat Stress Indicators While Maintaining Exercise	J Strength Cond Res	Exclude	-	-	-	-	-	-	No	-	-	
R. Watkins; G. Young; M. Wei 2021		I think we need to empower people to manage it better themselves": A qualitative interview study	Phys Ther Sport	Exclude	Yes	-	-	-	-	-	-	-	-	
C. M. Weiner; J. B. Kazman; I 2021		Perceptual strain in a compensable hot environment: Accuracy and clinical correlates	J Therm Biol	Exclude	-	No	-	-	-	-	-	-	-	
J. Whing; S. Nandhra; C. Nest 2021		Interventions for great saphenous vein incompetence	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
K. A. Wickham; P. J. Wallace; 2021		Sex differences in the physiological adaptations to heat acclimation: a state-of-the-art review	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	
A. G. B. Willmott; R. Holliss; 2021		Heat acclimation improves sweat gland function and lowers sweat sodium concentration in an adu	J Cyst Fibros	Exclude	-	-	-	-	-	-	No	-	-	
H. Yang; Y. L. Yang; G. Q. Li; 2021		Identifications of immune-responsive genes for adaptive traits by comparative transcriptome an	Sci Rep	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Yoon; M. Kim; H. Lee; G. I 2021		S-Nitrosylation of Histone Deacetylase 2 by Neuronal Nitric Oxide Synthase as a Mechanism of I	Circulation	Exclude	Yes	-	-	-	-	-	-	-	-	
S. Zhang; N. Zhu 2021		Exercise heat acclimation causes human responses and safety performance improvements	J Therm Biol	Exclude	-	-	-	-	-	-	No	-	-	
J. A. P. Ramos; C. J. Brade; K. 2021		The Internal-to-External Load Ratio: A Tool to Determine the Efficacy of Heat Acclimation/Accli	Front Sports Act Living	Exclude	Yes	No	-	-	-	-	-	-	-	
R. Ahmed; M. Ucci; D. Mumc 2022		Effects of thermal sensation and acclimatization on cognitive performance of adult female student	Indoor Air	Exclude	-	-	-	-	-	-	No	-	-	
S. Banerjee; A. Middel; S. Chi 2022		A regression-based three-phase approach to assess outdoor thermal comfort in informal micro-ent	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Barry; P. Gendron; C. Gagr 2022		Passive heat acclimation does not modulate processing speed and executive functions during cogn	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	No	-	-	
C. L. Benjamin; Y. Sekiguchi; 2022		The efficacy of weekly and bi-weekly heat training to maintain the physiological benefits of heat i	J Sci Med Sport	Exclude	-	-	-	-	-	-	-	No	-	
P. Brzęk; A. Gębczyński; P. Se 2022		Significance of variation in basal metabolic rate in laboratory mice for translational experimen	J Comp Physiol B	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Corbett; H. C. Massey; J. T. 2022		The effect of medium-term heat acclimation on endurance performance in a temperate environme	Eur J Sport Sci	Exclude	-	-	-	-	-	-	No	-	-	
T. Egawa; T. Ogawa; T. Yokok 2022		Methylglyoxal reduces molecular responsiveness to 4 weeks of endurance exercise in mouse plan	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-	-	-	
A. M. Evans; K. Rome; M. Ca 2022		Foot orthoses for treating paediatric flat feet	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-	-	-	
E. Fernández-Martínez; J. Péri 2022		Pain management and coping strategies for primary dysmenorrhea: A qualitative study among fen	Nurs Open	Exclude	Yes	-	-	-	-	-	-	-	-	
J. Frampton; R. M. Edinburgh 2022		The acute effect of fasted exercise on energy intake, energy expenditure, subjective hunger and ga	Int J Obes (Lond)	Exclude	Yes	-	-	-	-	-	-	-	-	
H. Fujiyoshi; T. Egawa; E. Ku 2022		TLR4-Mediated Inflammatory Responses Regulate Exercise-Induced Molecular Adaptations in M	Int J Mol Sci	Exclude	Yes	-	-	-	-	-	-	-	-	
J. N. Hussain; M. M. Cohen; 2022		Infrared sauna as exercise-mimetic? Physiological responses to infrared sauna vs exercise in healt	Complement Ther Med	Exclude	-	-	-	-	-	-	No	-	-	
O. Jay 2022		Can heat exposure improve exercise performance?	J Sci Med Sport	Exclude	-	No	-	-	-	-	-	-	-	
J. P. Kimball; O. T. Inan; V. A. 2022		Wearable Sensors and Machine Learning for Hypovolemia Problems in Occupational, Military an	Sensors (Basel)	Exclude	Yes	-	-	-	-	-	-	-	-	
L. S. Kissling; A. P. Akerman; 2022		A crossover control study of three methods of heat acclimation on the magnitude and kinetics of a	Exp Physiol	Exclude	-	-	-	-	-	-	No	-	-	
S. H. Kroesen; J. Q. de Korte; 2022		Impact of thermal sensation on exercise performance in the heat: a Thermo Tokyo sub-study	Eur J Appl Physiol	Exclude	-	No	-	-	-	-	-	-	-	
S. Kumar; P. Lennon; N. Mull 2022		Using long-range freeze-preventive vaccine carriers in Nepal: A study of equipment performance,	Vaccine X	Exclude	Yes	-	-	-	-	-	-	-	-	
K. Kwan; E. Helms 2022		Prevalence, Magnitude, and Methods of Weight Cutting Used by World Class Powerlifters	J Strength Cond Res	Exclude	Yes	-	-	-	-	-	-	-	-	
P. Ladow; O. O'Sullivan; A. F. 2022		Dysautonomia following COVID-19 is not associated with subjective limitations or symptoms bu	Heart Rhythm	Exclude	Yes	-	-	-	-	-	-	-	-	
Z. Li; Z. McKenna; Z. Fennel; 2022		The combined effects of exercise-induced muscle damage and heat stress on acute kidney stress a	Eur J Appl Physiol	Exclude	-	-	-	-	-	-	No	-	-	

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise**?
B. Liu, Y. Zhang, H. Chen; W. 2022		The combination of transcatheter arterial chemoembolisation (TACE) and thermal ablation versus	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. Manietta; V. Labonté, R. TI 2022		Algorithm-based pain management for people with dementia in nursing homes	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
Y. A. T. Martins; R. L. F. Passi 2022		A 32-day long fieldwork in Antarctica improves heat tolerance during physical exercise	An Acad Bras Cienc	Exclude	-	No	-	-	-	-	-
N. S. Mazalan; G. J. Landers; 2022		A Combination of Ice Ingestion and Head Cooling Enhances Cognitive Performance during Endu	J Sports Sci Med	Exclude	Yes	-	-	-	-	-	-
J. Meng; Z. Lv; Y. Wang; C. C 2022		Identification of the redox-stress signaling threshold (RST): Increased RST helps to delay aging in	Free Radic Biol Med	Exclude	Yes	-	-	-	-	-	-
E. Mur-Gimeno; R. Sebjo-Gar 2022		Short-term effects of two different recovery strategies on muscle contractile properties in healthy	J Sports Sci	Exclude	-	-	-	-	No	-	-
T. Naito; M. Haramura; K. Mu 2022		Cooling during short-term heat acclimation enhances aerobic capacity but not sweat capacity	Eur J Sport Sci	Exclude	-	-	-	-	No	-	-
C. A. Navas; G. A. Agudelo-C 2022		Thermal boldness: Volunteer exploration of extreme temperatures in fruit flies	J Insect Physiol	Exclude	Yes	-	-	-	-	-	-
N. Nishihara; J. Xiong; J. Kim 2022		Effect of adaptive opportunity on cognitive performance in warm environments	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
F. Pega; R. Pabayo; C. Benny; 2022		Unconditional cash transfers for reducing poverty and vulnerabilities: effect on use of health servi	Cochrane Database of Sys	Exclude	Yes	-	-	-	-	-	-
C. P. Philp; N. W. Pitchford; J. 2022		Hot water immersion; potential to improve intermittent running performance and perception of in	PLoS One	Exclude	-	-	-	-	No	-	-
S. Racinais; G. Havenith; P. A; 2022		Association between thermal responses, medical events, performance, heat acclimation and health	Br J Sports Med	Exclude	-	No	-	-	-	-	-
M. B. Reid 2022		Redox Implications of Extreme Task Performance: The Case in Driver Athletes	Cells	Exclude	Yes	-	-	-	-	-	-
K. Reminy; E. T. Ngo Sock; N 2022		Strenuous exercise in warm environment is associated with improved microvascular function in si	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
R. Renteria; S. Grineski; T. Cc 2022		Social disparities in neighborhood heat in the Northeast United States	Environ Res	Exclude	Yes	-	-	-	-	-	-
B. R. Ronnestad; J. Hansen; T. 2022		Case Report: Heat Suit Training May Increase Hemoglobin Mass in Elite Athletes	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-
W. Simmons; S. Lin; T. J. Lub 2022		Modeling complex effects of exposure to particulate matter and extreme heat during pregnancy or	Sci Total Environ	Exclude	Yes	-	-	-	-	-	-
J. Soo; S. Racinais; D. J. Bish 2022		Effects of mild heat exposure on fatigue responses during two sets of repeated sprints matched for	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
H. Štorkánová; S. Oreská; M. 2022		Hsp90 Levels in Idiopathic Inflammatory Myopathies and Their Association With Muscle Involv	Front Immunol	Exclude	Yes	-	-	-	-	-	-
S. Syed; T. L. O'Sullivan; K. P 2022		Extreme Heat and Pregnancy Outcomes: A Scoping Review of the Epidemiological Evidence	Int J Environ Res Public H	Exclude	-	No	-	-	-	-	-
A. Wallett; A. McKune; D. Pyl 2022		Repeated-Sprint Exercise in the Heat Increases Indirect Markers of Gastrointestinal Damage in W	Int J Sport Nutr Exerc Met	Exclude	-	-	-	-	No	-	-
B. Wang; W. Zhang 2022		MARnet: multi-scale adaptive residual neural network for chest X-ray images recognition of lung	Math Biosci Eng	Exclude	Yes	-	-	-	-	-	-
R. Ahmed, M. Ucci, D. Mumo 2022		Effects of thermal sensation and acclimatization on cognitive performance of adult female student	Indoor Air	Exclude	Yes	-	-	-	-	-	-
S. T. Al-Otaibi 2022		Physiological and biochemical parameters among a population of bakers exposed to environment;	Int J Occup Med Environ H	Exclude	Yes	-	-	-	-	-	-
M. Aliabadi, M. Shafiee Motla 2022		Analysis of body heat tolerance of workers in a simulated warm environment based on linear mixi	PLoS One	Exclude	Yes	-	-	-	-	-	-
S. B. Amin, A. B. Hansen, H. 2022		High-intensity exercise and passive hot water immersion cause similar postintervention changes in	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
M. Aoki, Y. Yamazaki, J. Otsu 2022		Influence of Heat Exposure on Motor Control Performance and Learning as Well as Physiological	Int J Environ Res Public H	Exclude	Yes	-	-	-	-	-	-
L. B. Baker, P. J. D. De Chave 2022		Explaining variation in sweat sodium concentration: effect of individual characteristics and exerci	J Appl Physiol (1985)	Exclude	Yes	-	-	-	-	-	-
S. Banerjee, A. Middel and S. 2022		A regression-based three-phase approach to assess outdoor thermal comfort in informal micro-en	Int J Biometeorol	Exclude	Yes	-	-	-	-	-	-
H. Barry, P. Gendron, C. Gagn 2022		Passive heat acclimation does not modulate processing speed and executive functions during cogn	Appl Physiol Nutr Metab	Exclude	-	-	-	-	-	-	-
I. Bartolomé, V. Toro-Román, 2022		Acute Effect of Exposure to Extreme Heat (100 ± 3 °C) on Lower Limb Maximal Resistance Stre	Int J Environ Res Public H	Exclude	-	-	-	-	No	-	No
H. Beat, J. Corbett, D. Davis a 2022		Marathon Performance and Pacing in the Doha 2019 Women's IAAF World Championships: Extr	Int J Sports Physiol Perfor	Exclude	-	No	-	-	-	-	-
C. L. Benjamin, Y. Sekiguchi, 2022		The efficacy of weekly and bi-weekly heat training to maintain the physiological benefits of heat	J Sci Med Sport	Exclude	-	-	-	-	No	-	-
C. Bernard, A. Zavoriti, Q. Pu 2022		Role of macrophages during skeletal muscle regeneration and hypertrophy-Implications for immu	Physiol Rep	Exclude	Yes	-	-	-	-	-	-
D. N. Borg and J. L. O'Brien 2022		Comment on "Effects of Heat Acclimation and Acclimatization on Maximal Aerobic Capacity Co	Sports Med	Exclude	-	No	-	-	-	-	-
B. Brajer-Luftmann, M. Kaczi 2022		Regulatory T cells, damage-associated molecular patterns, and myeloid-derived suppressor cells in	Medicine (Baltimore)	Exclude	Yes	-	-	-	-	-	-
H. A. Brown, T. H. Topham, B 2022		Seasonal Heat Acclimatization in Healthy Adults: A Systematic Review	Sports Med	Exclude	-	No	-	-	-	-	-
P. Brzqk, A. Gębczyński, P. Se 2022		Significance of variation in basal metabolic rate in laboratory mice for translational experimen	J Comp Physiol B	Exclude	Yes	-	-	-	-	-	-
H. A. Campbell, A. P. Akerman 2022		Acute physiological and psychophysical responses to different modes of heat stress	Exp Physiol	Exclude	-	-	-	-	-	-	-
Q. Chen, Y. Liu, K. Gu, J. Yao 2022		Silk-Based Electrochemical Sensor for the Detection of Glucose in Sweat	Biomacromolecules	Exclude	Yes	-	-	-	-	No	-
K. H. Cho, S. H. Jung, M. S. C 2022		Effect of water filtration infrared-A (wIRA) sauna on inorganic ions excreted through sweat from	Environ Sci Pollut Res Int	Exclude	Yes	-	-	-	-	-	-
A. Choe, Y. Kwon, Y. E. Shin, 2022		Adaptive IR- and Water-Gating Textiles Based on Shape Memory Fibers	ACS Appl Mater Interface	Exclude	Yes	-	-	-	-	-	-
G. Cil and J. Kim 2022		Extreme temperatures during pregnancy and adverse birth outcomes: Evidence from 2009 to 2018	Health Econ	Exclude	Yes	-	-	-	-	-	-
J. Connor, M. Germaine, C. G 2022		Effect of rapid weight loss incorporating hot salt water immersion on changes in body mass, bloo	Eur J Appl Physiol	Exclude	-	-	-	-	No	-	-
J. Corbett, H. C. Massey, J. T. 2022		The effect of medium-term heat acclimation on endurance performance in a temperate environme	Eur J Sport Sci	Exclude	-	-	-	-	-	No	-
R. Costello, K. M. Keane, B. J 2022		Plasma uptake of selected phenolic acids following New Zealand blackcurrant extract supplement	J Diet Suppl	Exclude	Yes	-	-	-	-	-	-
M. N. Cramer, D. Gagnon, O. 2022		Human temperature regulation under heat stress in health, disease, and injury	Physiol Rev	Exclude	-	No	-	-	-	-	-
J. Cui, Z. Gao, U. A. Leuenber 2022		Repeated warm water baths decrease sympathetic activity in humans	J Appl Physiol (1985)	Exclude	-	-	-	-	No	-	No
J. A. De Barros, M. J. Macarnt 2022		Effects of sex and wet-bulb globe temperature on heart rate variability during prolonged moderate	Appl Physiol Nutr Metab	Exclude	-	No	-	-	-	-	-
S. Del Ferraro, T. Falcone, M. 2022		A potential wearable solution for preventing heat strain in workplaces: The cooling effect and the	Environ Res	Exclude	Yes	-	-	-	-	-	-
M. C. Dennis, P. S. R. Goods, 2022		Repeated-sprint training in heat and hypoxia: Acute responses to manipulating exercise-to-rest rat	Eur J Sport Sci	Exclude	-	-	-	-	-	No	-
M. C. Dennis, P. S. R. Goods, 2022		Taking the plunge: When is best for hot water immersion to complement exercise in heat and hyp	J Sports Sci	Exclude	-	-	-	-	-	No	-
L. Deutsch, A. Sotiridis, B. Mi 2022		Exercise and Interorgan Communication: Short-Term Exercise Training Blunts Differences in Cor	Metabolites	Exclude	Yes	-	-	-	-	-	-
V. Di Felice, R. Barone, E. Tr 2022		Physiactisome: A New Nanovesicle Drug Containing Heat Shock Protein 60 for Treating Muscle	Cells	Exclude	Yes	-	-	-	-	-	-
K. J. Donnan, E. L. Williams a 2022		The effect of exercise-induced fatigue and heat exposure on soccer-specific decision-making durin	PLoS One	Exclude	-	-	-	-	No	-	-
M. A. Doolan, I. B. Stewart, 2022		Modified Stroop task performance when wearing protective clothing in the heat: An evaluation of	Physiol Behav	Exclude	Yes	-	-	-	-	-	-

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
				Include or exclude?	Irrelevant / off-topic?	Controlled trial design?	English language?				
T. Egawa, T. Ogawa, T. Yokokawa	2022	Methylglyoxal reduces molecular responsiveness to 4 weeks of endurance exercise in mouse plantar flexors	J Appl Physiol (1985)	Exclude	Yes						
N. Eimantas, S. Ivanove, N. B. 2022		Modulation of neuromuscular excitability in response to acute noxious heat exposure has no additive effect on muscle strength	Front Physiol	Exclude	Yes						
S. P. Fenemor, M. W. Driller, 2022		Practical application of a mixed active and passive heat acclimation protocol in elite male Olympians	Appl Physiol Nutr Metab	Exclude		No					
Z. J. Fennel, F. T. Amorim, M. 2022		The heat shock connection: skeletal muscle hypertrophy and atrophy	Am J Physiol Regul Integr Physiol	Exclude		No					
E. Fernández-Martínez, J. Péri 2022		Pain management and coping strategies for primary dysmenorrhea: A qualitative study among female university students	Nurs Open	Exclude	Yes						
M. J. Foertsch, J. T. McMullar 2022		Ketamine Stability over Six Months of Exposure to Moderate and High Temperature Environments	Prehosp Emerg Care	Exclude	Yes						
J. Frampton, R. M. Edinburgh 2022		The acute effect of fasted exercise on energy intake, energy expenditure, subjective hunger and gastric emptying	Int J Obes (Lond)	Exclude		No					
H. Fujiyoshi, T. Egawa, E. Ku 2022		TLR4-Mediated Inflammatory Responses Regulate Exercise-Induced Molecular Adaptations in Muscle	Int J Mol Sci	Exclude	Yes						
C. K. Garcia, G. P. Robinson, 2022		The impact of castration on physiological responses to exertional heat stroke in mice	PLoS One	Exclude	Yes						
E. Gervasoni, R. Bertoni, D. A. 2022		Acute Thermoregulatory and Cardiovascular Response to Submaximal Exercise in People With Multiple Sclerosis	Front Immunol	Exclude	Yes						
D. A. Holdsworth, R. Chamley 2022		Comprehensive clinical assessment identifies specific neurocognitive deficits in working-age patients with multiple sclerosis	PLoS One	Exclude	Yes						
B. G. Horgan, N. P. West, N. T. 2022		Acute Inflammatory, Anthropometric, and Perceptual (Muscle Soreness) Effects of Postresistance Exercise	J Strength Cond Res	Exclude					No		
Y. Huang, H. Shi, X. Liu, X. I. 2022		Analysis of Climate and Income-Related Factors for High Regional Child Drowning Mortality in China	Int J Public Health	Exclude	Yes						
J. N. Hussain, M. M. Cohen, 2022		Infrared sauna as exercise-mimetic? Physiological responses to infrared sauna vs exercise in healthy young men	Complement Ther Med	Exclude					No		
O. Jay 2022		Can heat exposure improve exercise performance?	J Sci Med Sport	Exclude		No					
C. Karraaoun, B. Haut, G. Bi 2022		Is airway damage during physical exercise related to airway dehydration? Inputs from a computational model	J Appl Physiol (1985)	Exclude	Yes						
J. Karolkiewicz, D. C. Niemar 2022		No effects of a 4-week post-exercise sauna bathing on targeted gut microbiota and intestinal barrier function	BMC Sports Sci Med Rehabil	Exclude		Yes	Yes	Yes	Yes	No	Yes
J. P. Kimball, O. T. Inan, V. A. 2022		Wearable Sensors and Machine Learning for Hypovolemia Problems in Occupational, Military and Recreational Settings	Sensors (Basel)	Exclude	Yes						
L. S. Kissling, A. P. Akerman, 2022		A crossover control study of three methods of heat acclimation on the magnitude and kinetics of a heat shock response	Exp Physiol	Exclude						No	
S. H. Kroesen, J. Q. de Korte, 2022		Impact of thermal sensation on exercise performance in the heat: a Thermo Tokyo sub-study	Eur J Appl Physiol	Exclude					No		
W. H. Kuan, Y. L. Chen and C. 2022		Excretion of Ni, Pb, Cu, As, and Hg in Sweat under Two Sweating Conditions	Int J Environ Res Public Health	Exclude	Yes						
D. B. Kulchitskaya, A. D. Fesj 2022		[Non-drug methods of treatment of post-thrombotic syndrome]	Vopr Kurortol Fizioter Lez Tobochno	Exclude	Yes						
S. Kumar, P. Lennon, N. Mulli 2022		Using long-range freeze-preventive vaccine carriers in Nepal: A study of equipment performance, stability, and efficacy	Vaccine X	Exclude	Yes						
A. Kutuywayo, M. Chersich, N. 2022		Climate change knowledge, concerns and experiences in secondary school learners in South Africa	Jama	Exclude	Yes						
K. Kwan and E. Helms 2022		Prevalence, Magnitude, and Methods of Weight Cutting Used by World Class Powerlifters	J Strength Cond Res	Exclude	Yes						
P. Ladlow, O. O'Sullivan, A. H. 2022		Dysautonomia following COVID-19 is not associated with subjective limitations or symptoms but with autonomic dysfunction	Heart Rhythm	Exclude	Yes						
E. Lee, I. Kolunsarka, J. Koste 2022		Effects of regular sauna bathing in conjunction with exercise on cardiovascular function: a multi-center study	Am J Physiol Regul Integr Physiol	Exclude		Yes	Yes	Yes	No	Yes	Yes
J. K. W. Lee, B. Tan, B. R. M. 2022		Biomarkers for warfighter safety and performance in hot and cold environments	J Sci Med Sport	Exclude	Yes						
J. K. W. Lee, B. Tan, H. B. Og 2022		Exertional heat stroke: nutritional considerations	Exp Physiol	Exclude	Yes						
Z. Li, Z. McKenna, Z. Fennel, 2022		The combined effects of exercise-induced muscle damage and heat stress on acute kidney stress and recovery	Eur J Appl Physiol	Exclude					No		
A. Lloyd, D. Fiala, C. Heyde 2022		A mathematical model for predicting cardiovascular responses at rest and during exercise in demersal fish	J Appl Physiol (1985)	Exclude		No					
M. Manware, R. Dubrow, D. C. 2022		Residential and Race/Ethnicity Disparities in Heat Vulnerability in the United States	Geohealth	Exclude	Yes						
E. D. Marchant, J. P. Kaluhiok 2022		Localized Heat Therapy Improves Mitochondrial Respiratory Capacity but Not Fatty Acid Oxidation in Muscle	Int J Mol Sci	Exclude	Yes						
R. A. Marciniak, C. A. Wahl ai 2022		Autonomic Nervous System Response to Far-Infrared Sauna Exposure in Firefighters	Ann Work Expo Health	Exclude	Yes						
Y. A. T. Martins, R. L. F. Passi 2022		A 32-day long fieldwork in Antarctica improves heat tolerance during physical exercise	An Acad Bras Cienc	Exclude	Yes						
A. R. D. Matthews, T. A. Asto 2022		Acute Effects of High-Intensity Interval Exercise While Wearing a Sauna Suit on Energy Expenditure and Heart Rate	J Strength Cond Res	Exclude					No		
N. S. Mazalan, G. J. Landers, 2022		Ice Ingestion Maintains Cognitive Performance during a Repeated Sprint Performance in The Heat	J Sports Sci Med	Exclude						No	
N. S. Mazalan, G. J. Landers, 2022		A Combination of Ice Ingestion and Head Cooling Enhances Cognitive Performance during Endurance Exercise	J Sports Sci Med	Exclude						No	
D. McEwan, R. E. Rhodes and 2022		What Happens When the Party is Over?: Sustaining Physical Activity Behaviors after Intervention	Behav Med	Exclude	Yes						
M. L. McGlynn, C. Collins, W. 2022		Heat Acclimation in Females Does Not Limit Aerobic Exercise Training Outcomes	Int J Environ Res Public Health	Exclude						No	
R. D. McIntyre, M. J. Zurawle 2022		A comparison of medium-term heat acclimation by post-exercise hot water immersion or exercise	Am J Physiol Regul Integr Physiol	Include		Yes	Yes	Yes	Yes	Yes	Yes
J. Meng, Z. Lv, Y. Wang and C. 2022		Identification of the redox-stress signaling threshold (RST): Increased RST helps to delay aging in mice	Free Radic Biol Med	Exclude	Yes						
J. J. Miles, P. M. McGuigan, E. 2022		Biomechanical asymmetries differ between autograft types during unplanned change of direction	Scand J Med Sci Sports	Exclude	Yes						
K. C. Miller, E. D. Launstein 2022		Body Core Temperature Cooling Using Two Cold-Water Immersion Preparation Strategies	J Athl Train	Exclude	Yes						
E. Mur-Gimeno, R. Sebio-Gar 2022		Short-term effects of two different recovery strategies on muscle contractile properties in healthy young men	J Sports Sci	Exclude					No		
T. Naito, M. Haramura, K. Mi 2022		Cooling during short-term heat acclimation enhances aerobic capacity but not sweat capacity	Eur J Sport Sci	Exclude						No	
C. A. Navas, G. A. Agudelo-C. 2022		Thermal boldness: Volunteer exploration of extreme temperatures in fruit flies	J Insect Physiol	Exclude	Yes						
N. Nishihara, J. Xiong, J. Kim 2022		Effect of adaptive opportunity on cognitive performance in warm environments	Sci Total Environ	Exclude	Yes						
N. M. Oliveira, L. F. Sousa Fil 2022		Different dehydration levels and their impact on blood ammonia, cognitive-motor performance, and heart rate	Int J Sports Med Phys Fitness	Exclude	Yes						
M. Pawlowska, C. Mila-Kierz 2022		The Influence of Ambient Temperature Changes on the Indicators of Inflammation and Oxidative Stress	Antioxidants (Basel)	Exclude					No		
J. D. Périard, D. DeGroot and 2022		Exertional heat stroke in sport and the military: epidemiology and mitigation	Exp Physiol	Exclude		No					
J. A. Peterson, C. Lohman, R. 2022		Body composition does not influence conditioned pain modulation and exercise-induced hyperalgesia	Eur J Pain	Exclude	Yes						
C. P. Philp, N. W. Pitchford, J. 2022		Hot water immersion: potential to improve intermittent running performance and perception of exertion	PLoS One	Exclude		Yes	Yes	Yes	Yes	No	Yes
C. P. Philp, N. W. Pitchford, D. 2022		Can ten days of heat acclimation training improve temperate-condition rowing performance in male rowers?	PLoS One	Exclude						No	
B. H. Poon, S. Prakaash, Y. S. 2022		Thermal strain and fluid balance during a 72-km military route march in a field setting	Singapore Med J	Exclude		No					
F. Protasi, B. Giroilami, M. Ser 2022		Ablation of Calsequestrin-1, Ca(2+) unbalance, and susceptibility to heat stroke	Front Physiol	Exclude	Yes						

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Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Irrelevant / off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
S. Racinais, G. Havenith, P. A. J. 2022		Association between thermal responses, medical events, performance, heat acclimation and health	Br J Sports Med	Exclude		No								
M. B. Reid 2022		Redox Implications of Extreme Task Performance: The Case in Driver Athletes	Cells	Exclude	Yes									
K. Reminy, E. T. Ngo Sock, M. 2022		Strenuous exercise in warm environment is associated with improved microvascular function in si	Eur J Appl Physiol	Exclude	Yes									
R. Renteria, S. Grineski, T. Co 2022		Social disparities in neighborhood heat in the Northeast United States	Environ Res	Exclude	Yes									
S. S. H. Roberts, S. J. Bowe, I. 2022		Does game-day circadian misalignment or environmental temperature influence team performance	J Sci Med Sport	Exclude		No								
R. Roklicer, C. Rossi, A. Bian 2022		Prevalence of rapid weight loss in Olympic style wrestlers	J Int Soc Sports Nutr	Exclude		No								
B. R. Ronnestad, J. Hansen, T. 2022		Case Report: Heat Suit Training May Increase Hemoglobin Mass in Elite Athletes	Int J Sports Physiol Perfor	Exclude		No								
B. R. Ronnestad, O. M. Lid, J. 2022		Heat suit training increases hemoglobin mass in elite cross-country skiers	Scand J Med Sci Sports	Exclude									No	
B. R. Ronnestad, T. Urianstad, 2022		Heat Training Efficiently Increases and Maintains Hemoglobin Mass and Temperate Endurance P	Med Sci Sports Exerc	Exclude									No	
D. Rothschild-Rodriguez, A. J. 2022		The effects of exercise on complement system proteins in humans: a systematic scoping review	Exerc Immunol Rev	Exclude		No								
M. M. Sailliant, N. Charkoudia 2022		Individual variability in achievement of short-term heat acclimation during a fixed intensity proto	J Therm Biol	Exclude										No
Y. Sekiguchi, C. L. Benjamin, 2022		Effects of Heat Acclimation Following Heat Acclimatization on Whole Body Heat Exchange in Ti	Int J Environ Res Public H	Exclude										No
Y. Sekiguchi, C. L. Benjamin, 2022		Using Predictive Modeling Technique to Assess Core Temperature Adaptations from Heart Rate, †	Int J Environ Res Public H	Exclude		No								No
Y. Sekiguchi, C. L. Benjamin, 2022		Effects of Heat Acclimatization, Heat Acclimation, and Intermittent Exercise Heat Training on Tir	Sports Health	Exclude										No
J. Shaw, C. Walkington, E. Co 2022		Effectiveness of short-term isothermic-heat acclimation (4 days) on physical performance in mod	PLoS One	Exclude										No
W. Simmons, S. Lin, T. J. Lub 2022		Modeling complex effects of exposure to particulate matter and extreme heat during pregnancy or	Sci Total Environ	Exclude	Yes									
D. Sitkowski, T. Cisoń, Z. Szy 2022		Hematological Adaptations to Post-Exercise Sauna Bathing With No Fluid Intake: A Randomized	Res Q Exerc Sport	Exclude		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
J. Soo, S. Racinais, D. J. Bish 2022		Effects of mild heat exposure on fatigue responses during two sets of repeated sprints matched for	J Sci Med Sport	Exclude										No
A. Sotiriadis, T. Debevec, N. G. 2022		Cross-adaptation between heat and hypoxia: mechanistic insights into aerobic exercise performan	Am J Physiol Regul Integr	Exclude		No								
M. Štangar, A. Štangar, V. Šht 2022		Rapid weight loss among elite-level judo athletes: methods and nutrition in relation to competitio	J Int Soc Sports Nutr	Exclude	Yes									
B. T. Stephenson, T. J. O'Brier 2022		Ice Slurry Ingestion Lowers Thermoregulatory Strain in Wheelchair Tennis Players During Repea	Int J Sports Physiol Perfor	Exclude	Yes									
B. L. Stone, J. D. Ashley, R. N. 2022		Effects of a Short-Term Heat Acclimation Protocol in Elite Amateur Boxers	J Strength Cond Res	Exclude										No
H. Štorkánová, S. Oreská, M. 2022		Hsp90 Levels in Idiopathic Inflammatory Myopathies and Their Association With Muscle Involv	Front Immunol	Exclude	Yes									
D. Sumi, H. Nagatsuka, K. Mi 2022		Heat acclimation does not attenuate hepcidin elevation after a single session of endurance exercis	Eur J Appl Physiol	Exclude							No			
S. Syed, T. L. O'Sullivan and I. 2022		Extreme Heat and Pregnancy Outcomes: A Scoping Review of the Epidemiological Evidence	Int J Environ Res Public H	Exclude		No								
S. C. C. Tan, W. H. Ang, L. S. 2022		Efficacy of Isothermic Conditioning over Military-Based Heat Acclimatization and Interval Traini	Med Sci Sports Exerc	-										
S. T. Tebeck, J. D. Buckley an 2022		Longitudinal haematological responses to training load and heat acclimation preceding a male tea	Eur J Sport Sci	Exclude		No								
Y. Tochihara, H. Wakabayashi 2022		How humans adapt to hot climates learned from the recent research on tropical indigenes	J Physiol Anthropol	Exclude		No								
K. Uchiyama, J. King, K. Wall 2022		The influence of rest break frequency and duration on physical performance and psychophysiol	Eur J Appl Physiol	Exclude		No								
J. Ujszegi, R. Bertalan, N. Ujh 2022		Heat waves experienced during larval life have species-specific consequences on life-history tra	Sci Total Environ	Exclude	Yes									
M. Waldron, R. Fowler, S. Hel 2022		Response to Comment on: "Effects of Heat Acclimation and Acclimatisation on Maximal Aerobic	Sports Med	Exclude		No								
A. Walleit, A. McKune, D. P. 2022		Repeated-Sprint Exercise in the Heat Increases Indirect Markers of Gastrointestinal Damage in W	Int J Sport Nutr Exerc Me	Exclude										No
B. Wang and W. Zhang 2022		MARnet: multi-scale adaptive residual neural network for chest X-ray images recognition of lung	Math Biosci Eng	Exclude	Yes									
Y. Wang, B. J. He, C. Kang, L. 2022		Assessment of walkability and walkable routes of a 15-min city for heat adaptation: Developmen	Front Public Health	Exclude		No								
S. R. C. Weaver, C. Rendeiro, 2022		Non-pharmacological interventions for vascular health and the role of the endothelium	Eur J Appl Physiol	Exclude	Yes									
R. S. Weller and M. J. Buono 2022		The effect of heat acclimation on the sweat lactate concentration vs. sweat rate relationship	J Therm Biol	Exclude										No
C. E. Wheelock, D. P. Looney, 2022		Exercise during hot-water immersion in divers habituated to hot-dry and hot-wet conditions	Undersea Hyperb Med	Exclude										No
S. T. Wolf, T. E. Bernard and 2022		Heat exposure limits for young unacclimatized males and females at low and high humidity	J Occup Environ Hyg	Exclude								No		No
C. Zhu and M. Lal 2022		Preclinical Safety and Pharmacokinetics of Heat Stable Oxytocin in Sublingual Fast-Dissolving T	Pharmaceutics	Exclude	Yes									
E. Ashworth, J. Cotter and A. 2023		Post-exercise, passive heat acclimation with sauna or hot-water immersion provide comparable ad	Ergonomics	Exclude							No			No
A. M. Cheibub, R. Muniz-San 2023		A burst of fenoterol excretion during the recovery of a weight loss protocol	J Pharm Biomed Anal	Exclude	Yes									
M. F. Chersich, F. Scorgie, V. 2023		Increasing global temperatures threaten gains in maternal and newborn health in Africa: A review	Int J Gynaecol Obstet	Exclude	Yes									
J. Corbett, J. Wright and M. J. 2023		Sex differences in response to exercise heat stress in the context of the military environment	BMJ Mil Health	Exclude		No								
J. A. E. Costley, J. J. Miles, E. 2023		Vertical jump impulse deficits persist from six to nine months after ACL reconstruction	Sports Biomech	Exclude	Yes									
S. P. Fenemor, M. W. Driller, † 2023		Heating Up to Keep Cool: Benefits and Persistence of a Practical Heat Acclimation Protocol in El	Int J Sports Physiol Perfor	Exclude		No								
B. G. Horgan, S. L. Halson, E. 2023		No effect of repeated post-resistance exercise cold or hot water immersion on in-season body com	Eur J Appl Physiol	Exclude								No		
J. Hussain, M. Cohen, C. J. O' 2023		Detections of organophosphate and pyrethroid insecticide metabolites in urine and sweat obtain	Int J Hyg Environ Health	Exclude							No			
L. Lei, S. Shi, D. Wang, S. Me 2023		Recent Advances in Thermoregulatory Clothing: Materials, Mechanisms, and Perspectives	ACS Nano	Exclude	Yes									
T. H. Lei, M. Fujiwara, T. Ami 2023		Induction and decay of seasonal acclimatization on whole body heat loss responses during exerci	Am J Physiol Regul Integr	Exclude		No								
Y. Liu, H. Feng, Y. Gui, T. Chi 2023		Flexible Stretchable, Dry-Resistant MXene Nanocomposite Conductive Hydrogel for Human Mot	Polymers (Basel)	Exclude	Yes									
M. C. Maccaroni, G. Magro, † 2023		Short-time effects of spa rehabilitation on pain, mood and quality of life among patients with dege	Int J Biometeorol	Exclude	Yes									
A. Mornas, F. Brocherie, G. G. 2023		Active Heat Acclimation Does Not Alter Muscle-Tendon Unit Properties	Med Sci Sports Exerc	Exclude		No								
H. Otani 2023		Prior heat exposure diminishes upper-body endurance work capacity and maximal arm and leg str	Int J Biometeorol	Exclude	Yes									
A. N. Schroeder, Z. J. Suriano 2023		Using Wet Bulb Globe Temperature and Physiological Equivalent Temperature as Predictive Mo	Clin J Sport Med	Exclude		No								
D. Sumi, H. Nagatsuka, K. Me 2023		The Impact of Heat Acclimation on Gastrointestinal Function following Endurance Exercise in a I	Nutrients	Exclude										No
C. Towilson, D. J. Watson, S. C. 2023		Soccer academy practitioners' perceptions and application of bio-banding	PLoS One	Exclude	Yes									

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
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F. Ware-Gilmore, M. Novelo, K. Yamaguchi, S. Kayanuma, Abbass, Ahmed M., Elrahman Asma, Elizabeth; Heenan, Me; Bennett, Samuel; Tioilier, Eve Bidonde, Julia; Fisher, Emma; Blazevich, Anthony J.; Fletcher Bourgois, Gil; Mucci, Patrick; Bröde, Peter; Kampmann, Ber Buguet, Alain; Radomski, Mai Buller, Mark J.; Atkinson, Em Caraway, J. Joseph; Shepard, J Chang, Howard H.; Zhang, Hi Chen, Ting-Hsuan; Hong, Yao Chu, Lingzhi; Chen, Kai; Crov Coertjens, Marcelo; Coertjens Cole, Edward; Donnan, Kate J Collado, Aurélie; Rinaldi, Ké Cross, Rosina; Greaves, Colin Cudeiro, Jesús; Soto, David; Deshayes, Thomas A.; Sodabi Di Cicco, Mattia; Di Lorenzo, Donnan, Kate J.; Williams, En Driller, Matthew; Leabeater, A Du, Peibo; Wang, Jun; Zhan, Erfani, H.; Ghorbani, G. R.; Favoreto, Michael William; Fenemor, Stephen P.; Driller Frackowiak, Bruno; Van den Fransson, Amanda; Björklund Fumimoto, Kanaru; Okada, S Gagnon, Daniel; Barry, Hadiat Galan-Lopez, Natalia; Esh, Ch Garcia, Christian K.; Gambine Goods, Paul S. R.; Maloney, P Graby, John; Khavandi, Ali; Gündoğdu, B.; Nouri, A. Sant Hatchi, Vanessa; Guillot, Aym Healy, James P.; Danesh Yazdi Heatherly, Alexander J.; Capui Horgan, Barry G.; Tee, Nicolir Horowitz, Michal; Hasin, Yon Horowitz, Michal; Kopeliovic Houghton, Michael J.; Snipe, Ireland, Andrew; Johnston, Da Jiang, Xiaoyan; Yang, Muyue; Kamaruddin, Harris Kamal; Ke, Deng; Takahashi, Kiyoshi Kelly, Monica K.; Bowe, Stev Kim, Hojoong; Yoo, Young Jir Ladlow, Peter; Holdsworth, Lalonde, Chloe S.; Switchenki Langhorst, Andrea; Langhorst, Lee, Jason K. W.; Tan, Beverl Lei, Leqi; Shi, Shuo; Wang, D Li, Xin; Xu, Fan; Ma, Li-Zhen	2023	Assessing the role of family level variation and heat shock gene expression in the thermal stress response in humans.	Philos Trans R Soc Lond B Biol Sci	Exclude	Yes						
		Adding heat stress to repeated-sprint training in hypoxia does not enhance performance improvement.	Eur J Appl Physiol	Exclude	Yes					No	
		Critical parameters affecting the thermal resistance of alkali-activated aluminosilicate wastes.	Environmental science and technology	Exclude	Yes						
		Avoid equipment graveyards: rigorous process to improve identification and procurement of effective equipment.	BMC pediatrics	Exclude	Yes						
		Environmental heat stress offsets adaptation associated with carbohydrate periodization in trained athletes.	Scandinavian journal of medicine and sports science	Exclude						No	
		Effectiveness of non-pharmacological interventions for fibromyalgia and quality of life: a systematic review.	Seminars in arthritis and rheumatism	Exclude	Yes						
		More than energy cost: multiple benefits of the long Achilles tendon in human walking and running.	Biological reviews of the Cambridge Philosophical Society	Exclude	Yes						
		Effect of acute heat exposure on the determination of critical power and W' in women and men.	European journal of sport science	Exclude				No			
		Temperature-Humidity-Dependent Wind Effects on Physiological Heat Strain of Moderately Exercising Humans.	Biology	Exclude	Yes						
		Heatwaves and human sleep: Stress response versus adaptation.	Journal of the neurological sciences	Exclude	Yes						
		Individualized monitoring of heat illness risk: novel adaptive physiological strain index to assess risk.	Physiological measurement	Exclude	Yes						
		Management of a Special Warfare Trainee With Repeat Exertional Heat Stroke: A Case Study.	Journal of sport rehabilitation	Exclude	Yes						
		Associations between short-term ambient temperature exposure and emergency department visits.	Environment international	Exclude	Yes						
		A kirigami-enabled electrochromic wearable variable-emittance device for energy-efficient adaptive cooling.	PNAS nexus	Exclude	Yes						
		Associations between short-term temperature exposure and kidney-related conditions in New York City.	Environment international	Exclude	Yes						
		Energetic responses of head-out water immersion at different temperatures during post-exercise recovery.	European journal of applied physiology	Exclude				No			
		Short-term heat acclimation protocols for an aging population: Systematic review.	PLoS one	Exclude				No			
		Cumulative pre-cooling methods do not enhance cycling performance in tropical climate.	PLoS one	Exclude				No			
		A qualitative longitudinal study of motivation in the Retirement in ACTION (REACT) physical activity trial.	The international journal of aging & human development	Exclude	Yes						
		Heat exposure following encoding can interfere with subsequent recognition memory.	Scientific reports	Exclude	Yes						
		Shifting focus: Time to look beyond the classic physiological adaptations associated with human heat acclimation.	Experimental physiology	Exclude				No			
		Some like it hot: Thermal preference of the groundwater amphipod Niphargus longicaudatus in a natural environment.	Journal of thermal biology	Exclude	Yes						
		The effectiveness of heat preparation and alleviation strategies for cognitive performance: A systematic review.	Temperature (Austin, Tex.)	Exclude				No			
		Fundamentals of Iceing on Top of the Cake? A Narrative Review of Recovery Strategies and Devices.	Sports (Basel, Switzerland)	Exclude				No			
		Asymmetric Multienergy-Coupled Radiative Warming Textiles for Personal Thermal-Moisture Management.	ACS applied materials & interfaces	Exclude	Yes						
		Effects of complete substitution of dietary grain and protein sources with by-products on the production and quality of dairy products.	Journal of dairy science	Exclude	Yes						
		Various ways of pre-heating a bulk-fill thermoviscous composite in restoration in non-carious cervical lesions.	Clinical oral investigations	Exclude	Yes						
		Heating Up to Keep Cool: Benefits and Persistence of a Practical Heat Acclimation Protocol in Elite Athletes.	International journal of sports physiology and health	Exclude				Yes		No	
		First validation of a model-based hepatic percutaneous microwave ablation planning on a clinical trial.	Scientific reports	Exclude	Yes						
		Older adults' occupations in heat waves: A scoping review.	Scandinavian journal of occupational health and safety	Exclude	Yes						
		Noncontact Evaluation Method for Autonomic Nervous System Activity during Exercise Using Respiration.	Annual International Conference on Wearable Computing Systems	Exclude	Yes						
		A dataset of proteomic changes during human heat stress and heat acclimation.	Scientific data	Exclude				No			
		Heat Preparation and Knowledge at the World Athletics Race Walking Team Championships.	International journal of sports physiology and health	Exclude				No			
		Delayed metabolic disturbances in the myocardium after exertional heat stroke: contrasting effects of heat preparation.	Journal of applied physiology	Exclude	Yes						
		Concurrent validity of the CORE wearable sensor with BodyCap temperature pill to assess core body temperature.	European journal of sport science	Exclude	Yes						
		Super Rehab: can we achieve coronary artery disease regression? A feasibility study protocol.	BMJ open	Exclude	Yes						
		Investigating the impacts of shaded outdoor spaces on thermal adaptation and cognitive performance in a hot climate.	International journal of biometeorology	Exclude	Yes						
		Revisiting Motor Imagery Guidelines in a Tropical Climate: The Time-of-Day Effect.	International journal of environmental research and public health	Exclude	Yes						
		Seasonal Temperature Variability and Mortality in the Medicare Population.	Environmental health perspectives	Exclude	Yes						
		Heat Acclimation Knowledge among Recreational Runners.	Sports (Basel, Switzerland)	Exclude				No			
		Acute Performance, Daily Well-Being, and Hormone Responses to Water Immersion After Resistance Training.	Journal of strength and conditioning research	Exclude						No	
		Vascular compliance and left ventricular compliance cross talk: Implications for using long-term cardiac catheterization.	Frontiers in physiology	Exclude	Yes						
		Identification of global transcriptional variations in human peripheral blood mononuclear cells through single-cell RNA sequencing.	American journal of physiology	Exclude	Yes						
		Plasma measurements of the dual sugar test reveal carbohydrate immediately alleviates intestinal discomfort.	The Journal of physiology	Exclude	Yes						
		Heat and worker health.	Journal of health economics	Exclude	Yes						
		A Photo-Activated Thermoelectric Catalyst for Ferroptosis-/Pyroptosis-Boosted Tumor Nanotherapy.	Advanced healthcare materials	Exclude	Yes						
		Carbohydrate mouth rinse is no more effective than placebo on running endurance of dehydrated athletes.	European journal of applied physiology	Exclude						No	
		Effects of heatwave features on machine-learning-based heat-related ambulance calls prediction in a hot climate.	The Science of the total environment	Exclude	Yes						
		Heat Adaptation for Females: A Systematic Review and Meta-Analysis of Physiological Adaptations to Heat.	Sports medicine (Auckland)	Exclude				No			
		Outdoor Worker Stress Monitoring Electronics with Nanofabric Radiative Cooler-Based Thermal Management.	Advanced healthcare materials	Exclude	Yes						
		Exercise tolerance, fatigue, mental health, and employment status at 5 and 12 months following COVID-19 infection.	Journal of applied physiology	Exclude	Yes						
		Shifting Sociodemographic Characteristics of a Phase I Clinical Trial Population at an NCI-Designated Cancer Center.	The oncologist	Exclude	Yes						
		[Integrative medicine, naturopathic and complementary medicine in the treatment of fibromyalgia: A systematic review.	Schmerz (Berlin, German)	Exclude	Yes						
		Biomarkers for warfighter safety and performance in hot and cold environments.	Journal of science and military medicine	Exclude				No			
		Recent Advances in Thermoregulatory Clothing: Materials, Mechanisms, and Perspectives.	ACS nano	Exclude	Yes						
		Acquired heat acclimation in rats subjected to physical exercise under environmental heat stress: A brain research study.	Brain research	Exclude	Yes						

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.



Supplemental File 4b - Characteristics of excluded studies - Studies excluded by ML.

Number included = 14 of 2458

Author	Year	Title	Journal	Decision	Reason(s) for inclusion/exclusion:	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity* or physiology during exercise***
Liu, Yafei; Feng, Huixia; Gui, 2023		Flexible Stretchable, Dry-Resistant MXene Nanocomposite Conductive Hydrogel for Human Motion Monitoring	Polymers	Exclude	Yes						
Lu, Hanzhi; Aratake, Shun; Nai, 2023		Development of a Core Body Thermometer Applicable for High-Temperature Environment Based Sensors (Basel, Switzerland)	Sensors	Exclude	Yes						
Lu, Xin; Xie, Daibin; Zhu, Ka, 2023		Swift Assembly of Adaptive Thermocell Arrays for Device-Level Healable and Energy-Autonomous Sensors	Nano-micro letters	Exclude	Yes						
Lundby, Carsten; Hamarsland, 2023		Hematological, skeletal muscle fiber, and exercise performance adaptations to heat training in elite athletes	Journal of applied physiology	Exclude				-	No		
Malta, Elvis Souza; Lopes, Vit, 2023		Repeated cold-water immersion improves autonomic cardiac modulation following five sessions of heat exposure	European journal of applied physiology	Exclude				No			
Manning, Ciara N.; Benjamin, 2023		Environmental Stress Symptoms during Heat Acclimatization, Heat Acclimation, and Intermittent Heat Exposure	International journal of environmental health research	Exclude				No			
Marchant, Erik D.; Nelson, W, 2023		Passive heat stress induces mitochondrial adaptations in skeletal muscle.	International journal of physiology	Exclude	No						
Matias, Aless A.; Albin, Isabel, 2023		Impact of high intensity interval exercise with and without heat stress on cardiovascular and aerobic performance	BMC sports science, medicine	Exclude				No			
Mornas, Adèle; Brocherie, Fra, 2023		Active Heat Acclimation Does Not Alter Muscle-Tendon Unit Properties.	Medicine and science in sports and exercise	Exclude	-			-	No		
Niclou, Alexandra; Sarma, Ma, 2023		To the extreme! How biological anthropology can inform exercise physiology in extreme environments	Comparative biochemistry and physiology	Exclude	No						
Northway, Sarah; Jones, Doug, 2023		Sensitivity and specificity of using exercise heart rate in a thermoneutral environment to predict heat stress	International journal of occupational environmental health	Exclude						No	
Notley, Sean R.; Mitchell, Dur, 2023		A century of exercise physiology: concepts that ignited the study of human thermoregulation. Part 1: The early years	European journal of applied physiology	Exclude							
Numata, Ura; Yanaoka, Taki, 2023		Effects of ice slurry ingestion on body temperature and softball pitching performance in a hot environment	Journal of physiological anthropology	Exclude				No			
O'Connell, Cameron T.; Reed, 2023		Cardiorespiratory and autonomic adjustments to exercise with healthy ageing: considerations with aging	The Journal of physiology	Exclude	No						
Podversich, Federico; Tarnons, 2023		Effects of Aspergillus oryzae probiotic on animal performance, nutrients digestibility, and feeding behavior	Journal of animal science	Exclude	Yes						
Ramirez-Calero, S.; Paula, J. I, 2023		Neuron-microglia interactions in disrupted mutualistic cleaning interactions under future environmental conditions	BMC biology	Exclude	Yes						
Rastogi, Deeksha; Christian, J, 2023		Exploring the Spatial Patterning of Sociodemographic Disparities in Extreme Heat Exposure at the Community Level	GeoHealth	Exclude	Yes						
Rawal, Atul; Kidhoh, Christo, 2023		A machine learning approach for identifying variables associated with risk of developing neutralizing antibodies	Heliyon	Exclude	Yes						
Renteria, Liliana I.; Zheng, Xi, 2023		Ovariectomy aggravates the pathophysiological response to exertional heat stroke in mice.	Journal of applied physiology	Exclude	Yes						
Rhoads, M. L., 2023		Review: Reproductive consequences of whole-body adaptations of dairy cattle to heat stress.	Animal : an international journal of animal production	Exclude	Yes						
Roxburgh, Brendon H.; Campbell, 2023		Acute and adaptive cardiovascular and metabolic effects of passive heat therapy or high-intensity interval exercise	Physiological reports	Exclude				No			
Saidi, Alireza; Gauvin, Chanta, 2023		Towards real-time thermal stress prediction systems for workers.	Journal of thermal biology	Exclude	Yes						
Steward, Charles J.; Menzies, 2023		The effect of age and mitigation strategies during hot water immersion on orthostatic intolerance and autonomic function	Experimental physiology	Exclude						No	
Sumi, Daichi; Nagatsuka, Haru, 2023		The Impact of Heat Acclimation on Gastrointestinal Function following Endurance Exercise in a Hot Environment	Nutrients	Exclude						No	
Tan, Xiang Ren; Stephenson, I, 2023		Elevated brain temperature under severe heat exposure impairs cortical motor activity and executive function	Journal of sport and health	Exclude	Yes						
Tian, Yuan; Florenciano, Isidro, 2023		Facile Fabrication of Flexible and High-Performing Thermoelectrics by Direct Laser Printing on Paper	Advanced materials (Deerfeld Beach, Fla.)	Exclude	Yes						
Toro-Román, Victor; Prieto-García, 2023		Effects of High Temperature Exposure on the Wingate Test Performance in Male University Students	International journal of environmental health research	Exclude						No	
Towson, Chris; Watson, Demi, 2023		Soccer academy practitioners' perceptions and application of bio-banding.	PloS one	Exclude	Yes						
Ware-Gilmore, Fhallon; Novel, 2023		Assessing the role of family level variation and heat shock gene expression in the thermal stress response	Philosophical transactions of the Royal Society B: Biological Sciences	Exclude	Yes						
Western, Max J.; Welsh, Toma, 2023		Exercise snacking to improve physical function in pre-frail older adult memory clinic patients: a randomized controlled trial	BMC geriatrics	Exclude	Yes						
Willmott, A. G. B.; James, C., 2023		The reliability of a portable steam sauna pod for the whole-body passive heating of humans.	Journal of thermal biology	Exclude	Yes						
Xiao, Yu; Zhang, Yuanlong; Qian, 2023		Miniaturized Flexible Non-Contact Interface Based on Heat Shrinkage Technology.	Small methods	Exclude	Yes						
Yang, Rui; Cao, Jing; Speakman, 2023		Limits to sustained energy intake. XXXIII. Thyroid hormones play important roles in milk production	The Journal of experimental biology	Exclude	Yes						
Yoshimura, Miho; Nakamura, 2023		Effect of CO(2) and H(2) gas mixture in cold water immersion on recovery after eccentric loading	Heliyon	Exclude						No	
Zahed, Md Abu; Kim, Dong K, 2023		Microfluidic-Integrated Multimodal Wearable Hybrid Patch for Wireless and Continuous Physiological Monitoring	ACS sensors	Exclude	Yes						
Zeng, Lingjun; Gao, Guanghu, 2023		Stretchable Organohydrogel with Adhesion, Self-Healing, and Environment-Tolerance for Wearable Sensors	ACS applied materials & interfaces	Exclude	Yes						
Zhai, Piyong; Liu, Hao; Zhang, 2023		Correlation analysis between sleep quality and the mental health status of female sex workers during the COVID-19 pandemic	Frontiers in endocrinology	Exclude	Yes						
Zhang, Liang; Zhang, Yu-Yan; 2023		Evaluation of species thermal sensitivity with individual-based physiological performance.	Marine environmental research	Exclude	Yes						
Zhang, Yangchang; Sun, Feng, 2023		Ambient temperature and major structural anomalies: A retrospective study of over 2 million newborns	The Science of the total environment	Exclude	Yes						
Zhang, Yingqi; Gantt, Shelby, 2023		Performance of Orbicella faveolata larval cohorts does not align with previously observed thermal tolerance	Global change biology	Exclude	Yes						
Berger, Nicolas J. A.; Best, Ru, 2024		Limits of Ultra: Towards an Interdisciplinary Understanding of Ultra-Endurance Running Performance	Sports medicine (Auckland)	Exclude	No						
Emery, A.; Moore, S.; Crowe, 2024		The effects of short-term, progressive exercise training on disease activity in smouldering multiple myeloma	BMC cancer	Exclude	Yes						
Girard, Olivier; Peeling, Peter, 2024		Combining Heat and Altitude Training to Enhance Temperature, Sea-Level Performance.	International journal of sports physiology and health	Exclude	No						
Monteiro Dos Santos, Djacinto, 2024		Twenty-first-century demographic and social inequalities of heat-related deaths in Brazilian urban areas	PloS one	Exclude	Yes						
Murray, Kevin O.; Brant, Jaso, 2024		Exertional heat stroke causes long-term skeletal muscle epigenetic reprogramming, altered gene expression, and mitochondrial dysfunction	American journal of physiology	Exclude	Yes						
Notley, Sean R.; Mitchell, Dur, 2024		A century of exercise physiology: concepts that ignited the study of human thermoregulation. Part 2: The modern era	European journal of applied physiology	Exclude	No						
Sautillet, Benoît; Bourdillon, 2024		Hot water immersion: Maintaining core body temperature above 38.5°C mitigates muscle fatigue.	Scandinavian journal of medicine and science in sports	Exclude						No	
Schroeder, Helena Trevisan; N, 2024		Resolution of Inflammation in Chronic Disease via Restoration of the Heat Shock Response (HSR)	Cell stress & chaperones	Exclude	Yes						
Souilla, Luc; Amedro, Pascal; 2024		Children With Cardiac Disease and Heat Exposure: Catastrophic Converging Consequences?	Pediatric exercise science and fitness	Exclude	Yes						
Wan, Feiyan; Wang, Huan; Gu, 2024		Bromine Substitution Improves the Photothermal Performance of $\pi$ -Conjugated Phototheranostic Hydrogels	Chemistry (Weinheim) : a European journal	Exclude	Yes						

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.

Supplemental File 4c - Characteristics of excluded studies - Exclusion disagreement discussion TS & ML.

Included by TS	Included by MJ	Author	Year	Title	Journal	Decision Include or exclude?	Reason(s) for inclusion/exclusion Irrelevant or off-topic?	Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?	Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold. **Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity * or physiology during exercise**?	Notes
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	G. S. Scoon; W. G. Hopkins; S. N. 2007	2007	Effect of post-exercise sauna bathing on the endurance performance of	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J. Vaile; S. Halsey; N. Gill; B. Dz. 2008	2008	Effect of hydrotherapy on recovery from fatigue	Int J Sports Med	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	J. Vaile; S. Halsey; N. Gill; B. Dz. 2008	2008	Effect of hydrotherapy on the signs and symptoms of delayed onset muscle soreness	Eur J Appl Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	Should NOT include. Only one exercise bout followed by 72 hours of recovery modalities.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	M. J. Zurawlew; N. P. Walsh; M. 2016	2016	Post-exercise hot water immersion induces heat acclimation and improves	Scand J Med Sci Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	M. J. Zurawlew; J. A. Mee; N. P. 2018	2018	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptation	Front Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes		No	Yes	Included because training was maintained or less during the intervention for each of the groups with Pre/Post design. (outcomes related to capacity)
		Why did TS exclude? M. J. Zurawlew; J. A. Mee; N. P. 2018	2018	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptation	Front Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes		No	No	No non-post exercise hot water immersion control group. The control group is an untrained group who undertake the same post-exercise HWI intervention. No exercise performance or capacity test (just end of exercise HR, SW, temp)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	M. J. Zurawlew; J. A. Mee; N. P. 2019	2019	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptation	Front Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes		No	Yes	I included because of the pre-post design with each person serving as their own control and if anything training was reduced "As endurance training can induce partial heat acclimation, participants were instructed to reduce their regular training by the duration completed in the laboratory" (outcomes related to capacity)
		Why did TS exclude? M. J. Zurawlew; J. A. Mee; N. P. 2019	2019	Post-exercise Hot Water Immersion Elicits Heat Acclimation Adaptation	Front Physiol	Exclude	-	No	Yes	Yes	Yes	Yes	Yes		No	Yes	No non post exercise HWI control group. No performance/capacity outcome, only HR, SW, core temp and RPE during exercise
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C. J. Stevens; M. L. R. Ross; A. J. 2020	2020	Postexercise Hot-Water Immersion Does Not Further Enhance Heat Adaptation	Int J Sports Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Daily training was in the heat (not cool) ambient conditions.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C. Lundby; I. S. Svendsen; T. Uri. 2021	2021	Training wearing thermal clothing and training in hot ambient condition	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	3 groups: cycling in the heat, cycling in thermal clothing, and cycling in thermal clothing plus post-ex heat exposure.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	I. Bartolomé; J. Siquier-Coll; M. 2021	2021	3-Week passive acclimation to extreme environmental heat (100± 3°C)	J Therm Biol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	3 sauna sessions per week (approx every 2nd day) for 3-weeks. Athletes trained every day but we don't know how much and when (before or after sauna).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	I. Pokora; E. Sadowska-Krepa; L. 2021	2021	The Effect of Medium-Term Sauna-Based Heat Acclimation (MPHA) on	Int J Environ Res Pub	Exclude	-	Yes	Yes	Yes	Yes	Yes	Yes		No	Yes	Yes, no non-sauna control group only a pre and post test design. I guess that does not qualify for the inclusion (unless it was crossed over?)
		Why did TS exclude? I. Pokora; E. Sadowska-Krepa; L. 2021	2021	The Effect of Medium-Term Sauna-Based Heat Acclimation (MPHA) on	Int J Environ Res Pub	Exclude	-	No	Yes	Yes	Yes	Yes	Yes		No	Yes	No non-sauna control group. Athletes trained as normal during the 10-day sauna intervention. Sauna baths took place in the afternoon after daily training sessions but we don't know how long after (it is likely it was variable since the authors wanted to "standardize the duration of sauna exposure rather than the duration of heat stress (internal temperature > 38.5 °C) to minimize the potential impact on the athletes' daily life/training schedule. By the end of the procedures"
<input checked="" type="checkbox"/>	<input type="checkbox"/>	M. Sabapathy; F. Tan; S. Al Huss. 2021	2021	Effect of heat pre-conditioning on recovery following exercise-induced	Curr Res Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	three consecutive days of hot water immersion but it is unclear whether the active subjects did exercise each day
		Why did ML exclude? M. Sabapathy; F. Tan; S. Al Huss. 2021	2021	Effect of heat pre-conditioning on recovery following exercise-induced	Curr Res Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	HWI and exercise were on separate days. Does not seem that the subjects completed any exercise on HWI days.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N. V. Kirby; S. J. E. Lucas; O. J. 2021	2021	Intermittent post-exercise sauna bathing improves markers of exercise	Eur J Appl Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	post-exercise sauna bathing 3 + 1 times per week
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N. V. Kirby; S. J. E. Lucas; T. G. 2021	2021	Sex differences in adaptation to intermittent post-exercise sauna bathing	Sports Med Open	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	post-exercise sauna bathing 3 + 1 times per week (IT IS POSSIBLE THAT THIS IS THE EXACT SAME SUBJECTS AS Kirby et al 2021 Eur J Appl Physiol)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R. D. McIntyre; M. J. Zurawlew; 2021	2021	A comparison of heat acclimation by post-exercise hot water immersion	J Sci Med Sport	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	The thermoneutral group exercised 60 minutes versus 40 minutes for the HWI group.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	C. P. Philp; N. W. Pichford; J. W. 2022	2022	Hot water immersion; potential to improve intermittent running performance	PLoS One	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	I agree to exclude but this paper is worth discussing briefly in our manuscript.
		Why did ML exclude? C. P. Philp; N. W. Pichford; J. W. 2022	2022	Hot water immersion; potential to improve intermittent running performance	PLoS One	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	HWI was not on consecutive days. 2 x week for three weeks and 3 x week for three weeks (M/W/F?), but probably not on consecutive days. Also - are skill training sessions really exercise???
<input type="checkbox"/>	<input checked="" type="checkbox"/>	E. Lee; I. Kolusarka; J. Kostens. 2022	2022	Effects of regular sauna bathing in conjunction with exercise on cardiovascular	Am J Physiol Regul Integr Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
		Why did TS exclude? E. Lee; I. Kolusarka; J. Kostens. 2022	2022	Effects of regular sauna bathing in conjunction with exercise on cardiovascular	Am J Physiol Regul Integr Physiol	Exclude	-	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes	Subjects were not healthy, they had at least one traditional cardiovascular disease (CVD) risk factor. Also, VO2max was not measured but estimated via extrapolation during a submaximal test.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	R. D. McIntyre; M. J. Zurawlew; 2022	2022	A comparison of medium-term heat acclimation by post-exercise hot water	Am J Physiol Regul Integr Physiol	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
		Why did ML exclude? R. D. McIntyre; M. J. Zurawlew; 2022	2022	A comparison of medium-term heat acclimation by post-exercise hot water	Am J Physiol Regul Integr Physiol	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	D. Sitkowski; T. Cison; Z. Szygul. 2022	2022	Hematological Adaptations to Post-Exercise Sauna Bathing with No Flow	Research quarterly for	Include	-	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
		Why did ML exclude? D. Sitkowski; T. Cison; Z. Szygul. 2022	2022	Hematological Adaptations to Post-Exercise Sauna Bathing with No Flow	Research quarterly for	Exclude	-	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	Post-exercise sauna not on consecutive days

Supplemental File 4d - Characteristics of excluded studies - Final agreed list of included studies.

Number included = 10

RoB2 Study ID	RoB2 Assessment ID	Author	Year	Title	Journal	Decision Include or exclude?	Reason(s) for inclusion/exclusion				Healthy male or female adults ≥18 years of age?	≥30-mins of at least moderate-intensity exercise in <25°C with post-exercise heat exposure for at least 2 consecutive days?	A control group completing the same daily exercise but without post-exercise heat exposure?	Outcomes measuring endurance exercise performance/capacity * or physiology**?
							Controlled trial design?	English language?	Peer-reviewed journal?	Full text available?				
A	1 - Running time to exhaustion	G. S. Scoon; W. G. Hopkins; S. M 2007		Effect of post-exercise sauna bathing on the endurance performance of	J Sci Med Sport	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B	2 - Cycling sprint & TT performance	J. Vaile; S. Halson; N. Gill; B. Dz 2008		Effect of hydrotherapy on recovery from fatigue	Int J Sports Med	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C	3 - Running 5 km TT performance	M. J. Zurawlew; N. P. Walsh; M. 2016		Post-exercise hot water immersion induces heat acclimation and improv	Scand J Med Sci Spor	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D	4 - Running 10 km TT performance	C. J. Stevens; M. L. R. Ross; A. J 2020		Postexercise Hot-Water Immersion Does Not Further Enhance Heat Adi	Int J Sports Physiol P	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
G	7 - Cycling TT performance	C. Lundby; I. S. Svendsen; T. Uri 2021		Training wearing thermal clothing and training in hot ambient condition	J Sci Med Sport	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
H	8 - Running time to exhaustion during VO2max test	I. Bartolomé; J. Siquier-Coll; M. 2021		3-Week passive acclimation to extreme environmental heat (100± 3 °C)	J Therm Biol	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J	10 - Running time to exhaustion during VO2max test	N. V. Kirby; S. J. E. Lucas; O. J. 2021		Intermittent post-exercise sauna bathing improves markers of exercise c	Eur J Appl Physiol	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
K	11 - Running time to exhaustion during VO2max test	N. V. Kirby; S. J. E. Lucas; T. G. 2021a		Sex differences in adaptation to intermittent post-exercise sauna bathing	Sports Med Open	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
L	12 - Running time to exhaustion	R. D. McIntyre; M. J. Zurawlew; 2021		A comparison of heat acclimation by post-exercise hot water immersion	J Sci Med Sport	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
M	13 - Running time to exhaustion	R. D. McIntyre; M. J. Zurawlew; 2022		A comparison of medium-term heat acclimation by post-exercise hot wa	Am J Physiol Regul H	Include	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*Performance/capacity = time trial, time to exhaustion, race performance, VO2max, economy/efficiency, or lactate threshold.  
 \*\*Physiology during exercise = RPE, heart rate, sweat rate, core temp, and thermal comfort during exercise.