



Supplementary file

Table S1. Prisma checklist.

Section/Topic	#	Checklist Item	Reported on Page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, an applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	4
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	4

Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	4
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	4
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	5
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, include measures of consistency (e.g., I^2) for each meta-analysis.	5
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicate which were pre-specified.	5
RESULTS			
Study selection	17	Give numbers of studies that were screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	6
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	6
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any	6

		outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study, (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	6
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	6
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if conducted (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	6
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, policy makers).	7–8–9
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias) and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	7–8–9
Conclusions	26	Provide a general interpretation of the results in the context of other evidence and implications for future research.	7–8–9
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); this is the role of funders for the systematic review.	10–11–12

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097. For more information, visit: www.prisma-statement.org (accessed on 8 April 2019).

Table S2. Detailed research methodology.

Concepts	Hypothermia	Heart Arrest	ECLS
Free words	Rewarming	Heart arrest	Extracorporeal*
	Hypothermi*	Cardiac arrest	ECMO
	Body temperature change	Cardiopulmonary Arrest	ECLS
		Asystole	cardiopulmonary bypass
		Cardiopulmonary resuscitation	
Emtree	'hypothermia'/exp	'heart arrest'/exp	'extracorporeal circulation'/exp
	'warming'/exp	'cardiopulmonary arrest'/exp	'extracorporeal oxygenation'/exp
MeSH	"Rewarming"[Mesh] OR "Hypothermia"[Mesh]	"Heart Arrest"[Mesh] OR Resuscitation" [Mesh]	"Extracorporeal Circulation" [Mesh]

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Equation:

("Rewarming"[Mesh] OR "Hypothermia"[Mesh] OR Rewarming[tiab] OR Hypothermi*[tiab] OR Body temperature change*[tiab]) AND ("Heart Arrest"[Mesh] OR "Cardiopulmonary Resuscitation"[Mesh] OR Heart arrest*[tiab] OR Cardiac arrest*[tiab] OR Cardiopulmonary Arrest*[tiab] OR Asystole*[tiab] OR Cardiopulmonary resuscitation*[tiab]) AND ("Extracorporeal Circulation"[Mesh] OR Extracorporeal*[tiab] OR ECMO[tiab] OR ECLS[tiab] OR cardiopulmonary bypass[tiab]).

Cochrane 30 September 2020

Equation:

((rewarming OR hypothermi* OR (body NEAR/3 temperature NEAR/3 change*):ab,ti,kw) AND (((heart OR cardiac OR cardiopulmonary) NEAR/3 (arrest* OR resuscitation)) OR asystole*):ab,ti,kw) AND ((extracorporeal* OR ECMO OR ECLS OR "cardiopulmonary bypass"):ab,ti,kw).

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Equation:

('hypothermia'/exp OR 'warming'/exp OR (rewarming OR hypothermi* OR (body NEAR/3 temperature NEAR/3 change*):ab,ti,kw) AND ('heart arrest'/exp OR (((heart OR cardiac OR cardiopulmonary) NEAR/3 (arrest* OR resuscitation)) OR asystole*):ab,ti,kw) AND ('extracorporeal circulation'/exp OR 'extracorporeal oxygenation'/exp OR (extracorporeal* OR ECMO OR ECLS OR "cardiopulmonary bypass"):ab,ti,kw) NOT ('animal'/exp NOT 'human'/exp).

Web of Science 30 September 2020

Equation:

TS = ((rewarming OR hypothermi* OR (body NEAR/3 temperature NEAR/3 change*)) AND (((heart OR cardiac OR cardiopulmonary) NEAR/3 (arrest* OR resuscitation)) OR asystole*) AND (extracorporeal* OR ECMO OR ECLS OR "cardiopulmonary bypass")).

Table S3. Source and characteristics of the 70 selected patients identified through the literature review (n = 64 references).

Source	First Author	Patients (70)
1	Gilbert M.	1
2	Coleman E.	1
3	Carlsen A. W.	1
4	Darocha T.	1
5	Meyer M.	1
6	Sansone F	2
7	Simek M.	1
8	Adhikari S. P.	1
9	Bolgiano E.	1
10	Boue Y.	1
11	Carlsen A. W.	2
12	Cohen D. J.	1
13	Deiml R.	1
14	Eckert I.	1
15	Eich C.	1
16	Elbers P. W.G.	1
17	Fister M.	1
18	Forti A.	1
19	Graeff I.	1
20	Holmström P.	1
21	Hungerer S.	1
22	Husby P.	1
23	Incagnoli P.	1
24	Lund F. K.	1
25	Maeder M. B.	1
26	Eckhard M.	1
27	Marquis C.	1
28	McCormack J.	1
29	Merz S.	1
30	Morley D.	1
31	Mulpur A. K.	1
32	Mutschlechnera H.	1
33	Niehaus M. T.	2
34	Oberhammer R.	1
35	Romlin B. S.	1
36	Rünitz K	1
37	Svendsen O. S.	1
38	Thalmann M.	1
39	Tirilomis A.	1
40	Waters D. J.	1
41	Wik L.	1
42	Dobson J.	1
43	Kakizaki R.	1
44	Mair P.	1
45	Mayor Pleines A.-F.	1
46	Mosesso V. N. Jr.	1

47	Norberg W. J.	1
48	Beaton C.	1
49	Kosinski S.	1
50	Riera J.	1
51	Boué Y.	2
52	Heller K.	1
53	Gretenkort P.	2
54	Köpcke V. J.	1
55	Umlauf V. N.	1
56	Bellanova G.	1
57	Nesemann M. E.	1
58	Shephard R. J.	1
59	Brat R.	1
60	Husby P.	1
61	Cooper S. S.	1
62	Antretter H.	1
63	Wickstrom P.	2
64	Cha S.	1

Complete list of the 64 references identified through the literature review.

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