

A. Quality Assessment of the Included Studies

[illegible]

Leng, 2018 [22]	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Yes
Olah, 2018 [23]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Yes
Watson, 2018 [24]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Unclear	Yes
Meizikri, 2019 [25]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	Unclear	Yes
Huang, 2020 [26]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Yes
Kim, 2020 [27]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Yes
Wu, 2021 [28]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Unclear	Yes
Geng, 2022 [29]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Unclear	Yes
Martyniuk, 2024 [30]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Unclear	Yes

Y = Yes, N = No, U = Unclear.

JBI critical appraisal checklist for systematic reviews and research syntheses: Q1 = Is the review question clearly and explicitly stated? Q2 = Were the inclusion criteria appropriate for the review question? Q3 = Was the search strategy appropriate? Q4 = Were the sources and resources used to search for studies adequate? Q5 = Were the criteria for appraising studies appropriate? Q6 = Was critical appraisal conducted by two or more reviewers independently? Q7 = Were there methods to minimize errors in data extraction? Q8 = Were the methods used to combine studies appropriate? Q9 = Was the likelihood of publication bias assessed? Q10 = Were recommendations for policy and/or practice supported by the reported data? Q11 = Were the specific directives for new research appropriate? <40%score = very low quality score; 40%-60% = low quality score; 60%-80% = moderate quality score; >80% = high quality score

1. Lewis, S.R., et al., *Hypothermia for traumatic brain injury*. Cochrane Database Syst Rev, 2017. **9**(9): p. Cd001048.
2. Chen, H., et al., *A meta-analysis of the effects of therapeutic hypothermia in adult patients with traumatic brain injury*. Crit Care, 2019. **23**(1): p. 396.
3. Crossley, S., et al., *A systematic review of therapeutic hypothermia for adult patients following traumatic brain injury*. Crit Care, 2014. **18**(2): p. R75.
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5. Fox, J.L., et al., *Prophylactic hypothermia for traumatic brain injury: a quantitative systematic review*. Cjem, 2010. **12**(4): p. 355-64.
6. Alderson, P., C. Gadkary, and D.F. Signorini, *Therapeutic hypothermia for head injury*. Cochrane Database Syst Rev, 2004(4): p. Cd001048.
7. Galvin, I.M., et al., *Cooling for cerebral protection during brain surgery*. Cochrane Database Syst Rev, 2015. **1**(1): p. Cd006638.
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11. McIntyre, L.A., et al., *Prolonged therapeutic hypothermia after traumatic brain injury in adults: a systematic review*. Jama, 2003. **289**(22): p. 2992-9.
12. Utsumi, S., et al., *Targeted Temperature Management in Pediatric Traumatic Brain Injury: A Systematic Review and Network Meta-Analysis*. World Neurosurg, 2023. **173**: p. 158-166.e2.
13. Sydenham, E., I. Roberts, and P. Alderson, *Hypothermia for traumatic head injury*. Cochrane Database Syst Rev, 2009(2): p. Cd001048.
14. Du, Q., et al., *Effect of Hypothermia Therapy on Children with Traumatic Brain Injury: A Meta-Analysis of Randomized Controlled Trials*. Brain Sci, 2022. **12**(8).
15. Peterson, K., S. Carson, and N. Carney, *Hypothermia treatment for traumatic brain injury: a systematic review and meta-analysis*. J Neurotrauma, 2008. **25**(1): p. 62-71.
16. Harris, B., et al., *Systematic review of head cooling in adults after traumatic brain injury and stroke*. Health Technol Assess, 2012. **16**(45): p. 1-175.
17. Ma, C., et al., *Is therapeutic hypothermia beneficial for pediatric patients with traumatic brain injury? A meta-analysis*. Childs Nerv Syst, 2013. **29**(6): p. 979-84.
18. Geurts, M., et al., *Therapeutic Hypothermia and the Risk of Infection: A Systematic Review and Meta-Analysis*. Critical Care Medicine, 2014. **42**(2): p. 231-242.
19. Zhang, B.F., et al., *Meta-analysis of the efficacy and safety of therapeutic hypothermia in children with acute traumatic brain injury*. World Neurosurg, 2015. **83**(4): p. 567-73.
20. Zhu, Y.F., et al., *Therapeutic hypothermia versus normothermia in adult patients with traumatic brain injury: a meta-analysis*. Springerplus, 2016. **5**.
21. Zang, Z.P., X.I. Xu, and S.M. Xu, *The efficacy of therapeutic hypothermia in adult patients with traumatic brain injury: a systematic review and meta-analysis*. International Journal of Clinical and Experimental Medicine, 2017. **10**(6): p. 8691-8699.
22. Leng, L., *Hypothermia Therapy after Traumatic Brain Injury: A Systematic Review and Meta-Analysis*. Turk Neurosurg, 2017.
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27. Kim, J.H., et al., *Therapeutic hypothermia in critically ill patients: a systematic review and meta-analysis of high quality randomized trials*. Critical Care ..., 2020.
28. Wu, X., et al., *The effectiveness of early prophylactic hypothermia in adult patients with traumatic brain injury: A systematic review and meta-analysis*. Australian critical care : official journal of the Confederation of Australian Critical Care Nurses, 2020.
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