



## What is the effectiveness of cold water immersion for recovery of athletes from contact team field sports? : A systematic review.

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<b>Relevant discipline</b>	Sports Coaches, Sports Trainers, Physiotherapists.
<b>Sources searched</b>	MEDLINE, PubMed, Scopus and SPORTDiscus databases and Google Scholar were searched 8 April 2021.
<b>Highest level of Evidence found</b>	Level III-1 – Pseudorandomised Controlled Trial
<b>Quality appraisal of the body of Evidence</b>	<b>Strength of Evidence:</b> 5 Pseudorandomised controlled trials (Level III-1) and 1 Cross-over randomised design (Level III-2) (NHMRC Guideline Assessment Register (GAR) consultant 2009).
	<b>Quality of Evidence:</b> Minimum of 9 out of 13 criteria met as per JBI Critical Appraisal Tool (Aromataris & Munn 2020, p. 127).
	<b>Statistical significance:</b> Studies did not disclose their level of chance or level of confidence.
	<b>Clinical significance:</b> The intervention is clinically relevant as it is economically viable and easy to integrate.
	<b>External validity/applicability:</b> Issues with applicability to females and those aged under 18 and over 40.
<b>Summary of Evidence findings</b>	CWI appears to: <ul style="list-style-type: none"> <li>• Moderate to large evidence of decreases in creatine kinase levels in the blood</li> <li>• Limited, moderate evidence of increases in power</li> <li>• Limited, large evidence of decreased perceived soreness</li> <li>• Conclusive evidence of decreased perceived fatigue</li> </ul>
<b>Conclusions</b>	CWI is recommended for male CTFS participants between the ages of 18-40 wanting to reduce perception of muscle soreness and fatigue and maximise turnaround times between training sessions/games.
<b>Implications for clinical practice</b>	We expect this will influence the management of recovery of male CTFS athletes aged 18-40 at all skill levels.

1. Barber, S., Pattison, J., Brown, F. & Hill, J. (2020). Efficacy of repeated cold water immersion on recovery after a simulated rugby union protocol, *Journal of Strength and Conditioning Research*, 34(12), 3523-3529.
2. Elias, G.P., Wyckelsma, V.L., Varley, M.C., McKenna, M.J. & Aughey, R.J. (2013). Effectiveness of water immersion on postmatch recovery in elite professional footballers, *International Journal of Sports Physiology & Performance*, 8(3), 243-253.
3. Higgins, T.R., Cameron, M.L. & Climstein, M. (2013). Acute response to hydrotherapy after a simulated game of rugby, *The Journal of Strength and Conditioning Research*, 27(10), 2851-2860.
4. Pointon, M. & Duffield, R. (2012). Cold water immersion recovery after simulated collision sport exercise, *Medicine & Science in Sports & Exercise*, 44(2), 206-216.
5. Takeda, M., Sato, T., Hasegawa, T., Shintaku, H., Kato, H., Yamaguchi, Y. & Radak, Z. (2014). The effects of cold water immersion after rugby training on muscle power and biochemical markers, *Journal of Sports Science and Medicine*, 13(3), 616-623.
6. Tavares, F., Beaven, M., Teles, J., Baker, D., Healey, P., Smith, T.B. & Driller, M. (2019). Effects of chronic cold-water immersion in elite rugby players, *International Journal of Sports Physiology & Performance*, 14(2), 156-162.

This evidence summary has been prepared by undergraduate students as part of the HLTH 3057 Advanced Evidence Based Practice course. Due to limitations of assignment requirements reviews are limited to a maximum of 8 evidence sources. Conclusions and implications for clinical practice reported are provisional based on the evidence identified in this review and should be contextualized to local practice, clinical expertise and patient values. For further information on the review process please contact [steve.milanese@unisa.edu.au](mailto:steve.milanese@unisa.edu.au)