

## The Beneficial Effects of Hydrotherapy for Recovery from Team Sport - A Meta-Analysis

**Authors :** Trevor R. Higgins

**Abstract :** To speed/enhance recovery from sport, cold water immersion (CWI) and contrast water therapy (CWT) have become common practice within the high-level team sport. Initially, research into CWI and CWT protocols and recovery was sparse; athletes relied solely upon an anecdotal support. However, an increase into recovery research has occurred. A number of reviews have subsequently been conducted to clarify scientific evidence. However, as the nature of physiological stress and training status of participants will impact on results, an opportunity existed to narrow the focus to a more exacting review evaluating hydrotherapy for recovery in a team sport. A Boolean logic [AND] keyword search of databases was conducted: SPORTDiscus; AMED; CINAHL; MEDLINE. Data was extracted and the standardized mean differences were calculated with 95% CI. The analysis of pooled data was conducted using a random-effect model, with Heterogeneity assessed using I<sup>2</sup>. 23 peer reviewed papers (n=606) met the criteria. Meta-analyses results indicated CWI was likely beneficial for recovery at 24h (Countermovement Jump (CMJ): p= 0.05, CI -0.004 to 0.578; All-out sprint: p=0.02, -0.056 to 0.801; DOMS: p=0.08, CI -0.092 to 1.936) and at 72h (accumulated sprinting: p=0.07, CI -0.062 to 1.209; DOMS: p=0.09, CI -0.121 to 1.555) following team sport. Whereas CWT was likely beneficial for recovery at 1h (CMJ: p= 0.07, CI -0.004 to 0.863) and at 48h (fatigue: p=0.04, CI 0.013 to 0.942) following team sport. Athlete's perceptions of muscle soreness and fatigue are enhanced with CWI and/or CWT, however even though CWI and CWT were beneficial in attenuating decrements in neuromuscular performance 24 hours following team sport, indications are those benefits were no longer Sydney evident 48 hours following team sport.

**Keywords :** cold water immersion, contrast water therapy, recovery, team sport

**Conference Title :** ICSES 2015 : International Conference on Sport and Exercise Science

**Conference Location :** Chicago, United States

**Conference Dates :** October 08-09, 2015