

Abstract

Title: Mood changes after cold water immersion in PE students

Aim: The aim of this bachelor thesis is to assess the impact of regular cold-water immersion on mood changes in students of the Faculty of Physical Education and Sport, Charles University.

Methods: The research involved male students of FTVS aged 20–26, divided into two groups – experimental (cold water immersion) and control (no immersion). The cold exposure intervention followed a pre-defined plan of thirty immersions. Over a ten-week period during winter, both groups regularly completed the standardized POMS questionnaire, which measures six mood dimensions: anger, fatigue, depression, confusion, tension, and vigor. The questionnaire was also administered once more six weeks after the intervention ended.

Results: Based on the average results from the POMS questionnaire (scale 0–4, where 0 = not at all, 4 = very much), the anger dimension in the cold-water group ranged from 1.1 (start), to 1.0 (end of intervention), and back to 1.1 (after 6 weeks), while in the control group it decreased from 1.4 to 0.9. Fatigue in the cold-water group dropped from 1.7 to 1.0 during the intervention and rose to 1.5 after six weeks; in the control group it decreased from 2.4 to 1.1. Depression remained between 0.6–0.5 in the cold-water group and between 0.7–0.6 in the control group. Confusion stayed stable in the cold-water group (0.7–0.8), while fluctuating in the control group (0.9–0.6–0.8). Tension slightly decreased in the cold-water group (0.8–0.6), while in the control group it remained around 0.5. Vigor slightly increased in the cold-water group (2.2–2.4), as well as in the control group (1.8–2.3).

Conclusion: The results suggest that the effect may be individual and context-dependent. Further research is recommended with a larger and more diverse sample, as well as more complex data collection methods that consider the multiple factors influencing mood changes.

Key words: cold water immersion, mood, mood changes, POMS, cold exposure, mental health, anger, fatigue, depression, confusion, tension, vigor