

# **Effectiveness of aquatic exercise and balneotherapy: a summary of systematic reviews based on randomized controlled trials of water immersion therapies.**

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**BACKGROUND:** The objective of this review was to summarize findings on aquatic exercise and balneotherapy and to assess the quality of systematic reviews based on randomized controlled trials. **METHODS:** Studies were eligible if they were systematic reviews based on randomized clinical trials (with or without a meta-analysis) that included at least 1 treatment group that received aquatic exercise or balneotherapy. We searched the following databases: Cochrane Database Systematic Review, MEDLINE, CINAHL, Web of Science, JDream II, and Ichushi-Web for articles published from the year 1990 to August 17, 2008. **RESULTS:** We found evidence that aquatic exercise had small but statistically significant effects on pain relief and related outcome measures of locomotor diseases (eg, arthritis, rheumatoid diseases, and low back pain). However, long-term effectiveness was unclear. Because evidence was lacking due to the poor methodological quality of balneotherapy studies, we were unable to make any conclusions on the effects of intervention. There were frequent flaws regarding the description of excluded RCTs and the assessment of publication bias in several trials. Two of the present authors independently assessed the quality of articles using the AMSTAR checklist. **CONCLUSIONS:** Aquatic exercise had a small but statistically significant short-term effect on locomotor diseases. However, the effectiveness of balneotherapy in curing disease or improving health remains unclear.