From waves to wellness: The effects of aquatic therapy on muscular and psychological health in patients with chronic low back pain

What did we want to know?

We wanted to understand whether *aquatic therapy* could improve back and glute muscle health, all while improving pain, disability and quality of life in people with chronic low back pain.

What is the problem?

Chronic low back pain is one of the main reasons people live with long-term disability, making it a serious public health concern. While exercise is often recommended, many people avoid it due to fear of pain or injury. Aquatic therapy provides a supportive environment for movement, but its role in improving muscle health is not well understood.

How did we study the problem?

We conducted a randomized controlled trial with 34 participants with chronic low back pain. They were randomly placed into either the aquatic therapy or standard care group. Both groups completed a 10-week program with two sessions per week, all supervised by athletic therapists. Magnetic resonance imaging (MRI) scans, muscle strength tests, and questionnaires were conducted before and after the program to examine changes in muscle health, pain, disability, quality of life, and mental health.

What did we find?

Aquatic therapy may help improve back muscle size at the upper lumbar levels and reduce fat within the glute muscles. Participants in both groups increased back and glute strength and reported feeling better overall, with less pain and improved quality of life.

How can this research be used?

These early findings suggest that aquatic therapy may be a safe and effective way to improve back and glute muscle health and reduce disability in those with chronic low back pain.

Cautions?

This was a pilot study with a small group, so findings should be confirmed with larger studies.

Reference: Rosenstein B, Montpetit C, Vaillancourt N, Dover G, Khalini-Mahani N, Weiss C, Papula LA, Melek A, Fortin M. Effect of aquatic exercise versus standard care on paraspinal and gluteal muscles morphology in individuals with chronic low back pain: a randomized controlled trial protocol. BMC Musculoskelet Disord. 2023;24(1):977. doi: 10.1186/s12891-023-07034-0.

Funding Sources:

Fonds de recherche Santé Québec

R. Howard Webster Foundation
Fondation R. Howard Webster

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