

# High Intensity Interval Training for Osteoarthritis with HydroWorx

## High-Intensity Interval Training on an Aquatic Treadmill in Adults With Osteoarthritis: Effect on Pain, Balance, Function and Mobility



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### Purpose:

The purpose of this study was to quantify the efficacy of a **6-week aquatic treadmill exercise program**, specifically for **individuals with osteoarthritis (OA)**, on measures of pain, balance, function and mobility.

### Methods:

**Eighteen participants (average age 65 years old) with knee osteoarthritis** completed a non-exercise control period for 4-weeks. This was followed by a 6-week exercise period. Outcome measures included visual analog scales for pain, balance, sit-to-stand test and a 10m walk test for mobility. The exercise protocol included **balance training and high-intensity interval training (HIIT) on an aquatic treadmill using water jets to destabilize while standing and achieve high rating of perceived exertion while walking.**

All aquatic exercise sessions were performed in a sports medicine clinic using an underwater treadmill (HydroWorx 2000 Series) with no shoes at a water depth equal to xiphoid process.

### Results:

In comparison with the pretests, participants **displayed reduced joint pain, improved balance, improved function and mobility after participating in the exercise protocol.** The same benefits were not observed after the non-exercise control period.

### Conclusion:

In conclusion, this study observed that patients with OA display **reduced joint pain and improved balance, function and mobility** after participating in a 6-week aquatic treadmill exercise program that incorporated a balance and HIIT training component.

**Adherence to the exercise was exceptional and no participants reported adverse effects, suggesting that** aquatic treadmill exercise that incorporates high-intensity intervals is well-tolerated by patients with OA and seems to be effective at managing symptoms of OA.



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