HydroWorx Increases Lean Mass Study

Lean Body Mass Increases following 12-Week Aerobic Training with Underwater but not Land Treadmill



Elizabeth S. Greene, Nicholas P. Greene, Aaron F. Carbuhn, John S. Green, FACSM, Stephen F. Crouse, FASCM

Texas A&M University

Purpose:

This study was conducted in order to compare the changes in body composition following twelve weeks of exercise training using either a land treadmill or an underwater treadmill.

Method:

Forty-seven overweight and obese men and women participated in this study. Subjects were randomly assigned to exercise three times a week on either a land treadmill or a HydroWorx underwater treadmill. Exercise intensities and durations were calculated such that subjects in both groups had the same caloric expenditure during each bout. Before and after the twelve week period, weight, percent body fat, fat mass, lean body mass and regional fat and lean mass were assessed.



Results:

There was no difference in oxygen uptake in either workout programs. Participants in both the underwater treadmill and land treadmill groups saw decreases in weight, percent body fat, and fat mass. Lean body mass increased in the underwater treadmill workouts, primarily in the legs while lean body mass did not increase in the land treadmill workouts.

Conclusion:

Aerobic exercise training on the underwater treadmill is able to elicit similar decreases in weight, percent body fat, and fat mass as the land treadmills. However, lean body mass increases with underwater treadmill training, with gains seen mainly in the legs.

