

Abstract

This study aimed to compare the effects of exercise program between training with Underwater Treadmill and Land-based Treadmill on the change of aerobic capacity, muscular endurance, and muscular power in healthy male college students. Thirty healthy male college students were selected by a purposive sampling, then divided into 2 group, each of fifteen student by sample random sampling using drawing lots one group be trained by Underwater with the other by the Land-based treadmill. Both groups were trained 3 days per week for 8 weeks. The aerobic capacity, muscular endurance, and muscular power were measured before training and after 4 week, and 8 week sessions of training.

Results: The results of this study showed that there were no statistically significant differences for the aerobic capacity, muscular endurance, and muscular power after 4 and 8 week sessions of training in the Underwater Treadmill Training group compared with the Land-based Treadmill Training group. However, there was improved of the aerobic capacity after 8 week in within both training group. The aerobic capacity before training, after 4 week, and 8 week sessions training in the Underwater Treadmill Training group were 43.14, 45.30, and 47.06 ml/kg/min, respectively (compared with the Land-based Treadmill Training group, the aerobic capacity before training, after 4 week, and 8 week sessions training were 54.73, 58.63, and 60.67 ml/kg/min, respectively). The muscular endurance before training, after 4 week, and 8 week sessions training in the Underwater Treadmill Training group were 24.67, 25.0, and 25.0 times, respectively (compared with the Land-based Treadmill Training group, the muscular endurance were 25.0, 25.0, and 25.0 times, respectively). The muscular power before training, after 4 week, and 8 week sessions training in the Underwater Treadmill Training group were 44.13, 45.07 and 45.73, respectively (compared with the Land-based Treadmill Training group, the muscular power were 52.47, 53.70 and 54.10, respectively).

Conclusion: The exercise program with Underwater Treadmill Training and Land-based treadmill will able to improve the aerobic capacity that important for exercise in healthy people and also the athletes.

Keywords: Underwater Treadmill Training, Land-based Treadmill Training, aerobic capacity, muscular endurance, muscular power