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11. Kinesiology

Southwestern Oklahoma State University

Comparing the Effects on Power During an Aquatic and Land Plyometric Intervention

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Abstract

Introduction. Plyometric training is a tool used to improve athletic performance for individuals who practice the skill in a fitness program, such as movements for vertical and horizontal jumping power, strength, agility, speed, and coordination. Purpose. The purpose of this research study is to compare the effects of aquatic and land plyometric training programs on power, body composition, and enjoyment. Methods. Participants will be recruited at Mercy Fitness Center-Edmond I-35 and at the University of Central Oklahoma. Requirements for the study are participants ages 18-40, free from lower body injuries for the past year, have no exercise limitations, and be performing resistance training at least twice a week for the past 12 months. Pre and post testing measurements will be taken for height, weight, age, vertical jump height, and body fat percentage. Participants will be randomly selected into either an aquatic or land training group, and then will train twice a week in the environment selected for eight weeks. Conclusions. The researcher found both sides to be effective methods of increasing athletic performance, but the findings were not consistent across the board. The length of participation, volume, impact forces, and muscle soreness were factors that affected the results. The researcher plans to focus on equal amounts of volume, participation length, and using both kinds of training styles to compare the effects and to find a better method of plyometric training.