

The Effects of Electrical Muscle Stimulation (EMS) towards Male Skeletal Muscle Mass

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Abstract : Electrical Muscle Stimulation (EMS) has been introduced to the world in the 19th and 20th centuries and has globally gained increasing attention on its usefulness. EMS is known as the application of electrical current transcutaneous to muscles through electrodes to induce involuntary contractions that can lead to the increment of muscle mass and strength. This study can be used as an alternative to help people especially those living a sedentary lifestyle to improve their muscle activity without having to go through a heavy workout session. Therefore, this study intended to investigate the effectiveness of EMS training in 5 weeks interventions towards male body composition. It was a quasi-experimental design, held at the Impulse Studio Bangsar, which examined the effects of EMS training towards skeletal muscle mass among the subjects. Fifteen subjects ($n = 15$) were selected to assist in this study. The demographic data showed that, the average age of the subjects was 43.07 years old ± 9.90 , height (173.4 cm ± 9.09) and weight was (85.79 kg ± 18.07). Results showed that there was a significant difference on the skeletal muscle mass ($p = 0.01 < 0.05$), upper body ($p = 0.01 < 0.05$) and lower body ($p = 0.00 < 0.05$). Therefore, the null hypothesis has been rejected in this study. As a conclusion, the application of EMS towards body composition can increase the muscle size and strength. This method has been proven to be able to improve athlete strength and thus, may be implemented in the sports science area of knowledge.

Keywords : body composition, EMS, skeletal muscle mass, strength

Conference Title : ICPESS 2015 : International Conference on Physical Education and Sport Science

Conference Location : Penang, Malaysia

Conference Dates : December 03-04, 2015