

Effects of Whole-Body EMS Exercise and Caloric Restriction on Cardiometabolic Risk Profile and Muscle Strength in Obese Women with the Metabolic Syndrome: A Pilot Study

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The purpose of this study was to look at the effect of whole-body electrical muscle stimulation on obese women with metabolic disease. It is well known that exercise and diet modifications can greatly assist in lowering risk of metabolic syndrome as well as lessening the severity of symptoms. Due to the efficacy of EMS workouts, this study explored whether or not WB-EMS could serve as the necessary exercise modality to implement in patients with the aforementioned conditions.

29 obese women between the ages of about 45 and 57 participated in this study. Half were assigned to the experimental group consisting of 12 weeks of EMS sessions, 2x per week, and the other half made up the control group, the point of which was to remain inactive. Both groups received nutritional counseling and were prescribed a 500 calorie/day deficit.

The results found were very much in favor of WB EMS as a mode of fitness for obese women with metabolic syndrome! While both groups saw a decrease in weight and total cholesterol, only the group who participated in WB-EMS twice a week saw a reduction in body fat. The WB-EMS group also saw increases in mass of all major muscle groups and an improved cardiometabolic risk. There were no negative effects of WB-EMS seen and the workouts were tolerated well. As a result of this study, whole-body electrical muscle stimulation has been deemed an appropriate and beneficial method to pair with diet modification to reduce metabolic risk in obese women.