

Efficacy of Whole-Body Electromyostimulation (WB-EMS) on Body Composition and Muscle Strength in Non-athletic Adults. A Systematic Review and Meta-Analysis.

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This analysis reviewed various studies that have looked at the effects of WB-EMS on body composition and strength of non-athletic individuals. Training frequency ranged from one session to five sessions per week, and studies lasted anywhere from 6 weeks to 12 months.

Over 16 studies, there were 897 participants between the ages of 23 to 77 who fell under one or more of the following categories – obese, physically untrained, osteopenic, sarcopenic, bariatric surgery candidates or patients, sedentary, back pain +. Parameters measured included muscle mass, total body fat mass, maximum leg extension and trunk extension strength. The studies found that EMS had significant effects on muscle mass and maximum leg and trunk strength. While it was discovered that body fat was also positively effected, results were not as significant – this is likely due to the fact that not all studies included frequent workouts over a substantial period of time; those protocols that included higher training volume likely saw greater increases in muscle mass which in turn resulted in greater body fat loss).

In conclusion, this meta-analysis determined that WB-EMS produces favorable effects on body composition and can be a safe and effective fitness modality for non-athletic individuals.