

The Effects of L-Carnitine Supplementation and Resistance Training on Body Composition, Strength and Hypertrophy in Overweight Men

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Background: The purpose of this study was to evaluate the Effects of L-Carnitine supplementation and resistance training on body composition, strength and hypertrophy in overweight men. **Materials and methods:** In this semi-experimental study 40 overweight men aged 25-35 years randomly divided into four groups including (Exercise with supplementation, exercise alone, placebo and control group). Exercise group and exercise- supplementation group followed the Resistance training for 8 weeks under the supervision of skillful trainers. Supplementation group were asked to take 2-gram L-Carnitine capsules per day for 8 weeks. Anthropometric indicators and body composition, strength and hypertrophy were obtained in the morning after an 8-12 hr fast prior to the start of the study and again 8weeks after at the end of the study under the same conditions. Data analysis using tests of Kolmogorov-Smirnov t-test, one-way analysis of variance (ANOVA) conducted through SPSS-20 software. **Results:** The results of ANOVA test showed that after 8 weeks of study strength, hypertrophy and BF% in exercise-supplement group, ($P=0.000$) placebo($P=0.000$), and exercise group ($P=0.000$), significantly increase and decrease respectively. But no significant changes were observed in control group. **Conclusion:** Based on the results of this study, L-Carnitine supplementation can't create significant changes on the levels of body composition, strength and hypertrophy in overweight men.

Keywords : L-Carnitine supplementation, body composition, strength and hypertrophy. **Key words:**

