

The Effect of Herbal Diet on Skeletal Muscle Mass After Resistance Training in Rats

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ABSTRACT

Resistance training has been well established as an effective strategy for muscle hypertrophy, increase in skeletal muscle mass and strength. Herbal diet has been introduced as an alternative treatment to alleviate muscle atrophy and therapeutic intervention. However, there is little evidence on the effect of herbal diet on skeletal muscle mass. To investigate whether herbal diet affects skeletal muscle mass after resistance training in rats. Twenty-four rats were randomly divided into 3 groups: 1) Control (CON, N=8), 2) Resistance training (RT, N=8), 3) RT+Herb (RTH, N=8). Resistance training was performed every other day for 8 weeks using ladder climbing. The ladder climbing exercise consisted of 3 sets of 5 repetitions with a 1 min rest interval between the repetitions and a 2 min rest between the sets. Huang Qi (Radix Astragali Membraneus) was given via oral gavage once a day for 8 weeks (1 ml mixed with water based on concentration of 368 mg/kg). All rats received sham treatment, same as treatment groups. All data were analyzed using One-way ANOVA. After 8 weeks of interventions, muscle mass of Gastrocnemius, Plantaris, and Flexor hallucis longus showed significant increases in RT and RTH groups compared to CON ($P < .05$). However, there was no significant difference between RT and RTH groups. Resistance training was considered as effective treatment for augmentation of muscle mass. However, combination of RT with herbal diet did not induce an additive effect on skeletal muscle hypertrophy.