

Acute and Chronic Resistive Exercise Increase Urinary Chromium Excretion in Men as Measured with an Enriched Chromium Stable Isotope

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OBJECTIVES:

The researchers measured the effects of short term (acute) and long term (chronic) strength training on the amount of chromium that is excreted in the urine. 10 men aged 53-63 years, consumed diets in compliance with the American Heart Association Phase 1 diet with a set amount of Chromium content, and participated in 16 weeks of strength training. Chromium excretion was measured after single bouts (acute) of strength training and after completion of the 16 weeks (chronic).

RESULTS:

Strength training led to an $\approx 41\%$ increase in total body strength, increases in fat-free mass and decreases in the percentage of body fat. Both short term and long term strength training increased Chromium excretion.

SUMMARY:

This study demonstrates that there may be an increase in Chromium absorption in response to strength training as determined by the increased excretion of the Chromium isotope. It also suggests that some of the improvements in glucose and insulin metabolism due to exercise could be related to increased Chromium absorption.

KEISER PIECES USED:

Leg press, leg extension, chest press, lat pull down, shoulder press, upper back.

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Abstract #20 under the Diabetes abstracts also refers to Chromium.