

Increased Energy Requirements And Changes in Body Composition With Resistance Training In Older Adults

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OBJECTIVES:

Body composition and the way energy is used by the body were examined in 12 men and women, aged 56-80 years, before and after 12 weeks of strength training. Subjects were randomly assigned to groups that followed diets providing either low or high levels of protein, and adequate total energy to maintain their pre-training body weight.

RESULTS:

Fat mass decreased and fat-free mass increased, while body weight remained the same. The level of protein intake (low or high) did not influence these results. The average number of calories required to maintain body weight in the subjects (resting metabolic rate) increased by $\approx 15\%$. This increase was partially due to the calories used during strength training, but was also associated with the increased resting metabolic rate observed in these subjects.

SUMMARY:

Strength training is an effective way to increase energy requirement, decrease fat mass, and maintain lean body mass in healthy older people. It can be very useful in weight control programs for older adults. The demonstrated increase in resting metabolic rate is an important aspect of this research. Many seniors are bewildered by the fact that they are eating less and still gaining weight. This is generally due to decreased physical activity but also speaks to the resultant decline of lean body mass. It requires very little energy to maintain body fat, which is inactive tissue. However, since lean body mass is active tissue it requires significantly higher energy expenditure (calories) to maintain, even at complete rest. When an individual is trying to lose weight increased energy expenditure is critical to success.

KEISER PIECES USED:

Chest press, lat pull down, leg extension.