

# Strength Training In The Elderly: Effects On Risk Factors For Age-Related Diseases

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Hurley BF, Roth SM. Department of Kinesiology, College of Health & Human Performance, University of Maryland, College Park 20742, USA.

## **BACKGROUND:**

Strength training is considered a promising intervention for reversing the loss of muscle function and the deterioration of muscle structure that is associated with advanced age. This reversal is thought to result in improvements in functional abilities and health status in the elderly by increasing muscle mass, strength and power and by increasing bone mineral density.

## **OBJECTIVES:**

In the past couple of decades, many studies have examined the effects of these strength training induced changes on risk factors for age-related diseases or disabilities. This review article outlines the research and draws conclusions about the effects of strength training on risk factors for age related diseases and disabilities.

## **CONCLUSIONS:**

Collectively, these studies indicate that strength training in the elderly:

(i) is an effective intervention against sarcopenia because it produces substantial increases in the strength, mass, power and quality of skeletal muscle; (ii) can increase endurance performance; (iii) normalizes blood pressure in those with high normal values; (iv) reduces insulin resistance; (v) decreases both total and intra-abdominal fat; (vi) increases resting metabolic rate in older men; (vii) prevents the loss of bone mineral density with age; (viii) reduces risk factors for falls; and (ix) may reduce pain and improve function in those with osteoarthritis in the knee region. However, contrary to popular belief, strength training does not increase maximal oxygen uptake beyond normal variations, improve lipoprotein or lipid profiles, or improve flexibility in the elderly.

## **SUMMARY:**

This is an excellent resource for anyone trying to outline a rationale for including progressive resistance strength training in programs for older adults. It forges the link between the effects of strength training (increased muscle mass/function and bone density) and the changes in risk factors for disease and disability.

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