

# Effects of High-Intensity Strength Training On Multiple Risk Factors for Osteoporotic Fractures: A Randomized Controlled Trial

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## **OBJECTIVES:**

Thirty-nine sedentary, post menopausal women, aged 50-70, who were not undergoing estrogen replacement therapy, were studied for 1 year to determine how the risk factors for osteoporotic fractures could be modified by high intensity strength training.

## **RESULTS:**

Femoral neck and lumbar spine bone mineral density increased in the 20 strength training women and decreased in the 19 sedentary controls. Total body bone mineral content was preserved in the strength trained women and decreased in the controls. Muscle mass, muscle strength, and dynamic balance increased in the strength trained women and decreased in the controls.

## **SUMMARY:**

High intensity strength training exercises are an effective way to preserve bone density and improve muscle mass, strength and balance in post menopausal women. Increases in bone mineral content, muscle mass, strength and balance with strength training are even more significant when contrasted with the loss in all of these areas experienced by the sedentary controls. Maintaining bone density and preventing falls through improved strength and balance can significantly reduce the risk for osteoporotic fractures.

## **KEISER PIECES USED:**

Standing hip, leg extension, lat. pull down, lower back, abdominal.

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