

# Gains in Muscular Strength Are Maintained Eight Weeks After Strength Training Ends in Elderly

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## **OBJECTIVES:**

To determine whether strength gains achieved from strength training are maintained 8 weeks after the completion of training, 11 women and 11 men ranging in age from 65-74 were studied before and after a 9 week heavy strength training program. 1 repetition maximum tests and peak torque of the knee extensors were measured on each leg before training (1 leg was designated as the untrained control). These measures were also taken within 48 hours after the last training session and again 8 weeks later. The Keiser K-300 Leg Extension machine was used for the 1 repetition maximum tests and training.

## **RESULTS:**

A small increase was observed in the untrained leg due to what is called “cross-educational effects”. Significant increases were observed in the trained leg in both men and women. These gains were maintained 8 weeks after the end of the training program for both women and men. Similar findings from the peak torque test reinforced the findings for maintenance of strength gains.

## **SUMMARY:**

Short term heavy strength training can lead to significant strength gains that can last at least 8 weeks after the completion of training. This has implications for those who are involved in strength training on a sporadic basis. A substantial break in the training program does not result in a loss of the substantial strength gains.

## **KEISER PIECES USED:**

Leg extension machine.