Les Mills Lab: BODYPUMP and bone density study

Introduction

It has been predicted that by the year 2020, osteoporosis will afflict 14 million people in the over-50 population, with another 47 million likely to suffer from low bone mass.

Resistance training is prescribed to maintain and increase bone mass. Historically, the prescription has been to lift heavy loads for low repetitions and past research has provided no clear evidence as to whether a low-load, high-repetition program such as BODYPUMP™ would increase bone density.

Method

For this study 20 adults aged 28 to 63 years completed 27 weeks of LES MILLS™ classes. They were randomly divided into two groups: a strength training group participated in BODYPUMP and a core training group participated in BODYBALANCE™/BODYFLOW®. Both groups also participated in RPM™.

Results

The BODYPUMP group saw increases in bone mineral density in their arm by 4%, leg by 8%, pelvis by 7% and spine by 3%.

Particularly impressive was their gains in squat strength: 25.3% greater than that of the core strength group; increasing the squat weight was correlated with increases in bone mineral density.

Participants in the study who had osteopenia increased bone density at the hip and pelvis by 29% while post-menopausal women saw a 22% increase in the same region. Improving bone density in both the pelvis and legs is thought to help prevent potentially fatal fractures of the hip.

Conclusion

These results show that 27 weeks of BODYPUMP led to an increase in bone mineral density which is associated with the reduced risk of osteoporosis. BODYPUMP is a very accessible program for older and untrained adults; the low loads and self-selected weights mean it is easier to adhere to than trying to lift heavy loads in the weights room.

This program is therefore an ideal way to stay fit and strong and remain healthy as we age.

A link to the published abstract in the Medicine and Science in Sports and Exercise Journal is available here.

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