

THE EFFECT OF DIFFERENT EXERCISES ON OSTEOPOROTIC BONE



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Background

- Osteoporosis represents a major health problem worldwide with a rise in the number of osteoporotic fractures, especially vertebral.
- Physical activity has been proven to play a major role in the increasing of lumbar spine bone mineral density.

Material & Methods

- Mechanical load exercises produce mechanical bone stress and activation of osteoblasts. Not all exercise modalities are equally osteogenic.
- Evidence shows that weight-bearing and muscle-strengthening exercises can improve: agility, muscle strength, bone strength, posture and balance.

Results

- High-impact weight-bearing exercises (jogging, dancing, jumping), static weight-bearing exercises (single-leg standing) and high-impact non-weight-bearing exercises (progressive resistance exercise with free weights, medicine balls and elastic bands) showed improvement in muscle strength, balance and reduced fear of falling.
- Combination or single use of resistance training and weight-bearing exercises, prevents major bone loss after menopause.
- Brisk walking exercises in elderly women found improvements in postural stability.
- Yoga practice, if performed incorrectly, can increase the risk of vertebral fracture.



Conclusion

- At any stage of osteoporosis, exercise is equally important.
- Adding a weight vest improved balance more than walking without a vest.
- Patients who combined exercise with antiresorptive therapy or hormone replacement therapy, displayed significantly greater increases in the lumbar spine BMD.