



## Prevention

Exercise for Health  
Bones

### **Bone is living tissue that responds to exercise by becoming stronger.**

Just as a muscle gets stronger and bigger the more you use it, a bone becomes stronger and denser when you place demands on it.

If your bones are not called upon to work, such as during physical activity, they do not receive any messages that they need to be strong. Thus, a lack of exercise, particularly as you get older, may contribute to lower bone mass or density.

You cannot see your bones respond to exercise, but when you strike a tennis ball or land on your feet after jumping, chemical messengers tell your arm and leg bones to be ready to handle that weight and impact again. In fact, if you x-ray the arms of a tennis player, you would see that the bones in the playing arm are bigger and denser than the bones in the other arm.

Two types of exercises are important for building and maintaining bone mass and density: weight-bearing and resistance exercises. Weight-bearing exercises are those in which your bones and muscles work against gravity. This is any exercise in which your feet and legs are bearing your weight. Jogging, walking, stair climbing, dancing and soccer are examples of weight-bearing exercise with different degrees of impact. Swimming and bicycling are not weight-bearing.

The second type of exercises are resistance exercises or activities that use muscular strength to improve muscle mass and strengthen bone. These activities include weight lifting, such as using free weights and weight machines found at gyms and health clubs.

Most weight-bearing and resistance exercises place health demands on bone. Daily activities and most sports involve a combination of these two types of exercises. Thus, an active lifestyle filled with varied physical activities strengthens muscles and improves bone strength.

***CAUTION: If you are frail, have had a fracture, fall frequently or have osteoporosis you should take extra caution. Certain movements like twisting of the spine, high impact aerobics or bending from the waist can be harmful. NOF recommends that before starting any exercise program, you should consult with a knowledgeable physician about your fracture risk.***

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**Boning Up Handbook**



**NOF's Exercise Video**

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