



Weight-Bearing Exercises for Girls and Young Women

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If you want strong bones, you have to use them! Everyone needs lifelong weight-bearing exercise to build and maintain healthy bones. Girls and young women especially should concentrate on building strong bones now to cut their risk of osteoporosis later in life. A bone thinning disease that can lead to devastating fractures, osteoporosis, afflicts many women after menopause and some men in older age. Osteoporosis is responsible for almost all the hip fractures in older people. The disease is largely preventable if you get enough weight-bearing exercise when you're young, stay active and continue other healthy habits as you age.

Bone mass and young females

The maximum size and density of your bones (peak bone mass) is determined by genetics but you need weight-bearing exercise to reach top strength. The best time to build bone density is during the years of rapid growth.

- Weight-bearing exercise during the teen years is ideal.
- Bones continue to grow during the 20s and sometimes into the early 30s. (Bone loss normally begins in the mid-30s)

Osteoporosis prevention is a special concern for females for a number of reasons:

- Women generally reach peak bone mass at an earlier age than men.
- Peak bone mass tends to be lower in women than in men.
- Women undergo rapid bone loss after menopause when levels of the bone strengthening hormone estrogen drop dramatically.

Doing regular weight-bearing exercise for the rest of your life can help maintain your bone strength.

What is "weight-bearing"?

Weight-bearing describes any activity you do on your feet that works your bones and muscles against gravity. Bone is living tissue that constantly breaks down and reforms. When you do regular weight-bearing exercise, your bone adapts to the impact of weight and pull of muscle by building more cells and becoming stronger. Some activities recommended to build leg, hip and lower spine strength include:

- Brisk walking, jogging and hiking.
- Yard work such as pushing a lawnmower and heavy gardening.
- Team sports such as soccer, hockey, baseball and basketball.
- Dancing, step aerobics and stair climbing.
- Tennis and other racquet sports.
- Skiing, skating, karate and bowling.

Weight training with machines or free weights can also help build strong bones, especially in the upper body. (Swimming and bicycling are not weight-bearing activities.)

You should exercise for at least 30 minutes a day, four or more days a week.

Besides improving bone strength, regular exercise also increases muscle strength, improves coordination and balance and leads to better overall health. To sustain the bone strengthening benefit of weight-bearing activity, you must increase the intensity, duration and amount of stress applied to bone over time.

Additional information

In addition to doing weight-bearing exercise, to protect yourself from osteoporosis, you should also:

- Eat a diet rich in calcium and Vitamin D. This may include dairy products (i.e. milk, yogurt and cheese), vegetables (i.e. spinach and broccoli) and fish (i.e. sardines).
- Practice a healthy lifestyle with no smoking or excessive drinking.
- See your doctor for a bone density test and/or medications as necessary.

Premenopausal women who exercise too much or suffer from the eating disorder anorexia nervosa can also develop long term problems with weak bones if low body weight stops normal menstrual periods (amenorrhea). If this happens during rapid growth years, you could lose bone mass at a time when your body needs to be building it. See your doctor right away for diagnosis and treatment.

- Materials borrowed from the American Academy of Orthopaedic Surgeons – www.aaos.org