

FITNESS HEALTH

by **Bill Boland**

OSTEOPOROSIS



What is Osteoporosis?

My mother and my aunt both had osteoporosis but just what is it? Is it a disease? Is there a vaccination? How can I avoid getting it?

Thirty years ago, osteoporosis was considered an unavoidable consequence of aging. Today, we have effective treatments; we know how to prevent it.

Osteoporosis is a disease; more than 25 million American women suffer from its effects. It compromises bone strength, predisposing the bones to an increased risk of fracture. Over 1 million fractures each year occur from osteoporosis in the U.S. There's no vaccine for it, but you can take steps to avoid getting it.

The risk of osteoporosis increases with age. Bones normally become thinner as a person ages. Osteoporosis usually develops in men after the age of 65. Women develop osteoporosis almost 4 times more often than men.

Risk factors include:

- ✓ Family history.
- ✓ Lifestyle/environmental factors, including:
 - Smoking.
 - Alcohol use.
 - Getting little or no weight-bearing exercise.
 - Thin body builds.
 - A diet low in foods containing calcium, phosphorous, and Vitamin D.
 - Caffeine in coffee and sodas, which increase calcium loss in your body.

- ✓ Having certain medical conditions or taking certain medications. Some medical conditions, such as hyperthyroidism or rheumatoid arthritis, or certain medications, such as corticosteroids, can increase the risk of osteoporosis.
- ✓ Low levels of testosterone in men, as well as in women.

Other risk factors for osteoporosis may include:

- ✓ Race. People of European and Asian ancestry are more likely to have osteoporosis than people from other backgrounds.
- ✓ Overusing antacids that contain aluminum. Antacids that contain aluminum remove phosphorous and calcium from the body, causing faster-than-normal bone thinning.
- ✓ Excessive dieting or eating disorders. Women with eating disorders usually have low body fat and therefore low levels of estrogen. In the case of men, it may be a combination of low levels of testosterone and estrogen.

(Source: Heathwise, Incorporated 2002)

Risk factors you **can** control:

- ❖ **Stress.** Try yoga, meditation or therapy. Exercise is good, too.
- ❖ **Cigarettes and alcohol.** Quit one ASAP and reduce the other. Period.
- ❖ **Diet.** Increase milk, yogurt, and other dairy products in your diet. Reduce high protein and salty, processed foods.
- ❖ **Exercise.** Get more. See below.

Exercise & Osteoporosis

Exercise modifies bone metabolism at the point of stress. Look at the bone thickness of a pitcher's throwing arm versus his non-throwing arm. You'll see a big difference in bone mass. Exercise programming should be designed to load those specific bones that need to be strengthened. Sound right? Good.

Let's approach an at-home workout with a Dynaband or Theraband that way. If you have time and access to a gym, you can modify these to work with cables or free weights. With rare exception, most stationary machines won't work.

(Dynabands and Therabands come in 3 strengths: Red or Pink = Least resistance; Blue or Green = Medium resistance, and Yellow or Purple = Greatest resistance.)

General recommendations:

- ◆ Wear comfortable clothes, stand with your feet parallel and a hip-width apart, chest up and chin parallel to the floor; keep all motions within the right angles of the joints. Contract your abs with each exertion.
- ◆ Perform all movements slowly and within the fullest range of motion.
- ◆ Don't hold your breath; exhale on every exertion.
- ◆ Perform resistive exercises with 4-12 repetitions and work up to 1-3 sets of 8-12 reps per exercise.
- ◆ When you can handle these exercises, progress to holding the movement for a 2 second up and a 4 second down ratio. Slow is good.
- ◆ Perform the exercises 2-3 times per week. Allow 24-48 hours between workouts.
- ◆ Stretch each worked muscle group lightly after each exercise. If you have been reading this magazine regularly, check the *Exercise as a Treatment for Arthritis* article in the May/June '05 issue for suggestions.
- ◆ Once you are comfortable with the exercises here, you can progress to a Swiss ball or exercise ball, which will add flexibility and balance to your workouts and movements.

Let's start with strengthening exercises for the upper, mid and lower spine.



1. One (or Two) Leg Extension Row

Sit in a chair or on the floor, extend one leg, and place the band around the bottom of the foot. Pull back slowly with both arms, elbows leading, as if you were rowing a boat. Release to the starting position. Keep your back tall and don't lean back as you row.



2. Back Raise

Hold the band in both hands, shoulder width apart, behind the back with an overhand grip. Keep elbows straight, not locked, band taut. Slowly raise and push the arms away from the body, lifting the band behind the back. Don't lean forward. Lower the band and repeat.

3. Shoulder Blade Squeeze



Hold the band at chest level with palms facing down, hands back about shoulder width apart. Pull your elbows to your back, squeezing the shoulder blades together and release.

4. Horizontal Arm Pull



Grip the band in front of the body; arms should be shoulder width apart with palms up. Pull arms to the side, keeping elbows slightly flexed and with your spine in a neutral position. Squeeze the shoulder blades together. Slowly return the arms to the starting position.

5. Low Horizontal Arm Pull



Repeat #4 beginning with arms lower, across the chest, to work the mid and low trapezius and rhomboids.



6. One Arm Overhead Pull Down

Extend the arms overhead, shoulder width apart, with the band held in an overhand grip. Pull one arm out to the side with the hand at about shoulder level. Slowly raise the extended arm.



7. Standing Upright Row

Take a split stance with the right foot in front of the left. Stand on one end of the band, securing it well, with the right foot, and grip the other end of the band with the right hand. Hold the right arm next to the side with the palm facing back. Raise the elbow no higher than the shoulder, keeping the upper arm parallel to the floor. These are hard but very beneficial.



8. Seated Row

Sit on the floor with your legs extended and parallel in front of the body. Place the band around the ball of both feet and grip each end of the band with both hands. Pull both ends of the band to the torso, leading with the elbows and keeping the elbows close to the torso as they pull back. If your hamstrings are too tight to allow you to put your legs straight out in front of you, then bend your knees a bit and follow the same procedures.



9. External Rotation of the Shoulder(s)

Grip the band palms up and hold it in front of your body with the elbows pressed to the waist and bent at 90 degrees. Keep the elbows pressed against the waist and slowly open the forearms outward, rotating the shoulders externally. Do this with one arm or two, depending on your strength.

- ◆ **Make sure you stretch the muscles you worked.** Let me know if you need a series of stretches to go along with these. If you feel comfortable working with your own experience, great, just stretch after each series of exercises. Also, check the *Exercise as a Treatment for Arthritis* article in the May/June '05 issue for suggestions.

There's only so much space in the magazine for an article like this, so next month, I'll provide a series of exercises for the back, neck, forearms and thighs as well as wrists and arms. Stay tuned. If you need that series more quickly, email me at bill@bodyfixmethod.com and I'll send a set to you.

This series will begin to arrest the bone thinning which is osteoporosis. You can add to this, obviously, make it more difficult with free weight and cables but this is meant only as a start.

Let me know how the exercises feel to you, how they work and how you feel, physically and emotionally, after 45 days of doing this routine.

Please feel free to mail your thoughts or questions to me in care of the magazine or email me directly at bill@bodyfixmethod.com.