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### **Sue Ann Says: To Help Prevent Osteoporosis, Do These Three Things**

Our foundation really enjoys educating women about osteoporosis by conducting Achilles tests at health events around the state. The test involves placing a bare foot in a small machine that safely passes ultrasound through the heel; the bone there is similar to spine and hip bones where osteoporotic fractures occur most. The end-result is a “relative fracture risk” number that will help your doctor determine if further testing is needed for diagnosis of osteoporosis.

The test takes only a few moments, and while individuals are waiting for their results, we talk about the disease and how to prevent it.

One woman, Helen, was just plain frustrated with all of the information out there about osteoporosis. In exasperation she blurted, “Just tell me the basics of what I need to know.” Well, Helen, I think you’ll be pleased with our summary.

### **The 3 Things You Need to Know about Preventing Osteoporosis**

1. Do weight bearing exercises.
2. Do resistance and strengthening exercises.
3. Eat for your bones.

Seems simple enough, doesn't it? Before I provide a little more explanation, I'd be remiss if I didn't mention the need to understand your own risk factors like genetics, age, whether you smoke or drink, and so on. But even if you fall into any of these risk factors, you still need to do these three things. Also, always talk with your health professional first before starting any exercise or diet program, including taking supplements.

#### **1. Weight bearing exercise**

I spoke with Jennifer Klestinski, MPT, OCS, WCS, CSCS, who specializes in treating women's health physical therapy conditions in Madison. She says, “Your body constantly builds up and breaks down bone tissue, a cycle designed to supply bones with strong, young cells. After you reach peak lifetime bone mass, around age 30, your body begins to break down bone cells faster than it can make new ones.” This process quickens in your 40s, when supplies of the bone-building hormone estrogen start to dwindle, and after menopause.

Weight-bearing exercise, both high impact and low impact, means that muscles and bones work against gravity making them stronger and denser. “The key is to make weight bearing exercise a part of your daily life...for the rest of your life,” says Jennifer.

**Jennifer suggests that women perform weight bearing exercise for a minimum of 30 minutes per day most days of the week.**

High impact, weight bearing exercise includes:

- Dancing
- High impact aerobics
- Hiking
- Jogging or running
- Jumping rope
- Climbing stairs
- Tennis

Low impact, weight bearing exercise includes:

- Intense walking on a treadmill or outside (strolling does not improve bone mass)
- Low impact aerobics
- Elliptical machines

## **2. Resistance and strengthening exercise**

Resistance and strengthening exercises build power and prevent falls by working the core muscles, which help you maintain balance. Weight lifting with free weights or machines, push-ups or pull-ups, and resistance bands all work.

**Do resistance and strengthening exercises two or three days a week for at least 20 minutes.**

Jennifer also suggested these additional exercises:

### **Toe raises/heel raises**

Stand straight and hold onto the back of a chair, without bending at the waist or knees. Rise up on your toes and then back onto your heels. When you rise up onto your toes, imagine you are moving your head up to the ceiling. Repeat 10 times. Hold on to the chair as little as possible to challenge your balance.

### **Squats**

Sits-to-stands – Using a sturdy chair, repeatedly rise and lower yourself to the seat without using your hands and with control – no plopping. Aim to improve the number you can do in one minute. (I tried these and I'll have to admit...I plopped.)

Wall slides – Stand with your back, against a wall, with your feet pointed straight ahead, 18 inches away. Pressing through your heels, slowly lower yourself until you feel like you're sitting in a chair, and then press yourself back up using your heels. Keep your butt against the wall. Do as many as you can in one minute.

Advanced – Stand with feet hip width apart. Hold a weight in each hand, and using good posture, do 2-3 sets of 15 squats. When squatting, your knees should never go over the tips of your toes.

### **Push ups**

Wall – Stand 18 inches from a wall with hands at shoulder height, shoulders down and relaxed. Bend your elbows and slowly lower yourself to the wall, and then press back out. Do as many as you can in one minute.

Counter top – Use the same technique as with wall push-ups, but now you've increased the amount of body weight you're using.

Floor – Use the same technique as with wall push-ups, but start on your knees and progress to your toes.

### **Rowing**

Shoulder blade squeezes – While sitting or standing, squeeze your shoulder blades, hold for a moment, and release. Do two sets of ten daily.

Use a seated rowing machine at home or gym.

“A physical therapist, personal trainer, or other exercise specialist can teach you balance, posture and functional exercises, using the proper technique,” says Jennifer.

## **3. Eating for your bones**

Calcium is the mineral that makes bones strong. Women under age 50 need 1,000 milligrams of calcium a day (about three 8-ounce glasses of skim milk, one cup of calcium-fortified cereal, or three 8-ounce servings of low-fat yogurt). To absorb and use that calcium, you also need 400 to 800 international units of vitamin D2 or D3 (fortified milk, egg yolks, and saltwater fish are excellent sources). After age 50 or after menopause, whichever comes first, increase your intake to 1,200mg of calcium and 800 to 1,000 international units of vitamin D.

Try to get as much calcium as possible from food. Dairy products are the best source; broccoli, kale, tofu, and canned salmon with bones are also good sources, as are fortified foods. If you can't, take these supplements (but always check with your doctor first because they can interact with some medications):

**Calcium** – Calcium carbonate and calcium citrate; don't take it at the same time as iron supplements; it blocks the ability to absorb iron.

**Vitamin D** – Either D2 or D3; helps the body take in calcium and deposit it in your bones. It may also help muscles stay strong.

**Vitamins B6 and B12** – The ability to absorb these nutrients declines over time. From 50 on, make sure your multivitamin contains both of these B vitamins and ask your health professional if you need additional B6 and B12.

To Helen and all of you...it's never too late to start improving your bones. And if you have daughters, it's also important to get them involved in keeping their bones strong. The steps you take now can pay off for a lifetime.

Because it all begins with a healthy woman...

*Sue Ann Thompson is founder and president of the Wisconsin Women's Health Foundation (WWHF), a statewide non-profit organization whose mission is to help Wisconsin women and their families reach their healthiest potential. WWHF provides programs and conducts forums that focus on education, prevention, and early detection of diseases that affect women the most; connects individuals to health resources; produces and distributes the most up-to-date health education and resource materials; and, awards grants and scholarships to women health researchers and related community non-profits. To learn more, visit [wwhf.org](http://wwhf.org) or call 1-800-448-5148.*