

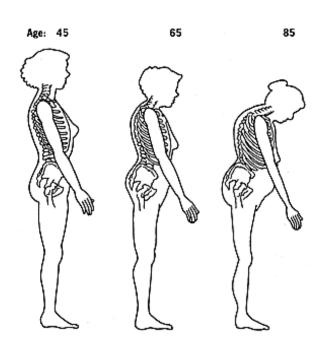


#### Introduction

As we age, it's normal to lose some bone mass. But losing an excessive amount of bone mass is not. When that happens, the culprit is osteoporosis, a disease that weakens the bones and makes them more susceptible to fractures and breaks.

Osteoporosis can be prevented and treated with a regimen of weightbearing exercises, such as yoga for osteoporosis, as well as good diet and lifestyle routines.

Osteoporosis is a "silent disease" that occurs with no warning or symptoms. Loren Fishman, MD and Ellen Saltonstall co-authors of *Yoga for Osteoporosis*, say osteoporosis is one of the most widespread chronic health problems found in Western societies. Osteoporosis affects 44 million Americans. That's more than half of everyone over the age of 50. It is 50 percent of all women of whatever age



and 25 percent of all men. It affects over 200 million people worldwide

Osteoporosis causes a million fractures each year, most of which are vertebral fractures and about 300,000 are hip fractures. Fully 25% of the people that have hip fractures die.

Another 25 percent enter a nursing home never to leave, so half of people who contract a hip fracture have a very significant life change.

"We worry so much about breast cancer in women, however, in actuality, the risk of a hip fracture is equal to the *combined risk of breast, uterine and ovarian cancer,*" says Dr. Loren Fishman, a Iyengar-trained yoga teacher and managing partner of Manhattan Physical Medicine and Rehabilitation. "And it's not just women who are at risk. For men over 50, even though we hear a lot about prostate cancer, men over 50 are actually more likely to have a hip fracture than prostate cancer."

# Can Yoga Help Prevent or Slow Osteoporosis?

Dr. Fishman is currently conducting a major study on the bone-building benefits of <u>yoga and osteoporosis</u>.



He says, "When bone cells get stimulated through being compressed or twisted or elongated, they produce more bone mass until that bone gets strong enough, to resist the pressure. In osteoporosis, the bones bend more, so pressure is more effective in stimulating the cells to make bone.

Yoga stimulates the bone with isometric

contraction at almost every conceivable angle for long periods of time."

Bones need both structure and density to remain strong. "Dense bone mass on its own doesn't necessarily provide protection against fractures; unless the bone fibers are laid down in a way to provide greater strength, the bone mass is not going to be very stable," says Saltonstall, a yoga therapist and senior certified Anusara yoga teacher. "It's like the difference between a pile of steel beams and the George Washington Bridge. A bridge has been planned by engineers, so the beams, when put together, create a well-organized, completely integrated structure, which can sustain huge amounts of weight—because of the strength created by the structural interconnections."

In short, density and structure both matter for bone health. But unfortunately, there are no convenient ways to measure the structure of bones as of yet. We do have straightforward ways to measure the density, but the functional limitations of just building bone mass without proper structure and strength are completely ignored.

"Because yoga poses pull and stretch the bones from every conceivable angle, yoga also may stimulate the formation of a *bone structure* that is able to resist greater amounts of pressure, as well as many different types of challenges," adds Dr. Fishman.

There are numerous other important ways in which yoga benefits people with osteoporosis, such as improving balance, muscular strength, range of motion and coordination, while lessening anxiety. These are other important benefits of yoga for people with osteoporosis because they each help reduce the risk of falling.

# Safely Practice Yoga for Osteoporosis: The 6 Do's

People with osteoporosis should take great precaution to protect the bones since even simple movements can risk fractures.

- **1. Do Check with Your Physician**. First, check with your physician to see if yoga practice is safe for your specific bone density and structure.
- 2. Work with a qualified instructor. If you get the goahead from your doctor, consider private instructions with a qualified yoga teacher to ensure your movements are correct rather then



independently modifying poses in a group yoga class. The key to getting the benefits of yoga is to ensure that the yoga postures are done with proper alignment.

- **3. Start Slowly.** Start slowly with simple yoga poses, and gradually build up length of practice and level of difficulty. Be careful to not push yourself beyond your limits.
- **4. Be Consistent.** To successfully build bone mass, consistently practice yoga and other exercise for a minimum of 30 minutes a day, five days a week.

- **5. Focus on Strengthening Yoga Poses**. Lunging poses such as Warrior I and II adds needed strength to thighbones and muscles. Poses such as the Dog, the Plank, the Crab and Balancing the Table strengthen the upper body.
- 6. Include Back Bends. Simple back bending poses like the Cobra, Sphinx and Bridge strengthen the spine and prevent what is commonly known as "dowagers hump," in the elderly. The Bridge pose and the Full and Half Shoulder Stand also stimulate the thyroid gland, which balances the endocrine system and encourages bone growth.

### The 6 Don'ts: Postures and Habits to Avoid

Follow these additional guidelines to keep your bones safe and to build bone density and strength.

## 1. Don't bend the spine

**forward.** Avoid flexing the spine forward to stretch the back, legs, or abdominal muscles. Several reclining poses can accomplish the



same goal. As many people don't know when they're bending the spine, for example in a forward bend, always work with a trained yoga teacher initially to learn how to keep the spine in proper alignment.

- **2. Use twisting poses with care.** Avoid twisting the spine in a way that uses gravity or leverage for rotation. Any type of rotation should be introduced slowly using simple movements without force.
- **3. Don't push or strain**. Approach backbends cautiously and gently, and avoid overarching the back. Gently supported backbends, as with a rolled towel, can help restore posture.
- **4. Don't put excessive weight on hands or wrists.** Avoid supporting your entire body weight with your hands to avoid wrist fractures, a common problem with osteoporosis. Other poses, such as Mudras, arm movements, or sustained arm positions, can build arm and wrist muscles and bones.
- **5. Don't do standing poses without proper support.** Standing poses and balances are excellent for increasing leg strength, but they should be done with the help of a teacher and the support of a wall or chair, as the risk of fracture is increased in these positions.
- **6. Don't practice challenging inversions.** Inversions are never recommended. Rather, try restorative poses such as the Legs-Up-the-Wall pose.

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