

## Osteoporosis

### How does healthy bone work?

**There are two things that it are important to know:** First, healthy bone contains cells called osteoblasts. They are in charge of making new bone material. These cells are important all through life because the body constantly removes old worn out bone or damaged bone and rebuilds with new material. Osteoblasts are stimulated to do their work by progesterone.

Second, healthy bone contains cells called osteoclasts. They are in charge of removing old and sick or damaged bone material. If estrogen levels are low, the osteoclasts increase their bone removal efforts.

As early as age 35 or so, many women begin to make less progesterone than is desirable. This means that the osteoblasts get less signals to make new bone material.

Then at menopause, the estrogen production decreases by 40% or so. This means that the osteoclasts get less signals to slow down. So now we have excess bone removal and not enough building of new bone.

The drug companies came up with a brilliant plan: Poison the osteoclasts with chemicals called bisphosphonates so that they cannot take away old bone. The result looks great on bone scans. Bone density appears to be increasing! There may even be a decrease in fractures during the first five years of bisphosphonate use. And this toxin that is worth a few cents a pound as a bathtub cleaner ingredient can now be sold for very high prices.

The problem is that the bones are now rapidly aging and cannot be repaired or replaced with new bone. This is similar to a disease called pycnodysostosis where bones are dense due to low osteoclast activity. In pycnodysostosis, the bone looks strong on bone scans but it is weak and brittle. Legs fracture with little or no provocation. This now appears to be happening to women who have taken bisphosphonates for several years.

Another problem is that many people have small infections in their jawbones. These are called cavitations. In healthy people, the body works on cleaning up these cavitations. Damaged bone is removed and new material is brought in. But with bisphosphonates we have stopped the removal of the damaged bone. The result in many women is that the entire jawbone dies. Bisphosphonates plus dental work also leads to this condition. Bone death is affecting thousands of women. It is not clear to me how this medically produced disaster can be repaired.

### How can we keep our bones healthy?

**Hormones:** Have your health care provider determine if you need to take natural, human-identical progesterone. That would help the osteoblasts in their work of making new healthy bone. And you can have your doctor determine if you need a natural human-

identical estrogen product. This would keep osteoclasts working at a normal rate. By the way, the doctor that told you to take "Boniva," "Fosamax," "Actonel" or other bisphosphonates drugs probably cannot help you with this!

**Vitamins:** Make sure that you are taking in adequate folic acid, B6, B12, C, D and K. All of these are associated with stronger bones. A multi such as the Bio Max Food Multi III or Oxgenic B is a good start. Extra K may be needed. If you are taking medications to thin you blood, ask your doctor before taking vitamin K.

**Minerals:** Make sure you are taking in adequate calcium, boron, chromium, copper, iodine, iron, magnesium, manganese and zinc. A good multi will provide these. Strontium and silicon (like in horsetail herb) may also be needed. Ask your nutritionally-literate health care provider if you need to take any of these as single minerals in addition to the multi.

**Amino acids:** If digestion is impaired (and it usually is), an essential amino acid formula is important for bone and spinal disc health.

**Aluminum:** This toxic metal is found in foil, cookware, pop cans, some table salt, some baking powder, antiperspirants, many antacids, vaccines and toothpaste. Aluminum damages bone and it does not help your brain either! Avoid it.

**Digestion:** As people age, they make less and less stomach acid. It has been estimated 40% of post-menopausal women make no measurable stomach acid at all. Many of the rest make too little. Without stomach acid, we are unable to effectively absorb calcium, some other minerals and other materials such as vitamin B12. Consider taking betaine hydrochloride (betaine HCl) to supplement stomach acid. Ask your doctor before trying this if you have stomach ulcers.

**Heartburn?** In spite of the many misleading ads you see on TV, it is rare that a person will make too much stomach acid. If your "doctor said 'Mylanta'", he or she is probably wrong. When stomach acid production slows down, our food does not digest properly. Instead, it decays and ferments. This produces gas and materials that are very irritating. We call this heartburn. The answer for many people is to take stomach acid in the form of betaine HCl. Ask you nutritionally literate doctor if you need this. And if you have acid reflux, find a doctor that knows how to correct a hiatal hernia. It takes about one minute to do this and the results are often amazing.

**Weight-bearing exercise:** Strength training may be even more important than supplements when it comes to bone density. Astronauts lose bone mass while in space. People who sit around too much lose bone mass. The densest bones are found in weight lifters. Strong muscles contribute to strong bones. My favorite kind of strength training is called "slow burn." See the book *The Slow Burn Fitness Revolution* by Frederick Hahn to learn how to have stronger muscles and bones with just one 30 minute workout per week.