

## **WOMEN AND THEIR BONES, THE DANGER OF OSTEOPOROSIS**

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The National Institutes of Health (NIH) state that Osteoporosis is a threat to the life and health of over 1 in 2 people aged 50 years or older, approximately 44 million Americans. There are over 10 million Americans estimated to have the disease Osteoporosis, 8 million of these are women and only 2 million are men. Because Osteoporosis is more common in women especially after menopause, one in two women over age 50 will sustain a fracture due to Osteoporosis in their lifetime. Remember that due to the increase in life expectancy, women are living longer and are spending almost one third of their entire life after menopause. Osteoporosis is not limited to Caucasian women, 1 in 5 of Asian women aged 50 and older will have it and 1 in 10 Hispanic women will have it too. Thin, Caucasian white women are at the highest risk. In the United States the cost of Osteoporosis is high, via fractures and debility caused by these, \$17 billion in 2001 or \$47 million per day. One in four persons who sustain a hip fracture due to Osteoporosis will die within a year of the fracture from complications such as blood clots or pneumonia due to inactivity from the fracture. These facts and figures are frightening but true.

Bone is a constantly changing dynamic structure with constant formation and resorption. The outer 'hard' part of the bone is called the compact bone and the inside part of the bone called the 'spongy' bone. Each bone in the body has both components in different amounts. For example the vertebrae, hip and wrists contain more spongy bone and therefore are affected by Osteoporosis first. When we are younger before age 30 for most people the 'bone balance' is 'positive' which means that more bone is being formed than is being resorbed. The peak bone mass for a particular individual is highest at around age 30. After this age, for most individuals the balance shifts such that the resorption becomes more than the formation. Thus, the total bone mass slowly begins to decline and bones become more fragile increasing the risk of a fracture. This process continues throughout the rest of the life. There are certain conditions or risk factors which cause the resorption process to be accelerated so fractures are more likely to occur. Most important of these are

- female gender
- menopause
- removal of ovaries before menopause
- smoking
- excessive alcohol use
- lack of physical exercise (sedentary lifestyle)
- lack of calcium and vitamin D
- low body weight
- being Caucasian or Asian
- certain medications especially steroids and anticonvulsants
- family history of osteoporosis

Osteoporosis is a silent disease. Prevention is the best to prevent disability from it. One can decrease chances of getting it by being physically active, maintaining ideal body weight, performing weight bearing exercise, avoiding alcohol and smoking, proper intake of Calcium and Vitamin D. If you have done all this when you are younger than 30 and continue throughout your life, you will decrease your chances of getting Osteoporosis. If you are on steroid medications for any reason then ask your doctor to perform a 'bone density' scan which will indicate whether you need medication to prevent or treat Osteoporosis.

If you are diagnosed with Osteoporosis, there are medications to improve the condition. These are Bisphosphonates (Fosamax and Actonel), Calcitonin, Hormone Replacement Therapy, Parathyroid Hormone, Selective Estrogen Receptor Modulators (SERMs) such as Raloxifene. Your physician would be able to decide which medication is the best for you.

Ask your physician for more information and if you have any questions about Osteoporosis.