



Invest in Your Bones Bone Basics Leaflet 1

Why is it so important to make a life-long investment in your bones?

Osteoporosis, a major health problem in America, affects over 10 million persons, with 34 million at a high risk of developing the disease (National Osteoporosis Foundation, 2008). Dubbed as the “silent thief,” osteoporosis is a debilitating disease that causes normal bones (see the above bone figure to the left) to become so fragile (see the above bone figure to the right) that they break.

Bone Basics

You may think of bone as hard and lifeless when, in fact, bone is complex, living tissue. Our bones provide structural support for muscles, protect vital organs, and store the calcium essential for bone density and strength. Keeping your bones healthy by preventing osteoporosis is particularly important as you age. Bones are changing constantly with fragments of old bone being removed and replaced by new bone. Think of bones the way you use your bank account. You make “deposits” and “withdrawals” of bone tissue. As children grow, more bone is produced than removed so that the skeleton grows both in size and density. By the mid-30s, the amount of tissue or bone mass in the skeleton reaches its maximum amount. Bone tissue in the skeleton typically begins to decline slowly, as withdrawals exceed deposits of new bone.

Women are at greater risk for developing osteoporosis, because they have a smaller, thinner skeleton. The ovaries’ production of estrogen diminishes during menopause. Since the female hormone estrogen is protective of bone, this decrease in estrogen production greatly accelerates the loss of bone in most women. That’s why estrogen becomes important. Without estrogen, your bones may become thin and weak. Menopause and the five- to ten-year period of rapid postmenopausal bone loss have been considered as the single most important cause of osteoporosis. It explains why the high proportion of women have osteoporosis. Ask your doctor if estrogen replacement at menopause may prevent bone loss and/or osteoporosis. Also find out if there is a need for a bone density test—the most practical way to accurately measure your current level of bone density. It predicts your risks of future bone breaks. Men also develop osteoporosis, but it’s generally later than women. By age 65 or 70, women and men lose bone mass at the same rate. Calcium absorption decreases for both sexes. Nearly half of all people over the age of 75 are affected by this disease.

For additional information about your investment in your bones and where to locate bone density testing in your area, call the [National Osteoporosis Foundation](http://www.nof.org/osteoporosis/diseasefacts.htm) at (800) 223-9994, or check their website: <http://www.nof.org/osteoporosis/diseasefacts.htm>.

For additional information, contact your local county AgriLife Extension agent – Family and Consumer Sciences. Resources: Mary Kinney Bielamowicz, Ph.D., R.D., L.D., Regents Fellow, Professor & Extension Nutrition Specialist; and Sharon Francey Robinson, Ph.D., R.D., Associate Professor & Extension Nutrition Specialist; Nutrition & Food Science Department, Texas AgriLife Extension Service, Texas A&M System, College Station, Texas.