

OSTEOPOROSIS

MY ACHY- BREAKY BONES



Normal, healthy bone is typically very strong when we are young. Bones break down and rebuild as we grow - a process called 'bone remodeling'. The peak age for healthy bone remodeling is around age 30. As we age, bones can become thinner and more brittle, and the remodeling process slows. The stronger and healthier your bones at an early age, the more solid bone mass you will have to work with as you age.

Osteopenia is a precursor of osteoporosis, and is one of the signs that the bones are becoming more porous (thinner). If untreated, *Osteopenia* can lead to *Osteoporosis*.

Osteoporosis occurs when the bones become thin and porous (low bone density), resulting in higher risk of fractures. Many people do not realize they have osteoporosis until they fracture a bone. In some cases, there is a family history of Osteoporosis, so it is important to know if there is a first-degree relative (parent/sister) who had osteoporosis. There are no specific symptoms of osteoporosis, except loss of height, stooped posture (kyphosis or "back hump"), feeling of weakness in the arms/legs, or pain (usually in an area where a bone may be broken). One of the consequences of osteoporosis is fractures- primarily of the spine (vertebrae), hip, wrist or leg bone (femur) from a fall- so talk to your primary care provider if you have fallen or feel pain in a specific area.

One of the dietary misconceptions is that if you do not consume dairy products, you will be calcium deficient and therefore at higher risk for osteoporosis. Recent research indicates that a diet high in grains and beans actually inhibits (prevents) the absorption of calcium. Studies show that a diet rich in fruits and vegetables reduces loss of calcium through the urine.

Plain x-rays of the bones are generally not sensitive enough to diagnose osteopenia or osteoporosis. However, if you have pain in a certain area, your health care provider will want x-rays to see if there is a broken bone.

The DEXA scan (Dual Energy X-ray Absorptiometry) is the most common test to diagnose osteoporosis. This is a test that is done in the nuclear medicine department, and measures how porous the bones are. Current guidelines suggest that any female over age 60, a female with early menopause (due to lowered estrogen levels), or male over age 70, combined with any one of the other risk factors should have a DEXA scan. Women who are pregnant should not have a DEXA scan.

The results of the DEXA scan are given in a “T-score”-

Normal - T score -1 or above :

osteopenia is between -1 and -2.5:

osteoporosis is below -2.5

Risk Factors for Osteoporosis

- More common in women than men
- Older age- generally women over 60 and men over 70 years old
- After menopause (or after hysterectomy) - especially if occurs at an early age. Women can lose bone mass up to 5% per year after menopause if left untreated
- Smoking- using tobacco products significantly increases the risk of osteoporosis
- Family history of osteoporosis- especially a first degree relative
- Low blood levels of calcium and vitamin D
- Caucasian or Asian descent
- Obesity – puts extra strain on the joints/ligaments and bones
- Eating disorders, such as bulimia or anorexia
- Persons who have a sedentary lifestyle (don't exercise regularly)
- Drinking large amounts of alcohol on a regular basis
- Drinking large amounts of carbonated (cola/soda) beverages daily
- Persons who are extremely thin or under-nourished
- Chronic medical conditions, such as Crohn's, thyroid, liver, rheumatoid, or digestive problems
- Persons taking certain medication, such as steroids, anticonvulsants and some pain medications

Ways to Prevent Osteoporosis

- Weight bearing exercise at least 20-30 minutes daily- walking, swimming, dancing, jogging
- Strength training with weights or bands at least 3-5 times per week
- QUIT SMOKING- Avoid all tobacco products
- If you are obese, start a serious weight loss program
- If you are too thin, talk with your primary care provider about proper nutrition
- Limit alcohol intake to 1 drink per day, or eliminate alcohol completely
- Avoid carbonated beverages, such as soda
- Take calcium and Vitamin D daily- talk to your primary care provider about the dose
- Get at least 10 minutes of sun exposure daily- helps to metabolize vitamin D
- Include Calcium and Vitamin D in your diet by eating green leafy vegetables, fruits, and dairy
- Eat fish high in Omega-3 fatty acid- such as salmon, mackerel and tuna at least 3 times/week
- Reduce the amount of grains and beans, and increase fruits and vegetables in your diet
- Talk to your health care provider if you fall, or feel pain in a specific area- especially the spine