



## OSTEOPOROSIS

### What is osteoporosis?

Loss of strength of bone is normal as people age; when bone loss becomes severe, it is called osteoporosis. When the bone loss is milder, it is called osteopenia. Osteoporosis gradually weakens bones so they become more fragile and more likely to break. ***This condition is silent.*** Most people do not realize they have osteoporosis until they have a fracture. ***It is not the same as osteoarthritis,*** which is the aging type of arthritis.

### What happens to your bones as you age?

Bone strength is highest in early adulthood and then gradually declines in both women and men. After menopause, however, bone loss is accelerated due to lack of estrogen; up to one-third of a woman's lifetime bone loss can occur during the first five years after menopause. After that, bone loss continues, but at a slower rate than that seen immediately after menopause. Men can develop osteoporosis, although less commonly.

### How does bone loss affect your physical appearance and your health?

Osteoporosis can lead to fractures of the spine (backbone), wrist, hips, and other bones. Fractures in the spine can occur without your knowing it. This can result in a loss of height, restricted movement, or the development of a humped back. One of the first signs of spinal fracture may be back pain. Broken bones can lead to chronic pain, decreased ability to function, and, in the case of hip fracture, even death from complications.

### Who is at risk for osteoporosis?

Being past menopause is a major risk factor for the development of osteoporosis. Other factors that increase your risk include:

- Family history of osteoporosis
- Caucasian or Asian descent
- Thin or small build
- A previously broken bone from a minor injury
- Not enough calcium in the diet, either now or in the past
- Use of certain medicines, like corticosteroids
- Smoking
- Too much alcohol
- Too little exercise

### How do we determine if bone loss has occurred?

A bone mineral density (BMD) test, usually the Dexascan, is the most accurate way to measure the density of your bones. BMD tests are simple, safe, and painless. Inexpensive screening bone density measurements of the finger, toe, or heel are available at health fairs, etc., but they may not be accurate as the more complete BMD evaluation of the hip, spine, and wrist. We offer free heel screening at Heritage Diagnostic Center for those who meet certain criteria.

### What does the T-score mean?

BMD test results are reported in terms of T-scores. These are comparisons of your bone density to the bone density of young healthy people. This is how we interpret these scores:

T-score of more than -1: normal

T-score of -1 to -2.5: low bone mass (osteopenia)

T-score of less than -2.5: osteoporosis

### What can you do to improve bone health?

- Eat a balanced diet that includes enough calcium and vitamin D. Good sources include milk and other dairy products. See below.



- Exercise regularly. Weight-bearing and muscle strengthening exercises stimulate bone growth. Examples include brisk walking, running, tennis, low-impact aerobics, weight training and toning. Unfortunately, non-weight-bearing exercise such as swimming doesn't seem to help as much.
- Stop smoking.
- Reduce your use of alcohol if it is excessive.
- Medications for osteoporosis are also available.

**Calcium:**

Very few people get enough calcium in their diet. Calcium is important to keep bones strong and prevent osteoporosis (brittle bones that break easily). Parents should make sure that their children and teenagers get enough calcium because bone strength reaches its peak in adolescence and then can start to decrease. Good calcium intake is just as important for men and women to keep bones strong into older age.

The recommended daily amounts (RDA) of calcium are as follows:

Age 4-8	800 mg/daily
Age 9-18	1300 mg/daily
Adults 19-50	1000 mg/daily
Adults 51+	1200 mg/daily

Use the following chart to figure out how much calcium you usually eat each day. If the calcium you are getting each day is lower than the RDA listed above for your age group, we suggest that you eat more foods that have calcium. If you can't do that, we recommend that you take a daily supplement. Calcium is sold in many forms. It comes in pills of 400, 500, or 600 mg., chewable tablets, and also in a chewy candy form (Viactiv). Some antacid tablets (Tums, Rolaids) contain 200 to 300 mg of calcium. Calcium carbonate (Tums, Oscal, others) is absorbed best when taken with food. Calcium citrate (Citracal) is absorbed well regardless of meals. Citracal is also best for those on medicines that reduce stomach acid, and it causes less intestinal discomfort. It is safe for adults to get up to 2000 mg/daily of calcium. It's best to spread the calcium intake over the day, as we don't absorb more than about 500 mg. at one time. There are certain medicines that are not absorbed as well when taken with calcium—check with your provider or pharmacist.

<u>Food</u>	<u>Calcium (mg.)</u>	<u>Food</u>	<u>Calcium (mg.)</u>
Yogurt (8 oz.)	400	Mozzarella Cheese (1/2 c.)	150
Pudding (1/2 c.)	130	Collards, cooked, frozen ( 1/2 c.)	180
Milk, whole, low fat or skim (1 c.)	300	Ricotta Cheese (1/2 c.)	260
Frozen Yogurt (1/2 c.)	150	Sardine, in oil, drained, w/bones (2 oz)	220
American Processed Cheese (1 oz.)	160	Swiss cheese (1 oz.)	270
Orange juice fortified w/calcium (1 c.)	300	Tofu **, raw, firm (1/2 c.)	260
Cheddar Cheese (1 oz)	200	Ice Cream or Ice Milk (1/2 c.)	90
Salmon, pink, canned, w/bones (2 oz.)	120	Broccoli, boiled (1/2 c.)	90

\*\* Some tofu is prepared with magnesium salts, not calcium; check the label.

**Vitamin D:**

Vitamin D is needed for the body to absorb calcium and is just as important in osteoporosis as calcium. Recent studies show it may play a major role in a healthy immune system, and some scientists believe that deficiency is linked to many common diseases. Exposure of the skin to sunlight gives us the best levels of Vitamin D, but most of us still don't get enough. Sunscreens block this effect. Milk is fortified with 100 international units (IU) per 8 oz.; other dairy products are not fortified. Other foods with Vitamin D are fish (salmon, mackerel, tuna, and sardines). A daily amount of 800-1000 IU is recommended for everyone, including children, but up to 2000 IU is okay. Some calcium supplements also contain Vitamin D, as do most multivitamins (again, check the label). It is sold by itself in pill form.