

Getting Strong Bones: From Youth to Old Age



Women don't have to worry about frail bones until they get older, right?
WRONG!

Preventing bone disease should begin at birth and continue throughout your life. By being physically active, following a bone-healthy diet, and avoiding smoking, women can improve their bone health from youth to old age.

Women of Caucasian and Asian ancestry are at the highest risk for developing osteoporosis. African American and Hispanic women have a lower risk, but still a significant one. All women need to pay attention to getting, or keeping, healthy bones.

Women of all ages need to keep their bones strong. Unfortunately, millions of women already have osteoporosis [oss-tee-oh-puh-

ro-sis]. If they don't yet have the disease, then they may be at risk for it. Osteoporosis means that your bones get weak, and you're more likely to break a bone. Because it has no symptoms, you might not know your bones are getting weaker until you break a bone. The disease can just get worse until a bone breaks.

A broken bone can make your life much more difficult. It can cause disability, pain, or loss of independence. It can make it harder for you to do your daily activities without help, such as walking. It can make it hard to participate in social activities. It can also cause severe back pain and deformity.

You can develop osteoporosis in any of your bones. It is most common in the hip, wrist, and spine (also called vertebrae [ver-tuh-bray]). Vertebrae are important because these small bones support your body, so you can stand and sit upright. *See Signs of Osteoporosis in Your Spine on the opposite page.*

Building Strong Bones

Building strong bones during childhood and adolescence is the best defense against getting osteoporosis later. Building strong bones at a young age will help you when you start to lose bone around the age of 30.

But no matter how old you are, it is never too late to start! As you get older, your bones don't make new bone quickly enough to keep up with the bone loss. And after menopause, bone loss increases faster. Here are some steps you can take to stop your bones from becoming weak and brittle.

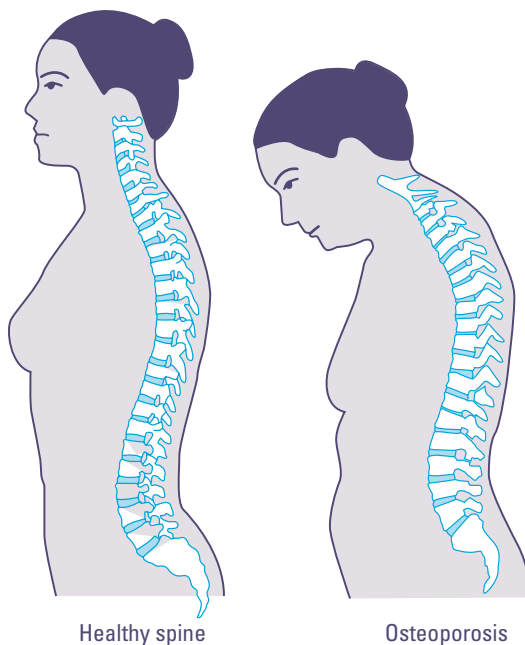
Get your bones tested

More than one kind of test is available. These tests find out the strength of your bones, or your bone density. Talk to your doctor or nurse to find out which type of test is best for you. One test is a dual-energy x-ray absorptiometry (DEXA). A DEXA takes special x-rays of your bones.

- ◆ If you are 65 years old or older, get a bone density test.
- ◆ If you are between 60 and 64 years old, weigh fewer than 154 pounds, and don't take estrogen, get a bone density test. Don't wait until you're 65. You have a higher chance for your bones to break.



Signs of Osteoporosis in Your Spine



Osteoporosis in the vertebrae can cause serious problems for women. A fracture in this area occurs from day-to-day activities like climbing stairs, lifting objects, or bending forward.

- Sloping shoulders
- Curve in the back
- Height loss
- Back pain
- Hunched posture
- Protruding abdomen



Get enough calcium each day

Bones are made of calcium. The best way to prevent osteoporosis is to get enough calcium in your diet. You need enough calcium each day for strong bones throughout life. You can get it through foods or calcium pills or both. You can get calcium pills at the drug store. Talk with your doctor or nurse before taking calcium pills to see which kind is best for you.

Amounts of Calcium You Need Each Day

Ages	Milligrams per day
9-18	1300
19-50	1000
51 and older	1200

Pregnant or nursing women need the same amount of calcium as other women of the same age.

Get enough vitamin D each day

It is also important to get enough vitamin D, which helps your body take in calcium. You can get vitamin D through sunlight and foods like milk. You need 10 to 15 minutes of sunlight to the hands, arms, and face, two to three times a week to get enough vitamin D. The amount of time depends on how sensitive your skin is to light, use of sunscreen, skin color, and pollution. You can also get vitamin D by eating foods rich in vitamin D or in your vitamin pills. It's measured in international units (IU).

Some Foods with Calcium

Food	Portion	Milligrams	% Daily Value*
Plain, nonfat (or low-fat) yogurt	1 cup	450	45
American cheese	2 ounces	348	35
Milk (fat-free or low-fat)	1 cup	300	30
Orange juice with added calcium	1 cup	300	30
Broccoli, cooked or fresh	1 cup	90	10

Note: Check the food labels for more information.

*The % daily value tells you how much of the recommended daily amount of that nutrient is in that portion of food. For example, eating 2 ounces of American cheese and 2 cups of milk would be 95% of your daily calcium needs.

Some Foods with Vitamin D

Food	Portion	IU	% Daily Value
Milk: fat-free, low-fat, reduced-fat, & whole, vitamin D-fortified	1 cup	98	25
Egg (vitamin D is in the yolk)	1 whole	25	6
Pudding (made from mix & vitamin D-fortified milk)	½ cup	50	13

Note: Check the food labels for more information.

Amounts of Vitamin D You Need Each Day

Ages	IU per day
19-50	200
51-70	400
71 and older	600

Get moving

Being active really helps your bones by

- ◆ slowing bone loss
- ◆ improving muscle strength
- ◆ helping your balance

Do weight-bearing physical activity. Any activity in which your body works against gravity is a weight-bearing activity. It means that your feet, legs, or arms are supporting or carrying your body’s weight. Jogging, walking, stair climbing, dancing, and playing soccer are examples of weight-bearing physical activities. Other weight-bearing activities are running, working in your garden, doing yoga or tai chi, hiking, playing tennis, or lifting weights.

Recommendations for physical activity

- ◆ Infants, toddlers, pre-schoolers, and older children need 60 minutes of physical activity each day. Thirty to sixty minutes of activity broken into 10 or 15 minutes throughout the day can improve their health. Because children spend most of their time in school, the type and amount of physical activity encouraged in schools is important.



- ◆ Teenagers need to exercise for about 60 minutes every day. You can mix up your activities. Participate in moderate activities like fast walking or riding a bike. Then switch to more intense or vigorous activities such as jogging or fast dancing. The exercise you get in gym class is probably not enough to meet the total amount of exercise you need each week. Make physical activity a regular part of your lifestyle.
- ◆ Adults 18 and older need 30 minutes of physical activity on five or more days a week to be healthy. You can improve your health by including a moderate amount of physical activity. Examples include 30 minutes of brisk walking or raking leaves, 15 minutes of running, or 45 minutes of playing volleyball. You get more health benefits if you do more physical activity.
- ◆ Older adults should also strive for 30 minutes of physical activity on five or more days a week. Physical activity is one of the most important steps older adults can take to improve their physical and mental health. Being active can also improve your quality of life because it can increase your strength, stamina, and flexibility. Exercise also helps older adults to maintain bone mass, improve balance, and increase endurance. Walking groups, senior swim clubs, and water aerobic classes are examples of good activities.

Eat a healthy diet

Other nutrients, like vitamin A, vitamin C, magnesium, and zinc, as well as protein,

help build strong bones too. Milk provides many of these nutrients. But you can also get these nutrients by eating a healthy diet, including foods that have these nutrients. Some examples are lean meats, fish, green leafy vegetables, and oranges.

Don't smoke

Smoking raises a woman's risk of getting osteoporosis. It damages your bones and lowers the amount of estrogen in your body. Estrogen is a hormone made by your body that can help slow bone loss.

Drink alcohol moderately

If you drink alcohol, limit it to no more than one drink per day. "One drink" is defined as one 12-ounce bottle of beer or wine cooler, one 5-ounce glass of wine, or 1.5 ounces of 80-proof distilled spirits. Alcohol can make it harder for your body to use the calcium you take in.

Make your home safe

Reduce your chances of falling by making your home safer. For example, use a rubber bathmat in the shower or tub. Keep a light on at night. Keep your floors free of clutter. Remove throw rugs that cause you to trip. Make sure you have grab bars in the bath or shower.

Think about taking medicines to prevent or treat bone loss

Talk with your doctor or nurse about the risks and benefits of medicines for bone loss.



Teach your daughter early

Making good choices for healthy bones should start in childhood and become habits that last. Help your daughter build healthy bones. *Powerful Bones. Powerful Girls.*[™] is a national education effort to help girls increase the calcium in their diets. The campaign has a user-friendly web site at www.cdc.gov/powerfulbones as well as a web site for parents at www.cdc.gov/powerfulbones/parents. This site provides parents with the information they need to help their daughters build strong bones during the critical window of bone growth—ages 9 to 12.

Get Sick from Dairy?

If you are lactose intolerant, it can be hard to get enough calcium. Lactose intolerance means the body is not able to easily digest foods that contain lactose, or the sugar that is found in dairy products like milk. Gas, bloating, stomach cramps, diarrhea, and nausea are symptoms you might have. It can start at any age but often begins as we grow older.

People who are lactose intolerant have different responses to the amounts and types of foods they can handle. For example, one person may have symptoms after drinking a small glass of milk. Another person may be able to drink an entire glass of milk but not two. Others may be able to eat ice cream and aged cheeses, such as cheddar and Swiss, but not other dairy products. People learn through trial and error about how much lactose they can handle. Soy-based or rice-based products can be alternative sources of calcium.

Lactose-reduced and lactose-free products are sold in food stores. They include milk, cheese, and ice cream. You also can take special pills or liquids before eating to help you digest dairy foods.

You can also eat foods that have calcium added (fortified), like some cereals and orange juice. Also think about taking calcium pills. Talk to your doctor or nurse first to see which one is best for you. Please note: If you have symptoms of lactose intolerance, talk to your doctor or nurse. These symptoms could also be signs of a different, or more serious, illness.

Then and Now

Before the 1990s, we used to think only women got osteoporosis. Now we know that men also have to worry about weak bones. In fact, one in four men older than age 50 will have a fracture caused by osteoporosis.