Bone Builders

Support Your Bones with Healthy Habits

Unearthed skeletons from ancient times testify to the durability of bone long after other bodily tissue turns to dust. Living bone in the body, however, can lose mineral and fracture easily if neglected—a disorder called osteoporosis, or porous bones.

One in two women and one in four men over the age of 50 suffer vertebral fractures. Osteoporosis is the primary cause of hip fractures, which can lead to permanent disability and sometimes death. Collapsing spinal vertebrae can produce stooped posture that makes your stomach stick out and/or a “dowager’s” hump on your back.

More than 85 percent of all girls and 63.7 percent of boys ages 12 to 19 in the United States do not get enough calcium. This places youth at serious risk for osteoporosis and other bone diseases. Because nearly 90 percent of adult bone mass is established by the end of this age range,

this is very serious. By eating calcium-rich foods and being physically active during your preteen and teenage years, you can reduce your risk of osteoporosis by making large calcium deposits into your bone bank account to store for later in life.
Bone Behavior

Your body’s 206 living bones continually undergo a buildup and breakdown process called remodeling.

The body starts to form most of its bone mass before puberty, the beginning of sexual development, building 75 to 85 percent of the skeleton during adolescence. Women reach their peak bone mass around age 25 to 30, while men build bone until about age 30 to 35.

The amount of peak bone mass you reach depends largely on your genes. Then, with age, breakdown gradually outpaces the buildup. In late middle age, bone density lessens as calcium is withdrawn from bone for such tasks as blood clotting and muscle contractions, including beating by the heart.

You can’t do anything about the genes you have. As a teenager, though, you can make the most of things you do control that can build your bones and help reduce the risk of fractures when you are older.

Support the skeleton with healthful habits now so it can support you later in life. These habits are eating a proper diet, exercising, and avoiding bone risk habits.

Eat Your Way to Strong Bones

The main mineral in bones is calcium. Calcium adds strength and stiffness to bones, which they need to support the body.

Adolescent bodies are tailor-made to “bone up” on calcium. With the start of puberty, our bodies have a higher capacity to absorb and retain calcium. Bone also needs vitamin D to move calcium from the intestine to the bloodstream and into bone. You can get vitamin D from normal day-to-day exposure of your arms and legs to the sun and from foods fortified with the vitamin. Also needed are vitamin A, vitamin C, magnesium, zinc, and protein.

Mother Nature provides many foods with these nutrients. One stands out, however, as an “almost perfect package”: milk. Milk is rich in calcium and high-quality protein. Nearly all U.S. milk has vitamins D and A added, as well as magnesium, potassium, and zinc.

Dairy products are the preferred sources of calcium because they provide it in a way that is easy for most people’s bodies to absorb and use. But if you cannot eat dairy products, you can still get calcium from other foods such as green, leafy vegetables and foods with added calcium such as orange juice.

To learn how much calcium is in a food, you can read the food label’s Nutrition Facts panel. Look for the “percent Daily Value” (%DV) set by the
Food and Drug Administration (FDA) for calcium. Although the calcium recommendations are generally listed in milligrams (mg), the food label refers to it as %DV for calcium. On the Nutrition Facts label, 100% DV is equal to 1,000 mg of calcium—the daily amount of calcium recommended for adults. However, if you are 9 to 18 years old, you need 1,300 mg of calcium each day to keep your bones growing strong and healthy. This means that the %DV listed for the foods you eat every day should add up to 130 percent.

Foods with at least 10% DV for calcium are good sources of calcium. If it has 20 percent or more, it is an excellent source of calcium. Remember that even foods with smaller amounts can still help you get enough calcium, especially if you eat them a lot.

An easy plan is to drink milk with every meal and eat one calcium food as a snack each day. If a doctor has confirmed that you are lactose intolerant, which means that you have difficulty digesting the sugar lactose found in milk, you can still get calcium from lactose-reduced or lactose-free milk or dairy products. There are also lactase drops and tablets, which can be added to regular dairy products to help you digest the lactose. There are also many nondairy food products that have been fortified with calcium, such as orange juice, that can help you get the amount you need.

Get Enough Weight-Bearing Exercise
Growing bone is made stronger when you exercise—especially when you do weight-bearing exercises. Weight-bearing exercise is activity where your feet and legs carry your weight. The impact of this weight on your muscles not only helps to build stronger muscles, which support your bones, but it helps build stronger and denser bones, too.

The Dietary Guidelines for Americans suggests that you get 60 minutes of physical activity every day for good health.

To make your bones stronger:
- play tennis
- walk
- jog
- dance
- jump rope
- climb stairs
- skate using
  - inline or
  - ice skates
- hike
- ski
- do karate
- do ballet
- participate in team sports:
  - soccer
  - basketball
  - field hockey
  - volleyball
  - softball
  - baseball

Before you do any weight-bearing exercise you should always warm up. This helps reduce your chance of hurting yourself or straining your muscles. Warm-up activities can include jogging in place, brisk walking, jumping jacks, or stretching for 10 minutes.
What Else Might Hurt Your Bones?

Some common teenage habits can steal calcium from your bones or increase the need for calcium, weakening the skeleton for life. Skipping meals is risky for bones. Skipping a meal a day may reduce your chance of getting enough calcium. Remember, you need 130% DV of calcium each day. If you skip a meal, you take away an opportunity to eat a calcium-rich food.

Drinking soda, fruit-flavored drinks, or teas instead of milk are other eating habits that prevent bones from getting the calcium and other nutrients they need. Any type of milk is better than a soda where your bones are concerned.

Drinking alcohol and/or smoking cigarettes can hurt your bones because many who abuse alcohol and/or smoke cigarettes also eat poorly. Cigarette smoking can also lessen your ability to exercise, which would hurt your bones.

Eating disorders can weaken bone, too. The repeated vomiting in bulimia and extreme dieting in the appetite disorder called anorexia can upset the body’s balance of calcium and the balance of important hormones like bone-protecting estrogen, making your bones weak.

Extreme exercise by young women—with or without an eating disorder—can cause menstruation to stop, which causes the blood levels of bone-protecting estrogen to drop. When this happens, calcium is lost from your bones, making them weak.

Small Changes for Big Benefits

Osteoporosis may seem like something that happens to people who are much older than you or something that is just too far off to even think about. But now is the best time to prevent it from happening to you. Small changes can make big differences. Teens that make even a 5 percent gain in bone mass/density can reduce their risk of osteoporosis by 40 percent!

Drinking milk instead of soda or walking up the stairs instead of taking the elevator may be small changes for you right now but may be very important for your health in the long run. Not to mention, you will feel stronger and healthier right now.

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