

BUILDING STRONG BONES

IT TAKES A LIFETIME



Healthy Bones: For Every Move You Make

You may not think much about your bones, but you can't make a move without them. Strong bones help you look good, stay active, and feel your best. Taking good care of your bones also can help prevent osteoporosis, a disease that makes bones weak, brittle, and easy to break (fracture). Both women and men can have this problem.

Keeping Your Frame Fit: Every Age Counts

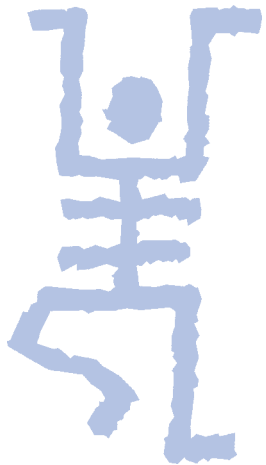
It's never too early or too late to take care of your bones. Bone is a living tissue, and the body builds new bone and loses old bone throughout your life span. Since your bones are always changing, you can't take them for granted. At each stage of your life you need to take steps to make them strong and keep them strong. Getting enough calcium and exercise, both of which help build and maintain bone, is critical.

For **children and teens**, bone building is the major focus, because at this time of life new bone growth occurs faster than bone loss. In fact, you'll achieve your "peak" bone strength and mass during these early years. If you build as much bone as you can now, you'll have more in reserve as you get older, when bone loss starts to occur. Yet most kids and teens do not achieve as much bone growth as they could — mostly because they don't get enough calcium and exercise.

From about age 35, some bone loss is a normal part of aging for both men and women. For **young and middle-aged adults**, the goal is to maintain bone mass and strength by building as much new bone as you lose through the aging process. Once again, calcium and exercise are key.

As we grow older, bone loss occurs faster than bone growth. To keep bones healthy, **people ages 51 and older** need to take action to limit bone loss. Getting enough calcium and exercise still are vital. And some people may need to take medicines that help protect bone.

Get enough calcium



Too Little Bone = Easy Fractures, Less Active Lives

If you have built too little bone during your younger years, lose too much as you grow older — or both — you'll be at higher risk for osteoporosis and bone fractures.

Broken bones and chronic pain often stop people with osteoporosis from having a normal work, home, and social life. For instance, half of those who have a hip fracture can no longer walk without a cane or walker.

Broken bones in the spine can cause loss of height and a curved back, making it hard to get clothes that fit well and look good. They can also cause back pain so severe it is hard to walk, stand, or even sit in comfort.

every day.

Get regular

The Role of Calcium and Vitamin D

At each stage of life, getting enough calcium is vital. The body uses calcium to build bone, but also for the heart, muscles, nerves, and blood clotting. When you don't get enough calcium



SEX AND BONE LOSS

For both men and women, sex hormones help keep bones strong.

- In men, testosterone helps build stronger and bigger bones than women can achieve. But if testosterone levels fall as a man ages, bone loss is likely to be a problem.
- In women, estrogen helps protect and maintain bone. At menopause, when estrogen levels decline, bone loss becomes much more rapid. In fact, women can lose up to 20% of their bone mass in the five to seven years after menopause.

Women are also at extra risk for bone loss while they are pregnant or nursing. If women don't get enough calcium each day, the body takes what it needs for the baby's growth from the mother's bones, where most calcium is stored.

each day your body tears down bones to get the calcium it needs. Look at the chart in this brochure, called

“Healthy Bones at Every Age,” to see how much calcium you need every day to take care of your bones.

Are you getting enough calcium for your stage of life? Many people in this country do not. The box on this page lists some of the foods that contain a lot of calcium. As you can see, people who don't eat many dairy products, certain types of fish, or greens may not get enough calcium from their diet. If you're getting too little calcium, talk to your health care provider about taking calcium supplements.

Getting enough calcium also means getting enough Vitamin D. The body needs about 400 to 800 IU of Vitamin D per day to absorb and make use of the calcium it gets. Sunlight is the major source of Vitamin D. You need about 15 minutes of sunlight a day to meet your needs. Or, you can take Vitamin D in pill form.



FOODS HIGH IN CALCIUM

DAIRY PRODUCTS

Plain, 2% fat yogurt,
1 cup – 415 mg

Nonfat dry milk,
1/2 cup – 377 mg

Skim milk, 1 cup – 302 mg

Buttermilk, 1 cup – 285 mg

Part-skim mozzarella
cheese, 1 oz. – 207 mg

Cheddar cheese,
1 oz. – 204 mg

FISH

Sardines, 3 oz. – 372 mg

Oysters, 1 cup – 226 mg

Salmon in can,
3 oz. – 167 mg

GREENS

Collard or mustard greens,
1/2 cup – 179 mg

Kale, 1 cup – 179 mg

Beet greens, 1 cup – 165 mg

OTHER

Waffle/pancake with
milk/egg – 179 mg

Dark molasses,
1 Tbsp – 137 mg

Tofu, 1/2 cup – 130 mg

English muffin – 96 mg

About Calcium Supplements

Three types of calcium supplements can work well. It's not so much which kind you take, but that you take them each day, the right way. Talk to your health care provider about the dose

that's right for you.

(A small number of people who take calcium supplements

— less than 10% — complain of gastrointestinal problems, mainly gas.)

Avoid lifestyle habits such as smoking and

Calcium carbonate (such as Tums or OsCal). This type contains the highest percentage of calcium. Most people absorb it well when they take it with food or after eating. It is also the least costly of the three types.

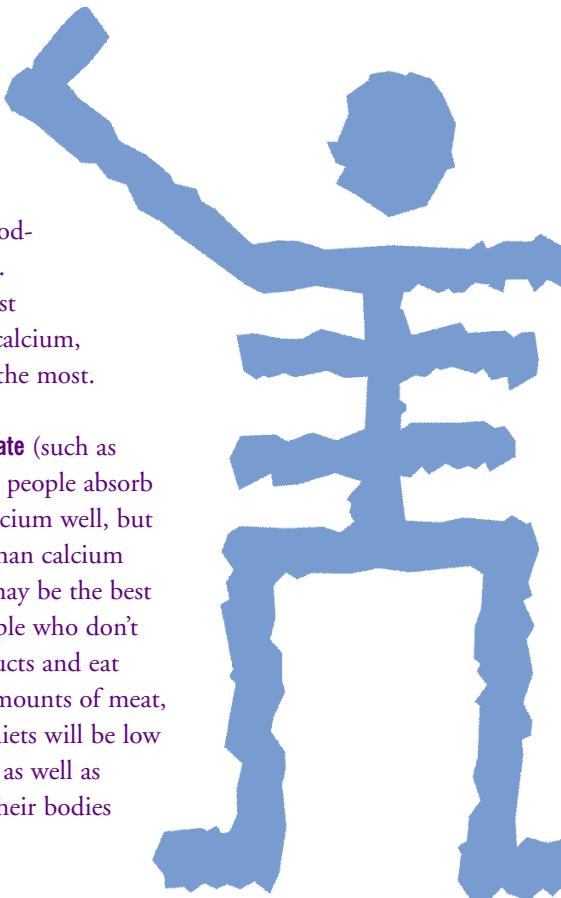
Calcium citrate

(such as Citracal).

This form of calcium is often added to breakfast products and juices.

It has the lowest percentage of calcium, and also costs the most.

Calcium phosphate (such as Posture). Most people absorb this type of calcium well, but it costs more than calcium carbonate. It may be the best choice for people who don't eat dairy products and eat only limited amounts of meat, because their diets will be low in phosphorus as well as calcium, and their bodies need both.



Here are some tips to help calcium supplements work best.

- Don't take your full dose all at once. Instead, take smaller doses two or three times during the day. You will absorb more calcium this way.
- Take your calcium at the same times each day, such as when you finish meals or brush your teeth.
- Take calcium with meals, because food improves absorption of the calcium.
- Ask your health care provider or druggist if any medicines you're taking can affect how well you absorb calcium. If they can, you may need to increase the amount of calcium you take.



MEDICINES TO PREVENT AND TREAT OSTEOPOROSIS

The drugs below help slow down or stop bone loss, make bone more dense, and lower the risk of fracture. Ask your health care provider whether you need this kind of help. If so, talk about the risks and benefits of each type of drug to decide what's best for you.

Prevent and Treat: Women

- Estrogen or Hormone Replacement Therapy (ERT/HRT)
Many brands – pill or patch; also relieve symptoms of menopause
- Alendronate sodium (Fosamax – pill)
- Risedronate sodium (Actonel – pill)
- Raloxifene (Evista – pill)

Treat Only: Women

- Calcitonin (Miacalcin – shot or nasal spray)

Treat: Men

Right now, doctors don't know whether the drugs used to prevent and treat osteoporosis in women will work the same way, or as well, in men. Although studies are being done to find out, treatments for men are few. The drugs below are used when men have osteoporosis caused by long-term use of steroid drugs to treat asthma or arthritis. Some doctors also prescribe testosterone pills for men with low levels.

- Alendronate sodium (Fosamax – pill)
- Risedronate sodium (Actonel – pill)

Products in Testing

- Calcitonin for use in men
- Parathyroid hormone (Forteo – shot) A new class of drug that speeds bone building. Tests to date show that it doesn't just slow bone loss. It also rebuilds lost bone.



HEALTHY BONES AT EVERY AGE

Time of Life	Goal	Steps to Take
Children and teens (ages 18 and under)	Build bone.	<ul style="list-style-type: none"> • Get enough calcium every day. Ages 10 and under: 800-1200 mg Ages 11-13: 1200-1500 mg Ages 14-18: 1300 mg • Get lots of exercise. Play sports, dance, walk, enjoy being active. • Don't smoke or use alcohol, which cause bone loss.
Young and middle aged adults (ages 19-50)	Maintain bone – balance bone loss with bone growth.	<ul style="list-style-type: none"> • Get at least 1000 mg calcium every day. • Get regular exercise. • Don't smoke, drink alcohol only in moderation.
Pregnant women and nursing mothers	Avoid bone loss.	<ul style="list-style-type: none"> • Get enough calcium every day. Ages 24 and under: 1500 mg Ages 25 and older: 1200 mg • Ask your health care provider about exercise and lifestyle choices during this time.
Women ages 51 and older who have been through menopause	Reduce bone loss; treat osteoporosis if needed.	<ul style="list-style-type: none"> • Get at least 1200-1500 mg of calcium every day. • Get regular exercise. • Don't smoke, drink alcohol only in moderation. • Ask your health care provider about: <ul style="list-style-type: none"> • Your personal risks for osteoporosis at this time • Medicines to prevent osteoporosis • Having a test to measure your bone density This test can show your risk for bone fracture and whether you have osteoporosis. • If you have osteoporosis: <ul style="list-style-type: none"> • Follow the treatment your health care provider prescribes. • Ask about how to exercise safely and how to prevent falls in your home.
Men ages 51 and older	Reduce bone loss; treat osteoporosis when possible.	<ul style="list-style-type: none"> • Get at least 1200 mg of calcium every day. • Get regular exercise. • Don't smoke, drink alcohol only in moderation. • Talk to your health care provider about: <ul style="list-style-type: none"> • Tests to see if you have low levels of the sex hormone testosterone These levels can decline with age and increase bone loss. • Steroid drugs you've taken to treat asthma or arthritis (like prednisone or cortisone) These drugs cause bone loss and increase your risk of osteoporosis. • Whether you need a test to measure your bone density • If you have osteoporosis: <ul style="list-style-type: none"> • Follow the treatment your health care provider prescribes. • Ask about how to exercise safely and how to prevent falls in your home.

What About Exercise?

Two types of exercise help build and maintain bone.

- Weight-bearing exercises, where bone and muscle work against gravity, help increase bone density. They include walking, jogging, dancing, stair climbing, and most team sports.
- Muscle-strengthening exercises involve lifting weights. They improve muscle mass and bone strength.

Both types of exercise make you stronger and more agile. They also help improve balance and reduce the risk of falls that can lead to a fracture.

Thus, exercise can be important even for people who have osteoporosis. Ask your health care provider what kinds of exercise are best for you at your stage of life.

Protect Your Bones, Now and in the Future

Although your bones need special care at each time of life, some basics apply at every age. These include:

- Get enough calcium every day.
- Get regular exercise.
- Avoid lifestyle habits that harm bone, such as smoking and alcohol abuse.

Taking these simple, low-cost steps can help you stay strong and active for life.



WANT TO LEARN MORE ABOUT BONE HEALTH?

Contact any of the information sources listed below.

American Dietetic Association

(www.eatright.org)

216 W. Jackson Boulevard

Chicago, IL 60606-6995

(312) 899-0040

National Dairy Council

(www.nationaldairycouncil.org)

10255 W. Higgins Road

Suite 900

Rosemont, IL 60018

Association of Reproductive Health Professionals (www.arhp.org)

2401 Pennsylvania Avenue, NW

Suite 350

Washington, DC 20037-1718

(202) 466-3825

National Foundation for Osteoporosis Research and Education

(www.fore.org)

300 27th Street

Oakland, CA 94612

(888) 266-3015

CALCIUMinfo.com

(Sponsored by GlaxoSmithKline

Consumer Healthcare)

National Osteoporosis Foundation

(www.nof.org)

1232 22nd Street, NW

Washington, DC 20037-1292

(202) 223-2226

Milk Matters

(www.nichd.nih.gov/milk/milk.htm)

National Institute of Child Health and Human Development

NICHD/Milk Matters

Clearing House

P.O. Box 3006

Rockville, MD 20847

(800) 370-2943

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The Association of Reproductive Health Professionals is a non-profit, 501(c)(3) educational organization with a membership of obstetricians/gynecologists and other physicians, advanced practice clinicians, researchers, educators, and other professionals in reproductive health.

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