



Osteoporosis is a bone disease that develops when bone mineral density and bone mass decreases, or when the quality or structure of bone changes. This can lead to a decrease in bone strength that can increase the risk of fractures (broken bones). Building healthy bones during childhood through healthy nutrition and lifestyle habits could help prevent or delay [osteoporosis](#) and fractures later in life.

## Why is bone development in childhood so important?

[Bone is living tissue](#) that changes constantly. Bits of old bone are continuously removed and replaced by new bone. During childhood and adolescence, much more new bone is deposited than taken out as the skeleton grows and as bones get denser.

In most people, the amount of bone tissue in the skeleton (bone mass) peaks by the mid- to late 20s, when bones reach their maximum strength and density. The amount of peak bone mass that one achieves can help determine their bone health for the rest of their lives.

## How can what my child eats keep their bones healthy?

One of the most important lifelong bone health habits to encourage now is proper nutrition. Eating to build healthy bones means getting a well-balanced diet with plenty of foods rich in [calcium and vitamin D](#) that are important for bone.

A balanced diet can also help keep children's weight in a healthy range, which is important for healthy bones. Children who are overweight tend to have a higher risk of fractures than other children because they are more likely to be inactive and their bones have more stress. Weighing too little is also risky for bone health. Dieting, fasting, or exercising too much during adolescence to lose weight can lead to bone loss.

## Calcium

Calcium does more than simply build strong bone. It also helps our muscles, heart, and nerves work properly. If we don't get enough calcium in our diets, our body takes calcium we need from our bones. Over time, this process weakens bones and raises the risk of [osteoporosis](#). Not eating enough dairy

products or getting enough calcium from foods can increase a child's risk of fracturing bones.

The best food sources of calcium are milk and other dairy products, like cheese and yogurt. Drinking one 8-ounce glass of milk provides 300 mg of calcium, or about one-third of the recommended intake for younger children and a quarter for teens. Other foods that have calcium include fish (such as salmon and tuna), leafy green vegetables, and foods made with grains (such as bread).

Some kid-friendly snacks and main dishes that are good sources of calcium include:

- A salmon sandwich made with canned salmon with bones.
- A pizza bagel with mozzarella cheese.
- Cheese cubes and apple skewers.
- Almond butter on apple slices.
- Peanut butter banana smoothie.
- Mashed potatoes with evaporated milk.

## Vitamin D

Vitamin D promotes bone health in children and adults because it:

- Helps absorb the calcium we get from food.
- Maintains the calcium we need to keep our bones healthy.
- Promotes healthy functioning of our muscles and immune system.

Most of the vitamin D that Americans get from food comes from fortified foods. Examples are:

- Milk (but other dairy products are not usually fortified with vitamin D).
- Ready-to-eat breakfast cereals.
- Orange juice.
- Margarine.

Some fun ways to increase the vitamin D in your child's diet include:

- Make a watermelon and strawberry smoothie with yogurt.
- Combine layers of yogurt, nuts, cereal, and berries to make a yogurt parfait.
- For children who can't eat dairy products, blend silken tofu with berries, honey, and orange or lemon zest to make a tasty dessert.
- Use chopped and sliced vegetables with hard-boiled eggs to make funny egg animals.
- Serve French toast with cheese.

Many teens don't get enough vitamin D, probably because they don't eat and drink as many dairy products as younger children. Children with obesity also have lower bone mineral density and are at

higher risk of vitamin D deficiency. Vitamin D supplements might help children with obesity improve their bone health. Talk to your teen's health care provider if you are thinking about giving a supplement to your child.

See [Calcium and Vitamin D: Important for Bone Health](#) for details on how much calcium and vitamin D children need and examples of foods that are good sources of these nutrients.

## How can physical activity help my children's bones?

Muscles get stronger when we use them, and the same is true for bones. Genes determine the timing of peak bone mass. But [exercise](#), particularly before the child reaches puberty, is important for the growth of healthy bones. Physically active children gain more bone mass than less active children, and their bone mass typically stays high when they become adults.

The best physical activity options for children's bones are weight-bearing and resistance exercises. Exercises that build strong bones while your kids have fun include:

- Hopping, skipping, and jumping (including jumping rope).
- Judo.
- Running or jogging.
- Dancing.
- Gymnastics.
- Team sports (like soccer or basketball).

You can help your children exercise by being a role model. For example:

- Join your children for a walk or run in the park, or play sports together.
- Assign active chores to your children, such as walking the dog or raking leaves.
- Plan a few short exercise blocks (10 or 15 minutes) at different times of the day.
- Clear space in a room for physical activity.

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