



# Ways to Improve Bone Density

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## How to Craft a Bone-Building Lifestyle

Osteoporosis won't affect everyone, but if your peak bone mass, genetics and lifestyle combine to put you at risk for weak bones as you age, it's important to use all the resources around you to counter the problem.

When it comes to your bone health now and in the future, there are plenty of things you just can't change, like your gender (women are more likely to suffer major bone loss), your age (menopause moves you into a high-risk category), and your ancestry (white and Asian women are most likely to develop osteoporosis). These factors can paint a grim picture, even if you're in pretty good shape at the moment.

The medical community hasn't yet discovered a cure for osteoporosis, but don't give up hope — the way you choose to eat, exercise, supplement and medicate can make huge waves in your bone health and your longevity.

## Understanding Bone Density

Before you learn how to build your bones, it's helpful to know how bone density works. Your bones may seem stable and immobile (unlike muscle, which stretches and grows), but they're actually in a constant cycle of regeneration.

Your body breaks down and repairs the building blocks of your bones over and over, and at the end of any cycle, you're back to an even playing field. However, the balance begins to change a bit as you approach middle age: once you pass the 30 year mark or so, your natural bone rebuilding mechanism cannot keep up with your body's bone deconstructing mechanism. The result? More bone is lost than gained, leaving you at a bone deficit.

As this trend continues, your bone mass could dwindle so much that the empty space within your bones puts you at big risk for fracture, since weak and brittle bones cannot withstand pressure or impact nearly as well as dense bones. In some cases, this damage is permanent — but for many people, there are ways to rebuild that important bone mass.

## Exercise to Build Bones

Exercising for stronger bones can seem counterintuitive, since exercise physically stresses your body, but it's one of the most effective things you can do for bone mass. Not all activities bring equal rewards, though. In you want to build bones stronger and faster, you'll need to work in some high-impact exercise.

You can use extra weight to stress your bones, but your own bodyweight will get the job done, too. While swimming and cycling are good for aerobic fitness, consider working in activities that involve pushing against gravity and impacting the ground, like:

- Jogging or running

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- Tennis, basketball or volleyball
  - Dancing

Anything that forces you to jump will encourage bone strengthening, especially in the upper body and thighs, as a study out of the University of Toronto shows. If you can commit to high-impact aerobic exercise at least a few times each week, you will build more calcium in the bones in your legs, hips, and spine.

You may be tempted to buy some the comfiest padded shoes you can find to absorb the shock of jumping or running, but that will work against you. The shock to your bones is what encourages the rebuilding — so the less cushioning, the better!

*Next page: vitamins and minerals sure to make a big difference for your bones*

## **Strong Diet and Strengthening Supplements**

It should come as no surprise that what you consume can help or hinder your bones. After all, you are what you eat!

A balanced diet is the foundation for good health, but a few specific choices can make a big difference for your bones. Swap out less nutritious food for “strengthening” food that contains these vitamins and minerals:

### **Calcium**

When you think about bone health, calcium probably jumps to mind. It plays an important role in bone growth and development, and the more you take in, the more that’s available for your body to use. And happily, there are some easy and delicious ways to work more calcium into your diet.

Dairy products are obvious choices, but there’s a good deal of non-dairy sources of calcium, too. Kale, spinach, broccoli, white beans and almonds are good ingredients to stock up on.

### **Vitamin D**

It’s true that calcium is at the root of bone building, muscle function, and a host of other important biological processes, but simply taking in more calcium won’t bring the results you need. The key is to help your body better *absorb* the calcium you take in, and for that you need vitamin D.

There aren’t many food sources of vitamin D — except for some fish and fortified juice or milk — but a daily supplement is a safe and effective way to top up your vitamin levels. Experts also recommend 10 to 15 minutes of direct sun exposure at least three days a week for a good supply of vitamin D.

### **Vitamin K**

This vitamin is crucial for protein building, and those proteins make bones stronger. It also appears that vitamin K reduces the amount of calcium excreted by the body, and since vitamin D helps the body absorb more calcium, the two vitamins make a powerful team.

Many of the best plant-based calcium sources also happen to be good sources of vitamin K: spinach, Swiss chard, broccoli and kale top the list.

While you’re topping up your diet with strengthening foods, ditch any bone “weakening” foods, too. Processed foods are not good for anyone, but when your bones are at risk, you’ll also want to cut down on caffeine and alcohol. A little bit is fine, but too much of either will interfere with how your body absorbs and uses calcium.

## **Medication to Protect and Improve Bone Structure**

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There's no simple pill to cure poor bone density, but there are a few medications that can help to slow the progression and limit the damage. The bisphosphonate class of medication is the popular choice, since they have been proven to reduce the frequency of fractures. Teriparatide is a newer compound that can actually help to build bone mass, although it's not right for everyone.

Drug therapy can be very helpful when it comes to slowing bone loss, although it generally can't replace the bone you've already lost. For that, you'll need to bring in diet and exercise, making permanent changes to your daily routine to encourage your natural bone-building ability.