

## Why take Calcium and Vitamin D?

Calcium, combined AND vitamin D helps to maintain the strength of your bones. Calcium is a key mineral in your bones, and Vitamin D helps absorb calcium and get it into your bones. As both men and women get older, they lose bone ‘density’ as a natural part of aging, and if an excessive amount of these bone minerals are lost, the condition is known as osteoporosis. This bone ‘thinning’ process starts at about age 30!

Both men and women can be affected by osteoporosis and low bone density. In some ways, women have an advantage in that estrogen, the female hormone they produce reduces the ‘normal bone loss process’. But after menopause, when estrogen levels reduce significantly, bone loss speeds up significantly. As a result, **more women than men** suffer from osteoporosis and fractures.

It is important to MAINTAIN your bone strength, by taking calcium and Vitamin D BEFORE YOU HAVE SIGNIFICANT BONE LOSS. Discuss starting these medications with your doctor while you are still in your 30’s or 40’s, or even earlier if you are taking certain medications (see later).

If you are already diagnosed with osteoporosis, you should take calcium and vitamin D supplements in addition to any other bone strengthening medication prescribed by your doctor.

PEOPLE WITH A CHRONIC HEALTH CONDITION are at SPECIAL RISK of bone density loss, osteoporosis and fractures, because:

- The condition itself may cause faster bone density loss
- Their treatment (medications) may cause rapid bone loss: this includes prednisone, corticosteroids, immunosuppressive drugs, some biological drugs and many other drugs.
- The individual may not get as much sun exposure (which helps create Vitamin D – see later)
- The condition may affect muscle strength; stronger muscles make for stronger bones. Also, with weaker muscles, falls and fractures are more likely.
- The condition may cause balance issues, making falls more likely

Other common things that accelerate calcium loss are lack of exercise, smoking, too much alcohol and caffeine, and many medications.

**Vitamin D** is vital as it helps absorb calcium and get it into the bones, and as a bonus, it improves muscle strength. The recommended amount of Vitamin D a day is 400 IU (international units) a day if you are over 50 years old. If you are over age 70yrs, 600 IU is recommended.

Interestingly, humans manufacture Vitamin D internally, and the final step in the process occurs when sun shines on their skin. People who live in sunnier areas and get 15 to 30 minutes of sunshine per day on their skin may not need to take Vitamin D tablets. But if you don't get much sun exposure, you should take Vitamin D supplementation. You also get some vitamin D in foods such as egg yolks, liver, saltwater fish, and vitamin D fortified dairy products.

### **Calcium**

Calcium is the most important bone mineral, and an adequate intake helps to offset the loss that occurs with aging. Adults over age 50yrs should take 1200 mg of calcium intake every day (under age 50yrs 1000 mg per day is recommended). This is about the amount of calcium found in four glasses of milk a day which is more than most people consume. In fact, most Americans get only ½ the calcium they need from their food.

Using calcium supplements are an easy way to get enough calcium. You can take either Calcium Carbonate or Calcium Citrate pills (look at the back of the label for this information). In general, calcium carbonate is less expensive (it is commonly found in antacids for example). It is best absorbed when taken with meals. Calcium citrate can be taken at any time, and causes less constipation than calcium carbonate. There is no need to take pills that combine calcium and magnesium as they are more expensive and the magnesium is unnecessary.

For best absorption of the calcium, chew your calcium tablets (or dissolve them in water) and take 500 mg or less at a time (split your tablets over the course of the day into 2 or 3 doses, for example with each meal).

Some people should not take calcium and vitamin D, and if you have any of the following or have other concerns, make sure to discuss your situation with your doctor:

- kidney disease or kidney stones
- parathyroid gland disease;
- or you take a tetracycline antibiotic regularly

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## References

National Institutes of Health, Osteoporosis and Related, Bone Diseases: National Resource Center - Osteoporosis Overview  
U.S. Preventive Services Task Force (USPSTF) recommendation on screening for osteoporosis in postmenopausal women , in the Guide to Clinical Preventive Services, Second Edition1. <http://www.ahrq.gov/clinic/3rduspstf/osteoporosis/osteorr.htm>