

Calcium/Vitamin D Patient Information Sheet

1. Why are calcium and vitamin D important for my health?



Calcium is a mineral that is important for the health of your bones. Almost all of the calcium in your body is stored in your skeleton. Calcium is what makes your bones strong so they won't fracture and will support you for the rest of your life. It is very important to get enough calcium when you're young, because this is when your bones are growing the most.

Vitamin D is also important for your bones because it helps your body absorb calcium from your food and also prevents you from losing calcium in your urine. It is important to make sure you get enough calcium and vitamin D to keep your bones healthy!

2. Where can I get calcium and vitamin D?

Food sources:

Calcium

- Milk, yogurt, cheese, ice cream, sardines, salmon, cooked spinach or kale
- Also found in fortified foods such as cereal or orange juice

Vitamin D

- Fatty fish (e.g., salmon, mackerel) or eggs (found in yolk)
- Also found in fortified foods such as milk, cereal, orange juice and yogurt



Your body can make vitamin D naturally, by letting the sun shine on your skin, for as little as 10 minutes! But, we protect our skin with sun screen during summer, and we can't sunbathe in the winter in New England (Brrrrrrr!)? A diet rich in Vitamin D, as well as supplements will help build strong bones all year long!

3. What supplements can I take to get additional calcium and vitamin D?

Multivitamins are widely available in many different forms and often contain calcium and vitamin D. Additional supplements containing only calcium and/or vitamin D are also available over the counter and by prescription. Be sure to check with your health care provider to find out what is appropriate for you.

Daily recommended values include:

Calcium: 9-18 years: 1300mg
19- adulthood: 1000mg



Supplement forms:

- Calcium carbonate is the least expensive and most widely used calcium supplement. It comes in swallow-able pill and chewable form and is best absorbed when taken at mealtime.
- Calcium citrate is another option and has the same calcium absorption profile as calcium carbonate, but may be more expensive and often comes in a bigger pill form. However, it does not need to be taken at mealtime.
- Be sure to take only one pill at a time because not all of the calcium that you ingest is absorbed by your body when taken all at once. By taking supplements at different times of the day, it allows your body to absorb more calcium over the course of a day.

Vitamin D: 1 year-adulthood: 600 IU +

Forms:

- Vitamin D3 (cholecalciferol): this is the form that is naturally produced in the body.
- Vitamin D2 (ergocalciferol): this is the form of vitamin D made in plants.
- Both types of vitamin D supplements work in the same way.

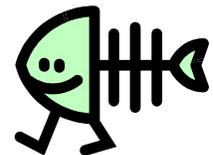
4. Who is most at risk for being calcium or vitamin D deficient?

People at risk for calcium deficiency are women who have gone through the menopause, adolescent girls who have never gotten their period, or have stopped getting their period, and those with lactose intolerance. However, it is important for everyone to get enough calcium, and not just people who are at increased risk.



Vitamin D deficiency is common, especially during winter, and in certain geographical locations, where people don't get much sun exposure. People most at risk for insufficiency are people with dark skin pigmentation. The pigment, melanin, in the skin blocks the sunlight from being able to produce as much vitamin D as people with less melanin. Additionally, breast milk contains little vitamin D and, therefore, infants who are breastfed are at risk for vitamin D insufficiency or deficiency, which can lead to rickets (weakening of the bones). This problem can be prevented or reversed by vitamin D supplementation along with breast milk.

There are very few side effects from taking calcium or vitamin D. Sometimes, too much calcium intake can result in constipation, kidney stones, and decreased iron and zinc absorption. Extremely high levels of calcium in the blood and urine can lead to damage of blood vessels, heart, and kidneys. However, this is almost never because of too much supplementation and these complications are extremely rare (and some unreported) in children and adolescents.



Vitamin D, in extreme excess (e.g., more than 10,000 IU daily for an extended period), can lead to loss of appetite, frequent urination, and irregular heart beat. In severe cases, it can raise blood calcium levels to amounts that may be dangerous. These occurrences are very rare, but you should contact your doctor if you are concerned about an overdose.