

Vitamin D Deficiency: What You Need to Know

Vitamin D deficiency is a condition in which a person has low levels of vitamin D in their body. Learn about vitamin D deficiency, including its causes and symptoms, and how doctors diagnose and treat the condition.

WHAT IS VITAMIN D DEFICIENCY?

Vitamin D deficiency is a condition in which a person has low levels of vitamin D in the body. Vitamin D deficiency can lead to poor bone health.

WHAT IS VITAMIN D?

Vitamin D has many important jobs in the body. Its most important job is to help the body absorb calcium from the food we eat.

HOW DO YOU GET VITAMIN D?

You can get vitamin D by spending time in the sun. Your body makes vitamin D in the skin when it is exposed to the sun's ultraviolet (UV) light.

You can also get vitamin D from certain foods. Fatty fish (like salmon and sardines) are naturally high in vitamin D. Certain foods such as most dairy products, some cereals, and some non-dairy milks have vitamin D added to them.

Vitamin D supplements are another way to get vitamin D.

WHAT CAUSES VITAMIN D DEFICIENCY?

Vitamin D deficiency can be caused by any of the following:

- Not enough exposure to sunlight. In the wintertime, when the sun's rays are less strong, very little vitamin D is produced in the skin. Vitamin D levels can be affected by anything that blocks exposure of the skin to sunlight. This includes sunblock, being indoors for long periods of time, skin pigmentation (dark skin color) or long clothing.
- Poor absorption of vitamin D in the gut because of certain medical conditions, such as celiac disease
- A newborn baby may have vitamin D deficiency if the mother had vitamin D deficiency during her pregnancy.

HOW MUCH VITAMIN D DOES MY CHILD NEED EVERY DAY?

The amount of vitamin D a person needs every day is different at different ages:

- Infants under 1 year need 400 International Units (IU) of vitamin D. While breastmilk is very healthy for babies, it is not a good source of vitamin D. In addition, while infant formulas typically have added vitamin D, most infants do not take enough formula each day to get their full requirement. **Most infants should get a supplement containing 400 IUs of vitamin D.**
- Children older than 1 year need 600 IUs of vitamin D.

Treatment and diagnosis on the back!

WHAT HAPPENS WHEN VITAMIN D IS TOO LOW?

In infants and young children, severe vitamin D deficiency can lead to **rickets**. Rickets is a condition in which the growth plates develop abnormally. This can lead to bowing (arching or curving) of the legs.

Children with rickets can also have the following symptoms:

- Swollen and painful wrists and ribs
- Prominent forehead (forehead that is more noticeable than usual)

If the vitamin D level is very low, bones can develop **osteomalacia** (softening of the bones), which can be painful and make the bones more likely to fracture (break).

Finally, if vitamin D is too low, the body may have low calcium levels in the blood. This can cause feelings of “pins and needles”, muscle cramps, and even seizures.

HOW IS VITAMIN D DEFICIENCY DIAGNOSED?

Doctors can diagnose vitamin D deficiency through a blood test. Doctors can diagnose rickets through an X-ray of the wrists and/or knees.

HOW IS VITAMIN D DEFICIENCY TREATED?

Vitamin D deficiency can be treated with vitamin D supplements. The 2 forms of vitamin D supplements are **ergocalciferol** and **cholecalciferol**. Both work well to treat vitamin D deficiency. They help vitamin D build back up to normal levels in the body. Your child’s care team will help you figure out how much vitamin D supplement your child should take every day and whether your child should also take calcium supplements.

After your child receives treatment for vitamin D deficiency and vitamin D levels are back to the normal range, the care team might recommend continuing a vitamin D supplement daily. This will help keep vitamin D levels in the normal range.

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