



VITAMIN D - THE 'SUNSHINE'

Vitamin D is a fat-soluble vitamin in a family of compounds that includes vitamins D1, D2, and D3.

Your body produces vitamin D naturally when it's directly exposed to sunlight. You can also get vitamin D from certain foods and supplements to ensure adequate levels of the vitamin in your blood.

Vitamin D has several important functions. Perhaps the most vital are regulating the absorption of calcium and phosphorus and facilitating normal immune system function.

Getting enough vitamin D is important for typical growth and development of bones and teeth, as well as improved resistance to certain diseases.

1. VITAMIN D MAY FIGHT DISEASE

In addition to its primary benefits, research suggests that vitamin D may also play a role in:

- Reducing the risk of multiple sclerosis (MS). A 2018 review of population-based studies found that low levels of vitamin D are linked with an increased risk of MS
- Decreasing the chance of heart disease. Low vitamin D levels have been linked to increased risk of heart diseases such as hypertension, heart failure, and stroke

- Reducing the likelihood of severe illnesses. Although studies are mixed, vitamin D may make severe flu and COVID-19 infections less likely
- Supporting immune health. People who do not have adequate vitamin D levels might be at increased risk of infections and autoimmune diseases, such as rheumatoid arthritis, type 1 diabetes, and inflammatory bowel disease.

2. VITAMIN D MAY REGULATE MOOD AND REDUCE DEPRESSION

Research has shown that vitamin D might play an important role in regulating mood and decreasing the risk of depression.

A review of 7,534 people found that those experiencing negative emotions who received vitamin D supplements noticed an improvement in symptoms. Vitamin D supplementation may help people with depression who also have a vitamin D deficiency.

3. IT MIGHT SUPPORT WEIGHT LOSS

People with higher body weights have a greater chance of low vitamin D levels. In one study, people with obesity who received vitamin D supplements in addition to following a weight loss plan lost more weight and fat mass than the members of the placebo group, who only followed the diet plan.

There is no concrete evidence to support the idea that vitamin D would cause weight loss, but there appears to be a relationship between vitamin D and weight.

VITAMIN D DEFICIENCY

Several factors can affect your ability to get adequate vitamin D from sunlight alone.

You may be less likely to absorb enough vitamin D from the sun if you:

- Live in an area with high pollution.
- Use extremely high sunscreen protection.
- Spend most of your time indoors.
- Live in a big city where the buildings block sunlight.
- Have darker skin (the higher the levels of melanin, the less vitamin d your skin can absorb.)

These factors can increase your risk of vitamin D deficiency. That's why it's important to get some of your vitamin D from non-sunlight sources.



WHAT ARE THE SYMPTOMS OF VITAMIN D DEFICIENCY?

The symptoms of a vitamin D deficiency in adults may include:

- Tiredness, aches, and pains
- Severe bone or muscle pain or weakness
- Stress fractures, especially in your legs, pelvis, and hips

A healthcare professional can diagnose a vitamin D deficiency by performing a simple blood test. If you have a deficiency, your doctor may order X-rays to check the strength of your bones.

If you receive a diagnosis of vitamin D deficiency, a healthcare professional will likely recommend that you take vitamin D supplements. If you have a severe deficiency, they may instead recommend high dose vitamin D tablets or liquids.

You should also make sure to get vitamin D through sunlight and the foods you eat.

RISKS OF GETTING TOO MUCH VITAMIN D

If you take excessive amounts of vitamin D supplements, you may get too much of it. However, this is unlikely to happen through diet or sun exposure because your body regulates the amount of vitamin D produced through sun exposure.

Vitamin D toxicity can lead to an increase in your blood calcium levels. This can result in a variety of health issues, such as:

- Nausea
- Apathy
- Vomiting
- Abdominal pain
- Dehydration
- Confusion
- Increased thirst

SOME FOOD SOURCES OF VITAMIN D

Some foods contain vitamin D naturally, and others are fortified with it.

You can find vitamin D in the following foods:

- Salmon
- Sardines
- Herring
- Canned tuna
- Cod liver oil
- Beef liver
- Egg yolk
- Shrimp
- Mushrooms
- Milk (fortified)
- Certain cereals and oatmeal's (fortified)
- Yogurt (fortified)
- Orange juice (fortified)

It can be hard to get enough vitamin D each day through sun exposure and food alone, so taking vitamin D supplements could help.

HOW MUCH DO YOU NEED?

There has been some debate over the amount of vitamin D required for optimal functioning. Recent studies indicate that we need more vitamin D than previously thought.

There are a few other debates around vitamin D e.g.:

- Standardisation of methods for measuring vitamin D levels
- The difference between free and total vitamin D testing
- Defining low vitamin D status (insufficiency versus deficiency)
- Screening versus treatment
- Vitamin D threshold for the general population relative to a particular condition (such as pregnancy or breastfeeding) and health issues (such as kidney failure or osteoporosis)
- Blood serum levels considered adequate range from 50-100 nanomoles per litre (nmol/L)



The Recommended Dietary Allowances for vitamin D are as follows:

- Infants (0-12 months): 10 mcg (400 IU)
- Children and teens: 15 mcg (600 IU)
- Adults aged 18-70: 15 mcg (600 IU)
- Adults over age 70: 20 mcg (800 IU)
- Pregnant or breastfeeding women: 15 mcg (600 IU)

THE BOTTOM LINE

Vitamin D has many potential benefits. It may reduce the risk of certain diseases, help improve mood and reduce depression symptoms, and help with weight management.

It's hard to get enough vitamin D through your diet alone, so you may want to ask a healthcare professional for a blood test and then consider taking a vitamin D supplement, if your levels are low.

