

## **SIDE EFFECT OF HIGH DOSE VITAMIN D**

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### **ABSTRACT**

In this review, we explore that the side effects of Vitamin D are many and a causal relationship has been assumed despite countless studies that show that therapeutic doses of Vitamin D reduce the risks. A person should use nutritional supplements and expose himself to the sun for a while. Vitamin D plays an essential role in maintaining the health of the body, and yet a large number of people suffer from a deficiency of this vitamin in their bodies, due to its scarcity in foods, which results in many problems that harm the muscles, nerves, body immunity and heart health. This is why many people resort to taking nutritional supplements to compensate for this lack of vitamin D, and sometimes taking excessive doses may cause some side effects and health problems.

**KEYWORDS:** Side Effect ,High Dose, Vitamin D

### **INTRODUCTION**

Vitamin D is not a regular vitamin like other vitamins, but it is a hormone , This hormone helps to absorb calcium from food in the digestive system into the body. Vitamin "D" keeps the body's cells healthy and functioning the way it works as it contributes to the absorption of calcium, Six side effects that tell you that you have taken too much vitamin D. strengthening immunity, protecting bones, muscles and heart health. It is found naturally in food, and it can also be produced by the body when the skin is exposed to sunlight .

Over the past two decades, interest in vitamin D has increased significantly. Besides playing important roles in calcium homeostasis and bone mineralization [1]. The etiology of MS remains elusive. There is increasing evidence that an interplay of genes and environmental factors determines the risk of developing the disease Regarding the potential environmental factors [2]. Vitamin D is a prohormone which is essential for skeletal health. It increases calcium absorption and facilitates bone mineralisation. Deficiency is associated with development of osteomalacia. Low vitamin D levels are common and important even in the absence of overt osteomalacia as they are associated with an increased risk of falls and fracture [3]. It has been observed that vitamin D-deficient individuals have increased COVID-19 risk and mortality , The role of vitamin D in SARS-CoV-2 infection is not explored in intervention studies despite the knowledge of an immunomodulatory role and protective effect of vitamin D against other viral infections [ 4 ]. When do the symptoms of vitamin D deficiency disappear Children under 18 years of age who have had a vitamin D deficiency take a dose of not less than 2000 international units of vitamin D for a month and a half, or at least six consecutive weeks, to increase the level of vitamin D in the body . Vitamin D is an important prohormone that plays a vital role in maintaining healthy bones and calcium levels. Vitamin D deficiency leads to hypocalcemia and defects in bone mineralization. Vitamin D deficiency, as suggested in many publications, also is associated with increased risks of extraskeletal complications such as autoimmune diseases, chronic obstructive pulmonary disease, cancer, and metabolic syndrome Vitamin D deficiency (25-hydroxyvitamin D [25(OH)D] concentration <20 ng/ml; <50 nmol/l) and insufficiency [25(OH)D concentration of 21-29 ng/ml; 52.5-72.5

nmol/l] are both prevalent, being a global problem of public health [ 5 ] .

Vitamin D was discovered about a century ago. Vitamin D supplementation (as cod liver oil, ergocalciferol, or cholecalciferol) was rapidly implemented by health authorities and physicians to eradicate endemic nutritional rickets, at least in high-income countries . However, there are still far too many cases of nutritional rickets around the world that could be easily prevented by an appropriate inexpensive strategy . Vitamin D is now known to be the inactive precursor of a ligand [1,25(OH)2D] of the vitamin D receptor. Vitamin D receptor is widely expressed in most nucleated cells and regulates a very large number of gene clusters involved in many skeletal and extra skeletal actions UVB [ 6 ] .

### **Side Effects of Too Much Vitamin D**

- Increased blood level
- Excess of calcium in the blood
- Stomach pain, constipation, or diarrhea
- Bone loss
- Kidney failure
- Psychological state

### **Nutrition and Healthy Eating**

Vitamin D deficiency is usually diagnosed by measuring the hydroxyl vitamin D concentration in the blood. Which turns into the active form. A person must take care of his diets, from healthy eating, regularity of meals, and psychological comfort is very necessary to lasting health .

Vitamin overload is a unique diagnosis that affects very much the body when you have an excess of vitamin D in parts of your body.

Too much vitamin D always works off of excessive amounts of vitamin D supplements - they are not affected by diets or sun treatments. And while your body contains the amount of vitamin D that it gets from exposure to the sun, also rich foodstuffs do not contain a large volume of vitamin D.

The main consequence of excessive vitamin D is calcium accumulation in the blood, which may affect the body and symptoms such as nausea, vomiting, weakness, and increased urination. Vitamin D may progress to bone pain and kidney problems, such as calcium stones.

### **Performance Vitamin D**

Vitamin D is somewhat of a misnomer as it is, in fact, a potent sterol hormone 1. In consequence [ 7] .During the past years, the focus was on these studies, and the results of the studies were found to be relatively balanced with other vitamins

Where vitamin D is an influential element in arranging the weight of calcium, which increases the activation of cholesterol, intestinal absorption of calcium and phosphates, and the regulation of bone mineralization, and thus the proportion of calcium in the blood increases.

### **Heartbeat Fluctuation**

She experienced hypercalcemia and complete heart blockage, which required a permanent pacemaker.

Some signs of heart complications associated with vitamin D toxicity include:

- an irregular heartbeat, which may be temporary or continual
- unexplained exhaustion
- high blood pressure
- pain when exercising
- dizziness
- chest pain [ 8]

When blood calcium is increased, it causes a decrease in the ability of the heart cells to work. Some people with increased active blood calcium complain of a fluctuation in the heartbeat. The person affected by the increase in calcium or phosphate in the blood may develop, which causes calcium accumulation or plaque in the arteries of the heart.

#### **Amount Vitamin D To Use**

amount of vitamin D to take depends on many elements . Illusion:

- age
- ethnicity
- latitude
- season
- sun exposure
- clothing

This is only a partial list of factors that help determine the amount of vitamin D a person needs[9] .

The National Institutes of Health (NIH) suggests working at an average daily intake of between 400 and 800 IU, or 10-20 micrograms.

Some studies have found that your daily intake should be higher if you are not exposed to sunlight or have darker skin tone.

Blood levels greater than 20 ng / mL or 30 ng / mL are considered sufficient

One study involving healthy adults showed that a daily intake of 1120 to 1,680 IU was required to maintain adequate blood levels .



**Figure 1: Women and Vitamin D**

The disappearance of estrogen in postmenopausal women has a negative effect on mineral production due to the decrease in the production of dihydroxyvitamin (1,25D) and the decrease in the amount of dihydroxyvitamin (1,25D) receptors.

The decrease in the level and activity of dihydroxyvitamin D 1,25 D leads to an increase in the activity of the thyroid gland and to promote the processes of bone breakdown, which leads to osteoporosis.

In addition, two hereditary diseases are known as the result of a person's immunity to this vitamin, in the first type there is a very low production of dihydroxy for this vitamin 1.25 d, and the second type is characterized by the absence of the dihydroxyvitamin 1.25 d receptor In either case, the symptoms are due to a lack of vitamin D [ 10 ]..

## CONCLUSIONS

The body must be exposed to sunlight if there is a lot of vitamin D in the sun's rays, especially in the morning, but you should not be exposed to it in the afternoon. Also, fish should be eaten if vitamin D is found in large quantities in tuna, sardines and salmon. Also, vitamin D is found in eggs, yogurt, and various types of cheeses .

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