

Health Risks of Vitamin D Deficiency

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Citation

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1. INTRODUCTION

Vitamin D is important for good health, growth and strong bones. Vitamin D deficiency is now a worldwide epidemic. Besides cardiovascular diseases, its deficiency has also been linked with neonatal tetany, rickets, osteomalacia and osteoporosis, its deficiency has recently been linked to several other diseases, including autoimmune diseases such as multiple sclerosis, Crohn's disease, lupus, rheumatoid arthritis, colorectal cancer and chronic lymphocytic leukemia. Its deficiency may play a role in the pathogenesis of diabetes mellitus, depression, active tuberculosis, periodontal disease and some cancers. Deficiency is also associated with an increase in overall general mortality. A lack of vitamin D is very common and is mostly made in the skin by exposure to sunlight. Most foods contain very little vitamin D naturally, though some are fortified (enriched) with added vitamin D. A mild lack of vitamin D may not cause symptoms but can cause tiredness and general aches and pains. A more severe lack can cause serious problems such as rickets (in children) and osteomalacia (in adults).

2. SOURCE

A main source of vitamin D is made by our own bodies. It is made in the skin by the action of sunlight. Vitamin D is also found in oily fish, such as salmon, mackerel and sardines, eggs, fortified fat spreads, fortified breakfast cereals and powdered milk. Ultraviolet B (UVB) rays in sunlight convert cholesterol in the skin into vitamin D. For a fair-skinned person, it is estimated that around 20-30 minutes of sunlight on the face and forearms around the middle of the day 2-3 times a week is sufficient to make enough vitamin D. People with darker skin and the elderly, the amount of time needed exposed to sunlight to make enough vitamin D can be much more than this.

3. DEFICIENCY

Children with severe deficiency may have soft skull, muscle pains or muscle weakness, Poor growth, Tooth delay, more prone to infections etc. Rarely, an extremely low vitamin D level can cause weakness of the heart muscle (cardiomyopathy). Adults with severe deficiency may have General tiredness, vague aches and pains, Bones can feel painful to moderate pressure, pain often also occurs in the lower back, hips, pelvis, thighs and feet.

4. CLINICAL TEST

The most accurate way to measure how much vitamin D is in your body is the 25-hydroxy vitamin D test. In the kidney, 25-hydroxy vitamin D changes into an active form of the vitamin. The active form of the vitamin can be measured through a blood test. The active form of vitamin D helps control calcium and phosphate levels in the body. The normal range is 80 to 120 nanomols per litre (nmol/L).

5. TREATMENT

Vitamin D deficiency is easily treatable. The treatment is to take vitamin D supplements. This is a form of vitamin D called ergocalciferol or calciferol. Vitamin D can be given as an injection or as a medicine (liquid or tablets). The generally recommended daily dose of vitamin D is 400 IU. Prolonged massive intake may result in hypercalcemia, confusion and cardiac arrhythmias.

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<http://www.discovery.org.in/md.htm>

6. CONCLUSION

A main action of vitamin D is to help calcium and phosphorus in our diet to be absorbed from the gut. Calcium and phosphorus are needed to keep bones healthy and strong. So, vitamin D is really important for strong and healthy bones. It seems to be important for muscles and general health. There is also some evidence that vitamin D may also help to prevent other diseases such as cancer, diabetes and heart disease.

REFERENCES

1. Shashi K Agarwal. Inter-Arm Blood Pressure Difference and Severe Vitamin D Deficiency. *Medical Science*, 2014, 10(37), 31-36