



مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
مؤسسة عامة - Gen. Org.



For Better Health Series (13)

Vitamin D Deficiency, Fact or Exaggeration?

Hussein Raef, MD
Consultant Endocrinologist

Although vitamin D deficiency is an ancient health problem that led to rickets in children or osteomalacia in adults, especially with the emergence of industrial societies in Europe due to malnutrition and less exposure to the sun, this topic has taken a large portion of attention during the last two decades due to what is rumored on the great prevalence of vitamin D deficiency in the world, including the developed countries, and the positive role of vitamin D in many health matters, including immunity, cancer, diabetes, hypertension and heart disease! What is the truth behind that?

Role of Vitamin D in Bone Health and Its Deficiency Causes

Certainly, vitamin D and calcium are elements for strong bones and maintaining them with age. The most important role of vitamin D is to facilitate the absorption of calcium from foods in the intestine, and without it this will not be attained enough. The severe deficiency of these two components leads to rickets and osteomalacia, and in lighter cases, bone pain and weakness in bones. Our country is one of the regions where these problems are relatively frequent, so why?

Vitamin D is manufactured in the body and begins from the skin by exposure to sunlight and ultraviolet rays. It can also be available in some foods, but it is limited, such as fish and liver, because it is not present in abundance unless it is added to food, such as supporting milk with vitamin D. This explains the prevalence of its shortage in our country because of the quality of dress and customs and avoiding sun, exposure despite its availability. Consequently, avoiding this deficiency will be either by exposure to the sun for 30 minutes a day between 9 a.m. and 4 p.m. where UV rays are available or eating foods rich in vitamin D which are limited or taking it as vitamin supplement in a dose of 1400-1000 units per day. (Some prefer weekly doses 500-100,000 or monthly 50,000 units).

Role for vitamin D in preventing other diseases and is there a need to higher amounts to prevent them?

These allegations were thoroughly researched by the Institute of Medicine due to command of the American and Canadian government, and although there are indications of vitamin D role in many cells of the body and perhaps its functions, it has been found that there is no scientific evidence that taking large amounts of vitamin D prevents any of the aforementioned diseases such as cancer, diabetes and heart diseases, and the claim that the body needs a very high level of vitamin D is not scientifically proven.

What Is the Moderate and Scientific Position of Vitamin D?

The report of the mentioned institution recommended moderate positions, which can be summarized as follows:
First: The person usually needs 600-1000 units of vitamin D and 1 gram of calcium per day, which is slightly more during adolescence for bone growth and in the elderly due to poor absorption. This can be obtained by the mentioned methods from sun exposure, or from foods rich in vitamin D or by taking vitamin D supplement as 400-1000 units per day. Taking into consideration that a sharp increase in the level of vitamin D may lead to high calcium level and kidney damage. As for high doses, they are used only for severe deficiencies and under medical supervision.

Second: The acceptable level of vitamin D if measured is 20 ng / ml (50 nmol / l) or more and not necessarily to have the very high levels that are circulating, because this level is sufficient for bone health in most cases.

Third: The report did not find any necessity to measure vitamin D level that is common these days except in special cases where the doctor doubts a severe deficiency due to an imbalance in the level of calcium and phosphates or suspicion of rickets and osteomalacia or when there is an unexplained osteoporosis..