

VITAMIN D

Deficiency is Today's Challenge



“Statistics show a third of Americans have insufficient levels of vitamin D, with a leading cause being lack of sun exposure.”

Most people are familiar with vitamin D's role in preventing rickets in children and in helping the body absorb calcium from the diet. Recently, research has shown that vitamin D is important in protecting the body from a wide range of diseases. Disorders linked with vitamin D deficiency include stroke, cardiovascular disease, osteoporosis, osteomalacia, several forms of cancer, some autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, type I diabetes, type II diabetes, depression and even schizophrenia.

Vitamin D is actually a prohormone and not technically a vitamin: a vitamin is defined as a substance that is not made naturally by the body but must be supplied in the diet to maintain life processes. But in fact, we make most of our vitamin D by the action of ultraviolet light (sunlight) on the vitamin D precursor that is found in our skin. We only get very small amounts of vitamin D from our diet, although increasingly it is added to foods eaten by children, in an attempt to prevent rickets in the population.

A major cause of deficiency is not getting enough sun. This is common in northern climates where people don't spend much time outdoors, but even in countries near the equator, women in particular often have much of their skin area covered for cultural reasons, and the use of sunscreen also blocks the formation of vitamin D in the skin.

Vitamin D is metabolized by the liver to a storage form of the vitamin, which circulates in the blood until needed. Enzymes in the kidneys metabolize it further to form the highly active hormone that is involved in essential biochemical processes throughout the body.

Testing for vitamin D is therefore an important screening test, especially if you spend much of your time indoors, or live in a colder climate. The ZRT blood spot test measures both the natural form of Vitamin D (D3) as well as D2, the form that is used in many supplements. So testing can be used to monitor vitamin D supplementation to ensure you are getting the right amount for optimum health.



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Who is at Risk for Deficiency?

The Elderly

Amounts of the vitamin D originator in the skin decrease with age, therefore elderly people are particularly prone to deficiency. Living in rest homes or becoming home-bound can limit exposure to sunshine. Additionally, muscle weakness and osteoporosis associated with vitamin D deficiency make the elderly more susceptible to falling and fracture risk, and studies show that vitamin D supplementation may decrease the risk of fractures.

Dark-Skinned People

Because people with darker skin have higher levels of melanin, which can block the action of sunlight on our vitamin D precursor, they may require much longer sunlight exposure than people who are fair skinned.

People with limited sunlight exposure, people living at northern latitudes or people who have limited sunlight exposure because of their working environment or cultural dress rules may have low vitamin D levels.

Musculoskeletal Pain Sufferers

People with symptoms of hypothyroidism, non-specific musculoskeletal pain, chronic low back pain, or fibromyalgia are frequently found to have low vitamin D levels and show clinical improvement

after supplementation. Vitamin D screening is strongly recommended in people with muscle and joint pain.

Overweight or Obese People

Vitamin D can be locked up in the fat stores of obese people, who have been found to have lower levels of circulating vitamin D and are at risk of deficiency.

Breast-fed Infants & Children with Limited Sunlight Exposure

All children require adequate circulating vitamin D to prevent rickets. Dark-skinned children and those who spend much of the day inside daycare centers are at risk of deficiency, and breast-fed children often receive inadequate amounts of vitamin D, particularly when their mothers are deficient.

Giving vitamin D supplements to nursing mothers, or the use of cod liver oil and other vitamin D supplements in infants and children, can reduce the risk of developing type I diabetes in childhood.

Vitamin D screening has been recommended as a routine part of the annual physical examination. Blood spot testing offers a quick and easy test method. Deficiency does not have obvious symptoms, but increases your risk for more serious diseases.

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