

News You Can Use

Vitamin D3

It is said that vitamin D3 deficiency is a national health crisis of monumental proportions. It was known in the 1920s that vitamin D deficiency was the cause of rickets in children. In 1928, the Nobel Prize in chemistry was awarded to the scientist who discovered the precursor to Vitamin D3 derived from cholesterol and converted to Vitamin D3 by the action of the UV in sunlight on the skin.

The US, and many other countries, mandated the addition of Vitamin D3 to milk and other products in the 1930s and we knew we could get vitamin D3 from fish and so generations of children grew up detesting that mandated spoonful of cod liver oil. Yet rickets are being sporadically reported around the US, particularly among infants exclusively breast-fed by mothers who are deficient themselves.



Experts tell us that Vitamin D3 deficiency is widespread in the population and doubles the incidence of many cancers and other diseases. Fortification of milk and other foods as well as exposure to sunshine was thought to be enough but 85% of people are estimated to be deficient in vitamin D3.

Vital for both men and women, important at every stage of life, vitamin D3 promotes calcium's absorption and functions for teen's and children's healthy teeth and bones, prevents loss of bone mass, and treats bone disorders. It protects against adult and elderly muscle weakness and immune system issues, and lowers the risk of colon, breast, and prostate cancers. Rheumatoid arthritis and psoriasis is improved with vitamin D3. Vitamin D3 prevents/treats rickets and postmenopausal osteoporosis. The vitamin also treats hypoglycemia, Multiple Sclerosis and the development of Type 1 diabetes. Vitamin D3, (cholecalciferol), is necessary for retaining bone density and for maintaining the immunity against cancers, heart disease, diabetes, weakness, muscle wasting and osteoporosis, among other disorders.

Muscle pain, weak bones/fractures, low energy and fatigue, lowered immunity, symptoms of depression and mood swings, and sleep irregularities may characterize Vitamin D3 deficiency.

As we age, our bodies slowly lose the ability to mobilize vitamin D, a process that lowers our calcium absorption rates. This creates a higher risk of osteoporosis, particularly in post-menopausal women. Moreover, people who have a reduced capacity to mobilize vitamin D often weigh more and have more body fat than those with full capacity. In the past 20 years multiple studies have shown a correlation between higher blood levels of vitamin D and leaner body mass.



Another area of vitamin D research is its relationship to depression. Seasonal affective disorder, or SAD, is a situational mood disorder brought on by decreasing daylight in the winter months. High doses of vitamin D during these months have proven to be a very effective natural remedy for SAD, leading most practitioners to believe that normal neurotransmitter function depends in part on adequate vitamin D synthesis.

Canada's public health agency has announced plans to analyze the effect of Vitamin D3 levels on the severity of flu symptoms. The study was launched last year with the intention of studying Vitamin D3's impact on seasonal influenza. However, as fear of H1N1 (formerly known as Swine flu) epidemic spreads around the world, the agency has modified the study plan to explore Vitamin D3's effect on the severity of H1N1 infections. This may quickly lead to a recommendation to use Vitamin D3 as a supplement to lessen the severity of the illness.

Human skin makes vitamin D3 when exposed to ultraviolet rays of the sun. Bare skin needs at least 10-15 minutes of exposure to direct sunlight every day to produce the vitamin D you need. However, even during summer most people get very little sun exposure. Tanning provides plenty of Vitamin D3. People can receive an ample supply of Vitamin D3 from the sun, but with the increased awareness of cancer from sun exposure, those who avoid the sun or those who apply heavy sun block may suffer from a Vitamin D3 deficiency. Few foods offer adequate Vitamin D3 but fish, cod liver oil and eggs provide small amounts of the hormone.



The body itself makes vitamin D when it is exposed to the sun

Due to American's changing habits of everyday life with more and more time indoors and use of sun block protection against skin cancer, the standard recommendation may increase, according to the Institute of Medicine, which sets the minimum daily requirements. The risk of taking too much supplemental Vitamin D3 is very low.

In an editorial in the March 2007 edition of the American Journal of Clinical Nutrition, a prominent group of researchers from leading institutions such as the University of Toronto, Brigham and Women's Hospital, Tufts University and University Hospital in Zurich, Switzerland, lashed out at the conventional media for its inaccurate reporting of Vitamin D supplementation.

The researchers went on to write that, "The balance of the evidence leads to the conclusion that the public health is best served by a recommendation of higher daily intakes of Vitamin D. Relatively simple and low-cost changes, such as increased food fortification or increasing the amount of Vitamin D in Vitamin supplement products, may very well bring about rapid and important reductions in the morbidity associated with low Vitamin D status."

Dr. R. Vieth, one of the foremost authorities on Vitamin D3 supplementation, has extensively studied Vitamin D, and lamented the low requirements for Vitamin D3 in a recent issue of the Journal of Nutrition: "Inappropriately low UL [upper limit] values, or guidance values, for Vitamin D have hindered objective clinical research on Vitamin D nutrition; they have hindered our understanding of its role in disease prevention, and restricted the amount of Vitamin D in multivitamins and foods to doses (that are) too low to benefit public health."

Experts have estimated that supplementation of 1,000 IU to 2,000 IU of Vitamin D3 a day could reduce the national incidence of many diseases by fifty percent or more. Federal authorities are revising recommended guidelines, discussion is under way among medical experts on just how much supplementation should be advised, keeping in mind the fact that Vitamin D3 is not a typical vitamin and has many effects more typical of a hormone.

Your body can't create vitamin D on its own. Nowadays vitamin D3 supplements are widely recognized as the superior, more bio-ready form for use in the body. These days, most commercial milk suppliers fortify their products with vitamin D in the form of *ergocalciferol* (also known as D2) or *cholecalciferol* (D3). Some orange juice makers are doing the same, and like many food fads, you can soon expect to see lots of other products claiming to be good for you because they're fortified with vitamin D. While the amount in these beverages is enough to ward off malnutrition, you'd have to drink gallons a day to reach optimal levels.



Our bodies are amazingly efficient. During the summer months, even as little as 15 minutes in the sun (without sunblock) in the early morning and late afternoon is enough for most light-skinned individuals to create an ample supply of vitamin D. Skin with more pigment (melanin) may require up to 40 minutes. It's still important to protect your skin, particularly on your face and scalp, during the sun's peak hours (11:00 AM – 2:00 PM). There have been some studies that suggest that skin washing immediately after sunbathing may remove D3 from the skin before it has been assimilated by the body; however data on this remains inconclusive.

Geographical and seasonal considerations can easily be addressed by supplementation. Supplements of Vitamin D3 are remarkably inexpensive, especially given the fact that as supplements go, it is the one most important for health at every stage.

Yours in Good Health!

Sincerely,

Dr. Jack and Chris Ritchason
Back to Herbs Team

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