Vitamin D: The New Guidelines

Can supplementing the diet with vitamin D prevent the development of certain chronic diseases? Researchers have known for many years that vitamin D intake promotes good bone health by helping our bodies to absorb calcium, but they are now thinking that it may have a protective effect against developing diabetes, cancer, heart disease and metabolic syndrome (high blood cholesterol and triglycerides, high blood glucose, increased waist size and high blood pressure, which is a risk factor in developing type 2 diabetes). In addition, research suggests that vitamin D intake helps maintain a healthy immune system.

Vitamin D is a fat-soluble vitamin that is not found naturally in many foods. The best sources of vitamin D in the diet are fatty fish (salmon/trout), egg yolks, beef liver and foods that are fortified with vitamin D (milk and some orange juices).

Luckily, the body does not need dietary sources of vitamin D to achieve sufficient levels in the bloodstream. The body can make adequate amounts of vitamin D by utilizing sunlight’s ultraviolet beta (UVB) rays to convert and inactive form of vitamin D into the active, usable form. The inactive form of vitamin D comes from cholesterol produced by the liver and is transformed in the kidneys into the active form, 1,25-dihydroxycholecalciferol, with help from the sun’s UVB rays. Unfortunately, the UVB rays are the same rays that cause sunburn and skin damage; however, the body can make adequate amounts of vitamin D from limited sun exposure – 5 to 15 minutes in the sun without sunscreen 2 to 3 times per week.

Because of the benefits of vitamin D intake, the recommended dietary allowance (RDA) of vitamin D has been increased for all age groups. The new guidelines are as follows:

- Infants – 12 months: 400 IU*/day
- 1 year – 70 years: 600 IU/day
- 71+ years: 800 IU/day

*International Unit. 40 IU = 1 microgram vitamin D.

Some researchers suggest an intake for adults as high as 1,000 – 4,000 IU/day. However, when intake exceeds 10,000 IU/day, a significant risk for vitamin D toxicity is present. Maintaining an adequate intake of vitamin D should keep blood levels up past the recommended 30 nanograms/ milliliter (ng/ml). Although no current standard for determining vitamin D deficiency exists, most health experts agree that levels below 30 ng/ml are insufficient.

The take-home message for vitamin D intake is as follows: Americans should be encouraged to increase time spent outdoors in the sunlight (which shouldn’t be difficult with the summer Texas sun!) and eat foods high in vitamin D to obtain the health benefits of adequate vitamin D intake!
References

Dietary Guidelines for Americans 2010, [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov)


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