Vitamin D deficiency

Dear Alice,

I recently had lab work done that identified a vitamin D deficiency. My level was 8 and my doctor says that 30 is considered a normal level. I was then prescribed a vitamin D2 pill to help bring my levels up. I just read something that said vitamin D3 is the preferred type to use as a supplement and that 30 isn?t considered the ?normal? level anymore, that the number should be closer to 40 or 50.

A few questions: Is it better to use D3 or D2? What level is considered normal? What are the effects of vitamin D deficiency?

Answer

Dear Reader,

Ahh, good ?ole vitamin D ? one of the most versatile and important vitamins. When combined with calcium, vitamin D promotes calcium absorption, helps maintain bone health, and is crucial for bone growth and remodeling. Adequate levels of vitamin D can prevent rickets in children and help protect adults from osteoporosis. Vitamin D is also important for regulation of cell growth, neuromuscular and immune function, and reduction of inflammation. Many genes that regulate cell growth, differentiation, and cell life cycle are also regulated in part by vitamin D.

The 25-hydroxy vitamin D test is currently the most accurate way to measure a person?s vitamin D level. Normal levels of vitamin D range between 30 and 74 ng/mL, and levels below 12 ng/mL are considered high risk for vitamin D deficiency. Speaking with your health care provider may help you better understand your test results. Extremely low levels of vitamin D can cause bones to become thin, brittle, or misshapen. Vitamin D deficiency is also associated with an elevated risk of cancers of the colon, breast, and prostate; high blood pressure and cardiovascular disease; osteoarthritis; and immune-system abnormalities.

Those who cannot get adequate sun exposure may consider the use of a vitamin D supplement. People with serious deficiencies may be prescribed weekly doses of up to 50,000 units (I.U.) until their levels are corrected. It appears that at nutritional doses, D2 and D3 supplements are equally effective. At high doses though, D3 may be more effective than D2. Speaking with your health care provider again can help you decide which supplement is best.
for you. The current recommended intake of vitamin D, as established by the Institute of Medicine, is as follows:

- 200 I.U. (5 micrograms, or 0.005 mg) per day from birth to age 50 years old
- 400 I.U. per day for adults ages 50 to 70 years old
- 600 I.U. for adults older than 70 years old
- 1000-2000 I.U. for certain populations, such as sun-deprived individuals, pregnant and lactating women

Aside from vitamin D supplements, most people obtain the recommended amount through exposure to UVB rays in sunlight. Researchers have found that exposure to the sun without sunscreen (except on your face, of course!) between 5 and 30 minutes per day, at least twice per week, can lead to sufficient vitamin D production. Remember though, too much UV exposure can increase your risk of skin cancer. If you’ve already got your vitamin D time covered, cover up your body with adequate clothing and sunscreen.

Unfortunately, very few foods in nature contain vitamin D. Most vitamin D in the American diet comes from fortified foods such as cereal or milk. For example, cow’s milk in the U.S. is fortified with 100 I.U. per cup. Fatty fish and fish liver oils are also good natural sources. Small amounts of vitamin D may also be found in beef liver, cheese, egg yolks, and some types of mushrooms.

It is important to be aware that certain medications can impair the body’s ability to absorb and metabolize vitamin D. For example, corticosteroids (such as prednisone) can reduce calcium absorption and impair vitamin D metabolism. Both phenobarbital and phenytoin (sold as Dilantin), used in preventing and controlling epileptic seizures, increase the metabolism of vitamin D to inactive compounds and reduce calcium absorption. Additionally, the cholesterol drug cholestyramine (sold under Questran, LoCholest, and Prevalite) can reduce the absorption of vitamin D and other fat-soluble vitamins. Make sure your doctor knows if you are taking any other medications.

Here’s to happy bodies and healthy vitamin D levels!

Alice!

Related questions

- Vitamin supplements good for health? [6]
- To supplement or not to supplement my diet [7]
- Time-release dietary supplements [8]
- Vitamin C supplements and birth control effectiveness? [9]

Resources

- Medical Services (Morningside) [10]
- Medical Services (CUMC) [11]