



September 19, 2009 – Grand Rapids, MI

Vitamin D

Vitamin D is hot right now. Even physicians are telling people that they should be taking more vitamin D, and many healthcare professionals don't usually recommend taking supplements. What are they so excited about? Let's take a look—I'll review Vitamin D and explain why everyone's excited.

Sources of Vitamin D

Vitamin D is a fat-soluble vitamin, but unless sardines and other canned fish are regularly on your menu, you aren't getting much of it in the foods you eat. Vitamin D is added to other foods, such as milk and cereals. You can also find it as a dietary supplement form. The cool thing is that your body can also make vitamin D if you're exposed to sunshine for a few minutes every day. More on sunshine later.

Vitamin D is used to help your body build strong bones (1). I can still remember my mother telling me to drink my milk if I wanted to grow big and strong. Mom was right 50 years ago and she would be right today. The calcium in milk is important for bones, and the vitamin D added to milk helps with the absorption of calcium, which helps make bones stronger. If you don't get enough vitamin D from all sources, it can result in an acute vitamin D deficiency. In children, the resulting soft bones are called Rickets or osteomalacia in adults. In modern countries, that rarely happens any more—so why is everyone jacked up about vitamin D?

The Latest Research

Over the past 10 to 15 years, researchers have examined the rates of degenerative disease in relation to yearly sun exposure (2). They've found that persons living north of the 35th parallel have higher rates of depression, heart disease, diabetes, and cancer than those living below it. That line runs through Arizona and Georgia. Viewing maps from the National Cancer Institute, it's pretty clear that the further north you live, the higher the rate of cancer (3); you can check them yourself at the link in the References.

Why did this problem develop? My opinion is that we have lifestyles which keep us locked inside our offices and homes, and we fear skin cancer which makes us lather up with sunblock any time we're going to be exposed to the sun (2). Here's another problem. While we manage to make some vitamin D during the summer to complement our diet in spite of the sunblock, the problem is greater in the winter if you live in the North. The angle of the sun reduces the ultraviolet light to such a low level that we don't produce vitamin D in our skin at all; that may be one of the reasons a Florida vacation feels so good in the winter. As a result, there are significant seasonal changes in our vitamin D levels, and this seems to be tied to disease.

Why didn't anyone notice this relationship before? The simple answer is that no one was looking. Dr. Robert Heaney outlined the problem in a paper in *The Journal of Nutrition* (4). Research studies are designed to examine acute changes in vitamin or mineral status, similar to the way studies examine the effectiveness of medications. But a sub-clinical deficiency can take years to develop and unless a researcher is looking for it, it might not be found. There may also be confounding variables such as how long a person has lived in a northern region, the type of work they do, etc. That's why it took years to discover that type 1 diabetes, high blood pressure, osteoporosis, various cancers, multiple sclerosis, and periodontal disease are all related to low levels of vitamin D intake (5).

The Institutes of Medicine has convened a committee to consider this recent research and update the USFDA's Dietary Reference Intake for vitamin D and calcium if appropriate. Their report is due in 2010. Most experts on vitamin D suggest that 1,000 IU of vitamin D should be the new minimal intake for adults (6). That's not official yet, but it does give you and your physician some guidance. Paula and I take 2,000 IUs vitamin D per day, an amount that's definitely adequate and still safe.

Bottom Line

What should you do in the meantime if your exposure to the sun is limited either by location or by choice? Talk to your doctor and request a blood test for vitamin D. More correctly, it's called a Serum 25-Hydroxyvitamin D test. Based on the latest research, a reading of more than 30 nanograms per milliliter (or greater than 75 nanomoles per liter) is desirable (1,5). Your doctor will let you know where you stand, whether you should take more vitamin D, and if so, how much you should take.

There's always the tendency for us to think if a little is good, more has got to be better. While vitamin D isn't toxic until levels get well into 100,000s IUs per day (7), let's be prudent—we want to reduce our risk of degenerative disease, not cause other problems. Until all the research is in, stick to what your doctor tells you.

What are you prepared to do today?

Dr. Chet

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