'D' depravation: There's no problem with vitamin D intakes to at least 10,000 units per day. But the junkiest science rules with an official safe limit of only 1,000 units

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Financial Post

Wednesday, June 15, 2005

The story of vitamin D safety is complicated, but the issue is very important for public health. In recent scientific publications and conferences, astounding research has come to light about vitamin D intake and its beneficial effects in preventing breast, prostrate and other kinds of cancer. Vitamin D also is important in preventing the incidence of multiple sclerosis, whose prevalence increases as we live in more northerly latitudes, where we get less exposure to the sun's beneficial ultraviolet rays.

To put the new research into vitamin D's benefits into context, smokers who give up smoking reduce their risk of dying of cancer by 30%. When it comes to vitamin D, according to data from various large U.S. health surveys published from the Harvard School of Public Health, Americans who consume the highest amounts of vitamin D through supplements and foods have a 30% lower risk of dying from cancer, compared to people who consume the smallest amounts of vitamin D. No other vitamin comes near to having this kind of impact. As a result of vitamin D's benefits, experts are now recommending that all adults should be taking at least 1,000 IU per day of vitamin D.

The easiest way for you to obtain the benefits of vitamin D is through tanning without sunscreen, thus producing vitamin D via the ultraviolet light that interacts with an oil in your skin and then absorbs it into your body. However, such tanning can cause skin cancer, albeit in relatively small numbers. The logical question to ask is whether taking vitamin D by mouth could substitute for the vitamin D obtained from sunshine. This way, we could avoid the sun without feeling guilty about it.

Here the safety police who tell us to avoid sunshine collide with the safety police who deal with nutrition: You cannot walk into the drugstore without a prescription and purchase a pill that will provide large amounts of vitamin D because large amounts are considered toxic. These groups also believe that sunshine is dangerous. As a result, the two groups guarantee that many Canadians have poor vitamin D nutrition.

No mainstream manufacturer of vitamins sells a product with an amount of vitamin D that exceeds 1,000 international units (IU) a day. Put another way, the most you can buy in a drugstore is one-tenth of what you can obtain by being in the sun.

Executives of vitamin companies tell me their legal departments will not allow them to market products with any more vitamin D because they are afraid of lawsuits from people who -- justified or not -- claim that the company exceeded the official safe limit for vitamin D.

The science of toxicology has been misused by official agencies in North America, Britain and Europe. These agencies have published three independent reports about vitamin D safety that state that adults who consume more than 2,000 IU per day of vitamin D can no longer be assured of safety. They are effectively saying that if you eat an amount of vitamin D equal to one-fifth of what you make by being in the sun, you risk harm. It is like saying that if you are in ankle-deep water on a beach, nobody can guarantee you will be safe if you take one more step.

To establish the vitamin D safety limits, official safety committees focused on some of the worst science in the field. For example, the reason why North Americans cannot buy vitamin D in higher doses is because of one paper published in India in 1984. The Indian researchers observed high blood calcium levels in people taking 4,000 IU a day of vitamin D. No other researchers have ever found that. As another example, in Britain, the official safety committee focused on two patients who had high calcium levels when taking 2,000 IU a day. At the same time, it ignored three people with high calcium who did not take any vitamin D.

I and others have shown no problem with vitamin D intakes to at least 10,000 IU per day. But the junkiest science rules the day for the safety committees. Official nutrition safety committees guarantee that the public will not suffer harm from taking too much vitamin D by forcing the amount of vitamin D in supplements to be so low my laboratory can barely detect their effects.

In a report published last month, the American Academy of Dermatology called for increases in the dietary guidelines for vitamin D. That would take away the need for vitamin D as a reason to spend time in the sun. Their suggestion makes perfect sense from a scientific perspective, but it is at odds with official agencies whose guidelines are the junk science that prevents us from obtaining the vitamin D we need. (In contrast, it is extremely difficult to prove that either vitamin E or vitamin C do anything for adults. As a result, these are touted as safe and you always see these vitamins front and centre on drug store shelves.)

Recently, an expert panel, of which I was a member, concluded that to prevent fractures, older adults should aim for serum 25-hydroxyvitamin D levels that are higher than 75 nmol/L. To guarantee this level, adults need at least 2,000 IU a day of vitamin D. The super conservative science of safety has made it very difficult for them to get this much.

Ultimately, the real context for vitamin D is another healthful substance that the official nutrition committees have ignored -- the rays of the sunshine. There is no doubt that the sun provides a safe and probably optimal supply of vitamin D. Yet thanks to science scares, the public is deprived of the vitamin D it needs through the sun or the bottle.