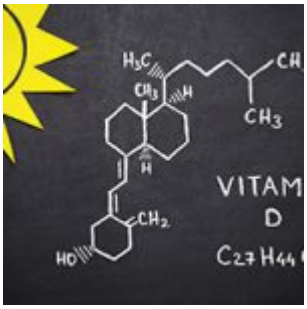
Is the “pandemic” of vitamin D deficiency exaggerated?



Eclipsed by post-election media coverage, this is clearly the big health/nutrition story of the week. The press uncritically parroted the unwarranted conclusions of a *New England Journal of Medicine* op-ed:

- “Vitamin D deficiency widely overestimated, doctors warn”
- “Vitamin D deficiency is over-rated—is your doctor fooling you?”
- “Doctors claim that too much vitamin D is bad for you”
- “Too may people are worried about vitamin D deficiency”

So what’s all the fuss about? The article in question is not a new study, but actually a position paper by members of the Institute of Medicine (IOM) and the Office of Dietary Supplements (ODS) of the National Institutes of Health, scientific bodies entrusted with setting health guidelines for Americans. They are notoriously conservative in their statements about vitamins.

For example, the ODS stated in 2011:

“It is still not possible to specify a relationship between vitamin D and health outcomes other than bone health.”

With regard to cancer they say:

“. . . studies to date do not support a role for vitamin D,

with or without calcium, in reducing the risk of cancer."

As to other conditions, the ODS admits:

"A growing body of research suggests that vitamin D might play some role in the prevention and treatment of type 1 and type 2 diabetes, hypertension, glucose intolerance, multiple sclerosis, and other medical conditions" and that "one meta-analysis found use of vitamin D supplements to be associated with a statistically significant reduction in overall mortality from any cause."

But the ODS then dismisses the evidence and concludes:

"Until [more] trials are conducted, the implications of the available evidence for public health and patient care will be debated." In other words, they say, keep your powder dry with regard to vitamin D for anything but its traditional application to osteoporosis prevention.

And the doses (RDAs) they recommend are paltry: For children 0-12 months, 400 IU; for ages 1-70, 600 IU; and for adults 70 or older, 800 IU.

Flying in the face of these guidelines are studies that demonstrate that many adults taking these dosages continue to suffer from vitamin D deficiency. Moreover, the blood levels they achieve by taking such small amounts are not up to the task of combatting osteoporosis or the many other conditions for which D has been shown helpful.

The authors of the *New England Journal* study that generated all the headlines express their "concern that universal screening based on inappropriate cut points might lead to routine supplementation in generally healthy populations with adequate vitamin D levels."

An interesting statement. It all hangs on their definition of "inappropriate cut points" and "generally healthy."

The would-be arbiters of our vitamin D consumption argue that a vitamin D of 20 ng/ml is adequate for 97.5% of the population. They challenge the notion of vitamin D "inadequacy" which stops short of waiting for a frank deficiency to emerge before advocating that patients take more vitamin D.

And what constitutes a "generally healthy" person? Is it the 1/3 of the populace destined to develop heart disease? Or the 1/4 headed for cancer? Or the estimated 40% of U.S. adults who will develop metabolic syndrome, a precursor to diabetes? Or perhaps the millions of not-yet-sick Americans who will acquire an autoimmune disease? Is "healthy" merely the absence of a serious condition? What happened to the notion of prevention?

By the same rationale, we should only administer statin drugs to those who've already suffered heart attacks or strokes, or who have required stents or bypasses. But "primary prevention" guidelines now urge frequent cholesterol checks and statin use for tens of millions of well Americans! Double-standard?

I suspect that cost-containment is a motivator for health officials advocating against widespread screening for vitamin D deficiency. But if D is as good as many studies suggest, what more cost-effective strategy could be devised to protect Americans from a wide gamut of diseases?

It's ironic that the very week that brought us headlines suggesting we weaken guidelines for D screening and supplementation also brought us stories like these:

- "Vitamin D may increase survival for breast cancer patients"
- "Vitamin D status linked to bipolar disorder, according to study"
- "Low vitamin D linked with higher asthma risk"

Moreover, the headlines that suggest that "too much Vitamin D

is bad for you" are a total misrepresentation. While the authors of the *New England Journal* article express concern that liberalizing the guidelines for vitamin D might cause some patients to exceed the Upper Limits of supplementation set by the IOM (4000 IU/day), a recent Mayo Clinic study found that vitamin D toxicity is rare in people who take supplements.

Only one case over the 10-year study period was identified as true acute vitamin D toxicity; the person's vitamin D level was 364 ng/mL (greater than 100 is considered too high). The individual had been taking 50,000 IUs of vitamin D supplements every day for more than three months(!), as well as calcium supplements. With this sole exception, researchers found no increased risk of high blood calcium or kidney stones even in aggressive supplementers.

Under careful monitoring, MS patients have safely received therapeutic doses of 10,400 IUs/day ; A recent study found skin benefits without adverse effects in psoriasis and vitiligo patients taking 35,000 IUs/day for six months while following a low-calcium diet.

Michael Hollick, a professor of medicine, physiology and biophysics at Boston University School of Medicine, states: "The evidence is clear that vitamin D toxicity is one of the rarest medical conditions and is typically due to intentional or inadvertent intake of extremely high doses."

(Nevertheless, if you're contemplating high-dose D supplementation, you should do so under the supervision of an experienced health practitioner)

Clearly there is a big divide among vitamin D researchers, and the recent *New England Journal* article represents the most conservative slice of the spectrum of opinion. In 2007, in the self-same *New England Journal*, Dr. Hollick published a landmark paper that extended the boundaries of our

understanding of the applicability of vitamin D to a wide gamut of medical conditions: “Of great interest is the role it can play in decreasing the risk of many chronic illnesses, including common cancers, autoimmune diseases, infectious diseases, and cardiovascular disease,” he wrote.

While researchers and health authorities make up their minds, my advice is to keep checking your vitamin D, and target higher than the bare minimum to safeguard yourself against disease. Let’s hope that this latest influential *New England Journal* article doesn’t embolden insurers to be even more stingy about paying for proper vitamin D screening and monitoring!

To keep up with the latest on vitamin D research, keep following *Intelligent Medicine* for our frequent updates on radio, in podcasts, and in our newsletter. An additional resource is the Vitamin D Council.