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Vitamin D: The New RDA

The scientists and physicians have convened. They've read every article known to mankind from all around the world on calcium and vitamin D. They've considered every possibility and have announced the new Recommended Dietary Allowance for vitamin D (1). In this message, I'm going to talk about the new RDA. I'll also comment on the press reports that suggest that too much vitamin D can be dangerous according to some of the committee members that set the new RDAs. So let's take a look at the new RDA for vitamin D and see if there's any merit to the warning against using more than recommended.

Vitamin D: RDA

The Committee examined every possible piece of research that has ever been published on vitamin D. The real focus was on the potential relationship between the lack of vitamin D and diseases other than bone diseases such as osteopenia that have been reported over the past five years: multiple sclerosis, diabetes, depression, and hypertension among others. They concluded that the data were not clear as to the relationship between vitamin D and those diseases. After all the hype, that seems like such a let down. But here's something that you have to consider: they're setting the amounts for an entire society, not just an individual. They must be conservative in your approach because if they set it too high, some people will be getting excess amounts and it could be hazardous to their health. As a result, the Committee tripled the current recommendation of 200 IU per day; the RDA for vitamin D is now set at 600 IU per day for all adults.

Is that enough? I don't think there's any doubt that our society is deficient in vitamin D. Raising the RDA to 600 IU will increase the levels in the society, but slowly. For a society, that's a reasonable approach. There are over 310,000,000 people in the U.S. and another 34,000,000 people in Canada who are affected by this recommendation. If the increase results in a 1% decrease in some of the aforementioned diseases over the next 10 years, that will be a huge benefit.

But societal considerations aside, is 600 IU per day the correct amount for everyone? Probably not, but I'll address that later in the message. For now, let's take a look at the Tolerable Upper Limit and whether excess vitamin D can be hazardous to your health.

Vitamin D: Tolerable Upper Limit

The Tolerable Upper Limit (UL) for vitamin D for adults was set at 4,000 IU per day. Based on what was written in the report, I think it's too conservative. The Committee members reported that they couldn't really find any clear indication from the literature as to how much vitamin D was too much. There are a couple of reasons for that.

First, medical ethics prohibit researchers from conducting studies that may harm the subjects. I think that's understandable. Second, the population that might be harmed by excessive intake such as subjects with kidney disease would not be selected as subjects in the studies. So you're limited in the type of subjects—eliminating perhaps the exact population that could be helped by extra vitamin D—and you're limited to how much vitamin D you can give them. Add the fact that most studies won't last long enough to find out whether the additional vitamin D helps or harms, and you have a real dilemma. What do you do?

You turn to case studies: people who took excessive amounts of vitamin D and the results. There were about 20 such reports cited in the report. Two stood out to me. In the first case, a person took 100,000 IU vitamin D; in the second, they took 300,000 IU vitamin D. As you might expect, their serum levels of vitamin D were very high. At

those levels of intake, it can cause calcium to be released from the bones; that increases the strain on the kidneys and can cause kidney damage, which is why they showed up at their doctor's office. They didn't feel good. But there's one more piece of information that's important. The first case was a subject who took 100,000 IU of vitamin D for 10 years! The second with 300,000 IU took that amount for six years. Even at those ridiculously high amounts, it took years for any symptoms to show up.

I'm not suggesting that anyone take anywhere near those amounts, but if it can take that long at those amounts for negative effects to occur, why set the UL so low? The committee acknowledged that they could not find anything under 50,000 IU per day that was hazardous, yet they set the UL at 4,000 IU per day. I think that even 10,000 IU per day would be conservative. But there's a way to supplement vitamin D responsibly and take the guesswork out of it.

The Bottom Line

Increasing the RDA for vitamin D was an important step in promoting bone health. While conservative in my opinion, it still triples the prior recommendation. Whether it will have a significant effect on other conditions remains to be seen.

But how can you determine how much vitamin D you should take? Base it on your vitamin D blood test. The Committee reported that there was no evidence that a serum 25(OH)D test between 30-50 ng/mL was harmful; that coincides with what most vitamin D experts recommend. Therefore, that would seem like a reasonable way to determine your vitamin D intake. If you're below that amount, take the UL until you get it into the healthy range; work with your physician in adjusting the dose until you've reached the correct vitamin D level. Then just maintain that. In my opinion, that's the responsible thing to do.

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Dr. Chet

Reference: Institute of Medicine 2011. Dietary Reference Intake for Calcium and vitamin D. Washington, D.C. The National Academies Press

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