

Millions may be taking vitamin D unnecessarily, analysis suggests

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Health experts disagree on safe levels needed to prevent illness.

(HealthDay)—Under the latest guidelines from the Institute of Medicine, it's possible that almost 80 million Americans who've previously been considered as having low levels of vitamin D don't need supplements of this nutrient at all, according to a new study.

Older guidelines had suggested that anyone with a blood level of [vitamin D](#) that was less than 30 [nanograms](#) per milliliter (ng/mL) needed to boost their levels, but the newer Institute of Medicine (IOM) guidelines say that a minimum level of 20 ng/mL is sufficient.

However, not all experts agree with the new guidelines from the IOM, a nonprofit American organization that dispenses health advice.

"The IOM guidelines are so different than the Endocrine Society's

guidelines that this study will just add to the controversy," said lead study author Dr. Holly Kramer, an associate professor of medicine at Loyola University Medical Center in Maywood, Ill. "We really need clinical trials to settle the whole issue, but what's clear is that these threshold levels make a huge difference in how many people would be taking vitamin D."

The Endocrine Society is an international group of endocrinologists.

Why worry about your vitamin D intake? Vitamin D is essential for good [bone health](#), and it's necessary to prevent the disease known as rickets. The nutrient has also been implicated as potentially beneficial for a number of conditions. Low levels of vitamin D have been associated with higher risks of some [autoimmune diseases](#), and may make people more susceptible to infection.

In addition, noted Dr. Robert Heaney, a professor of medicine at Creighton University in Omaha, Neb., low vitamin D has also been associated with [high blood pressure](#), [insulin resistance](#) and the [metabolic syndrome](#)—a group of symptoms that signal higher risk for diabetes and heart disease.

Heaney is a member of the Endocrine Society's task force on vitamin D guidelines.

"Vitamin D is necessary in most cells in our body, probably all cells," Heaney said. "When you have adequate vitamin D, all of the body's systems tend to work well." But, "there is no consensus on what normal levels are in the field of nutrition," he added.

For the current study, Kramer and her colleagues reviewed data on more than 15,000 adults from the third U.S. National Health and Nutrition Examination Survey and linked that information to 18 years of

information from the National Death Index to determine if vitamin D had an effect on mortality rates.

The researchers found that in people with impaired kidney function, about 35 percent had vitamin D levels below 20 ng/mL. In people with healthy kidneys, about 30 percent had levels below 20 ng/mL, according to the study.

But for the older, higher vitamin D threshold, 76.5 percent of people with impaired kidney function would be considered to have low levels of vitamin D, as would 70.5 percent of people with healthy kidneys.

"Even under the new guidelines, there are still a fair number of people who are considered deficient or insufficient," Kramer said.

There was a big difference in mortality rates for those who had the lowest levels of vitamin D—less than 12 ng/mL—compared to those with levels between 24 and 30 ng/mL. But after that, Kramer said, there wasn't much difference in mortality between the groups.

Heaney also noted how findings varied according to vitamin D levels.

He said that while there wasn't a huge effect from group to group depending on vitamin D levels, there was "a continuing downward trend" with less mortality as vitamin D levels went up.

So where does that leave people trying to decide whether to take the supplements?

Kramer said that right now the decision may depend on your personal situation, and suggested talking to your doctor about whether extra vitamin D is necessary for you. People with certain medical conditions need to be on vitamin D. But, she said that others are taking supplements

who don't need to and that it's just a waste of their money.

For his part, Heaney noted that taking vitamin D and other nutrients may be akin to changing the oil in your car. "If you don't change the oil, your car runs well now, but it may break down sooner," he said.

In terms of side effects, Kramer said, too much vitamin D can increase the risk of kidney stones, but in general, it's a well-tolerated supplement. The upper safe limit for daily intake is 4,000 international units, according to the U.S. Office of Dietary Supplements, though most people take a much lower dose.

Results of Kramer's study are published in the Oct. 24 issue of the journal *PLoS ONE*.

More information: To learn more about vitamin D, visit the U.S. government's [Office of Dietary Supplements](#).

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