

Why you should take vitamin D this winter

January 8 2024, by Cynthia McCormick Hibbert



Should you supplement with these vitamin D capsules? Credit: Matthew MODOONO/Northeastern University

The days are finally getting longer, but the sun is still low in the sky—and that means you probably aren't getting your recommended daily allowance of vitamin D through solar rays alone.

Is a [vitamin D](#) supplement in order?

"It's something that could be helpful for many people," says Northeastern clinician researcher Carla Bouwmeester.

She says recent studies have shown that most people in the United States are not getting the recommended dietary amount of vitamin D, which is 600 international units (15 mcg) for those [ages](#) 1–70.

Unlike with some other vitamins, supplementation with vitamin D is relatively safe—it's difficult, although not impossible, to consume too much, says Bouwmeester, a clinical professor of pharmacy and health system sciences at Northeastern's Bouvé College of Health Sciences.

The role of vitamin D

Vitamin D is best known for increasing the efficiency of calcium absorption and promoting bone growth, Bouwmeester says.

But it also plays a complex and still mysterious role in promoting health throughout the bodily systems, she says.

"It's also used as a signaling molecule to help maintain levels of other chemicals in the body. Things like the calcium level in your blood and the phosphate level in your blood are all partly controlled by vitamin D," Bouwmeester says.

"It's really used in so many different ways," she adds.

"Vitamin D has been studied for just about everything," including cancer, depression and cardiovascular health, she says.

"My understanding of most of these [clinical trials](#) is there was no

smoking gun and vitamin D alone is not going to cure these conditions for everyone. But there have been [observational studies](#) or population studies where researchers see an association where vitamin D supplementation may help with the symptoms."

Winter means less sun and less D

"One of our primary sources of vitamin D is the sun. UVB light from the sun can activate vitamin D synthesis in your skin," Bouwmeester says.

Winter poses a barrier to absorbing vitamin D through the sun both because colder weather means more clothing covering the skin and because there are fewer hours of direct sunlight.

In fact, research presented in [Health magazine](#) says winter sunlight is just too weak to promote vitamin D synthesis in locations above the 37th parallel—basically every place north of Los Angeles on the West Coast and north of North Carolina on the East Coast.

Foods such as salmon, tuna, beef liver, fish liver oil, fortified milk and cereal and mushrooms are excellent dietary sources of vitamin D, Bouwmeester says. "But not everyone can get an adequate amount from their diet alone."

Fortunately, vitamin D is one of the safer supplements to take, she says.

Why vitamin D is safe

Bouwmeester says the recommended daily allowance for vitamin D is 600 international units (15 mcg) for individuals between the ages of 1 and 70.

After age 70, the RDA goes up to 800 international units (20 mcg) per day due to the aging body's inability to absorb the vitamin as efficiently, she says.

While the RDA is the lower limit established by the Institute of Medicine, the institute also sets values for the tolerable upper intake level (UL) that are quite a bit higher, Bouwmeester says.

"The UL for vitamin D is 4,000 international units (100 mcg) a day. That's a really wide window, which says to me as a pharmacist that vitamin D is a relatively safe supplement."

"I think it's safe to take vitamin D supplements that are in the range of 600 to 1,000 international units," says Bouwmeester. "It's very unlikely you would have any adverse effects."

Older people in nursing homes may benefit from 2,000 to 3,000 international units a day, she says.

Too much vitamin D can cause nausea and vomiting, dehydration, and increased calcium levels that can lead to kidney stones, Bouwmeester says.

And studies of mega dosing [older people](#) aged 70 and older with a single yearly dose of 500,000 international units or 50,000 to 100,000 international units monthly actually showed an increased risk of falls, she says.

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