

Most kids in northern latitudes don't get enough vitamin D in winter

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“Improvements to diet and increased awareness are considerations for closing the vitamin D gap when the sun can’t do the job,” said Jennifer Sacke. Credit: Ingimage

Living in northern latitudes such as New England means not only shorter days and less sunlight during the winter, but also far less vitamin D, the

"sunshine" vitamin. And adequate vitamin D intake, which is crucial to bone health, can be difficult for children in particular to achieve through food alone.

In a new study, researchers from the Friedman School of Nutrition Science and Policy at Tufts and colleagues conducted a clinical trial administering three supplemental doses of vitamin D in Boston area schoolchildren who were vitamin D deficient or at risk for deficiency. They found that bringing the majority of participants safely to sufficiency took a dose that was more than three times the recommended daily allowance for vitamin D for [children](#).

The study, published online last month in the *Journal of Clinical Endocrinology & Metabolism* and led by Jennifer Sacke, associate professor of nutrition at the Friedman School, sought to determine whether the current recommended daily allowance (RDA) was enough to raise blood levels to nutrient sufficiency in children in northern latitudes, especially across the winter months when blood levels tend to fall. The randomized double-blind clinical trial investigated the effect of three supplemental doses of vitamin D₃— the current RDA of 600, as well as 1000 or 2000 IU per day—administered over six months in more than 600 schoolchildren ages 8 to 15 in the greater Boston area.

In previous work with urban schoolchildren around Boston, the researchers found that upwards of 90 percent of the children they were studying were vitamin D deficient, prompting them to question what was needed to increase levels to sufficiency. Deficiency is also reported to be more common among those with obesity, darker skin pigmentation, and/or living in the northern portion of the United States.

At the start of the study, 40 percent of the children were either vitamin D deficient or severely deficient ([blood levels](#)

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