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Increase in use of high-dose vitamin D supplements

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From 1999 through 2014 the number of U.S. adults taking daily vitamin D supplements above the recommended levels increased, and 3 percent of the population exceeded the daily upper limit considered to possibly

pose a risk of adverse effects, according to a study published by *JAMA*.

A 2011 report concluded that vitamin D was beneficial for bone health but noted possible harm (e.g., abnormally high levels of calcium in the blood, soft tissue or vascular calcification) for intakes above the tolerable upper limit of 4,000 IU daily. The recommended dietary allowance for vitamin D is 600 IU/d for adults 70 years or younger and 800 IU/d for those older than 70 years. Using data from the nationally representative National Health and Nutrition Examination Survey (NHANES), Pamela L. Lutsey, Ph.D., M.P.H., of the University of Minnesota, Minneapolis, and colleagues assessed trends in daily supplemental vitamin D intake of 1,000 IU or more and 4,000 IU or more from 1999 through 2014.

The analysis included 39,243 participants. The researchers found that the prevalence of daily supplemental vitamin D use of 1,000 IU or more in 2013- 2014 was 18.2 percent; in 1999-2000, it was 0.3 percent. In 2013-2014, prevalence of daily supplemental intake of 4,000 IU or more was 3.2 percent; this figure was less than 0.1 percent prior to 2005-2006. Trends of increasing supplemental vitamin D use were found for most age groups, race/ethnicities, and both sexes. In 2013- 2014, intake of 4,000 IU or more daily was highest among women (4.2 percent), non-Hispanic white individuals (3.9 percent), and those 70 years or older (6.6 percent).

A limitation of the study is that data were self-reported; however, participants were asked to bring supplement bottles to aid in reporting.

"Characterizing trends in vitamin D supplementation, particularly at doses above the tolerable upper limit, has important and complex public health and clinical implications," the authors write.

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