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Are You Getting Enough Vitamin D?—Controversy over New Dietary Reference Intakes (DRIs)

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In late November 2010, the National Academy of Science's Institute of Medicine (IOM), an independent nonprofit organization that provides unbiased and authoritative advice about health to those in government and the private sector, released a report discussing new vitamin D (and calcium) DRIs* for North Americans¹. Governmental regulatory agencies of the food and dietary supplement industries rely on the IOM's DRIs to help establish nutrition labeling guidelines.



Highlights from the IOM Report

Here are the vitamin D highlights from the report:

- The previous vitamin D Recommended Dietary Allowance (RDA)*, set back in 1997, has been increased—from 200 IU* per day for children and adults (up to the age of 50) to 600 IU per day for children and adults (up to the age of 70). For adults aged 71 years and older, the RDA has been increased from 600 IU to 800 IU per day.
- The Tolerable Upper Intake Level (UL) was doubled from 2,000 IU per day to 4,000 IU per day for adults and children over the age of 9 years.
- The IOM concludes that a majority of North Americans are meeting their needs for vitamin D, based on the IOM's determination of optimal blood levels of 25-hydroxyvitamin D (25OHD) needed to support calcium absorption and bone health. This is despite the fact that national surveys suggest the average total daily intake of vitamin D from food and supplements is way below the new RDAs². The IOM hypothesizes that this discrepancy is likely due to the body's ability to synthesize vitamin D from sun exposure.

A plethora of new research and strong recommendations from numerous nutrition experts led to the reevaluation and resulting increases in the DRIs of vitamin D. However, some experts feel these increases may not be sufficient to provide bone and other health benefits that have been associated with vitamin D intake. The Council for Responsible Nutrition (CRN) called the report "a modest step in the right direction that fell short of truly capturing the extensive and positive research that has consistently supported the need for people to significantly raise their vitamin D levels."³ As part of the new report, the IOM reviewed all available literature about vitamin D and health outcomes and concluded that the data for vitamin D impacting other areas of health beyond bone was insufficient to support a recommendation for higher levels of intake.

How Much Vitamin D Is Sufficient?

So how should you ensure adequate vitamin D intake for bone health? Given the known risks of excess sun exposure, it is recommended to consume vitamin D from foods, in particular vitamin D-fortified foods, such as milk, and dietary supplements. Remember, the new DRIs suggest children and adults up to the age of 70 should aim for 600 IU of vitamin D per day, while adults aged 71 years and older should aim for 800 IU of vitamin D per day.

How can you be sure you are getting enough vitamin D? Speak with your healthcare professional about performing a 25OHD blood test and agree on a suitable personalized vitamin D intake. The measurement of blood 25OHD levels is virtually the only tool available at this time to determine vitamin D status. Optimal levels to support calcium absorption and bone health have been determined by the IOM to be around 50 nmol/L (nanomoles per liter) blood 25OHD.

*IUs (international units) measure the biological activity of a substance. The measurement of vitamin D in IUs, rather than milligrams (mg), is appropriate because there are five forms of this vitamin. One IU of vitamin D is equal to 0.025 micrograms of cholecalciferol/ergocalciferol.

Recommended Dietary Allowances (RDA) are the daily dietary intake level of a nutrient considered sufficient by the Food and Nutrition Board to meet the requirements of nearly all healthy individuals in each life-stage and gender group.

Dietary Reference Intakes (DRIs) are nutrition recommendations developed by the [Institute of Medicine \(IOM\)](#) of the [U.S. National Academy of Sciences](#). DRIs are used by both the United States and Canada. The DRI was introduced in 1997 in order to broaden existing RDA guidelines.

1. Institute of Medicine. Dietary Reference Intakes for Calcium and Vitamin D. National Academy Press: Washington, D.C., 2010.
2. R.L. Bailey et al., Estimation of total usual calcium and vitamin D intakes in the United States. *J of Nutrition* 2010;140(4):817–22.
3. Council for Responsible Nutrition. CRN reacts to Institute of Medicine DRI recommendations for vitamin D. Available online at https://www.crnusa.org/CRNPR10_CRNVitDDRlresp113010.html (accessed December 2, 2010).

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