

PERSONAL HEALTH

An Oldie Vies for Nutrient of the Decade

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The so-called sunshine vitamin is poised to become the nutrient of the decade, if a host of recent findings are to be believed. Vitamin D, an essential nutrient found in a limited number of foods, has long been renowned for its role in creating strong bones, which is why it is added to milk.



Stuart Bradford

Now a growing legion of medical researchers have raised strong doubts about the adequacy of currently recommended levels of intake, from birth through the sunset years. The researchers maintain, based on a plethora of studies, that vitamin D levels considered adequate to prevent bone malformations like rickets in children are not optimal to counter a host of serious ailments that are now linked to low vitamin D levels.

To be sure, not all medical experts are convinced of the need for or the desirability of raising the amount of vitamin D people should receive, either through sunlight, foods, supplements or all three. The federal committee that establishes daily recommended levels of nutrients has resisted all efforts to increase vitamin D intake significantly, partly because the members are not convinced of assertions for its health-promoting potential and partly because of time-worn fears of toxicity.

This column will present the facts as currently known, but be forewarned. In the end, you will have to decide for yourself how much of this vital nutrient to consume each and every day and how to obtain it.

Where to Obtain It

Through most of human history, sunlight was the primary source of vitamin D, which is formed in skin exposed to ultraviolet B radiation (the UV light that causes sunburns). Thus, to determine how much vitamin D is needed from food and supplements, take into account factors like skin color, where you live, time of year, time spent out of doors, use of sunscreens and coverups and age.

Sun avoiders and dark-skinned people absorb less UV radiation. People in the northern two-thirds of the country make little or no vitamin D in winter, and older people make less vitamin D in their skin and are less able to convert it into the hormone that the body uses. In addition, babies fed just breast [breast milk](#) consume little vitamin D unless given a supplement.

In addition to fortified drinks like milk, soy milk and some juices, the limited number of vitamin D food sources include oily fish like salmon, mackerel, bluefish, catfish, sardines and tuna, as well as cod liver oil and fish oils. The amount of vitamin D in breakfast cereals is minimal at best. As for supplements, vitamin D is found in prenatal [vitamins](#), multivitamins, [calcium](#)-vitamin D combinations and plain vitamin D. Check the label, and select brands that contain vitamin D₃, or cholecalciferol. D₂, or ergocalciferol, is 25 percent less effective.

Vitamin D content is listed on labels in international units (I.U.). An eight-ounce glass of milk or fortified orange juice is supposed to contain 100 I.U. Most brands of multivitamins provide 400 a day. Half a cup of canned red salmon has about 940, and three ounces of cooked catfish about 570.

Myriad Links to Health

Let's start with the least controversial role of vitamin D — strong bones. Last year, a 15-member team of [nutrition](#) experts noted in The American Journal of Clinical Nutrition that “randomized trials using the currently recommended intakes of 400 I.U. vitamin D a day have shown no appreciable reduction in [fracture](#) risk.”

“In contrast,” the experts continued, “trials using 700 to 800 I.U. found less fracture incidence, with and without supplemental calcium. This change may result from both improved bone health and reduction in falls due to greater muscle strength.”

A Swiss study of women in their 80s found greater leg strength and half as many falls among those who took 800 I.U. of vitamin D a day for three months along with 1,200 milligrams of calcium, compared with women who took just calcium. Greater strength and better balance have been found in older people with high blood levels of vitamin D.

In animal studies, vitamin D has strikingly reduced [tumor](#) growth, and a large number of observational studies in people have linked low vitamin D levels to an increased risk of [cancer](#), including cancers of the breast, rectum, ovary, prostate, stomach, bladder, esophagus, kidney, lung, pancreas and uterus, as well as [Hodgkin's lymphoma](#) and [multiple myeloma](#).

Researchers at Creighton University in Omaha conducted a double-blind, randomized, placebo-controlled trial (the most reliable form of clinical research) among 1,179 community-living, healthy postmenopausal women. They reported last year in *The American Journal of Clinical Nutrition* that over the course of four years, those taking calcium and 1,100 I.U. of vitamin D3 each day developed about 80 percent fewer cancers than those who took just calcium or a placebo.

Vitamin D seems to dampen an overactive immune system. The incidence of autoimmune diseases like [Type 1 diabetes](#) and [multiple sclerosis](#) has been linked to low levels of vitamin D. A study published on Dec. 20, 2006, in *The Journal of the American Medical Association* examined the risk of developing multiple sclerosis among more than seven million military recruits followed for up to 12 years. Among whites, but not blacks or Hispanics, the risk of developing M.S. increased with ever lower levels of vitamin D in their blood serum before age 20.

A study published in *Neurology* in 2004 found a 40 percent lower risk of M.S. in women who took at least 400 I.U. of vitamin D a day.

Likewise, a study of a national sample of non-Hispanic whites found a 75 percent lower risk of [diabetes](#) among those with the highest blood levels of vitamin D.

Vitamin D is a [fat](#)-soluble vitamin that when consumed or made in the skin can be stored in body fat. In summer, as little as five minutes of sun a day on unprotected hands and face can replete the body's supply. Any excess can be stored for later use. But for most people during the rest of the year, the body needs dietary help.

Furthermore, the general increase in [obesity](#) has introduced a worrisome factor, the tendency for body fat to hold on to vitamin D, thus reducing its overall availability.

As for a maximum safe dose, researchers like Bruce W. Hollis, a pediatric nutritionist at the Medical University of South Carolina in Charleston, maintain that the current top level of 2,000 I.U. is based on shaky evidence indeed — a study of six patients in India. Dr. Hollis has been giving pregnant women 4,000 I.U. a day, and nursing women 6,000, with no adverse effects. Other experts, however, are concerned that high vitamin D levels (above 800 I.U.) with calcium can raise the risk of [kidney stones](#) in susceptible people.