

Vitamin D: Calcium's Bone-Building Partner and More

Vitamin D, often called the “sunshine vitamin,” has become a recent star on the nutrition scene. This attention comes from evidence that children and adults are not getting enough of this superstar vitamin, whose long known role in bone health is now just one of its many benefits.

Vitamin D is unique because, with enough exposure to sunlight, the body can make all the vitamin D it needs. However, because people have variable and often limited exposure to sunlight, vitamin D is considered an essential nutrient.



So what's the big D-eal?

Vitamin D's partnership with calcium in keeping bones strong has been understood for nearly a century. In fact, it was the fortification of milk with vitamin D that led to a near elimination of the childhood bone disease rickets in this country. Now vitamin D is being recognized for doing so much more. Recent science suggests that a lack of vitamin D may increase the risk of chronic diseases, such as some cancers, high blood pressure, metabolic syndrome, and disorders of the immune system.

Calcium and Vitamin D Recommendations*

| Age | Calcium (mg) | Vitamin D (IU) |
|-------------|--------------|----------------|
| 0-6 months | 210 | 200 |
| 7-12 months | 270 | 200 |
| 1-3 years | 500 | 200 |
| 4-8 years | 800 | 200 |
| 9-18 years | 1300 | 200 |
| 19-50 years | 1000 | 200 |
| 51-70 years | 1200 | 400 |
| 71+ years | 1200 | 600 |

The American Academy of Pediatrics recommends that children consume at least 400 IU of vitamin D from the first few days of life through adolescence.**

*National Academy of Sciences

**Wagner CL et al. "Prevention of Rickets and Vitamin D Deficiency in Infants, Children, and Adolescents." Pediatrics 2008; 122:1142-1152

Food Sources of Calcium and Vitamin D

| Food or Beverage | Calcium (mg) | Vitamin D (IU) |
|--|--------------|----------------|
| Milk, fat-free, 1 cup ¹ | 306 | 100 |
| Chocolate milk, 1%, 1 cup ¹ | 288 | 100 |
| Lactose-free milk, 1%, 1 cup ² | 300 | 100 |
| Pink salmon, canned with soft bones, 3.5 oz ¹ | 277 | 466 |
| Vanilla yogurt, 6 oz ³ | 250 | 80 |
| Yogurt smoothie, 10 oz ³ | 400 | 100 |
| Bran cereal, fortified, ½ cup ⁴ | 100 | 40 |

1. Values taken from USDA Nutrient Data Laboratory. <http://www.nal.usda.gov/fnic/foodcomp/search/> 2. Lactaid product web site. <http://www.lactaid.com> 3. Stonyfield Farm product information. <http://www.stonyfield.com> 4. All-Bran product web site. <http://www.all-bran.com>

How to avoid D-efficiency

Getting enough vitamin D appears to be important for strong bones and overall health at any age. Although further research is needed to determine optimal vitamin D intake, there is growing support for an increase in the current recommendations. In fact, the American Academy of Pediatrics recently increased its vitamin D recommendation for infants, children and adolescents to 400 IU per day.

Vitamin D status can be improved by eating more foods rich in naturally occurring or added vitamin D (see table) along with sensible sun exposure (often defined as 5-15 minutes, 2-3 times per week). A vitamin D supplement may also be helpful. Consuming three servings of vitamin D fortified milk and yogurt is a deliciously easy way to get vitamin D and the eight other nutrients dairy foods provide.

MEAL AND SNACK SUGGESTIONS

- > For a double dose of D, start your day with a bowl of fortified cereal and low-fat milk.
- > Top your salad with chunks of canned salmon for extra protein and bone-building nutrients.
- > Blend yogurt with fruit for a smoothie or top French toast with vanilla yogurt for a sweet treat.
- > On the go? Grab a single-serve low-fat milk or a yogurt smoothie.
- > Use low-fat milk to make soup that's nutrient-rich.
- > Take a break with a “skinny latte,” single-serve flavored milk, or hot cocoa made with low-fat milk.
- > Enjoy fresh cut veggies with yogurt dip for a snack.
- > Indulge in a dairy-delicious dessert of low-fat pudding topped with granola and fruit.