

SHOPPING FOR HEALTH: VITAMIN D¹

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WHY DO I NEED VITAMIN D?



Vitamin D is an important nutrient for maintaining health. We need vitamin D for calcium absorption, bone strength, muscle strength and immunity. Vitamin D has also been associated with a decreased risk of certain cancers and chronic diseases (1).

HOW MUCH VITAMIN D DO I NEED?

The current recommendation for healthy children, teens, and adults less than 70 years of age is 600 IU per day. Older adults (over 70 years) should aim for 800 IU/day (2). The International Osteoporosis Federation (IOF) recommends 800 to 1000 IU of vitamin D per day for healthy adults (3). An intake of 2000 IU (50 µg) per day is recommended for people who are obese, have osteoporosis, or those with limited sun exposure, such as elderly living in long-term care homes (3). Routine daily

intakes of more than 4000 IU are not recommended.

HOW CAN I GET ENOUGH VITAMIN D?

Vitamin D needs can be met by eating foods containing Vitamin D and taking vitamin supplements. Traditionally, most of our vitamin D has come from sunlight. However, vitamin D produced from the sun may be limited by use of hats, clothing and sun screen. People with darker skin and older adults produce much less vitamin D when exposed to the sun. It is very important to get enough vitamin D from food sources and supplements.

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1. This document is FSHN11-02, one of a series from the Food Science and Human Nutrition Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Visit EDIS at <http://edis.ifas.ufl.edu>.
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FOOD SOURCES OF VITAMIN D

NATURAL SOURCES

There are very few natural sources of dietary vitamin D. Preferred sources include fatty fishes and eggs. Fish liver oils and liver are not recommended.

ENRICHED FOODS

Mushrooms that have been exposed to ultraviolet B light are good sources of vitamin D. Bread and yeast-raised bakery products can be prepared with high vitamin D yeast and become natural sources of vitamin D.

FORTIFIED FOODS

Foods fortified with vitamin D are the largest contributors of dietary vitamin D. These foods include milk and some yogurts, breakfast cereals and other grains, orange juice and margarine.

SHOPPING TIPS

When shopping for foods with vitamin D, be sure to read the nutrition facts panel on food labels, as similar foods may contain different amounts of vitamin D. Varieties of a specific brand may not all be fortified the same. It is important to read the label carefully to determine how much vitamin D is in the food you are buying.

Figure 1 provides an example of a nutrition facts panel. The vitamin D content is listed as a percent of the Daily Value (DV) of 400 IU. For example, if the nutrition facts label on a food indicates it provides 10% of the DV of vitamin D, it means that the food provides 40 IU of vitamin D per serving.

Nutrition Facts	
Serving Size 8 fl oz (240mL)	
Amount Per Serving	
Calories 160	Calories from Fat 25
%Daily Value*	
Total Fat 2.5g	4%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 15mg	5%
Sodium 300mg	13%
Total Carbohydrate 27g	9%
Dietary Fiber 1g	4%
Sugars 25g	
Protein 9g	
Vitamin A 10%	Vitamin C 0%
Calcium 30%	Iron 4%
Vitamin D 25%	
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carb	300g 375g
Dietary Fiber	25g 30g

Figure 1: Nutrition Facts Panel for chocolate milk

CEREAL



Many breakfast cereals are fortified with 10% or 40 IU of vitamin D per serving. Some cereals may contain up to 140 IU per serving,

and others may not be fortified at all.

Table 1 lists some examples of cereals and their levels of fortification.

Table 1. Vitamin D contents of various breakfast cereals

Breakfast Cereal	Vitamin D (IU/serving)
General Mills: Cheerios [®] , Wheaties [®] , Total [®] , Chex [®]	40
Kellogg's: Rice Crispies [®] , Raisin Bran [®] , Froot Loops [®] , Frosted Flakes [®] , All-Bran [®]	40
Kellogg's Meuslix [®]	16
Quaker: Life [®] , Cap'n Crunch [®] , Oatmeal Squares [®] , Oh's! [®]	0
Kellogg's Mini-Wheats [®]	0
Kashi: Go Lean [®] , Cinnamon Harvest [®] , Whole Grain Puffs [®]	0
<i>IU = International Units</i>	

MILK



Milk is fortified with 100 IU vitamin D per cup, regardless of the fat content of the milk.

Lactose-free milk and chocolate milk are fortified with 100 IU per cup as well. Soy milk is usually fortified, but not always. For example, Silk[®] Soy Milk is fortified with 125 IU per cup.

As vitamin D is a stable compound that is not lost during cooking, storage, or processing, foods prepared at home with milk will also contain vitamin D.

YOGURT

The fortification of yogurts varies greatly among different brands and types. Table 2 lists a sample of different yogurts and their levels of fortification.

Table 2. Vitamin D contents of selected yogurts

Yogurt	Vitamin D (IU/serving)
Weight Watchers [®] Lowfat Yogurt (6 oz)	120
Dannon Frusion [®] Yogurt Smoothies (7 oz)	100
Dannon Light & Fit [®] Lowfat Yogurt (6 oz)	80
Yoplait [®] Light and Original Varieties (6 oz)	80
Stoneyfield Farm [®] Organic Low-fat or Fat-free Yogurt (6 oz)	80
Fiber One [®] Yogurt (4 oz)	60
Dannon Light & Fit [®] Family-Pack Yogurt (6 oz)	40
Yoplait Whips [®] (4 oz)	40
Stoneyfield Farm [®] Organic Whole-Milk Yogurt	0
Activia [®] (4 oz)	0
<i>IU = International Units</i>	

CHEESE



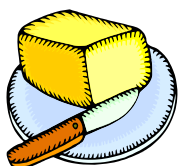
As with yogurt, cheeses vary in their vitamin D content.

Cheeses do not naturally contain vitamin D, but some are fortified. Table 3 lists some examples of cheeses that have been fortified with vitamin D. Your local grocer may offer other varieties that also are fortified.

Table 3. Vitamin D content of fortified cheeses

Cheese	Vitamin D (IU/serving)
Kraft Singles® 2% American slices	40
Kraft Singles Calci-3® American and White American slices	60
Borden Triple Calcium Singles® American slices	60
<i>IU = International Units</i>	

MARGARINE



Not all margarines are fortified with vitamin D. Fortified varieties contain 60 IU

of vitamin D per serving in the U.S. **Table 4** lists some fortified margarines. It is important to remember that specific brands may offer both fortified and non-fortified options.

Table 4. Vitamin D content of fortified margarines

Margarine	Vitamin D (IU/serving)
Smart Balance® Buttery Spread and Low-Sodium Buttery Spread	60
Fleischmann's® Original and Light Margarine	60
Country Crock® Spread Plus Vitamins and Minerals	60
Promise Activ® Buttery Spread	60
<i>IU = International Units</i>	

FISH

Fish is one of the few sources of naturally occurring vitamin D. Fatty fish, such as salmon and sardines, is the best source of vitamin D. Lean fish, such as cod, contains much lower amounts of vitamin D. When selecting fish, consider that wild caught fishes are more likely to have higher vitamin D contents (4).

Table 5 lists fish varieties with various vitamin D contents (5). Although fish liver oils contain vitamin D, they are not recommended due to their very high vitamin A contents (6).



Table 5. Vitamin D contents of fish

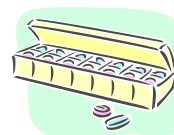
Fish	Vitamin D (IU / 3oz serving)
Sockeye Salmon, Wild	620
Atlantic Mackerel	550
Bluefin Tuna	200
Atlantic Sardines, canned in oil	140
Yellowfin Tuna	40
Atlantic or Pacific Cod	30
<i>IU = International Units</i>	<i>oz = ounce</i>

Table 6. Vitamin D contents of supplements

Supplement	Vitamin D (IU/tablet)
Nature Made® Multivitamins	1000
One-A-Day® Women's Health Multivitamins	800
One-a-Day® Multivitamins	400
Sundown Naturals® Vitamin D Tablets	400
Viactiv® Calcium Chews	200
<i>IU = International Units</i>	

SHOPPING FOR SUPPLEMENTS

Supplementation is encouraged for people with low intakes of vitamin D, particularly the elderly. Vitamin D is available for over-the-counter purchase as a component of multivitamins or in a stand-alone form. Many calcium supplements provide vitamin D as well. Supplements vary, but typically contain 400 IU to 2000 IU. Table 6 lists various supplements and their vitamin D contents.



BE AN INFORMED SHOPPER!

The key to optimizing your dietary vitamin D intake is to read food labels while shopping! Few foods are consistent in their levels of vitamin D. You must be proactive in finding brands that will meet your vitamin D needs.

WHERE CAN I GET MORE INFORMATION?

The Family and Consumer Sciences (FCS) agent at your county Extension office may have more written information and nutrition classes for you to attend. Also, a registered dietitian (RD) can provide you with reliable information. Reliable nutrition information may be found on the Internet at the following sites:

<http://www.eatright.org>

<http://www.nutrition.gov>

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