Vitamin D Fact Sheet

What is Vitamin D?

Unique in the fact that the body can synthesize all it needs with help from the sun, Vitamin D is a one-of-a-kind nutrient. By simply exposing oneself to enough sun each day there is no need to consume Vitamin D at all from foods.

The most important function Vitamin D plays within the human body is its role in helping to maintain normal blood levels of calcium and phosphorus. By assisting the body with calcium absorption, Vitamin D helps to create and maintain strong bones. Without adequate levels of Vitamin D, the bones can become thin, brittle and misshapen.

Essentially, Vitamin D functions as a hormone, that is, a chemical substance which is formed in one organ or part of the body and is carried in the blood to another organ where it alters the function of another organ. Vitamin D is used by various body parts such as the brain, heart, intestines, kidneys and even the reproductive organs. Research also suggests that Vitamin D may play a role in maintaining a healthy immune system.

Recommended Daily Intake

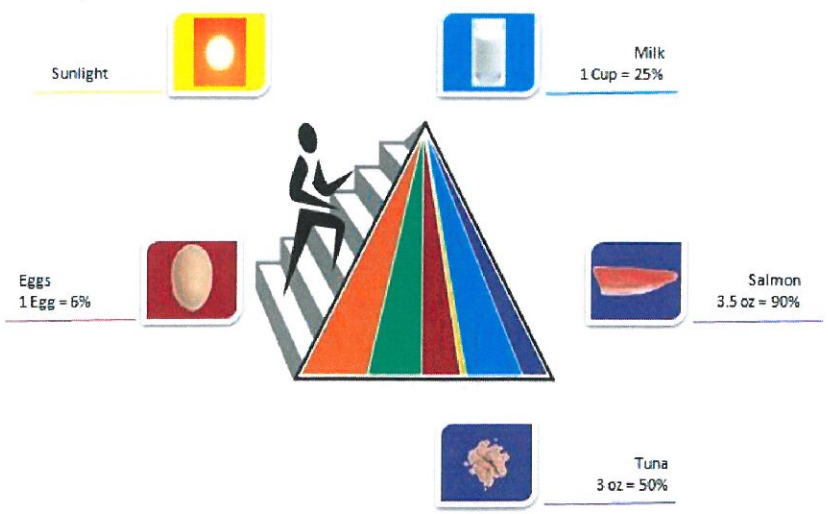
Because there is insufficient scientific information available to establish a Recommended Daily Allowance for Vitamin D, the table below lists the Adequate Intake (AI) level, which represents the amount of Vitamin D that is needed to maintain bone health and normal calcium metabolism.

When looking at food and dietary supplement labels, you may notice that the AI's for Vitamin D are listed as either micrograms (µg) or International Units (IU). For reference, 1 µg = 40 IU.

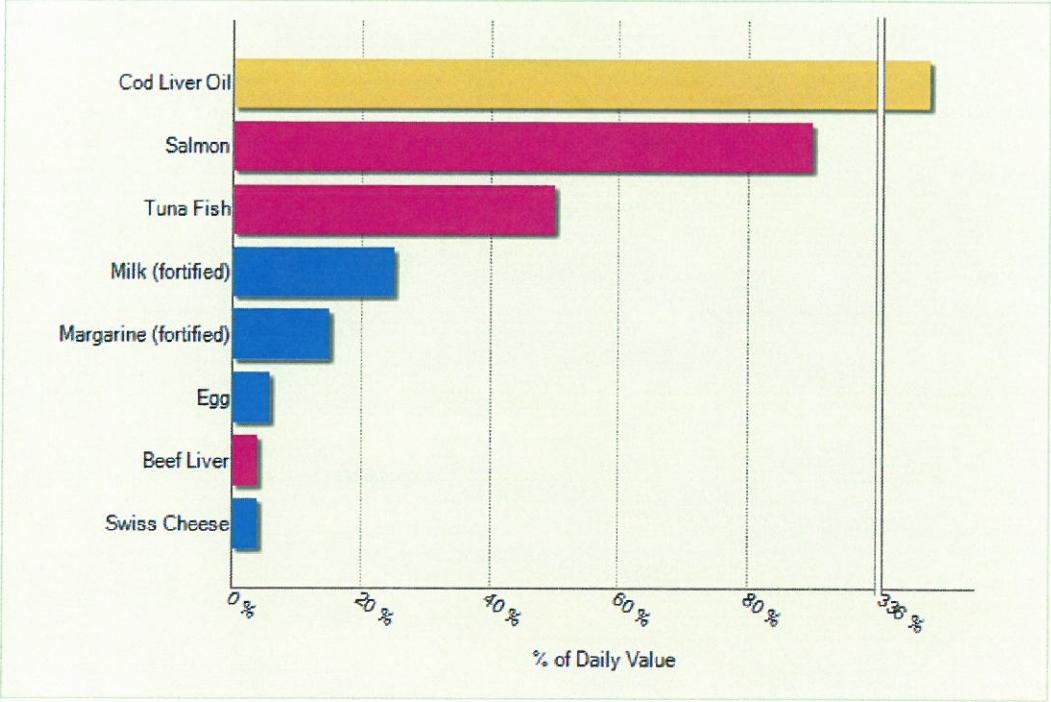
Age	Children (µg/day)	Men (µg/day)	Women (µg/day)	Pregnancy (µg/day)	Lactation (µg/day)
Birth to 13 years	5 (=200 IU)				
14 to 18 years		5 (=200 IU)	5 (=200 IU)	5 (=200 IU)	5 (=200 IU)
19 to 50 years		5 (=200 IU)	5 (=200 IU)	5 (=200 IU)	5 (=200 IU)
51 to 70 years		10 (=400 IU)	10 (=400 IU)		
71+ years		15 (=600 IU)	15 (=600 IU		

Sources of Vitamin D

Fortified foods are common sources of vitamin D. In the 1930's, rickets was a major public health problem in the United States. A milk fortification program was implemented to combat rickets, and it nearly eliminated this disorder in the U.S. About 98% to 99% of the milk supply in the U.S. is fortified with 10 micrograms (400 International Units or IU) of vitamin D per quart. One cup of vitamin D fortified milk supplies one-half of the recommended daily intake of adults between the ages of 19 and 50.



The following chart displays the Vitamin D content of various foods.



The following table lists foods that provide large quantities of Vitamin D, ranked by International Units per Serving.

Food, Standard Amount	Vitamin D (IU)	% Daily Value	Calories
Cod Liver Oil, 1 Tbsp	1360	340	123
Salmon, cooked, 3½ oz	360	90	201
Mackerel, cooked, 3½ oz	345	90	256
Tuna fish, canned in oil, 3 oz	200	50	198
Sardines, canned in oil, 1¾ oz	250	70	103
Milk, nonfat, reduced fat, and whole, fortified, 1 cup	98	25	86-138
Margarine, fortified, 1 Tbsp	60	15	102
Pudding, made w/ vitamin D fortified milk, ½ cup	50	10	197
Egg, 1 whole (vitamin D found in egg yolk)	20	6	72
Liver, beef, cooked, 3½ oz	15	4	220
Cheese, Swiss, 1 oz	12	4	106

Vitamin D Under/Over

The following table describes some of the symptoms that signify a lack of Vitamin D (Deficiency) and an overabundance of Vitamin D (Toxicity).

Deficiency Symptoms	Toxicity Symptoms
Blood/Circulatory System	
	Raised blood calcium
Bones/Teeth	
Abnormal growth, bowing of legs, soft bones, joint pain	Calcification of tooth soft tissue; thinning of enamel on teeth
Nervous System	
Muscle spasms	Excessive thirst, irritability, headaches, nausea, weakness, loss of appetite
Other	
	Kidney stones, stones in arteries