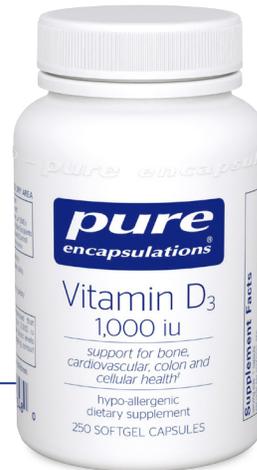




# Vitamin D<sub>3</sub> (cholecalciferol)

Introduced 2008



## What Is It?

Vitamin D<sub>3</sub> enhances calcium absorption and retention, a key nutritional role in supporting healthy bones, and may play a potential role in cardiovascular, colon and cellular health. Vitamin D levels have been shown to decline with age, due primarily to a reduction in either absorption or metabolism by the liver. Decreased exposure to sunlight, a vegetarian diet, or a low intake of vitamin D fortified foods also play a role in inadequate vitamin D levels.\*

## Uses For Vitamin D<sub>3</sub>

**Bone Health:** Vitamin D promotes intestinal calcium and phosphorous absorption and reduces urinary calcium loss, essential mechanisms for maintaining proper calcium levels in the body and for healthy bone composition. Clinical studies involving vitamin D supplementation suggest the importance of vitamin D in addition to calcium for bone health. Vitamin D supplementation alone may also support bone health.\*

**Cardiovascular Support:** Vitamin D may also provide cardiovascular support for some individuals, which may be attributed to its effect on calcium metabolism or possibly by helping to maintain healthy plasma renin function.\*

**Cellular Health:** Studies suggest vitamin D supports colon health by promoting healthy cellular function. Vitamin D is also believed to provide general cellular support potential, including breast and prostate cells, in part by helping to maintain healthy angiogenesis balance, supporting immune cell activity and maintaining healthy cell metabolism. Preliminary evidence suggests that vitamin D may also play a role in maintaining healthy glucose metabolism, since vitamin D receptors are present on the islet cells of the pancreas.\*

## What Is The Source?

Vitamin D<sub>3</sub> is derived from the cholesterol in lanolin, the fat found in wool. Hypoallergenic plant fiber is derived from pine cellulose. Medium chain triglycerides (Vitamin D<sub>3</sub> liquid only) are derived from coconut and palm oil.

## Recommendations

Pure Encapsulations provides vitamin D<sub>3</sub> capsules in 4 amounts (400 iu, 1,000 iu, 5,000 iu and 10,000 iu) and Vitamin D<sub>3</sub> liquid.

Recommendations are as follows:

*Vitamin D<sub>3</sub> 400 iu* = 1-2 capsules daily, in divided doses, with meals.

*Vitamin D<sub>3</sub> 1,000 iu* = 1-5 capsules daily, with meals.

*Vitamin D<sub>3</sub> 5,000 iu* = 1 capsule daily, with a meal.

*Vitamin D<sub>3</sub> 10,000 iu* = 1 capsule daily for up to five days per week, with a meal, or as directed by a health professional.

*Vitamin D<sub>3</sub> liquid* = 1-7 drops daily, with a meal, or as directed by your health professional.

## Are There Any Potential Side Effects Or Precautions?

It is recommended that individuals using more than 2,000 iu vitamin D per day have their blood levels monitored. Large doses of vitamin D can cause hypercalcemia, signs include headache, weakness, nausea, vomiting, and constipation. Individuals with hyperparathyroidism or kidney disease are at particular risk. Vitamin D<sub>3</sub> 10,000 iu and Vitamin D<sub>3</sub> 5,000 iu and are not to be taken by pregnant or lactating women. If pregnant or lactating, consult your physician before taking Vitamin D<sub>3</sub> 400 iu or Vitamin D<sub>3</sub> 1,000 iu.

## Are There Any Potential Drug Interactions?

Vitamin D may result in hypercalcemia in certain individuals taking digoxin or thiazide diuretics. Consult your physician for more information.

(continued)

### Vitamin D<sub>3</sub> 10,000 iu

each vegetarian capsule contains  v 3  
 vitamin D (as cholecalciferol) (D<sub>3</sub>)..... 10,000 iu  
 other ingredients: hypoallergenic plant fiber (cellulose), vegetarian capsule (cellulose, water)

*Not to be taken by pregnant or lactating women. Consult a health professional before taking this or any other product. It is recommended that individuals taking more than 2,000 iu vitamin D per day have their blood levels monitored.*

1 capsule daily for up to five days per week, with a meal, or as directed by a health professional.

### Vitamin D<sub>3</sub> 5,000 iu

each vegetarian capsule contains  v 3  
 vitamin D (as cholecalciferol) (D<sub>3</sub>)..... 5,000 iu  
 other ingredients: hypoallergenic plant fiber (cellulose), vegetarian capsule (cellulose, water)

*Not to be taken by pregnant or lactating women. Consult a health professional before taking this or any other product. It is recommended that individuals taking more than 2,000 iu vitamin D per day have their blood levels monitored.*

1 capsule daily, with a meal.

### Vitamin D<sub>3</sub> 1,000 iu

each vegetarian capsule contains  v 3  
 vitamin D (as cholecalciferol) (D<sub>3</sub>)..... 1,000 iu  
 other ingredients: hypoallergenic plant fiber (cellulose), vegetarian capsule (cellulose, water)

*It is recommended that individuals taking more than 2,000 iu vitamin D per day have their blood levels monitored. If pregnant or lactating, consult you health professional before use.*

1-5 capsules daily, with meals.

### Vitamin D<sub>3</sub> 400 iu

each vegetarian capsule contains  v 3  
 vitamin D (as cholecalciferol) (D<sub>3</sub>)..... 400 iu  
 other ingredients: hypoallergenic plant fiber (cellulose), vegetarian capsule (cellulose, water)

1-2 capsules daily, in divided doses, with meals.

### Vitamin D<sub>3</sub> liquid

one drop contains v  
 vitamin D (as cholecalciferol) (D<sub>3</sub>)..... 1,000 iu  
 other ingredients: medium-chain triglycerides  
 serving size 0.03 ml (1 drop)  
 servings per container 810

*It is recommended that individuals taking more than 2,000 iu vitamin D per day have their blood levels monitored. If pregnant or lactating, consult you health professional before use.*

1-7 drops daily, with a meal, or as directed by your health professional.

**CAUTION: Accidental overdose of liquid vitamin D products can lead to serious adverse side effects in infants. This product is not intended for infants. The recommended daily dose of vitamin D for infants is 400 iu per day. This product provides 1,000 iu per drop.**

#### Vitamin D Recommendations Update

- In a 2007 article published in the American Journal of Clinical Nutrition, scientists worldwide describe an urgent need to revise daily intake recommendations and to boost the upper limit to 10,000 iu per day.
- Human diets do not provide sufficient vitamin D and in some regions, sunlight exposure is not adequate; this emphasizes the importance for food fortification and nutritional supplementation.
- While typical daily recommendations have been 400-800 iu daily, many experts believe 1,000 iu daily or more is optimal.
- For some, high dose vitamin D for 2-3 months may be required, with intakes reaching 25,000-50,000 iu per week to help reach healthy serum levels (32 ng/ml represents a minimum adequate level, above 40 ng/ml is more ideal, 50-60 ng/ml may be optimal).