Vitamin D: An Absolute Requirement for Healthy Living

Everyone should have his or her vitamin D level checked at least once a year (infants through the elderly).

Below are conditions that have been associated with vitamin D levels:

< 10 ng/mL	**Severely deficient**
< 15 ng/mL	Risk of rickets
< 20 ng/mL	75% greater risk of colon cancer
< 30 ng/mL	**Deficient**
	Increased calcium loss from bones, osteoporosis
	Poor wound healing
	Increased muscle pain
	Increased joint and back pain
	Greater risk of depression
	Increased diabetes
	Increased schizophrenia
	Increased migraines
	Increased autoimmune disease (lupus, scleroderma)
	Increased allergies
	Increased preeclampsia
	Increased inflammation
30–50 ng/mL	**Suboptimal levels**
< 34 ng/mL	Twice the risk of heart attack
< 36 ng/mL	Increased high blood pressure
< 40 ng/mL	Three times the risk of multiple sclerosis
50–80 ng/mL	**Optimal levels**
> 50 ng/mL	50% reduction in breast cancer, decreased risk of all solid cancers
80–100 ng/mL	Slowing of cancer growth in patients with cancer
> 100 ng/mL	**Increased risk of toxic symptoms (hypercalcemia)**

Natural Production of Vitamin D

Your skin makes vitamin D when it is exposed to a pinking dose of sunlight. How much vitamin D you make depends on your age, how much skin is uncovered, and your skin tone. Without sunblock and with arms and legs exposed, your skin will make 10,000 to 15,000 units of vitamin D in one pinking sun exposure, on average. (Sunblock with an SPF of more than 15 blocks 100% of vitamin D production in the skin.)

Depending on where you live (latitude), you may only get enough radiation from the sun for vitamin D production between May and October. Also, the darker your skin, the more sun you need to make enough vitamin D.

Vitamin D Supplementation Doses

Normal dosing of vitamin D depends on your blood levels. Treatment doses for blood level ranges are:

<10 ng/mL – 10,000 units per day
10–20 ng/mL – 10,000 units per day
20–30 ng/mL – 8,000 units per day
30–40 ng/mL – 5,000 units per day
40–50 ng/mL – 2,000 units per day

If you are taking a vitamin D supplement, adequate calcium and magnesium intake are also required.

It is very difficult to get too much vitamin D. People can take up to 10,000 units per day for 6 months and not have adverse effects. However, people with sarcoid, tuberculosis, Lyme disease, lymphoma, and kidney disease have to be supplemented carefully because of an increased risk of their blood calcium level becoming too high.

Rechecking Your Vitamin D Level

It is recommended that you recheck your vitamin D level within 2 weeks to 2 months after starting supplementation, depending on your medical and health condition. Other lab tests for calcium, ionized calcium, magnesium, and parathyroid hormone level (PTH) may be done during the recheck.