



Vitamin D

Vitamin D is the hot new vitamin! Every day it seems like there is a new study showing that many Americans don't get enough vitamin D, and that people who don't get enough vitamin D have some problem: rickets, strokes, asthma, allergies, diabetes, multiple sclerosis -- the list seems to go on and on. Although we have always been somewhat skeptical of vitamin recommendations, it now seems that adding Vitamin D actually might be a good idea. The American Academy of Pediatrics has said that all American children should have a supplement if they are not getting enough in their diet.

Not many foods contain much Vitamin D naturally (see chart on reverse side). Breast milk contains very little vitamin D; but vitamin D is added to cow's milk and formula. It is also added to a few other foods, such as some orange juices, and various other foods that say "fortified with vitamin D" – even special brands of mushrooms grown in UV light to produce high amounts of vitamin D.

WHAT DOES VITAMIN D DO?

Vitamin D helps to build strong bones, but it also has a role in preventing cancer and other diseases. Like other vitamins, Vitamin D probably does lots of things we don't yet know about. In older adults, low Vitamin D has recently been connected to lower mental functioning. So, it is an important vitamin.

HOW DO WE GET VITAMIN D?

Vitamin D is the "sunshine vitamin." Our bodies produce Vitamin D when sunshine directly hits our skin, especially around midday. There is uncertainty about how much sunlight we need each week to produce enough Vitamin D; some sources say that for light-skinned people, 5-20 minutes of mid-day sun three times per week may be enough; others suggest that much more is necessary. And darker-skinned people need more sun than lighter-skinned people to produce Vitamin D. Even if you are fair-skinned, you can't get much Vitamin D from the sun when you are wearing sunscreen, when sunlight comes through windows, or in the early morning or late afternoon when the sun is weaker. It has to be direct sunlight on your skin. People living in places farther north, like the Bay Area, get less vitamin D from sunshine than in places like Tahiti, or even San Diego. But the problem with sunlight is that too much of it is not good for our skin—it causes wrinkles and can even cause cancer. So we recommend avoiding too much sun, and using sunscreen to protect the skin. But at the same time we know that we need to get enough Vitamin D. So, what to do?

Luckily, we can also get Vitamin D orally, either from foods (see chart on reverse side) or from vitamin supplements.

HERE ARE OUR RECOMMENDATIONS:

- Infants who are breast fed: We recommend that all breast fed infants be given a Vitamin D supplement, 400 IU (international units) per day.
- This can be given as an infant multivitamin (Poly-vi-sol, Tri-vi-sol, Vi-Daylin ADC, or generic equivalents). The dose is *1 dropperful per day*, which is one milliliter (ml) per day.
- Or, you can give only Vitamin D by itself. There are many different brands. It is important to read the label carefully.
 - Some of them, such as "D-vi-sol" or "Sunlight Just D," have the same dose as the multivitamins, 400 IU in *1 dropperful per day* (one ml).
 - Some of them such as "Carlson's Baby D Drops" or "Ddrops" are very concentrated, with 400 IU in a *single drop*, not a dropperful! Then the dose is *1 drop per day*.



- **Infants who are formula fed:** We recommend that formula-fed infants *not* be given extra Vitamin D, since it's already added to formula.
- **Infants on both breast and formula:** If your baby is drinking both formula and breast milk, we recommend only a partial supplement of Vitamin D if the amount of formula is less than 16-24 oz. per day. You could give a dose every other day or a few times per week instead of daily. *(While small amounts of extra Vitamin D are generally not dangerous, there is a recent study showing a higher risk of urinary tract infections in the first three months of life in formula-fed babies who receive additional Vitamin D supplements.)*
- **Children and teenagers:** We recommend that all children over age one year, and teens, receive 600 IU of Vitamin D per day. Most Vitamin D drops, chewables and tablets for children, as labeled for age, will contain 400 IU per dose – but check the label. Milk has Vitamin D added to it, but it would take a full quart of milk per day to get 400-500 IU of Vitamin D – and this would be far too much milk for kids to drink. It's better just to take the Vitamin D supplement and drink about 16 oz. of milk per day. If your child gets little sun or is dark-skinned, and drinks very little milk, supplementing with a vitamin is even more important.

Selected Food Sources of Vitamin D	
Food	IUs per serving*
Cod liver oil, 1 tablespoon	1,360
Swordfish, cooked, 3 ounces	566
Salmon (sockeye), cooked, 3 ounces	447
Tuna fish, canned in water, drained, 3 ounces	154
Orange juice fortified with vitamin D, 1 cup (check product labels, as amount of added vitamin D varies)	137
Milk, nonfat, reduced fat, and whole, vitamin D-fortified, 1 cup	115-124
Yogurt, fortified with 20% of the DV for vitamin D, 6 ounces (more heavily fortified yogurts provide more of the DV)	80
Sardines, canned in oil, drained, 2 sardines	46
Liver, beef, cooked, 3 ounces	42
Egg, 1 large (vitamin D is found in yolk)	41
Ready-to-eat cereal, fortified with 10% of the DV for vitamin D, 0.75-1 cup (more heavily fortified cereals might provide more of the DV)	40
Cheese, Swiss, 1 ounce	6

* IUs = International Units. Adapted from: <http://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/>