**Low Vitamin D levels**

(normal range 75-200nmol/L)

Vitamin D helps the body absorb calcium, which is essential for good bone health. Vitamin D also helps the immune, muscle, and nervous systems function properly. Most vitamin D is made when an inactive form of the nutrient is activated in your skin when it's exposed to sunlight. Smaller amounts of vitamin D are in fortified milk and other foods, fatty fish, and eggs. As more and more people spend most of their time out of direct sunlight or wearing sunscreen when they are in the sun, vitamin D production from sun exposure is limited.

Research suggests that women with low levels of vitamin D have a higher risk of breast cancer. Vitamin D may play a role in controlling normal breast cell growth and may be able to stop breast cancer cells from growing.

**Steps you can take**

The two most reliable ways to boost your vitamin D level: get more direct sunlight exposure and take vitamin D3 supplements. Eating foods rich in vitamin D can help, but is less effective.

Sunshine exposure: Even short periods of direct peak sun exposure -- 15 minutes 3 times a week, for example -- can give you more than the recommended daily amount of vitamin D. It's also impossible to overdose on vitamin D from the sun. While sun exposure offers vitamin D benefits, it does have risks. Sun exposure increases your risk of skin cancer, including melanoma, the most dangerous type.

In general, most experts recommend you continue to use sun protection when ultraviolet (UV) radiation levels are moderate or high. UV rays are invisible, so you can't tell if you're exposed or not.

There are many variables that can affect how much vitamin D you'll produce from sunlight:

•the darker your skin color, the less vitamin D you produce

•the farther you live from the equator, the less vitamin D you produce

•fewer daylight hours mean you produce less vitamin D

All these factors can make is hard to get enough vitamin D from sun exposure alone.

**Supplements:** Before you adjust your vitamin D intake, it's important to know your vitamin D serum level. This is done with a simple blood test that your doctor can order for you. Before you take any supplements, talk to your doctor about the risks and benefits of the product, as well as what a good vitamin D serum level is for you. If your level was low and you've been taking a supplement to get back into the normal range, have your vitamin D level checked a few months (3-6 months) later and adjust your supplement dose accordingly. Taking too much vitamin D occasionally can cause you to have too much calcium in your blood.

If you're going to take a vitamin D supplement, most experts recommend taking the D3 form of the vitamin, not the D2 form.

**Normal Supplementation in Healthy Adult:** The current recommendation is that people younger than 50 get 200 international units (I.U.) of vitamin D per day. 400 international units per day is recommended for people aged 50-70, and 600 international units per day is recommended for people older than 70. The typical multivitamin contains 400 international units (iu) of vitamin D. Still, many researchers believe these recommendations are too low.

**If you have below normal levels and a history of breast cancer, you may be started on vitamin D**

**by your Breast Surgeon or Oncologist. This dose may be adjusted depending on your repeat blood vitamin D levels.**

Foods rich in vitamin D:

•salmon

•herring

•catfish

•oysters

•mackerel

•sardines

Taking 1 to 3 teaspoons of cod liver oil per day as a supplement can also help fulfill your vitamin D requirements. Still, most people don't like the taste of cod liver oil, so you may want to try these other fortified foods (though they have lower levels of vitamin D):

•milk

•some yogurt (read the label to see if it says "fortified with vitamin D")

•some orange juice (read the label to see if it says "fortified with vitamin D")

•some soy milk (read the label to see if it says "fortified with vitamin D")

Please talk to your GP, breast surgeon or oncologist if you have any queries about whether you need to take Vitamin D, and what supplements they recommend.

Date:

Your vitamin D level:

Suggested vitamin D supplement dose:

We suggest your vitamin D levels are rechecked in 3 months