

Vitamin D and Breast Cancer: What is the Real Story?

Vitamin D is an important nutrient that plays a significant role in the healthy functioning of the human body. Among other things, vitamin D helps improve muscle strength, boosts the immune system, promotes the absorption of calcium, and reduces inflammation. There is even an apparent connection between shortages of vitamin D and the development of certain kinds of cancers.

But what about breast cancer? Do vitamin D deficiencies increase a woman's vulnerability to this disease? For a long time, there has been a lot of disagreement over this question. Many vitamin D advocates have claimed that the nutrient's ability to prevent breast cancer has long been established, while mainstream medical sources have usually asserted the connection remains unproven.

As time has gone on, however, more evidence has begun to accumulate that suggests vitamin D levels can play a positive role in reducing the risk of breast cancer.

What is Vitamin D?

Strictly speaking, vitamin D is not actually a vitamin at all. The substances that carry this label are known as prohormones, which means that they function as precursors to hormones that perform important tasks in the body once created. In human beings, most vitamin D is made naturally by the body as a result of exposure to ultraviolet radiation from the sun. Many dietary sources of vitamin D have actually been fortified with it (milk, cereal, juices, yogurt, etc.), although it can be found to some degree in things like fatty fish, eggs, and fish liver oil. Nevertheless, exposure to sunlight is the primary means by which humans acquire their supplies of this critically important nutrient.

Breast Cancer and Sunlight

France's version of the National Institute of Health recently reported on a research study they had done involving 67,000 French women, 8,900 of whom had suffered from breast cancer. This study was designed to see if exposure to sunlight could be linked to breast cancer rates in any way. It turns out that women who lived in the sunniest areas of southern France were 50% less likely to be diagnosed with breast cancer when compared to average rates. The researchers also looked at eating habits and vitamin D consumption, and found those women who received the majority of their vitamin D from sunlight instead of diet were 32% less likely to be diagnosed with breast cancer.

Geographical data reveals that women living in the sunny American Southwest have lower breast cancer rates than women living in the darker Northeast, and national breast cancer rates have been negatively correlated to distance from the equator (closer to the equator means more hours of sunlight). A study from Norway even found that women diagnosed with breast cancer in summer had better survival rates than those diagnosed in the winter, presumably because extra sunlight in the early stages of the disease can be decisive.

Conflicts in the Data

One Canadian study that measured vitamin D in the blood of women with breast cancer found that those with relatively high levels had a 50% reduction in their 12-year all-cause mortality rates compared to those with the lowest levels. Another report in the journal *Cancer Epidemiology, Biomarkers and Prevention* discussed research showing that patients with low amounts of vitamin D in their bloodstreams had more aggressive tumors and a higher risk of future breast cancer recurrence.

There are some recent examples of research studies showing a positive connection between vitamin D and decreased breast cancer risk; but there are several other studies that have been done over the years that have produced similar results.

On the other hand, there have been many other studies that have not been able to find a connection between vitamin D and breast cancer prevention. This has naturally caused confusion and skepticism. But a 2008 report published in the *Journal of Steroid Biochemistry and Molecular Biology* may have revealed the key reason for the discrepancy between different studies. This meta-analysis of other studies found no protective effect for vitamin D against breast cancer in most cases. However, it *did* find a positive effect when the breast cancer rates of those with the highest levels of vitamin D in their bloodstreams were compared to women who had the lowest.

More Varied Research is Needed

It must be admitted there is a certain incompleteness in the research data on the vitamin D – breast cancer connection. For example, there is no clear recommendation that emerges about just exactly how much vitamin D would be needed to deliver significant protective effects. In part, this may be because cancer researchers have been too focused on drug-based approaches to treating breast cancer and have not put enough effort into really looking closely at the possibilities offered by natural substances and nutrients. This seems to have started changing, however, which may be why the general evidence supporting a positive connection between vitamin D and breast cancer rates now appears to be getting stronger.