

# Is Vitamin D Deficiency Connected to Parkinson's Disease?

**By Dr. Mercola**

Researchers report that there is a correlation between insufficient levels of vitamin D and the development of early Parkinson's disease.

A study of more than 150 Parkinson's patients found that a high percentage of subjects had vitamin D insufficiency or deficiency. Almost 70 percent had vitamin D insufficiency (defined as levels of less than 30 nanograms per milliliter) at the beginning of the study, while about 26 percent were classified as deficient (levels of less than 20 nanograms per milliliter.)

The prevalence of insufficiency at the final visit was over 51 percent, and deficiency occurred in 7 percent.

Life Extension Magazine reports:

*"Previous studies ... [suggested] that long-term effects of Parkinson's disease may contribute to the development of insufficient vitamin D concentrations ... Contrary to [the] expectation that vitamin D levels might decrease over time because of disease-related inactivity and reduced sun exposure, vitamin D levels increased over the study period.*

*These findings are consistent with the possibility that long-term insufficiency is present before the clinical manifestations of Parkinson's disease and may play a role in the pathogenesis of PD."*

As we learn more about vitamin D you almost reach the conclusion that what disease isn't helped or prevented by optimizing your vitamin D levels? Considering that vitamin D impacts about 10 percent of all your genes it can be expected that the diseases that vitamin D favorably influences will continue to expand.

## **What is Parkinson's Disease?**

Approximately one to one and a half million Americans suffer from Parkinson's disease and **50,000 more people in the US are diagnosed with the disease** each year. People over 60 years of age used to make up the majority of those afflicted, but with increasing lifestyle factor risks like high aspartame intake, high exposure to pesticides and a generally increasing toxic burden, cases are now being reported regularly in people under 50 and even under 40 years of age.

Parkinson's is primarily related to poor lifestyle choices. And with the way the American diet has moved in the last 30 years (**and especially in the last 10 years**), we are virtually guaranteed to see ever increasing numbers of people suffering from this disease.

Parkinson's is a neurodegenerative disease caused by a steady depletion of nerve cells, particularly in the area of your brain referred to as the substantia nigra. Related symptoms include increasingly slow motor function, tremor when at rest, muscle rigidity, and abnormalities in your walk. It's has also been linked with decreased levels of dopamine in your brain and now a prime risk factor does appear to be deficiency in vitamin D.

A host of other factors have also been attributed to the onset of Parkinson's, including:

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Environmental toxins and pesticides

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Aspartame

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Petroleum-based hydrocarbon solvents, like paint and glue

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Deficiencies in vitamin D and vitamin B folate

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Excess iron in your body

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Pasteurized milk

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As you can see, ALL of these are lifestyle-related, which is why making simple, healthy lifestyle changes can be such a powerful tool to fight this disease.

## Vitamin D and Parkinson's

**According to the featured article**, the findings refute the previous belief that vitamin D deficiency is a symptom of Parkinson's and instead squarely implicates vitamin D deficiency as one of the **causes** of Parkinson's:

*"Previous studies in Asian populations reported a higher prevalence of hypovitaminosis D (deficiency or insufficiency) in patients with more advanced disease, suggesting that long-term effects of Parkinson's disease may contribute to the development of insufficient vitamin D concentrations," the authors write.*

*"Contrary to our expectation that vitamin D levels [in Parkinson's patients] might decrease over time because of disease-related inactivity and reduced sun exposure, vitamin D levels increased over the study period.*

*These findings are consistent with the possibility that long-term insufficiency is present before the clinical manifestations of Parkinson's disease and may play a role in the pathogenesis of [Parkinson's]."*

This isn't the first time that **I've told you sub-clinical levels of vitamin D is a risk factor for Parkinson's**. But now the Archives of Neurology is offering even further scientific proof that backs this claim up.

## The Key to Proper Vitamin D Supplementation

For a complete list of vitamin D resources, **please see my vitamin D resource page**.

There are three major points you want to remember about vitamin D:

#1) Your best source for this vitamin is exposure to the sun, without sunblock on your skin, until your skin turns the lightest shade of pink. While this isn't always possible due to the change of the seasons and your geographic location (and your skin color), this is the ideal to aim for. Safe tanning bed are next and oral Vitamin D will work if the first two options are not available.

#2) When you do supplement with vitamin D, you'll only want to supplement with natural vitamin D3 (cholecalciferol). Do NOT use the synthetic and highly inferior vitamin D2, which is the one most doctors will give you in a prescription most of the time unless you ask specifically for D3.

#3) Get your vitamin D blood levels checked! The only way to determine the correct dose is to **get your blood tested** since there are so many variables that influence your vitamin D status. I recommend using Lab Corp in the U.S. Getting the correct test is the first step in this process, as there are TWO vitamin D tests currently being offered: 1,25(OH)D and 25(OH)D.

From my perspective, the preferred test your doctor needs to order is 25(OH)D, also called 25-hydroxyvitamin D, which is the better marker of overall D status. This is the marker that is most strongly associated with overall health.

## **Optimal Vitamin D Levels Explained**

The "normal" 25-hydroxyvitamin D lab range is between 20-56 ng/ml. In fact, your vitamin D level should not be below 32 ng/ml, and any levels below 20 ng/ml are considered serious deficiency states, increasing your risk not only of Parkinson's, but also of cancer and autoimmune diseases like multiple sclerosis and rheumatoid arthritis, just to name a few.

The OPTIMAL value that you're looking for with vitamin D is 50-65 ng/ml. This range applies for everyone: children, adolescents, adults and seniors.

Keeping your level in this range, and even erring toward the higher numbers in this range, is going to give you the most protective benefit. And the way you maintain your levels within this range is by getting tested regularly -- say two to four times a year in the beginning, and adjusting your vitamin D intake accordingly.

Please notice, also, that if you currently have Parkinson's or cancer you will want to keep your vitamin D level in the higher 65-90 ng/ml range to help fight the disease.

## **The Animal Based Omega-3 Fat DHA Also Prevents Brain Diseases**

Animal-based omega-3 fats are also a powerful defense against Parkinson's, as they contain two fatty acids crucial to human health, DHA and EPA. Most of the neurological benefits of omega-3 oils are derived from the DHA component rather than the EPA component.

In fact, DHA is one of the major building blocks of your brain. About half of your brain and eyes are made up of fat, much of which is DHA -- making it an essential nutrient for optimal brain and eye function. Your brain activity actually depends greatly upon the functions provided by its outer, fatty waxy membrane to act as an electrical nerve-conduction cable.

In your brain alone, DHA may help to ward off Parkinson's by:

- Reducing brain inflammation.
- Stimulating neuron growth, and development and repair of synapses. (Your brain is a vast complex system of nerve cells sending and receiving electrical impulses across junctions called synapses. The small space between the two cells is where the action occurs. One neuron may synapse with as many as 1,000 other neurons.)
- DHA protects your brain's function by supporting optimal glutamate function. Glutamate and GABA are considered your brain's 'workhorse' neurotransmitters. They work together to control your brain's overall level of excitability, which controls many body processes.

But there's a lot of confusion out there when it comes to supplementing with omega-3 fats, and getting your best source of DHA.

I believe **krill oil is your best option** for getting animal based omega-3 fats. Personally, I, and my family, take two krill oil capsules every day, because of the fact that the omega-3 is attached to phospholipids that dramatically increase its absorption, especially into brain tissue.

There has been some misinformation spread around the Internet that krill is not sustainable. This is NOT true. The truth is that not only is krill the largest biomass in the world, but krill harvesting is one of the best regulated on the planet, using strict international precautionary catch limit regulations that are reviewed regularly to assure sustainability.

You can **[read more about why krill oil is completely environmentally friendly here.](#)**

# Currently Prescribed Parkinson's Drugs May Actually Make You WORSE

The dopamine agonists currently used to treat Parkinson's appear to curb some of the side effects of the disease, but at what cost? Dopamine agonist's labels now include the warning that they may lead to some strange and disturbing side effects, including:

**Euphoria**

**Nausea**

**Hallucinations**

**Insomnia**

Causing or worsening **psychosis**

Unusual tiredness or weakness

**Orthostatic hypotension**

Dizziness, drowsiness, lightheadedness, or fainting

Increased **orgasmic** intensity

Twitching, twisting, or other unusual body movements

Weight loss

Pathological addiction (gambling, shopping, internet pornography, hypersexuality)

So it is best to avoid putting yourself in a position where you will have to take a dopamine agonist drug if you want to avoid these possible side effects.

## Healthy Living Tips to Avoid Parkinson's

To reduce your risk of this disease and the risk of side-effects from drugs conventional doctors will use to treat your Parkinson's case should you find yourself diagnosed with it, I recommend lifestyle adjustments that will lead directly to prevention. This really is your best route to make sure you do not fall victim to this disease.

Here's a good start:

- Exercise regularly. It's one of the best ways to protect against the onset of symptoms of Parkinson's disease
- Get plenty of sunshine to optimize your vitamin D levels
- Avoid pesticide and insecticide exposure (as well as exposure to other environmental toxins like solvents)
- Eat more vegetables which are high in folic acid
- Make sure your body has healthy levels of iron and manganese (neither too much nor too little of either)
- Consider supplementing coenzyme Q10, which may help to fight the disease.