



## Frequently Asked Questions on Vitamin D and MS

### **What is vitamin D and what does it do in the body?**

Vitamin D is a fat-soluble essential nutrient that plays a number of important functions in the body to maintain health and prevent disease. Vitamin D must undergo two changes in the body; via the liver, and then the kidneys, before it can become activated and carry out its biological functions.

### **What is the connection between vitamin D and MS?**

A growing body of evidence demonstrates that vitamin D deficiency is associated with multiple sclerosis (MS). Multiple studies have shown that the risk of developing MS is decreased with either higher blood levels of 25(OH)D (vitamin D) or higher levels of vitamin D intake. While the association between vitamin D status and MS risk is quite strong, it is less clear whether vitamin D supplementation can improve disease outcomes in people living with MS. Clinical trials are currently evaluating the role of vitamin D in altering the disease course. For more information, visit the [hot topics page](#) on vitamin D.

People with MS and those at risk of developing MS should meet the daily vitamin D intake recommended by Health Canada. You are considered at higher risk of developing MS if you have a biological sibling, parent or child with the disease. Other factors contributing to an increased risk of developing MS include smoking and obesity.

### **How do I check my vitamin D level?**

You must obtain a laboratory requisition for blood work from your healthcare provider. The most accurate method to measure vitamin D status is through a blood test. Test results will provide a number in units of nanomoles per litre or nmol/L, which will indicate whether your vitamin D level is *deficient*, *insufficient*, or *sufficient*. The optimal level of 25-hydroxyvitamin D in the blood ranges from 50-125 nmol/L.

### **How often should I get my vitamin D blood levels checked?**

If your healthcare provider has established that your vitamin D levels are deficient or insufficient, s/he will provide additional guidance on how often you should have your levels tested.

### **How much does the vitamin D blood test cost?**

The cost of a blood test for vitamin D varies significantly across the country. The estimated cost per test ranges between \$35 to \$100.

### **Is the vitamin D test covered through provincial, territorial or federal health insurance plans?**

Provinces and territories no longer cover the cost of vitamin D tests for the general public. Certain health conditions are exempt from the cost, though multiple sclerosis is not currently one of them. The MS Society of Canada's Government Relations endeavours to change government policies, private industry practices and public attitudes in ways that will benefit people affected by MS. This includes advocating for Canadians who are living with MS to have timely and affordable access to treatment and healthcare.

**Can I get the cost of vitamin D supplements subsidized by my provincial or private drug plan?**

Depending on your provincial drug/healthcare coverage, vitamin D supplementation might be subsidized if you meet certain criteria. For additional information, please contact your drug plan directly.

**Is there a specific brand of vitamin D supplement I should take?**

Over-the-counter vitamin D supplements will be issued a National Product Number (NPN) which means the product has been assessed by Health Canada, found to be safe, effective and of high quality. If you want to know more about the vitamin D supplement/brand, you can find more information on Health Canada's licensed natural health products [database](#). You can also speak to your pharmacist about vitamin D supplements and brands.

**Are there different types of vitamin D?**

Yes. There are two major types of vitamin D.

Vitamin D2 - also called ergocalciferol - is made by plants, some irradiated mushrooms and is found in some supplements and vegan fortified foods.

Vitamin D3 - also called cholecalciferol - is what we can produce in our skin when it is exposed to strong enough sunlight and it is also found in fish, some supplements, and fortified foods.

**Are there any contraindications between vitamin D and health conditions or medications?**

Although uncommon, there may be potential interactions between vitamin D supplements and health conditions or medications. Greater precaution should be taken in individuals with kidney disease, parathyroid disease and endocrine malignancies who have an increased risk of hypercalcemia (increased blood calcium levels). Vitamin D supplementation should be done under careful monitoring of a healthcare provider. It is important to tell your healthcare provider about other health conditions, and any prescription or over-the-counter medications you are taking.

**I believe I get adequate vitamin D from sun exposure and food sources, should I still take vitamin D supplements?**

The only way to identify your vitamin D levels is to have your blood tested and discuss with your healthcare provider if you should be taking vitamin D supplements.

**Can vitamin D supplementation replace my MS medication (disease-modifying therapy)?**

No. Vitamin D supplements should not be taken instead of a disease-modifying therapy. A maximum dose of 4,000 IU per day of vitamin D supplementation may be taken in combination

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with a disease-modifying therapy. Consult your healthcare provider before starting any new medication or supplement.