



# Vitamin D<sub>3</sub> Supplementation

## About the Pure North program

Pure North provides many of the tools needed to have a healthy lifestyle and help prevent chronic disease. In addition to education and support, the program provides a personalized plan to help participants feel better and live longer using research-based nutritional supplements. A special and unique focus of the program is on educating participants about the health benefits of vitamin D<sub>3</sub> and working with them to achieve optimal blood levels of vitamin D<sub>3</sub>.

## Why Vitamin D<sub>3</sub> is important

Vitamin D<sub>3</sub> has an effect on every system in our bodies. It acts as a protector and as a regulator to help each system function properly and to prevent the spread of disease. Canadians, particularly at northern latitudes, are deficient in and need more vitamin D<sub>3</sub> supplementation.<sup>1</sup>

## Vitamin D<sub>3</sub> levels

The amount of vitamin D<sub>3</sub> is measured by the serum 25(OH)D levels in our bodies. The optimal serum 25(OH)D levels are above 150 nmol/L.

## How much Vitamin D<sub>3</sub> do we need to take?

The amount of vitamin D<sub>3</sub> supplementation a person should take is dependent upon their body weight. Depending on a person's BMI they will need to take a different amount of vitamin D<sub>3</sub> supplementation in order to raise their serum 25(OH)D level.<sup>2</sup>

BMI Range	Vitamin D <sub>3</sub> Supplementation required to achieve serum 25(OH)D of 150 nmol/L
Underweight (<18.5)	5,000 – 9,000 IU/d
Normal (18.5-24.9)	9,000 – 10,500 IU/d
Overweight (25-29.9)	12,500 – 14,000 IU/d
Obese (30-35)	19,500 – 24,000 IU/d
Overly Obese (>35)	>20,000 IU/d

## Is it safe to take “high” doses of vitamin D<sub>3</sub>

The current national vitamin D<sub>3</sub> dose recommendations are too low to achieve serum 25(OH)D levels above 150 nmol/L.

Our research has used dose amounts to achieve the target serum 25(OH)D levels of 150 nmol/L that are higher than Health Canada's tolerable upper level of intake of 4,000 IU/day. This demonstrates that vitamin D<sub>3</sub> supplementation of at least 15,000 IU/day do not pose an increased risk for adverse affects.

1. Chao Y-S, Brunel L, Faris P, Veugelers PJ. 2013a. Vitamin D status of Canadians employed in northern latitudes. Occupational Medicine 63:485-93.
2. Ekwaru JP, Zwicker JD, Holick M, Giovannucci E, Veugelers PJ. The importance of oral vitamin D supplementation and body weight for plasma 25-hydroxyvitamin D among healthy volunteers. 2013. PLOS One (Submitted).