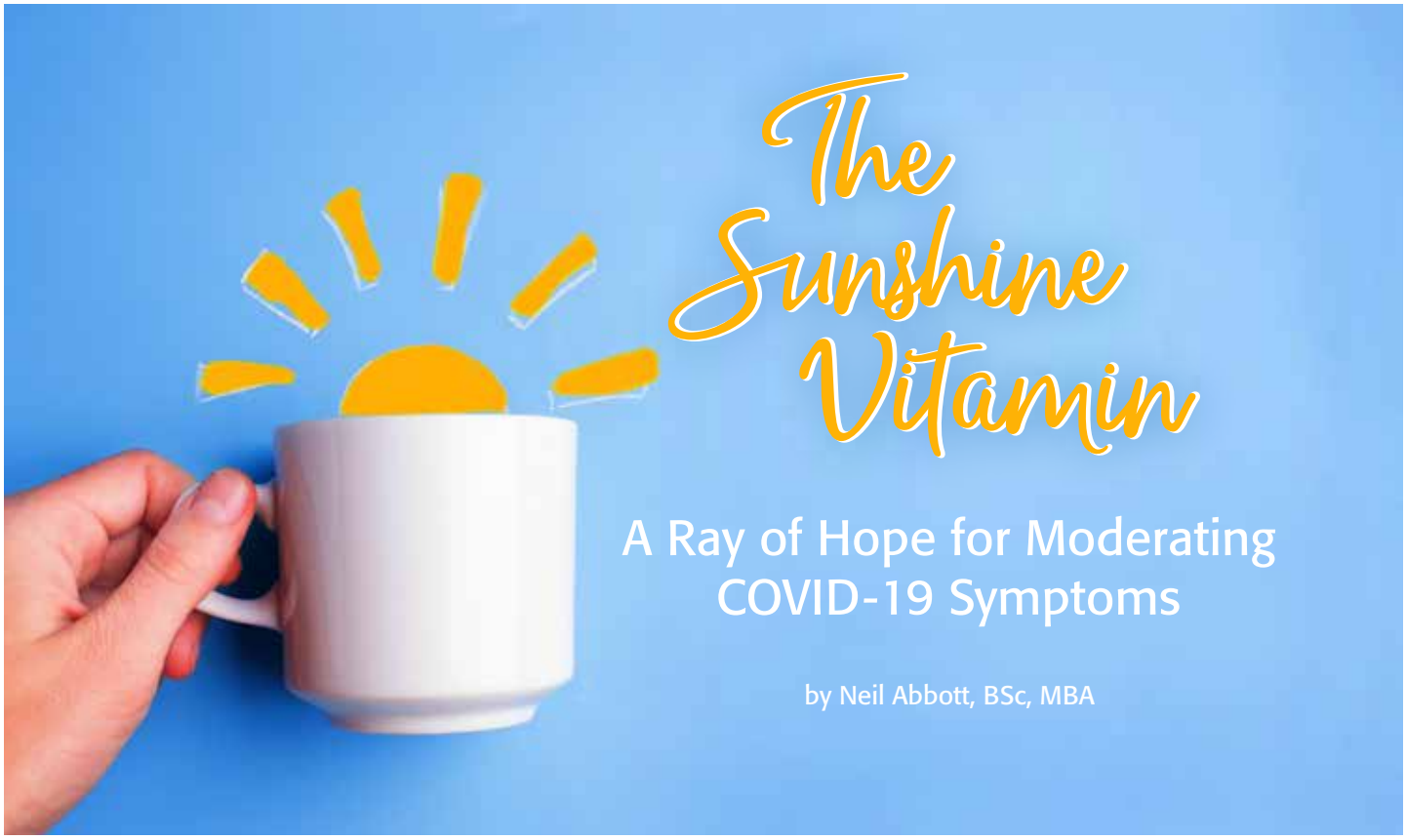

The Sunshine Vitamin

A Ray of Hope for Moderating COVID-19 Symptoms

by Neil Abbott, BSc, MBA

Sometimes, we have good news worth sharing; this is one of those cases. Upon seeing a new study promoted by *CTV News*, I was compelled to share it with my friends and family, particularly my elderly parents. I am very pleased to share this with *Flourish* readers.

Recent studies have found an association between vitamin D deficiency and the severity of COVID-19 symptoms.

Our Situation

The recent global outbreak of COVID-19 has impacted everyone, especially the elderly. There are currently no drugs or other therapeutics, nor vaccines approved by Health Canada to treat or prevent the novel coronavirus. In fact, the only proven effective strategy for dealing with COVID-19 is avoidance (social distancing, hand washing, and quarantine).

What Is Vitamin D?

Vitamin D_3, or "the sunshine vitamin," is a prehormone which, upon conversion to its active form, has an array of positive physiological activities within the body. Vitamin D is well known for its role in calcium absorption and deposition within the skeletal system (bones and teeth).

The well-established role of vitamin for immunity, in helping prevent and treat seasonal influenza, and the mechanisms by which this is achieved, have resulted in considerable interest in vitamin D possibly having a role in the fight against COVID-19.

Vitamin D Deficiency Is an Issue

Canadians and people living in other higher-latitude countries have varying degrees of vitamin D deficiency. As we age, our skin becomes less effective in producing vitamin D. This may explain the correlation of higher mortality from COVID-19 amongst the elderly, who are chronically vitamin D–deficient.

Current guidelines call for vitamin D to be between 75 and 225 nmol/L (Aloia 2008, Hughes 2009). Almost all Canadians are deficient according to these recommendations.

In 2009, a panel of 16 scientists and physicians issued a call to action urging an increase in the recommended intake of vitamin D to 2,000 IU/d and raising the minimum blood level to 100–150 nmol/L (Garland 2009).

Promising Developments

One study (Daneshkhah 2020) suggests that vitamin D may reduce COVID-19 severity and save lives by suppressing the cytokine storm in COVID-19 patients. The study found that patients from countries with high COVID-19 mortality rates, such as Italy, Spain, and the UK, had lower levels of vitamin D compared to patients in countries that were not as severely affected.

Another study (Alipio 2020) found that vitamin D status is significantly associated with clinical outcomes. They reported that for each standard deviation increase in serum levels of vitamin D, **there was an eight-fold increase in the odds of having mild v. severe symptoms, and a 20-fold increase in the odds of having a mild v. critical outcome**.

Researchers in Edmonton are among several groups around the world looking into whether there is any benefit of boosting vitamin D levels in a patient's blood as a means of protecting them against COVID-19. Dr. Aldo J. Montano-Loza, an associate professor at the University of Alberta, is preparing to launch a study of at least 70 Albertans who contracted COVID-19 to see if their vitamin D levels put them at risk of severe infection and whether boosting these levels will help their condition.

Summary

Vitamin D provides a wide spectrum of benefits spanning both prevention and treatment of diseases. It was even included as a suggestion in the *Canadian Food Guide* for many years. Vitamin D is inexpensive and is available to everyone. Its safety is considered exceptionally high at approved doses. Vitamin D has been clearly proven to broadly impact immune function in a manner that is reproducibly beneficial. Specific evidence from controlled human intervention trials shows vitamin D supplementation to effectively prevent or treat seasonal influenza.

Preliminary evidence is showing individuals who test positive for COVID-19 have profoundly lower levels of the vitamin in their blood, compared to people who test negative for the virus. A rapidly increasing number of scientists are calling for vitamin D supplementation as an important tool in the fight against COVID-19.