

Chapter 24

Importance of Vitamin B and Its Effect on Health During the COVID–19 Pandemic Period

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ABSTRACT

Vitamin B12 is a water-soluble vitamin, which is mainly present in animal food, and some plant-based sources are found like dried purple laver (Nori). Dried purple laver is also rich in iron and n-3 polyunsaturated fatty acid. Due to the minimum plant source of vitamin B12, its deficiency mainly occurs in a vegetarian population. In this covid-pandemic time immunity is playing a very important role to reduce the chances of symptoms of covid-19. Vitamin B12 is helping to maintain a healthy balance of the immune system. The covid-19 virus interferes with the metabolism of cobalamin which gives symptoms of cobalamin deficiency and this is very much similar to covid's symptoms. A high dose of methylcobalamin is used in the treatment of the symptoms of vitamin B12 deficiency. Many studies showed that methylcobalamin would play a role to reduce the damage caused by covid-19 in infected people.

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INTRODUCTION

The SARS-CoV-2 virus causes coronavirus disease (COVID-19). In January 2020, the Coronavirus was proclaimed a general wellbeing crisis of international concern by the World Health Organization, and in March 2020, COVID-19 was identified as a global pandemic responsible for infecting over 20 million and more than 700,000 deaths. The symptoms of COVID-19 are fever, cough, fatigue, headache, diarrhea, arthromyalgia, severe interstitial pneumonia, sepsis-induced coagulopathy, and multi-organ failure, which can also lead to acute respiratory misery syndrome (Zhu et al., 2020). Also, the intense development of COVID-19 consequences in immoderate manufacturing of pro-inflammatory cytokines in cytokine storms (Zhang et al., 2020). Previously, in 2002-2004 and 2012-2014, outbreaks of associated viruses belonging to the β -coronavirus household befell as Extreme Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), COVID-19 respectively (Zumla et al., 2015; Schoeman et al., 2020), is noticeably transmissible in humans; regularly current with moderate flu-like symptoms (Guo et al., 2020; Mehta et al., 2020). The interest in vitamin B wishes to be emphasized due to the fact it performs a critical function in cell functioning, strength metabolism, and suitable immune function. Kandeel and Al-Nazawi used molecular modeling methods and noted that feasible treatments for COVID-19 may want to be ribavirin, telbivudine, diet B12, and nicotinamide (Kandeel et al., 2020). Narayanan and Nair (Narayanan et al., 2020) point out that nutrition B12 (methylcobalamin) may additionally be a workable inhibitor of the SCV2-nsp12 enzyme's RNA-dependent-RNA polymerase activity, and that inhibition of this enzyme may additionally lead to decrease viral contamination and reduce the severity of COVID19 disease. Zhang et al. (Zhang et al., 2020) say that the conceivable for treating COVID-19 patients is melatonin, an anti-inflammatory and anti-oxidative molecule. Research has proven that melatonin manufacturing is growing with the use of diet B12 (Yanagihara et al., 2014; Gupta et al., 2015).

Vitamin B Complex

The B vitamins are a gathering of water-solvent vitamins that assume significant parts in cell digestion. The B vitamins were once thought to be a solitary nutrient, alluded to as vitamin B (much as individuals allude to vitamin C or vitamin D). All eight are alluded to as a nourishment B complex. Individual vitamin B dietary supplements are referred to through the precise identity of every diet (e.g., B1, B2, B3, etc).

Vitamin B1 (Thiamine)

Found in 1912 by Casimir Funk, vitamin B1 is supposed to be useful for dissemination, sugar digestion, psychological movement, mind work, and sensory system health. Thiamine is the anti-beriberi factor.

Source

Thiamine happens in high concentrations in seeds. It is likewise present in leaves, stems, roots, and natural products. In grains, it is packed in external germ cells and horse shelter layers (rice cleaning). These are regularly disposed of during processing which is related to loss of thiamine.

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