

Long Term Care and Vitamin D Supplementation in COVID-19 ERA

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ARTICLE INFO

Received: 📅 April 15, 2021

Published: 📅 April 28, 2021

ABSTRACT

Citation: Carmine Finelli. Long Term Care and Vitamin D Supplementation in COVID-19 ERA. Biomed J Sci & Tech Res 35(3)-2021. BJSTR. MS.ID.005699.

Editorial

Coronavirus disease 2019 (COVID-19) outbreaks have been recorded in long-term care facilities around the world, ranging from nursing homes to rehabilitation clinics [1]. Long-term care patients (or residents) need continuous care, live in close quarters, and are typically elderly and multimorbid, placing them at a higher risk of contracting SARS-CoV-2 (the virus) and suffering severe COVID-19 consequences [2,3]. Vitamin D deficiency has been linked to SARS-CoV-2 sensitivity and disease progression [4]. Educational services, nutritionists, and other doctors may be able to extend this information to social media health platforms and forums used by adults for specific vitamin D-containing nutrients, ensuring that what people have been exposed to is based on science and provides for particularly feasible, safe, and low-cost solutions and activities, especially during the winter months [5]. Long-term care facility patients are prone to vitamin D deficiency. The endogenous synthesis of vitamin D requires skin exposure to the sun, which is in short supply for most residents in long-term care facilities.

Although vitamin D is present in small amounts in some foods, it is difficult to prevent vitamin D deficiency without dietary supplementation in the absence of sufficient sun exposure. Osteomalacia and osteoporosis are also caused by a lack of vitamin D [6]. It may also lead to muscle fatigue and a higher risk of falling [7]. Because the symptoms of vitamin D deficiency are so vague, either screening or regular supplementation is necessary. There isn't enough evidence to recommend that all nursing home residents be tested for vitamin D deficiency. The single best test

for determining whether a patient is vitamin D deficient is serum 25-hydroxyvitamin D. Despite the relative cost of the test and the high prevalence of vitamin D deficiency in this population, regular vitamin D supplementation should be suggested for all nursing home residents [8]. During the examination of residents newly diagnosed with osteoporosis, a serum 25-hydroxyvitamin D level, parathyroid hormone level, and calcium level should all be taken into account [8].

These tests aren't needed before starting vitamin D supplementation on a regular basis. Vitamin D supplementation is not recommended for people who have hypercalcemia or have signs of vitamin D toxicity. Supplementing with vitamin D is not recommended for people who are hypersensitive to any ingredient of a vitamin D-containing product. By inhibiting vitamin D 25-hydroxylase activity in the liver, phenobarbital and phenytoin can lower plasma levels of 25-hydroxyvitamin D. It's unclear what kind of treatment will be best in this situation. The elderly and chronically ill patients, who are at high risk for vitamin D deficiency, have a higher disease incidence and mortality rate due to COVID-19 infection. Inflammation and immune function are also supported by vitamin D [9]. Vitamin D supplements are available in two forms: vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol). Vitamin D comes in the form of cholecalciferol, which is found in nature. A standard daily dose is 200-400 IU (5-10 micrograms).

Vitamin D and calcium are often mixed in one tablet. The amount of vitamin D that should be given as a dietary supplement

varies depending on the source. At a minimum, 400 IU should be delivered effectively, but for older nursing home residents, 800-1000 IU is a better dosage. In older people, 400 IU of Vitamin D per day has been shown to be inadequate to avoid fractures [10]. This is a worthwhile measure, given the high mortality and disability correlated with hip fractures in this population, as well as the low cost and side effects of supplementation. Vitamin D is not present in all multivitamins in sufficient quantities. When measuring the dosage of supplementary vitamin D, the quantity of vitamin D in a multivitamin should be taken into account. Nephrocalcinosis can be caused by consuming too much vitamin D. Because of irreconcilable constipation injury induced by the calcium, some long-term care residents obtaining a mixture of calcium and vitamin D may not be able to handle this procedure. In conclusion, for older patients in long term care, a daily calcium intake of 1200 mg is suggested, and vitamin D supplementation should be continued if calcium supplementation is to be stopped.

Disclosure Statement

The author declare that there are no conflicts of interest.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2021.35.005699

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