



SPECIAL ARTICLE

## Vitamin D supplementation for the prevention and treatment of COVID-19: a position statement from the Spanish Society of Geriatrics and Gerontology

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### ABSTRACT

The coronavirus disease 2019 (COVID-19) produces severe respiratory symptoms such as bilateral pneumonia associated to a high morbidity and mortality, especially in patients of advanced age. Vitamin D deficiency has been reported in several chronic conditions associated with increased inflammation and dysregulation of the immune system. Vitamin D in modulates immune function too. Vitamin D receptor (VDR) is expressed by most immune cells, including B and T lymphocytes, monocytes, macrophages, and dendritic cells and the signalling of vitamin D and VDR together has an anti-inflammatory effect. Some studies have reported that vitamin D treatment could be useful for the prevention and treatment of COVID-19 because vitamin D plays an important role as a modulator of immunocompetence. Over the last few months, some studies have hypothesized the possible beneficial effect of vitamin D supplementation in patients with COVID-19 in order to improve the immune balance and prevent the hyperinflammatory cytokine storm. Some preliminary studies have already shown promising results with vitamin D supplementation in hospitalized COVID-19 patients. Vitamin D should be administered daily until adequate levels are achieved due to vitamin D behaves as a negative acute phase reactant (APR). Despite the lack of evidence on specific doses of vitamin D to treat COVID-19 in older adults, authors consider it is necessary to standardize the use in clinical practice. These recommendations advice supplement vitamin D in a protocolled fashion based on expert opinions, level of evidence 5.

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