



Reducing Covid-19 Illness in Elder Care Residents

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Vitamin D, the Most Important Nutrient

Recent research shows that Vitamin D offers more protection against Covid-19 cases, severity of illness and deaths than any other nutrient or pharmaceutical. This paper reviews the evidence, and why seniors need extra attention.

Covid-19 Deaths in Aged Care Homes

As of June 19, 43% of COVID-19 deaths have been in nursing homes or care facilities. New Hampshire, North Dakota, Rhode Island and Minnesota each experienced 78-80% of their COVID deaths in those facilities.¹ As in other high risk groups, such as dark skinned people and the obese, the elderly are especially at risk for both severe illness and death due to Covid-19 and for low 25(OH)D levels.

Vitamin D & Covid-19 Protection The Research

- As of July 2020, studies had shown up to a 95% decrease, in critical outcomes and death when Covid-19 patients had 25(OH)D levels greater than 30 ng/ml.^{2,3}

- Countries with lower average D levels experienced statistically more cases and deaths from Covid-19.^{4,5}
- Since July, further study has provided even more evidence of protection with sufficient vitamin D levels against SARS-CoV-2 infection and its severity.
- A study of 225 hospitalized Covid-19 patients found that levels of 25(OH)D over 30 ng/ml significantly reduced the severity of illness, hypoxia, and unconsciousness. Not only did higher levels reduce illness, but while the death rate among those with levels less than 30 ng/ml was 20%, 30 ng/ml reduced the death rate to 9.7% and for those over 40 ng/ml the death rate was 6.3%, showing that this higher D level reduced the death rate by more than two thirds.⁶
- Two large scale studies that included 191,799 patients from all 50 states and 556,000 patients and controls in Israel showed a highly significant correlation between Vitamin D levels and positive Covid cases.^{7,8}
- Knowing that it takes a few days for D3 to fully activate in the liver, high doses of Calcifediol, the active form of D3, were given to patients hospitalized for Covid-19. Out of 50 patients receiving Calcifediol, only 2 needed ICU admission and none died. Of 26 controls receiving only standard of care, 13 were admitted to the ICU and 2 died. Despite a small sample size, results were highly significant ($p < 0.001$). These results suggest that dosing with Calcifediol, rather than D3, is more appropriate in emergency situations.⁹

What is Vitamin D?

- The main source of D3 is synthesis in the skin when exposed to the sun. Food supplies only a minor amount of D.
- With the same sun exposure, our old skin makes half as much as our young skin did.¹⁰
- Kidneys and liver convert D3 into hormones that regulate many bodily functions. Every cell in the body has Vitamin D receptors.
- D3 is vital for a functioning immune system.
- Vitamin D3 also protects against influenza¹¹, respiratory infections^{12,13}, certain cancers (colon¹⁴, prostate¹⁵ and breast¹⁶), Type 2 Diabetes¹⁷, and cardiovascular disease¹⁸.

Why Are the Elderly More at Risk?

- The elderly have less D3 precursor, 7-dehydrocholesterol, in the skin.
- They spend less time outdoors in the sun.
- They absorb fewer nutrients from their digestive tract.
- Diseased liver and kidneys fail to change D3 into active hormones.

Vitamin D Supplements Work

- Using D supplements in nursing homes has been shown to prevent deficiency.¹⁹
- Out of a concern for falls and bone fractures, New Zealand offers government sponsored Vitamin D supplements, 50,000 IU/month, to all residents of aged care facilities, thus raising serum 25(OH)D to sufficient

levels. Out of the 75% of the residents who took the supplement, 98.5% had sufficient serum 25(OH)D levels, compared to only 35% of those not on a supplement.²⁰

Doctors Should Measure and Correct D Levels

- The test is for serum 25(OH)D.
- The Endocrine Society has set the lower limit to 30 ng/ml, based on a review of the scientific evidence.
- CDC statistics show that most Americans have 25(OH)D levels below 30 ng/ml.²¹
- The Endocrine Society recommends these doses of vitamin D3 supplements:
 - 600-1000 IU/day for children 1-18
 - 1500-2000 IU/day in adults
 - 3000 - 6000 IU/day if obese.
 - If 25(OH)D levels are lower than 30 ng/ml, initial doses should be higher.²²

Work with Your Doctor

Pharmaceutical companies will not put money into marketing for vitamins. Patients usually have to ask for the test and recommendations for supplementation.

Note: This is not meant to replace sanitation and personal protection, nor the recommendations of your physician.

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