



INFORMATIONAL MEMO

TITLE:	VITAMIN D SUPPLEMENTATION RECOMMENDATIONS FOR OLDER ADULTS
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APPROVED BY: DR. LISA LATTIS	

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Purpose and Audience:

The purpose of this Informational Memo is to inform residential care settings serving older adults, members, and family members about the broad benefits of vitamin D supplementation and the evolving research and potential connection to outcomes for individuals related to COVID-19.

Information:

MAIN SUMMARY

Vitamin D supplementation has been shown to have modest beneficial effects in older adults in reducing falls, fractures and perhaps other maladies such as respiratory infections, possibly including COVID-19.

At this time, there are no definitive studies to indicate vitamin D supplementation prevents COVID-19 infection, or reduces severity of illness; however, there are studies showing an association between low vitamin D concentrations and a higher likelihood of testing positive for COVID-19. Because there are almost never attributable side effects, **supplementation with vitamin D may be reasonable to recommend to most or**

all older adults. There is general agreement that vitamin D dosing should be equivalent to 800 to 4000 International Units daily. This dosing can also be given in combined dosing once weekly, twice a month, or monthly (using 50,000 unit dosing). If possible, vitamin D should be taken with a large meal for best absorption.

Regardless of vitamin D status, all recommended precautions to prevent COVID-19 should continue to be followed, including social distancing, wearing masks, and hand hygiene.

FAQ:

Should levels be checked before supplementing?

Checking 25(OH) vitamin D concentrations before supplementation may be advantageous only in certain patients at high risk of severely deficient vitamin D levels (e.g. those with severe kidney impairment, those with very dark skin and no current supplementation, patients who are severely obese or have had gastric bypass surgery). Patients who are severely deficient may need higher doses of vitamin D supplementation. However, checking vitamin D concentrations is invasive, increases patient contact and is not necessary for most patients.

Is high dose bolus dosing recommended?

High dose bolus vitamin D supplementation is not recommended for most patients. Daily, weekly or monthly supplementation is most effective. Higher doses of vitamin D given less frequently than monthly may not be beneficial and may increase side effects.

TECHNICAL SUMMARY:

Vitamin D for COVID-19 Prevention

- No definitive data currently exists regarding the ability of vitamin D to prevent or impact treatment outcomes associated with COVID-19 infection. However, data exist regarding the impact of vitamin D supplementation on acute respiratory infections and a recent meta-analysis¹ supports a modest benefit of vitamin D

supplementation of approximately 800 IU to 2000 IU daily (or weekly equivalent dose) was associated with reduced ARIs.

- Of note, among those receiving daily or weekly vitamin D, protective effects were stronger in those with baseline 25-hydroxyvitamin D levels <10 ng/mL.
- It is possible that vitamin D might affect how the body responds to COVID-19 pneumonia so that both the acute infection and the inflammation that results from the body's immune system response to the infection are less severe.
- Although checking 25-OH vitamin D concentrations in patients may provide useful clinical information and identify a subgroup of patients who may have higher potential benefit from vitamin D supplementation, this approach is invasive, would require additional resources, would likely increase staff interaction with patients, and could possibly delay time to treatment.
 - The US Dietary Reference Intake (DRI) for vitamin D in adults over age 70 years is 800 units per day. The recommended adult upper limit for vitamin D for general supplementation is 4000 IU per day.
- Supplementation of older adults with a daily dose (or weekly equivalent) of vitamin D3 800 IU to 2000 IU theoretically may help prevent SARS-CoV-2 infection and/or reduce morbidity and mortality and is unlikely to cause unwanted side effects.
 - Vitamin D3 is readily available over the counter in doses of 800 IU, 1000 IU, 2000 IU, 4000 IU, 5000 IU 10,000 IU, and 50,000 IU.
- If older adults are already receiving a vitamin D supplement of at least 800 IU per day (separate or combined with calcium or a multivitamin), there are no data to support further supplementation unless a 25-OH vitamin D concentration is measured and the patient is insufficient in vitamin D despite current supplementation.

REFERENCES:

1. Jolliffe D, Camargo Jr CA, Sluyter J, et al. Vitamin D supplementation to prevent acute respiratory infections: systematic review and meta-analysis of aggregate

data from randomised controlled trials. medRxiv 2020; published online July 17.
<https://doi.org/10.1101/2020.07.14.20152728>

2. www.thelancet.com/diabetes-endocrinology Published online August 3, 2020
[https://doi.org/10.1016/S2213-8587\(20\)30268-0](https://doi.org/10.1016/S2213-8587(20)30268-0)

Attachment(s):

None

Department Contact:

Hcpf_hcbs_questions@state.co.us