FACT VS. FICTION

Vitamin D and COVID-19

MWR FITNESS

You may have recently heard that vitamin D levels affect one's susceptibility to and recovery from COVID-19. Current, retrospective analysis of vitamin D status in patients with confirmed COVID-19 infection has shown that those with poor vitamin D status (<30 ng/ml 25(OH)D levels) experience more severe symptoms. In addition, some health care professionals tout that obesity, diabetes and unhealthy eating habits also increase the risk for contracting COVID-19 and the severity of symptoms.

Although this relationship has some merit, hold off on reaching for the vitamin D supplement as a savior. Vitamin D is a very important nutrient for immune function. But no single food, pill, powder, or habit surpasses current infection-prevention guidance, such as hand washing, mask wearing, physical distancing, etc.

CONSIDER THE SOURCE

As with any research "study," consider the motives of the author or publisher. For example, data from a website touting the benefits of vitamin D to limit severity of COVID-19 symptoms that also sells vitamin D supplements should raise a red flag.

ASSOCIATION VS. CAUSATION

Vitamin D status is associated (correlated) with positive COVID-19 outcomes, but it absolutely does not prevent or treat the infection.

For example, flossing your teeth daily is associated with lower rates of heart disease, but flossing alone will not prevent a heart attack. Healthy habits tend to cluster (e.g., people who floss are more likely to have better sleep habits, cook their own food, exercise more, and drink less alcohol). All of those factors combined decrease the risk of heart disease.

People with higher vitamin D levels (>30 ng/ml) likely also maintain a healthy body weight, eat less fast food, exercise outdoors, and sleep well. It would be interesting to see some of the vitamin D/COVID-19 data overlaid with body fat, hours of sleep, and/or hours of exercise. Those factors would likely be very well correlated with vitamin D and possibly limit the severity of symptoms.

INCREASING VITAMIN D LEVELS

Maintaining high vitamin D levels (30-50 ng/ml) is important; however, it can take 60-90 days to change your vitamin D level. This is another reason why healthy, positive habits are vital in preventing disease or limiting severe symptoms, compared to a few days or weeks of healthy behaviors.

Vitamin D is actually not very prevalent in foods (compared to most other vitamins), so sunlight exposure and supplementation are often the best forms. Foods that contain vitamin D include: mushrooms, sardines (fish eaten with the bones), fatty fish (salmon, herring, tuna), egg yolks, and fortified dairy products.

SUMMARY

While vitamin D has immune-enhancing properties, its value in reducing symptoms in individuals with COVID-19 infection remain unclear, due to an absence of clinical studies. However, achieving and maintaining optimal vitamin D status is sensible and desirable for a number of health and performance outcomes. Vitamin D deficiency, similar to a deficiency of any other micronutrient that plays a role in the immune system, may increase the risk of contracting respiratory infections, including COVID-19. If you have any risk factors for vitamin D deficiency, consider supplementing your diet with 1000-2000 IU/day.

RECOMMENDATIONS

- Once health care clinics have the resources, check your vitamin D status (a medical provider can order the 25(OH)D lab).
- If you choose to take a vitamin D supplement, select a third-party verified product (https://www.nsfsport.com/certified-products, https://www.informed-choice.org).
- Get 15-20 minutes of sun exposure every day.
- Focus on all the other health aspects related to improving the immune system, including regular physical activity, sleep, maintaining a healthy weight, eating healthy foods, and hygiene.

Foods that contain vitamin D include:

- **Mushrooms**
- **Sardines** *(fish eaten with the bones)*
- **Fatty fish** *(salmon, herring, tuna)*
- **Egg yolks**
- **Fortified dairy products**