

## **INFORMATION ON SUPPLEMENTS REGARDING COVID-19 (CORONAVIRUS)**

*This was last updated on August 23, 2020*

This information is taken from Consumer Lab, an entity that thoroughly reviews scientific and medical literature regarding supplements. If you have further concerns or questions, please ask your primary care physician or your specialist.

**\*\*\*\*PLEASE NOTE: There are no supplements that will prevent COVID-19.\*\*\*\***

### **Supplements and products unlikely to help with coronavirus and could be dangerous**

- **Oleandrin**: This compound isolated from the oleander shrub has recently been proposed for use in preventing or treating COVID-19 (Axios, August 16, 2020), but there is no published information showing oleandrin to be safe or effective for COVID-19 in people. It is important to note that ingestion of oleander, the source of oleandrin, can be *highly toxic*. Deaths have been reported for people who consumed oleander, either accidentally or intentionally.
- **Apple Cider Vinegar**: While all varieties of vinegar, including apple cider vinegar, contain acetic acid, which has antibacterial and antiviral properties, there is no evidence that gargling with vinegar is useful for preventing or treating colds, sore throats, or COVID-19.

Vinegars may be used to clean surfaces but are not as effective a disinfectant as bleach and may take as long as 30 minutes sitting on a surface, particularly a porous one, to be effective. No research to date has shown that cleaning surfaces with vinegar can kill SARS-CoV-2. High concentrations can be considered *poisonous* and can cause tooth enamel decay, chemical burns, and painful swallowing.

- **CBD (cannabidiol)**: This has been heavily promoted to prevent the coronavirus. While CBD has been shown to inhibit certain viruses in laboratory studies, there is no evidence that it can prevent or treat COVID-19 in people. In a recently published review, researchers cited the lack of clinical evidence for CBD's antiviral effects and cautioned "*CBD sellers should stop promoting claims that are not backed by scientific evidence.*" (Tagne, Cannabis Cannabinoid Res 2020).

In fact, animal studies generally indicate that CBD *dampens* the immune system, and a study among children and young adults given large amounts of CBD found that those given CBD reported *more* upper respiratory infections than those given placebo (11% vs. 8%, respectively). Although, theoretically, dampening the immune response could dampen the devastating "cytokine storm" that occurs in severe COVID-19, it is far too early to know if this would be the case or whether it might make the infection worse.

CBD may be **helpful for anxiety** and anxiety-related sleep disorders, making it useful for people struggling with anxiety due to the current pandemic. However, be aware that in a small percentage of individuals, CBD may *worsen* anxiety and insomnia.

- **Miracle Mineral Solution:** This contains 28% sodium chlorite in distilled water. Chlorine dioxide "kits" are not a solution for COVID-19 and are ***dangerous*** to drink. They can cause nausea, vomiting, diarrhea, and symptoms of severe dehydration; there has been at least one death reported.
- **Colloidal silver:** This is a solution with silver particles. It has antiseptic (disinfectant) activity on surfaces and has been promoted by several companies to prevent or treat coronavirus. However ingesting colloidal silver has not been shown to prevent or treat coronavirus, and there are ***serious potential risks***.
- **Essential oils:** **No** essential oils have been shown to prevent or treat COVID-19 or other diseases caused by coronaviruses. The FDA has recently sent warnings to several companies promoting essential oils for use in treating COVID-19. Be aware that many essential oils can irritate the skin and eyes and cause allergic reactions when used topically. Some essential oils can have serious adverse effects if inhaled or cause severe toxicity if ingested.
  - Those that have been evaluated and found to not be helpful and even dangerous and/or poisonous are: eucalyptus, lavender, tea tree and oregano oils
  - Essential oils from eucalyptus, rosemary, fennel, sage, hyssop, wormwood, camphor, spike lavender and possibly other plants *should not be used* by people with a seizure disorder

### **Supplements and products unlikely to help with coronavirus**

(None of the following have been shown to be helpful in few studies, most with small numbers of participants)

- Coconut oil
- Garlic
- Lysine
- Melatonin
- NAC (N-acetyl cysteine)
- Olive leaf extract
- Vitamin K

### **Vitamin and minerals that *can help* with coronavirus *only if you're not getting enough***

- **Vitamin C:** If you are deficient in vitamin D, taking high doses *may* help critically ill COVID-19 patients and those on ventilators for prolonged are deficient, that can interfere with iron absorption, which could potentially lead to iron-deficiency anemia, a risk factor for increased infections. It has not been shown to prevent COVID-19 infections.

- **Vitamin D:** Taken daily in moderate doses, it may help to reduce the risk of respiratory infections and viruses such as influenza A in children and adults who are deficient (< 20 ng/mL) or severely deficient (< 10 ng/mL) in vitamin D. It has not been shown to prevent COVID-19 infections.
- **Zinc:** Supplements (such as with regular tablets) would not benefit most people unless they are deficient in zinc, which is more common in elderly people due to reduced zinc absorption. In such people, supplementing with zinc (e.g. 20 mg per day) may improve the chance of avoiding respiratory tract infection.

Zinc lozenges have been touted as able to prevent COVID-19. Although there is no direct evidence at this time to suggest that using zinc lozenges can prevent or treat COVID-19 in people, zinc does have anti-viral properties and was shown in a laboratory study to inhibit the replication of coronaviruses in cells, not people.

Zinc can impair the absorption of antibiotics, and use of zinc nasal gels or swabs has been linked to temporary or permanent loss of smell.

### **Supplements that *may possibly* help reduce symptoms of coronavirus**

- **Astragalus (or Huang qi):** has been promoted on some websites to help protect against COVID-19. Astragalus is an herb that has traditionally been used in Chinese medicine to strengthen the immune system and to treat colds, among many other uses. There is no clinical evidence at this time that astragalus can prevent or treat coronavirus infections in people. This herb may also lower blood pressure, and so should be used with caution in people with low blood pressure and those taking blood pressure-lowering medications. Women who are pregnant or breastfeeding should not take astragalus.
- **Echinacea:** Studies in laboratories (but not in people) have shown that certain species of echinacea may inhibit coronaviruses. However, there is no evidence at this time that taking this or any other echinacea product can prevent or treat coronavirus infections in people.
- **Elderberry extract:** This has been shown in *laboratory* studies to inhibit human flu viruses, including certain strains of Influenza A and B, and H1N1. Small, *preliminary* trials in *people* with the flu suggest that, taken within the first day or so of experiencing symptoms, elderberry shortens the duration of the flu, but more studies are needed to corroborate this. There is no evidence that elderberry extract can prevent COVID-19 or reduce symptoms in people who have been infected.

Concern has been raised on some websites about the potential for elderberry extract to cause a cytokine storm in reaction to a COVID-19 infection. A cytokine storm is an "overreaction" to infection in the body, in which the immune system overproduces the cytokines and immune system cells that help to fight infection, which is very damaging, particularly to the lungs, and is suspected to play a role in some cases of severe COVID-19.

There do not appear to be studies on the effects of elderberry extract on cytokine levels in people with severe respiratory infections, and there are no published reports of elderberry extract being associated with, or suspected of causing or worsening, a cytokine storm in people.

- Probiotics: Preliminary evidence from laboratory and animal studies suggest that some can have anti-viral activity. There is, however, *no clinical evidence* that a probiotic helps prevent or treat COVID-19. A placebo-controlled trial to evaluate the effects of a commercially available probiotic on transmission of the COVID-19 virus has been announced but results are not expected until 2022 (Clinicaltrials.gov 2020).
- Quercetin: It has been found in laboratory studies to inhibit a wide variety of viruses, including SARS-CoV, which is related to COVID-19. One of these studies showed that when mice were protected from lethal doses of Ebola virus when injected with high doses of quercetin. According to preliminary research, quercetin appears to work by preventing viruses from entering cells, thereby reducing "viral load." A clinical trial that will investigate the use of oral quercetin in patients with COVID-19 has been planned, or may already be underway, in China. Until more is known, it's not clear if taking quercetin supplements can help prevent or treat COVID-19.
- Turmeric and curcumin: These are best known for their modest anti-inflammatory effects. There are no studies in people showing that turmeric or curcumin supplements can prevent or reduce the symptoms of viral infections such as colds, the flu, or COVID-19.