## **COVID Virus – Prevention & Precautions**

In COVID virus complications, a prominent feature in serious cases is <u>suddenly deteriorating</u> into <u>overwhelming oxidative stress</u> (cytokine storm, which causes Glutathione depletion). High-dose intravenous <u>Vitamin C</u> (to 10,000 mg or more daily) seems to be a remarkably protective antioxidant (in studies from China & New York City). Anything that increases oxidative stress in cells can increase complications in any illness.

My preferred approach to preventive supplements for COVID virus protection is:

- 1. Anti-oxidants:
  - a. <u>Vitamin C</u>, 2000-5000mg daily orally, spread throughout the day because its half-life is only a few hours;
  - b. Astaxanthin, 1 gelcap daily (a potent oil-soluble antioxidant).
- 2. **Oil of oregano** mobilizes the immune system to stop a beginning viral infection (take one immediately at onset of any viral symptoms).
- 3. **Supportive nutrients** to maintain a <u>healthy immune system</u> (buy good quality):
  - a. Vitamin D3 (keep blood levels of 25-OH D3 up to at least 50s or 60s);
  - b. Magnesium, Zinc, Selenium;
  - c. Others helpful: N-Acetyl Cysteine (NAC), Berberine, Quercetin, Resveratrol.

<u>Health factors with increased risk</u>: Diabetes, overweight, insulin resistance, hypertension, poor nutrition, smoking, lung disease, stress, poor sleep (under 8 hours). (<u>Sugar & high-carb diets</u> increase risk even without diabetes.)

<u>Masking, distancing, and hand-sanitizer</u> are proven preventive measures for protecting others as well as yourself (even after vaccination). Prevention is better than high-intensity care (<u>only the</u> immune system can cure a virus infection). Most infections are spread by carelessness.

<u>Incubation period</u> before symptoms can be 2-7 days (but these people can unknowingly infect many others). <u>Common symptoms</u> include headache, loss of smell and taste, nose congestion, cough, muscle pain, sore throat, fever and breathing difficulties. 14% develop severe symptoms (difficulty breathing), and 5% of patients suffer critical symptoms (multi-organ failure), with weeks in the hospital. 20% do not develop noticeable symptoms (but can infect others).

Although there have been reactions to the vaccines, this is much less common than reactions to the wild-type virus, which has a death rate  $\sim 1\%$  (much higher in elderly or chronically ill), and a long-term disability rate (Long-COVID or Long-Haulers) in the majority of hospitalized patients and in some who were not hospitalized. Long-term symptoms can include fatigue, insomnia, depression, lung and heart problems, and brain damage (dementia). This virus does not result in reliable long-term immunity (people can get the same virus again), so vaccinations are recommended even for those previously infected. (Defer vaccination during current viral symptoms.) Tests for immunity or past infection are of uncertain reliability at this time.

Caution: Because this infection can change suddenly from immune deficiency to auto-immune over-reaction (cytokine storm), immune-suppressive drugs at the wrong time can kill the patient. Safety precautions and a healthy immune system (& vaccine if available) are your best protections.