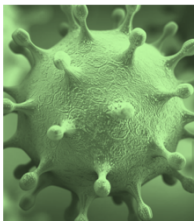


## COVID-19 – What I’ve discovered so far

I have been doing a lot of reading, watching videos and keeping up with information released by the research arms of the supplier companies I use such as Metagenics, BioCeuticals, BioMedica, Orthorplex etc. I’ve also done an online government training in the disease. Here’s a copy of the certificate I received for completing it. From all of this reading and research, here is what I’ve discovered so far about the corona virus, how it sometimes kills, who is at risk and what you should do.



Coronaviruses are a large group of viruses containing many different strains. The SARS virus from a few years ago now, was also from this group of viruses. This particular strain is new, which is why it is sometimes referred to as “novel”. It is called SARS-CoV-2 while COVID-19 is the name of the disease you get if you catch this virus. It stands for corona virus disease and the 19 refers to the fact that 2019 was when it first emerged.

### How it attacks the body

Corona viruses have what are called spike proteins on their surface. This gives them that crown like appearance you are likely used to seeing by now, and that is how these viruses got the name corona. The virus usually enters the body via the mouth or nose when we touch our faces after touching a surface that the virus has settled on. The virus then needs to enter the cells of our body so that it can hijack our cellular material (RNA) in order to replicate itself. This is why there is a delay of between 1 to 14 days before symptoms start to show. The virus can enter our body’s cells when these spike proteins bind to a receptor site on the outside of the body cell. There are thousands of different receptor sites expressed on all sorts of different cells in the body, but this virus particularly uses a receptor called the angiotensin-converting enzymes 2 (ACE2) receptor. These receptors are found on surface cells of the lung, intestine, kidneys and blood vessels. ACE receptors are involved in blood pressure regulation.

### How it kills

It is not actually the Corona virus that is responsible for people dying with this infection, it is the body’s overreaction to the infection which kills. For some reason, some people’s immune system goes into overdrive. This causes the cells infected by the virus to be killed off. As so many of these cells are lining the lung surface, this causes fluid accumulation in the lungs leading to pneumonia, an inability for the body to get adequate oxygen, followed by multiple organ failure.

### Who is most at risk

- The elderly (because their immune systems are generally not as robust as younger people)
- Anyone immunocompromised or on immune system inhibiting medications. This means people with cancer or conditions such as autoimmune conditions where they need an immune system lowering medication to keep the autoimmune process under control
- Anyone with diabetes, cardiovascular disease
- People with high blood pressure or taking a medication for high blood pressure. That is because these medications generally work by inhibiting angiotensin-converting enzymes. This means there are more of the ACE2 receptors available for the virus to bind to, allowing them to enter our cells more easily. This generally leads to greater susceptibility to the virus and is generally associated with a worse prognosis.
- Being overweight or obese seems to be correlated with a worse outcome if infected

- Having any underlying inflammation because contracting the virus will then just turn this inflammation up even further. This could also be part of the reason why the above conditions put people at a greater risk, because having these conditions generally results in a level of inflammation in the body.
- Being male (initial, limited evidence is showing men generally having a worse outcome than women)
- Another limited report showed people with A, B or AB blood types generally did worse than people with O blood types.
- People with a vitamin D deficiency also seem to be at a higher risk
- The advice is not that people with asthma and smokers don't seem to be at a heightened risk as may have been expected. This is likely because the immune processes involved in asthma involves and stimulates a different arm of the immune system.

### What can you do to decrease your risks

- Get plenty of good quality sleep. Melatonin is the sleep hormone and having good sleep is generally associated with a stronger diurnal rhythm of melatonin production. There seems to be a correlation between good melatonin levels and a better outcome with COVID-19
- Continue to eat healthy anti-inflammatory foods. Include lots of fruit and veg, nuts, seeds and fish. Limit excess sugar, alcohol, processed and deep fried foods including biscuits, cakes, pastries etc.
- Drink plenty of cleansing, hydrating water
- Keep stress levels low. Stress can cause inflammation in the body so limit your exposure to stressful news reports, get some exercise, connect with your family and friends via electronic means as much as you can, do deep breathing, take your magnesium and other nervous system relaxing remedies and ensure you are getting good sleep.
- Exercise. This will reduce stress, boost your immune system, improve sleep and keep your weight under control.
- If you have a back yard or balcony, get a few minutes of safe sun exposure whenever you can to boost your immunity, mood and your vitamin D levels
- Take your immune enhancing natural medicine formulas. Other useful nutrients include vitamin C, D and zinc. I am here to guide you to the right forms and correct doses. Book in for a Telehealth appointment with me to find out immune regime most suited to you). Find out how easy and convenient Telehealth consults can be. I can help if you need.
- Follow the governments advise on social isolation and hand washing requirements

### Cytokine storm

You might have heard some talk about not using **elderberry** for this virus. This is due to the ability of elderberry to increase the production of inflammatory cytokines. Cytokines are inflammatory immune proteins produced by the body's immune system. They can cause the death of a body cell that is infected with a virus in an attempt to rid the body of the infection.

Elderberry is absolutely fine to use as a preventative or in the early stages of infection as it has strongly anti-viral properties. If you get to the stage where you are hospitalised and put on a ventilator, it means the immune system has gone into hyperdrive and is overproducing these cytokines in order to try to rid the body of the infection. This is a dangerous situation because it causes the death of cells in the lungs, cardiovascular system and kidneys. This is the point at which you should no longer use elderberry, but then if you are hospitalised and ventilated, you are unlikely to be in a position to still be taking anything anyway. At this point you need to let emergency and hospital services take over to save your life.

If you suspect you may be infected, call the Coronavirus Health Information Line on 131 450.

For a more personalised immune enhancing program, click here to book in for a Telehealth consult with me so we can ensure you are doing everything you can to improve your immunity and lower your risks.