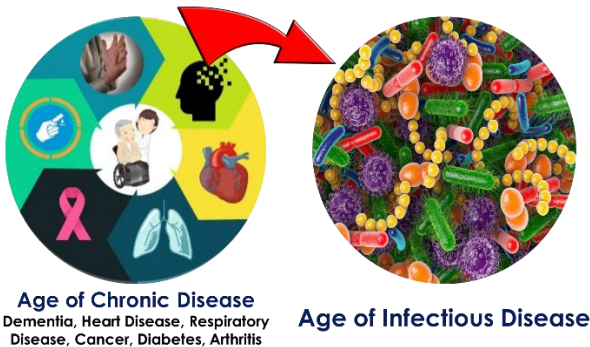




Improving Immunity

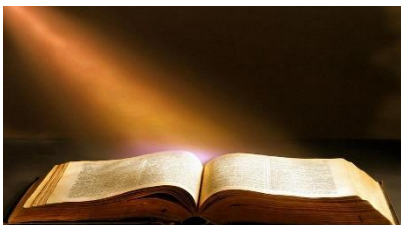
Dr Rachel Coelho B.Sc, B.Med, FRACGP, DBM

One of the great issues in health today is rise of infectious diseases. We thought we had won the war on infectious bugs in the twentieth century, and indeed we seem to have done a reasonable job for a time. However, in the last few decades and into this twenty-first century, the tide of infectious disease is rising again. In medical terms, we are moving from the Age of Chronic Disease (Dementia, Heart Disease, Cancer, Diabetes, Arthritis and Respiratory Disease) – which we know is largely due to our lifestyle choices - to the Age of Infectious Disease.



That does not mean we have won the war on Chronic Disease at all, but the two are now running concurrently. What it does mean, is that infectious diseases are starting to take centre stage again, but prevention and treatment options are very tenuous at best.

We have all just experienced the difficulties and challenges – not just with health, but also economically and socially – with the current COVID 19 pandemic. Could this happen again? If so, will it be more deadly? The prediction of experts from many areas are that we are on the brink of a much more catastrophic infectious disease pandemic. We



all have heard of plagues of Biblical Proportions, but students of the Bible are very aware of some prophecies from the Bible that give us some insight into what is happening. In the book of Luke, we find this amazing prophetic look at what this planet earth will be experiencing in the time before the return of Jesus. Jesus was asked what signs we should look to know that His second coming was near. Jesus replied to the question with this prophecy: “Nation will rise against nation, and kingdom against kingdom. And there will be great earthquakes in various places, and famines and **pestilences**; and there will be fearful sights and great

signs from heaven...” Luke 21: 10, 11. All of these things are happening before our eyes, but in the midst of this prediction is the word “pestilence” – another word for infectious disease. Therefore, we can expect that infectious disease will be a concern at this time in history.

In this context it is necessary to look at maximising our immunity. There is much we can learn from history and our own physiology to give ourselves the best fighting chance. If your body is in a prime state with minimal inflammation and oxidative stress, your immune system is much more likely to be able to fight and win a war against most infections that you are confronted with.



Good nutrition is a great place to start. Research has revealed that just increasing fruit and vegetable intake alone, has significant immune boosting and anti-inflammatory effects on your body. There is also a strong link between low fat diets and enhanced immune response. Fruits, vegetables, legumes, nuts, and whole grains – in their unprocessed forms – are rich in anti-inflammatory, anti-oxidant, anti-viral and immune boosting nutrients. Conversely, diets high in animal products, saturated fats and processed foods tend to be pro-inflammatory. The ideal immune boosting diet would be to adopt the whole food plant- based diet that avoids animal products, and is low in processed foods and oils. Not only does this diet boost your immunity directly, it also helps weight management, and reduces your risk and successfully helps a number of chronic diseases. This includes hypertension, diabetes, heart disease and kidney disease – all of which have been associated with higher severity of disease and death rates with infections.



There are some really amazing and helpful nutrients that we can find in the whole-food plant-based diet that are particularly useful to the immune system. Vitamin C is an essential and powerful antioxidant, well known for supporting immunity. It plays significant roles in both preventing and treating many respiratory infections such as colds and flus. There is no consensus on supplementation, but 1000-3000mg for most adults, to help prevent and fight infections, should be

more than adequate. Some fantastic natural sources of Vitamin C include the Kakadu plum (an Aussie superfood with 10 times more Vit C than an orange), guavas, sweet yellow peppers, all your citrus fruits, black currants and strawberries, and leafy greens. N-acetyl cysteine (NAC) is a compound that shows some very powerful benefits with regard to influenza – the normal flu. Although it doesn't prevent you from getting the infection, the research shows that only 25% of those infected with the virus develop symptoms if they were taking NAC, this is compared to 79% of those who developed symptoms when not taking NAC. Its natural form is cysteine which is found in legumes and sunflower seeds. The recommended dosage of the supplement form is 600mg twice daily in the winter season. Just a caution if you are a highly allergenic person, taking NAC may exacerbate your allergies (including hives and asthma), and also be cautious if you have stomach ulcers with this as a supplement. Zinc plays a really important role in our immune defense. High levels of zinc inside our cells causes a decrease in replication mechanisms of RNA viruses (COVID and influenza). Healthy zinc containing foods include whole grains such as oats, legumes and beans, cashews and almonds. Be careful with supplementation. Taking more than 40mg daily, long term, can interfere with absorption of other essential elements such as copper. It probably best to only supplement at times of higher risk or exposure to viruses. If symptomatic with viral symptoms, the dose can be increased up to 200mg daily just for a short period. Quercetin is a wonderful compound found naturally in red onions, carob, cranberries, red delicious apples, watercress and asparagus for example. It has been implicated to have a plethora of benefits including anti-oxidant, anti-inflammatory, anti-cancer and anti-viral properties. With regard to its effect as an anti-viral, it works as zinc ionophore – it chelates or binds the zinc and causes the zinc to rush into the cell where it can carry out its anti-viral actions. If you were to supplement the dose is 500mg twice daily. Selenium has a key role in strengthening immunity, reducing oxidative stress and preventing viral infections. It is found naturally and in high doses in Brazil nuts – just 2-4 nuts per day would be more than sufficient. Magnesium has multiple immune supportive roles and it also helps to reduce susceptibility to viral infections. Natural sources are readily found in leafy greens, nuts, seeds, legumes and whole grains.

Studies have shown that you can halve your risk of developing colds and flus by doing regular moderate exercise. Exercise has been shown to really impact the levels of oxidative stress in your body, and boost many of your innate immunity factors, making it up to five times stronger in fighting infections. It also improves your ability to sleep, and lowers stress and anxiety levels which also are implicated in immune function. How much exercise is enough? Half an hour a day of something that will make you huff and puff. A brisk walk is all that it takes. You might like to try walking in the bush. Research has discovered that walking in a forest with trees that release aromatic compounds can boost a variety of immune factors. This can be amongst eucalyptus, cypress,



pine or fir trees, and it only has to be once a week to get long lasting effects.

In the event that you get an infection, fever is your friend. Fever enhances the innate immunity, and mobilize many factors in the immune system to fight the infection effectively. The thermal effect of a fever on the body is associated with better survival rates and shorter duration of the disease caused by the infection. Generally speaking, there is no need to resort to the paracetamol or ibuprofen unless the temperature is reaching 40 degrees Celsius, or there is significant pain that is stopping you from getting adequate rest.



It is recommended that you drink at least eight glasses of water a day. Experiments tell us that those who only drink 2-3 glasses of water, increase their chances of getting flu, a stuffy nose or a sore throat by up to 4-5 times. Clearly viruses like dehydrated bodies, so stay well hydrated.

Now it is known that heat can improve the innate immune response, so there is a way that this can be enhanced, even when there is no fever. Research has uncovered that even healthy individuals taking thermal baths between 38 to 39.5 degrees Celsius were able to significantly stimulate a variety of immune cells and factors. Interestingly, if this is followed by short exposure to cold temperatures, it enhances the immunity response even further. This can be implemented at home by taking a contrast shower: 5 minutes hot, 1 minute cold, 3 minutes hot, 1 minute cold, 3 minutes hot, 1 minute cold. Make the water as hot as it can be tolerated, but not burning, and on the coldest setting for the cold portion. This is not advisable if you are particularly frail or have any heart rhythm issues. Another wonderful way to get some hydrotherapy is taking an Epson Salt Bath. Not only do you get the benefit on the immune system from the warm water, but the Epson Salt is soothing to all those aches and pains that can come with viral illnesses.



Vitamin D plays a critical role in preventing respiratory tract infections, reducing antibiotic use, and enhancing the immune systems response to infections. The best way to get your Vitamin D is through sunlight. How much is enough? As everyone has a different skin colour, the helpful rule is about ¼ of time it would normally take you to get sunburnt, with face, arms and as much of your legs exposed to direct sunlight each day. This is ok for most of Australia throughout the year, but if you live below the latitude of the greater Sydney area, it will be very unlikely that you will make sufficient Vitamin D from sunlight in the winter months. If you are not able to get enough sunlight, or live in the lower latitudes of Australia, supplementation is recommended.

As you increase air exchange through ventilation, the infection rate and severity across individuals will decrease. Ventilation is particularly essential in your own home, perhaps even more important than sterilizing all the surfaces. To ensure that you have good air exchange

throughout your home, open the windows to allow fresh air in, and this will help prevent spread of the viruses from airborne particles. Another way to ensure good ventilation is breathing through our noses. It is much better at humidifying the air that goes into our lungs, and viruses generally speaking, do not like this humidity.

Despite the fact that many viruses and infectious diseases are spread via the air, about 80% are also transmitted by touch. Very few bugs can get through skin, so it's important to avoid touching the places it can get into your body – the nose, the eyes and the mouth – particularly in public places. Make sure you sanitize your hands regularly and also the surfaces you have contact with. A solution of 60-80 % alcohol will kill nearly all germs that cause infectious diseases.



A good night sleep of at least seven to eight hours, for most adults, is really helpful. Studies have shown that individuals who have been inoculated in the nose with the common cold – rhinovirus – are less likely to develop the cold symptoms if

they have had seven or more hours sleep when compared to sleep deprived individuals.

Two things we need to avoid, to protect our immune system, is alcohol and smoking. Drinking alcohol every day or most days really suppresses and weakens your immune system. Those who consume alcohol are much more likely to catch colds, flus or other viral or bacterial illnesses than those who don't drink. The symptoms of the infections also last longer and are more severe and intense, when you're a drinker. It is well recognised that smoking causes severe lung damage, heart disease and cancers. It also has profoundly detrimental effects on our immune system. There are so many immunosuppressing chemicals, including nicotine, found in cigarettes. All of these cause smokers to be far more susceptible to both infections and autoimmune disease.



There are definite links between stress and immune function. If you have excessive stress, or mental illness such as anxiety or depression, these can all adversely affect immune system and are really important to address with stress management strategies or professional help.

There are some wonderful herbs that can help enhance our immune system to help us to combat infections. Astragalus is a deep immune enhancer and a major leader of herbs for immunity. It can be used in the treatment of colds and flus, but it plays a more important role in prevention of these for those who are susceptible – reducing the frequency and severity of the viruses. The dose is 2-6 grams of the dried root daily. Andrographis is a strong bitter herb that stimulates the immune system in a number of ways. It has broad spectrum anti-viral activity against influenza, hepatitis, cold sores, wart viruses, and Covid 19. The above ground or aerial parts of this plant are used at a dose of 2-6g each day. Do not use in pregnancy. Elderflowers directly inhibit the virus entry and replication in the immune system, and also enhance the

efficiency of the immune response to the virus. They can help to reduce the congestion and coughs in respiratory tract infections. Elderflowers can be used as a throat



gargle for pharyngitis and tonsillitis. The dose is 1-3 grams of the dried flowers daily. Echinacea has been extensively studied, and its most important action is to stimulate

the innate immune system. It is very useful in colds and flus, and a variety of respiratory tract infections, including tonsillitis and pharyngitis. Echinacea can be used for both treatment and prevention. It can also help in some skin infections as well, such as abscesses and boils. The dose is 1-3g of the dried roots daily. Garlic has some wonderful healing properties. It has quite potent anti-viral, anti-bacterial, anti-fungal, and also some anti-parasite properties. However, does not harm beneficial bacteria in the gut. It can be used it to treat colds, flus, bronchitis and nasal congestion. It tends to lose most of its benefits if crushed or heated so use it dried (which is either freeze dried or below 65 degrees C) 2-4g daily, or 1-4 fresh cloves of garlic daily if having socially free periods of time. Thyme is a great antiseptic with antiviral, anti-bacterial and anti-fungal properties. It is very useful in respiratory tract infections, such as colds, flus, bronchitis, and congestion in the respiratory tract. Thyme is particularly good when there is a lot of coughing caused by the viral illness. It is great to use as a throat gargle for coughs and sore throats, or even as a mouth wash for gum infections. The dose is 2-3 grams per day of the dried leaf.

God is the greatest of all physicians, and as our Creator, there is nothing in our physiology that he does not understand or know how to fix. God is in the business of helping and healing and He is the one that has provided all the remedies found in nature. By committing your life, and thus your health, to Him, God has promised us a peace that passes all understanding. Having an active spiritual life has been shown to boost our immune system. Therefore, include Bible reading and prayer with your maker every day. There is nothing greater that you can do for your health and immunity than to be filled with such perfect hope and peace.

Healthy Immune System Prescription

- Exercise
- Plant based diet
- Weight Management
- Adequate water
- Sleep well
- Sunlight
- Ventilation
- Good hygiene
- Manage stress
- Hydrotherapy showers & baths
- Herbs: garlic, thyme, elderflowers, echinacea
- Include God in Your Health Plan
- Be Prepared