

# NATURAL IMMUNITY and COVID19.



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*I am a retired Dentist with special interest in nutrition and Holistic Health. I have also trained in aromatherapy and sound therapy. I became interested in nutrition at age 16, when I began reading books on nutrition and naturopathy from the USA. My mother was disabled with MS and this spurred my interest and also my desire to help others.*



**NATURAL IMMUNITY** is our body's natural system of protection against microorganisms including bacteria, fungi and viruses. This means we can protect ourselves against any number of viruses including Covid19<sup>(1)</sup>. There is a considerable volume of science showing how dietary and lifestyle choices, as well as certain food supplements<sup>(2)</sup> and herbs, can support the immune system<sup>(3)</sup> and are needed for healthy immune function.

## FOOD CHOICES

**Many fruits and vegetables** are natural immunity superfoods and contain natural plant chemicals such as **flavonoids**<sup>(4)</sup>. A Systematic review and meta analysis of 83 studies suggests that higher intakes of fruit and vegetables lead to a reduction in inflammation and enhancement of immunity<sup>(5)</sup>. Many studies have suggested that flavonoids exhibit biological activities, including antioxidant, anti-allergenic, antiviral and anti-inflammatory actions<sup>(6)</sup>. **Flavonoid** rich foods include apples, citrus fruit, blueberries, onions, broccoli, kale, tomato, green tea<sup>(7)</sup>, tea<sup>(8)</sup>, cacao and whole grains + certain herbs and spices eg **Thyme & Turmeric**. Studies suggest that Flavonoids such as **Quercetin**, may be effective in preventing entry of SARS-CoV2 to human cells, by inhibiting the virus and also by blocking the spike protein<sup>(9)</sup>. Flavonoids<sup>(10)</sup> and a soluble fibre called beta-glucans<sup>(11)</sup>; help to reduce inflammation and regulate the immune system.

**Beta glucans**<sup>(12)</sup>, found in oats, barley and mushrooms, have been well researched for natural immunity in general<sup>(13)</sup> and there have been 6000 published studies. **Medicinal mushrooms**, such as **Shitake** are widely used for immune support<sup>(14)</sup> in China.

It is also important to eat a **balanced diet** and limit consumption of refined and processed food<sup>(15)</sup> and sugar<sup>(16)</sup>; these are devoid of nutrients.

**Proteins and amino acids** are required for antibody production and normal immune function<sup>(17)</sup>, as well as vitamins **A B C D E**, **essential fatty acids** and minerals; **Zinc, iron, selenium, magnesium**<sup>(18)</sup> <sup>(19)</sup>.

Research also indicates; **Lactoferrin** from cows milk is antiviral and supports natural immunity<sup>(20)</sup>; it has anti-inflammatory and immunomodulator effects.

## SUPPLEMENTS :

A variety of studies have shown that high-dose oral supplements of **vitamin C**<sup>(21)</sup> and other essential nutrients such as **vitamin D** and **zinc**, can lower the risk of viral infection and effectively reduce the intensity of infections. **Zinc**<sup>(23)</sup> <sup>(24)</sup> is especially important as it protects the body and cells from viruses entering and modulates the immune system.

A systematic review and meta-analysis of 43 studies indicated that reduced levels of **vitamin D** resulted in a higher infection risk, mortality and severity of COVID19 infection<sup>(22)</sup>.

Other food supplements<sup>(25)</sup> to consider include essential fatty acids, Vitamins A<sup>(26)</sup>, B, E, selenium, magnesium & copper, Lactoferrin, Beta-glucans<sup>(27)</sup>, and Flavonoids<sup>(28)</sup>.

**Hesperidin**, a flavonoid found in citrus fruit, was found to block and inhibit the 2002 SARS virus<sup>(29)</sup>, is anti-inflammatory and balances (modulates) the immune system<sup>(30)</sup>.

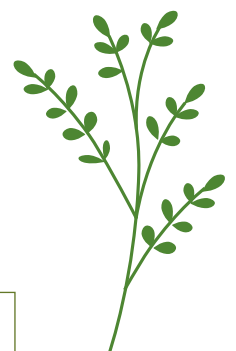
The supplementation of **micronutrients** may support the body's natural defence system by enhancing immunity, mucosal barriers, cellular immunity, and antibody production<sup>(31)</sup>.

A combination of **Quercetin, Bromelain and Vitamin C** were given to healthcare workers in a trial, and found to be protective against Covid19<sup>(32)</sup>.

## HERBAL REMEDIES and teas

such as **Echinacea** and **Pelargonium**<sup>(33)</sup> can be taken to support and balance (modulate) the immune system or at the first signs of illness, such as colds and flu<sup>(34)</sup>.

**Echinacea** and **Saint Johns Wort** were tested together and separately (In cell cultures) for their antiviral effect against SARSCOV2 and showed significant antiviral effects in the following order



IMPORTANT: You must not rely on the information here as an alternative to medical advice from your doctor or other professional healthcare provider and if you have any specific questions about any medical matter, you should consult your doctor or other professional healthcare provider

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of potency; 1/ Saint Johns Wort 2/ Saint Johns Wort /Echinacea combined 3/ Echinacea. (35)

**Black-elderberry** may also be useful in reducing the duration of colds and flu (36).

**Liquorice** balances the immune system, is a natural antiviral and anti-inflammatory (37). In 2003, researchers tested **Liquorice** (Glycyrrhirin) against the original Sars coronavirus, in infected cells of patients admitted to hospitals. Liquorice had the strongest effect against the virus and outperformed the antiviral drugs in tests (38). It also appeared in the top 10 main ingredients used in Chinese prescriptions for Covid19.

**Neem** can be taken for natural immune support and is a natural antiviral (39). A “docking” study indicates activity against covid19 virus (40). A clinical study found a 55% reduction in Covid19 positive tests among participants taking **Neem** capsules (41).

## EXERCISE

Research suggests that regular exercise (42) is crucial for a healthy immune system and counters the effects of ageing on immune function (43), which is important as severe Covid19 and deaths are linked to older age groups. Physical activity and regular moderate to strenuous exercise significantly lowers the risk of severe Covid19 and hospitalisation according to a study reviewing 48,440 adult patients with a covid19 diagnosis (44).

## SLEEP

and the biological clock have a significant influence on immune function (45). Diet (46) and lifestyle help to regulate a hormone called melatonin and hence promote healthy sleep. **Melatonin** not only plays an important role in regulating circadian rhythms (biological clock), but is also involved in anti oxidative defence and immune modulation. Exposure to natural light during the day and sleeping in a dark room are also important for regulating **melatonin** and promoting healthy **sleep**.

## SUNLIGHT

is needed for production of Vitamin D in the skin (vitamin D is poorly available from food). The major cause of vitamin D deficiency is inadequate exposure to sunlight. Vitamin D deficiency in the winter months may be the seasonal stimulus that triggers influenza outbreaks in the winter. An estimated 50% of people worldwide are vitamin D deficient. (47)\*



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