

THE ART & SCIENCE OF COMPOUNDING

Formulae Immune Support formulas are an initiative developed exclusively for Formulae pharmacies.

Have your customised immune support formula made for you at your favourite compounding pharmacy.

Contact the pharmacy that supplied this brochure to talk about your specialty immune support formula.



Formulae is a new era in compounding pharmacy, developing unique, useful products for Australian patients. Find out more by visiting <u>formulae.com.au</u>

- Contact your compounding pharmacy.
- Call us on 1300 662 485.
- Email us at <u>hello@formulae.com.au</u>

## Vaccine Support

Custom nutrients to support your immune system in the time of vaccines



Covid-19 (and its variants) is not only a respiratory disease: it affects the whole body. To date, despite the impressive outcomes of vaccination, no "magic bullet" or cure has been identified to combat Covid-19.

Vaccination is an essential and core part of the solution, however appears that it will take some time to achieve adequate levels that provide herd immunity world-wide.

Here we outline some of the known antiviral or immune supporting properties for a range of nutrients as well as emerging re-purposed use of some supplements. Key nutrients that we recommend are:

- B-Vitamins B1, B2, B3, B5, B6, B12
- Vitamin C
- Vitamin D3
- Magnesium
- Quercetin
- Zinc

**B** Vitamins (B1 – Thiamine, B2 – Riboflavin, B3 – Niacin, B5 – Pantothenic Acid, B6 – Pyridoxine and Pyridoxal-5-Phosphate, B12 – Cobalamin). The B Vitamin Group play an essential role in cell functioning, energy metabolism and immune function. They assist in proper activation of both the innate and adaptive immune responses, reduce pro-inflammatory cytokine levels, prevent hypercoagulability, and potentially reduce the length of stay in hospital. **Vitamin C** Anti-Inflammatory, antioxidant and immune enhancing properties, including increased synthesis of Type I Interferons. <sup>9-11</sup>

**Quercetin** <sup>27</sup> <sup>2</sup> Direct viricidal properties against a range of viruses *including SARS*-CoV-2. It is also a potent antioxidant and anti-inflammatory agent. Quercetin acts as a zinc ionophore and it is likely that with Vitamin C has synergistic prophylactic benefits.

**Zinc** Elemental Zinc at doses of 30-50mg per day inhibit RNA dependent polymerase vitro against SARS-CoV-2 virus and is essential for innate and adaptive immunity. <sup>31-34, 42,43 28-30 31 38</sup>

**Vitamin D3** Vitamin D insufficiency has been associated with an increased risk of death from *SARS-CoV-2*. A recent study of residents in a long-term care facility demonstrated that those residents who took Vitamin D supplementation had a much lower risk of dying from Covid-19. <sup>33-41 38</sup>

**Magnesium** Both in human and animal models, evidence is showing that magnesium plays a key role in the immune and anti-inflammatory response as a co-factor for immunoglobulin synthesis, C'3 convertase, immune cell adherence, antibody-dependent cytolysis, IgM lymphocyte binding, macrophage response lymphokines and T-helper B cell adherence. <sup>60-65</sup>

