

Meditation

Exercise

Diet

Supplements

Natural Health Care

Principles of The Best of Health

- **Reduce Life Stresses/Affirmations**
- **Unloading / Relaxation**
- **Adequate Sunlight**
- **Meditation and Sleep**
- **Exercise/Daily Walk/ Tai Chi**
- **Clean, Whole, Healthy Food**
- **Nutritional and Herbal Supplements**



Diet – Immune Boosting Foods

As many greens as you can eat

Plant foods for healthy microbiome

Avocado

Berries

Citrus Fruits

Dark Chocolate

Capsicum – red

Fish

Onion Family

Ginger

Spinach

Legumes

Mushrooms

Olive products

Probiotics / Prebiotics

Tumeric/Curcumin

ESSENTIAL SUPPLEMENTS FOR IMMUNITY

Vitamin D

Zinc

Ginger

Vitamin C

Licorice Root

Selenium

Quercetin



Zinc and the Immune System

30

https://www.dropbox.com/sh/gney953svzcx7s0/AABbC-oA2_T9vd1YHCal0HfPa?dl=0

Zinc & Respiratory Illness

- Inhibits rhinovirus replication
- Has activity against other respiratory viruses respiratory syncytial virus (Suara et al. 2004)
- Increasing intracellular Zn²⁺ concentration with zinc-ionophores
- pyrithione (stimulates cellular uptake of Zn)
- efficiently impairs replication of several RNA viruses (poliovirus, influenza virus picornaviruses (te Velthuis et al. 2010))
- Zn²⁺ & pyrithione at low concentrations (2 μM Zn²⁺ and 2 μM PT) inhibits replication of SARS-coronavirus (SARS-CoV) & equine arteritis virus (EAV) in cell culture (te Velthuis et al. 2010)
- Reduces severity of cold symptoms by acting as an astringent on trigeminal nerve (Novick et al. 1996; Godfrey et al. 1992)
- ionic zinc strongly astringent
- anti-rhinoviral, increases interferon-gamma (IFN-γ) 10-fold, inhibits ICAM-1 & inhibits release of vasoactive ingredients (histamine, leukotrienes) from basophils & mast cells, also anti-viral against other resp viruses incl herpes & respiratory syncytial virus (Elby 2010)

ZINC in the PREVENTION and TREATMENT of COVID-19

REFERENCE

Zinc for the prevention or treatment of COVID-19 and other coronavirus-related respiratory tract infections.

Hunter J et al. *Integr Med Res*, 9(3):100457, 23 Jun 2020 PMID: 32690999

Vitamin D

Vitamin D

- Most common nutritional deficiency in Australia
- Up to 70% by end of winter
- Important factor in most common chronic diseases



Vitamin D – Immunity

- enhances cellular innate immunity
- modulates immune responses
- reduces cytokine storm
- increases glutathione production
- spares Vitamin C

Deficiency

- increased susceptibility to infection, disease, and auto-immunity

How Can Vitamin D Help in Respiratory Illness?

- Vitamin D may increase production of natural antibodies (Rallof 2006)
- 25-hydroxyvitamin D supports induction of antimicrobial peptides in response to viral & bacterial stimuli (Martineau et al. 2017)
- Vitamin D metabolites induce other innate antimicrobial effector mechanisms, incl. induction of autophagy & synthesis of reactive nitrogen intermediates & reactive oxygen intermediates (Martineau et al. 2017)

Vitamin D & Corona

Lower circulating Vitamin D is associated with a greater susceptibility and severity of SARS-CoV-2 infection (Covid-19)

D'Avolio, A. et al, *Nutrients* 2020, 12(5), 1359

[Panagiotou G et al, Clin Endocrinology July 2020](#)
online

How does Vitamin D Influence Covid-19?

Conversion of Vitamin D into active form occurs in kidney and also in the lung causing anti-inflammatory effect

Vitamin D can inhibit the coronavirus by activating the ACE2 receptors (being where the virus enters)

Vitamin D can inhibit one of the specific proteins that is important in the viral replications of Covid-19

Dr Linda Calabresi 'What's the Link between Vitamin D and coronavirus?' 22 June 20 'The Medical Republic'

Vitamin C

75

<https://www.dropbox.com/sh/lyfp8pp3dxn32j5/AAC35Q0gH65t32IQiHvrMSYTa?dl=0>

Vitamin C & Respiratory Illness

- Animal studies: Vitamin C can reduce incidence & severity of bacterial & viral infections (Hemila & Chalker 2013)
- Vitamin C:
 - increases neutrophil phagocytosis & chemotaxis
 - increases macrophage migration
 - affects replication of viruses
 - affects production of interferons
 - enhances T & NK cell proliferation & modulates their functions
 - may increase antibody formation
 - powerful antioxidant, can protect various cells against oxidative stress during infection (Hemila & Chalker 2013; Nabzdyk & Bittner 2018)

Evidence of Efficacy of Vitamin C Against Viral Infections

- High dose IV Vit C shown effective against viral infections:
 - Common cold rhinovirus (Hemila & Herman 1995)
 - Avian virus H1N1 (Ely 2007**; Bissell et al. 1980*)
 - Chikungunya (Gonzalez et al. 2014; Marcial-Vega et al. 2015);
 - Zika (Gonzalez et al. 2016)
 - ARDS (Fowler et al. 2017)
 - Influenza (Zarubaeva et al. 2017; Gonzales et al. 2018)
- Oral supplementation Vit C (doses > 3g) can prevent & treat respiratory & systemic infections (Carr & Maggini 2017)

* In vitro study; ** commentary

Vitamin C in the Prevention & Treatment of Covid-19



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Vitamin C Dosages

★ You can have:

- ★ a 5 gram cold
- ★ A 10 to 30 gram flu
- ★ A 30 to 60 gram ALI, ARDS or pneumonia
- ★ A 60 to 100 gram severely ill patient dying on a ventilator.

Recommendations for Supplementation:
Treatment of Colds, Influenza and Covid-19 (no pneumonia)

- Without progression to pneumonia, increase dosages of Vit C, D & Zn
 - Supplementation with Vitamin C: up to 10,000 mg daily (spread out over course of day, bowel tolerance will vary)
 - Supplementation with Vitamin D: 4,000-10,000 IU daily
 - Supplementation with Zinc: 60mg daily (for 2 weeks max.)