

COMPOUNDS FOR YOUR

Anti-Viral Arsenal

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Co-Infection? Tripledemic?

- 1) **COVID-19** cases expected to rise in the winter months
- 2) **Respiratory syncytial virus (RSV)** - early start to season
- 3) **Influenza (flu)** - it's back!

Concerns:

- All three viruses on the rise > increased sicknesses and hospitalizations
- Anti-viral options for prevention

Early viral/co-infection

| | RSV | Flu | COVID-19 |
|--------------------------|-----|-----|----------|
| Runny Nose | X | X | X |
| Cough | X | X | X |
| Fever | X | X | X |
| Sore throat | | X | X |
| Muscle Aches | | X | X |
| Fatigue | | X | X |
| Headaches | | X | X |
| Loss taste/smell | | | X |
| SOB | | | X |
| Wheezing/Protruding Ribs | X | | |

Early viral/co-infection

- Mode of transmission: Airborne, respiratory droplets
- Respiratory distress
- Cases increase during cold months

Both children and adults have had less contact with others the past two seasons, and they don't get the immunity they got with those infections [previously]. That's why we are seeing out-of-season, early season [viruses]."¹

- Dean Blumberg, MD *professor and Chief of pediatric infectious diseases at the University of California Davis*

Long Haul Syndrome

- Chronic Fatigue
- Chronic Inflammation
- Weight gain
- Temperature intolerance
- Hair Loss
- Loss taste/smell
- Cytokine Storm
- Prolonged Mast Cell Activation
- Disrupted sleep cycles, insomnia
- Headaches
- Brain fog, lack of concentration

"Up to 80% of patients experience prolonged illness after COVID-19²"

"Long COVID may persist for months after infection and is more likely to occur in those who did not receive adequate treatment during symptomatic phase"

"Treatment should be individualized to clinical signs and symptoms"

Preventive and Long-Haul Protocols

I-PREVENTSM

COVID PROTECTION PROTOCOL

A Guide to the Prevention of COVID-19

The I-PREVENT protocol must be part of an overall strategy that includes common sense public health actions such as good hand hygiene, avoiding crowded public gatherings, adequate ventilation and other measures. The following protocol can be used for both chronic and post-exposure prevention.

Chronic prevention is especially recommended for healthcare workers, those over 60 years old with comorbidities, people who are morbidly obese, and residents of long-term care facilities. Follow **post-exposure prevention** if a household member is COVID-positive or if you have had prolonged exposure to COVID but have not developed symptoms. At the onset of any flu-like symptoms, please refer to the I-CARE Early Treatment Protocol.

CHRONIC PREVENTION

In order of priority, not all required.

- **Ivermectin:** 0.2 mg/kg – start treatment with one dose, take second dose 48 hours later, then 1 dose every 7 days (weekly).
Those at high risk of contracting COVID-19 can consider dosing twice a week. See Table 1 for help with calculating correct dose. Due to a possible interaction between quercetin and Ivermectin, these drugs should be staggered throughout the day. For COVID treatment, Ivermectin is best taken with a meal or just following a meal, for greater absorption.
- **Zinc:** 30-40 mg daily.
Zinc supplements come in various forms (e.g., zinc sulfate, zinc citrate and zinc gluconate).
- **Melatonin:** Begin with 1 mg and increase as tolerated to 6 mg before bedtime (causes drowsiness). Slow- or extended-release formulations preferred.
- **Mouthwash:** three times a day.
Gargle three times a day (do not swallow) with an antiseptic-antimicrobial mouthwash containing chlorhexidine, cetylpyridinium chloride (e.g., Scope[™], Act[™], Crest[™]) or povidone-iodine.
- **Steam inhalation:** once a day.
Inhaled steam supplemented with antimicrobial essential oils (e.g., Vicks VapoRub[™] inhalations) has been demonstrated to have virucidal activity. Antimicrobial essential oils include lavender, thyme, peppermint, cinnamon, eucalyptus and sage.
- **Vitamin D:** dosing varies (see tables below).
Vitamin D supplementation is likely a highly effective and cheap intervention to lessen the impact of this disease, particularly in vulnerable populations, (i.e., the elderly, obese, people of color, and those living in northern latitudes).
The greatest COVID protection benefit from Vitamin D supplementation will occur in individuals deficient in Vitamin D.

About this Protocol

The information in this document is our recommended approach to COVID-19 based on the best (and most recent) literature.

It is provided as guidance to healthcare providers worldwide on the early treatment of COVID-19. Patients should always consult with their provider before starting any medical treatment.

New medications may be added and/or changes made to doses of existing medications as further evidence emerges. Please check our website at flccc.net to be sure you are using the latest version of this protocol.

For more information on nutritional therapeutics and how they can help with COVID-19, visit geni.us/COVID_nutrition

For additional information on COVID prevention, the rationale behind these medications, and other optional treatments, see 'A Guide to the Prevention of COVID-19'.

FLCCC > Treatment Protocols > I-PREVENT

I-RECOVER

LONG COVID TREATMENT

An Approach to Treating Long COVID

Up to 80% of patients experience prolonged illness after COVID-19, characterized by prolonged malaise, headaches, generalized fatigue, sleep difficulties, hair loss, smell disorder, decreased appetite, painful joints, dyspnea, chest pain and cognitive dysfunction. Long COVID may persist for months after acute infection, and it is likely that patients who did not receive adequate treatment during the symptomatic phase are much more likely to develop long COVID. Treatment should be individualized to clinical signs and symptoms.

FIRST LINE THERAPIES

In order of priority, not all required.

- **Prednisone:** 10-15 mg daily for 3 weeks. Taper to 10 mg for three days, then 5 mg for three days, then stop.
- **Ivermectin:** 0.2–0.3 mg/kg daily for 2-3 weeks.
- **Low dose naltrexone (LDN):** Begin with 1 mg daily, increase to 4.5 mg daily as required. May take 2-3 months for full effect.
- **Intermittent daily fasting and/or periodic daily fasts:**
Fasting promotes autophagy, the body's protective mechanism to remove misfolded, foreign and damaged proteins. It also promotes mitophagy and the release of stem cells. It is likely that promoting autophagy will aid in the removal of the spike protein. NOTE: Hydroxychloroquine inhibits autophagy and should be avoided in patients undergoing intermittent fasting.
- **Spermidine and/or Resveratrol:**
These compounds have been demonstrated to augment autophagy. Wheatgerm, mushrooms, grapefruit, apples and mango are high natural sources of spermidine. A bio-enhanced formulation containing trans-resveratrol from Japanese Knotwood Root appears to have good bio-availability.
- **Melatonin:** 8 mg at night (slow release/extended release preferred).
Patients should pay attention to good sleep habits. Increase dose from 1 mg as tolerated (may cause severe bad dreams at high dosages).
- **Vitamin D:**
The majority of those with long COVID continue to have Vitamin D deficiency. Patients may require a loading dose based on baseline Vitamin D levels (see Table 2). If baseline levels are unknown, the needed dose can be calculated from body weight or BMI (see Table 3).
- **Omega-3 fatty acids:** Vascepa, Lovaza or DHA/EPA 4 g day.
- **Aspirin:** 81 mg daily.
- **Curcumin (turmeric):** 500 mg twice daily.

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For additional information on long COVID treatment, the rationale behind these medications, and other optional treatments, see 'An Approach to Treating Long COVID'.

Long COVID Phenotypes

- Inflammatory phenotype

FLCCC > Treatment Protocols > I-RECOVER

COMPOUNDS FOR DECREASING VIRULENCE AND ASSOCIATED SYMPTOMS

Rx Bundles for Viral Protection

WINTER ANTI-VIRAL Rx BUNDLE

Guest Name _____ DOB _____ Sex M or F
Address _____ Ph # _____
Allergies _____ Medical Conditions _____

| MEDICATION | STRENGTH | DOSAGE FORM | DIRECTIONS | QTY | REFILLS |
|---|--|-------------------|--|---------------------|---------|
| Compounded Ivermectin* (0.2mg/kg) | _____ mg (Available in 3mg increments) | Capsule | Take 1 capsule PO once weekly | | |
| Vitamin D3 | Circle One: 50,000 IU 5,000 IU/gm | Capsule Cream | Take 1 cap by mouth _____ Apply _____ gm(s) topically QD | ___ caps ___ gms | |
| Melatonin SR | ___ mg | Capsule | Take ___ capsule(s) by mouth every night at bedtime | | |
| Methyl-B | Each tablet contains: 1mg methylcobalamin 1mg hydroxocobalamin 1mg methylfolate 0.5mg pyridoxyl-5-phosphate | Sublingual Tablet | Dissolve 1-2 tabs under the tongue daily | | |
| Phys Pref Immune (Thymosin alpha-1) | 0.5mg | Sublingual Tablet | Dissolve ___ tablet(s) under the tongue daily (empty stomach). Once dissolved, allow 15mins before eating/drinking anything. | | |
| Vasoactive Intestinal Polypeptide (VIP) | 50mcg/spray | Nasal Spray | Use 1 spray in one nostril _____ time(s) daily as directed (alternate nostrils) | 12ml (1 month) | |
| Sirolimus | 5mg | Capsule | Take 1 cap PO once weekly | | |
| Methylene blue | Circle One: 15mg 25mg 35mg 50mg | Capsule | Take _____ cap(s) PO daily | | |
| Glutathione (L) reduced | Circle One: 50mg | Sublingual Tablet | Dissolve _____ tab(s) under the tongue _____ time(s) daily | ___ tabs | |
| Glutathione Liposomal | 200mg/ml | Cream | Apply _____ gm(s) topically daily | ___ gms | |

Clinical Reason for Use: * Hypoallergenic formulation; BHA-free and corn-free

LONG HAUL SYNDROME Rx BUNDLE

Guest Name _____ DOB _____ Sex M or F
Address _____ Ph # _____
Allergies _____ Medical Conditions _____

| MEDICATION | STRENGTH | DOSAGE FORM | DIRECTIONS | QTY | REFILLS |
|---|--|-------------------|---|---------------------|---------|
| Compounded Ivermectin* | _____ mg | Capsule | Take 1 capsule PO _____ for _____ then | | |
| Vitamin D3 | Circle One: 50,000 IU 5,000 IU/gm | Capsule Cream | Take 1 cap by mouth _____ Apply _____ gm(s) topically QD | ___ caps ___ gms | |
| Glutathione (L) reduced | Circle One: 50mg | Sublingual Tablet | Dissolve _____ tab(s) under the tongue _____ time(s) daily | ___ tabs | |
| Glutathione Liposomal | 200mg/ml | Cream | Apply _____ gm(s) topically daily | ___ gms | |
| Low Dose Naltrexone (LDN) | _____ mg | Capsule | Initial Titration Dose: Take 1 cap PO QD for _____ days, then increase by 1 cap every _____ days until _____ caps are reached Maintenance Dose: Take 1 cap PO QD | | |
| Vitamin A palmitate | 5,000 IU/spray | Nasal Spray | Use 1 spray in each nostril once daily. Discard after 30 days. | 8 mls | |
| Phys Pref Rejuvenation (Epitalon) | 0.5mg | Sublingual Tablet | Dissolve 1 tablet under the tongue once daily on an empty stomach | | |
| Phys Pref Brain (Semax) | 0.5mg | Sublingual Tablet | Dissolve 1 tablet under the tongue _____ time(s) daily on an empty stomach | | |
| Vasoactive Intestinal Polypeptide (VIP) | 50mcg/spray | Nasal Spray | Use 1 spray in one nostril _____ time(s) daily as directed (alternate nostrils) | 12ml | |
| Desiccated Porcine Thyroid** T3/T4 SR* | ___ grains(s) ___ / ___ mcg(s) | Capsule | Take _____ cap(s) PO Q _____ | | |
| Phys Pref Immune (Thymosin alpha-1) | 0.5mg | Sublingual Tablet | Dissolve _____ tablet(s) under the tongue QD | | |
| Methylene blue | Circle: 15mg, 25mg, 35mg, 50mg | Capsule | Take _____ cap(s) PO _____ | | |
| Sirolimus | 5mg | Capsule | Take 1 cap PO once weekly | | |

Clinical Reason for Use: * Hypoallergenic formulation; BHA-free and corn-free / ** Hypoallergenic formulation; sodium starch glycolate, sugar, salt, and cholesty-free /

Ivermectin

Ivermectin for COVID-19

90 studies from **963** scientists
133,842 patients in **27** countries

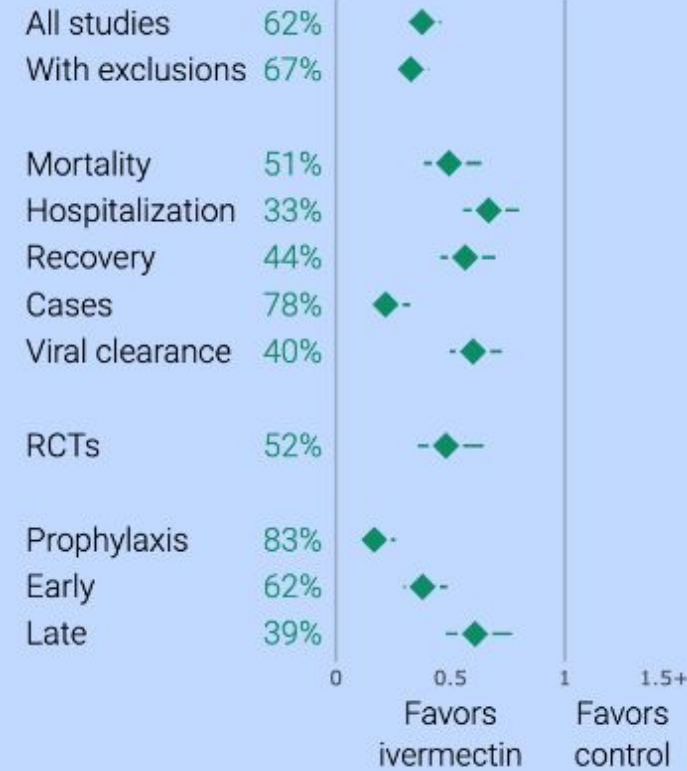
Statistically significant improvement for **mortality, ventilation, ICU, hospitalization, recovery, cases, and viral clearance.**

83%, 62%, 39% improvement for prophylaxis, early, and late treatment CI [74-89%], [51-70%], [23-52%]

52% improvement in **41 RCTs** CI [35-64%]

51% lower **mortality** from **47** studies CI [36-62%]

COVID-19 IVERMECTIN STUDIES. SEP 2022. IVMMETA.COM



<https://covid19criticalcare.com/ivermectin/>

Compounded ivermectin capsules (in 3 mg increments BHA/starch-free)

- Anti-viral protection against increasing number of RNA viruses: Influenza, SARS-CoV-2, Zika, HIV, Dengue²⁷⁻³⁵
- It is the non-viable RNA fragments of SARS-CoV-2 which provoke an overwhelming and injurious **inflammatory response** - (leading to high mortality and morbidity)
- Inhibits SARS-CoV-2 replication, leading to absence of nearly all viral material by 48h in infected cell cultures¹⁷
- Potent anti-inflammatory effect on spike protein, inhibition of both cytokine production and transcription of NF-kB (most potent mediator of inflammation)¹⁸⁻²⁰
- Prevents cellular entry, inhibits replication³⁶⁻³⁸
- Significantly lowers viral load²¹
- Prevents transmission/development of SARS-CoV-2 disease when exposed to infected patients²²⁻²⁴
- Reduces mortality in critically ill patients with COVID-19^{25,26}

Compounded ivermectin dosing

Post COVID-19 vaccine syndrome treatment: Ivermectin 0.2-0.3 mg/kg/day⁴⁰

- Binds to the spike protein for elimination
- Duration of treatment is determined by the clinical response.
- In patients with a suboptimal response, a trial of a higher dose (0.6 mg/kg/day) can be considered. If no improvement is noted after 4-6 weeks, the drug should be stopped.

Long COVID Treatment: Ivermectin 0.2-0.3 mg/kg/day for 2-3 weeks²

Chronic COVID-19 and Influenza Prevention: Ivermectin 0.2 mg/kg⁴¹

- Dose on Day 1, Day 3, then once weekly. Those at high risk of contracting COVID-19 can consider dosing twice a week.

Early COVID Treatment: Ivermectin 0.4-0.6 mg/kg QD for at least 5 days or until symptoms resolved

NOT for those who are:

- Pregnant (avoid in first trimester of pregnancy)/breastfeeding
- Taking warfarin or Coumadin (increased clotting risk)

Vitamin D₃

- Vitamin D insufficiency has been associated with an increased risk of/death from COVID-19.
- The majority of those with Long COVID continue to have Vitamin D deficiency².
- Patients may require a loading dose based on baseline Vitamin D levels.
- Supplementing Vitamin D improves:
 - Cardiovascular event outcomes, blood pressure
 - Blood sugar and insulin production
 - Inflammation
- Available as: Compounded D₃ cream (500 or 1,000 units/gm) or 50,000 units capsule (not compounded)

Thymosin alpha-1 (Phys Pref Immune) 0.5mg SL tablet

- Plays a significant role in decreasing inflammation
- Excellent concentration in the respiratory tissue
- Protects myocardium, improves WBC count
- Seeks out latent infections
- Standard dosing is 0.5mg SL QD but a TDD of 1-1.5mg QD may be necessary (2-3 tabs daily)

| PROMOTES OR INCREASES | INHIBITS |
|---|----------------------------|
| Cytokines and cytokine receptors | TNF- α |
| IL-2 | IL-1 β , IL-4, IL-10 |
| IFN α and IFN- γ | Viral replication |
| T-cell proliferation and differentiation | |
| Stem cell differentiation into CD4+ (helper) and CD8+ (cytotoxic) T cells | |
| NK-cell activity | |
| MHC-1 and tumor antigen expression | |
| Glutathione | |

Vasoactive Intestinal Polypeptide (VIP) 50mcg/spray intranasal

- Produced naturally by tissues of the gut, pancreas, gallbladder, and hypothalamus
- Lowers toxicity, corrects inflammation, immunoregulation
- Down regulation of th1 responses (proinflammatory/autoimmune response)
- Immunoregulation, especially following infections by intracellular bacteria and **viruses**
- Decrease in symptoms of CIRS, SARS and MCAS
- Binds lung epithelial cells critical for oxygen transfer, surfactant production – the same cells selectively attacked by the SARS-CoV-2 virus
- Corrects estradiol, 25-OH Vitamin D and testosterone in males⁴²
- 1-4 sprays daily

Sirolimus (rapamycin) - 5mg capsule

Recommended in Long COVID and Post COVID-19 vaccine syndrome treatment Protocols

- Mimics intermittent fasting via cellular autophagy:
Intermittent daily fasting and/or periodic daily fasts promote autophagy (the body's protective mechanism to remove misfolded, foreign and damaged proteins, and likely spike proteins as well).
- mTOR inhibitor: Improves autophagy, immune regulator, regulates cellular metabolism, anti-inflammatory, anti-proliferative, anti-fungal, decreases adiposity
- It is likely that ivermectin and intermittent fasting (or sirolimus) act synergistically to rid the body of spike proteins.
- Avoid in pregnancy, breast-feeding, < 25 years old
- Track progress at baseline and monthly using a Medical System Questionnaire⁴⁸

Methylene blue (15mg, 25mg, 35mg, 50mg caps)

Recommended in Post COVID-19 vaccine syndrome treatment protocol

- Improves: Mitochondrial function and respiration, O₂ consumption, ATP production, glucose consumption
- Acts as an antioxidant against oxidative stress, proinflammatory cytokines, cytokine storm
- Interferes with lifecycle and reduces infectivity of viruses, parasites, bacteria, and fungi (E. coli, Candida, Hepatitis, HIV, Ebola, Zika, West Nile, COVID-19)
 - *Quinine (isolated from S. African tree bark) > synthesized MB used in WWII > quinacrine > chloroquine > hydroxychloroquine (HCQ)*
- Boosts serotonin with reduced anxiety and depression, improves memory retrieval speed^{3,4}
- Recommended safe and effective dosing at 0.5-2mg/kg/day
- **Contraindicated in G6PD deficiency (hemolysis), or if pregnant or breast-feeding**

Methylene blue (15mg, 25mg, 35mg, 50mg caps)

A Cohort of Cancer Patients with No Reported Cases of SARS-CoV-2 Infection: the Possible Preventive Role of Methylene Blue

MARC HENRY^{1*}, MIREILLE SUMMA², LOUIS PATRICK³, LAURENT SCHWARTZ⁴

¹ *Université de Strasbourg, Chimie Moléculaire du Solide, Institut Le Bel, Strasbourg*

² *Ceremade, Université Paris Dauphine*

³ *Association Espoir Métabolique*

⁴ *Assistance Publique des Hôpitaux de Paris, Paris, France.*

*Corresponding author: henry@unistra.fr

- 2,500 French cancer patients treated during COVID-19 pandemic
- Breast > lung > prostate > colon cancer
- **NONE developed cases of COVID-19 or flu-like syndromes**
- Treatment group received ALA (800mg BID), hydroxycitrate (500mg TID), MB (75mg TID), followed low carb diet

Glutathione (L) Reduced 50mg SL tab

What is the primary contributor to severity of COVID-19 illness?

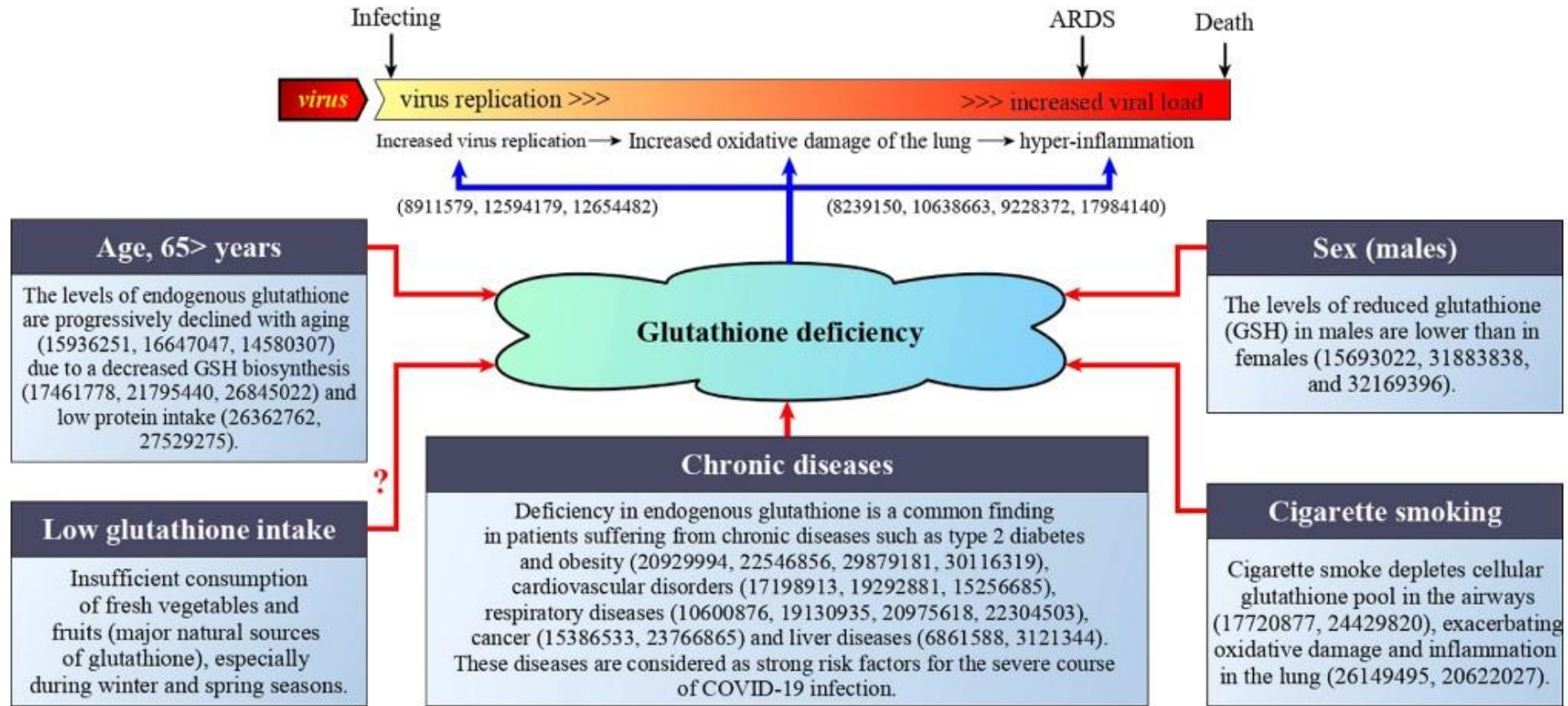
[Findings suggest that glutathione deficiency rather than vitamin D deficiency is a primary cause underlying biochemical abnormalities, including the decreased biosynthesis of vitamin D, and is responsible for serious manifestations and death in COVID-19 patients].⁴³

Glutathione:

- essential for the control of endogenous vitamin D biosynthesis
- protects host immune cells through antioxidant mechanism

Glutathione deficiency present in:

- COVID-19 patients with chronic diseases may shift redox homeostasis toward oxidative stress, exacerbating lung inflammation, leading to acute respiratory distress syndrome (ARDS), multiorgan failure, and death.⁴³



Glutathione inhibits viral replication at different stages of the viral life cycle⁴³.

Phys Pref Brain (semax) 0.5mg SL tablet

- Promotes survival of neurons during hypoxia and glutamate neurotoxicity > improved memory, attention, focus, and lifting brain fog
- Originally developed for its circulatory benefits - particularly in those experiencing pathologies connected to brain circulation, including stroke and TBI
- Semax = alternative to fluvoxamine (SSRI) FLCCC Long-Haul recommendation
 - Non habit forming
 - Free of SSRI side-effect profile (drowsiness, constipation, low appetite, decreased sex drive)
- Most patients use one 0.5mg SL tab BID
- Safe and effective \geq 2 years old

Phys Pref Methyl B SL tablet

Vitamins B9 and B12 (methylcobalamin) exhibit strongest binding affinity and inhibition of furin⁴⁴ and RNA-dependent RNA polymerase

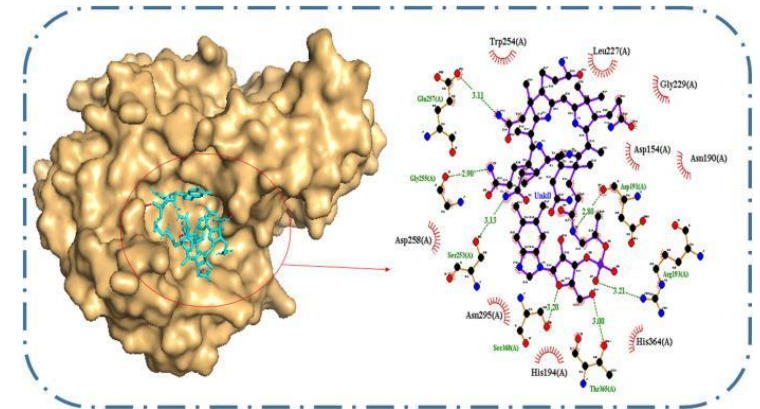
- Furin activity plays a role in spike maturation, thus viral infectivity

Global MTHFR mutation ~ 40%⁴⁵

Each Methyl B SL tablet contains:

- 0.5 mg pyridoxyl-5-phosphate (B6)
- 1 mg methylfolate (B9)
- 1 mg methylcobalamin (B12)
- 1 mg hydroxocobalamin (B12)

Typical dosing = 2 SL tabs Q a.m.



Low Dose Naltrexone (LDN)

Recommended in Long COVID and Post COVID-19 vaccine syndrome treatment Protocols

Compounded as capsules or SL tabs

In low doses (< 25 mg), naltrexone exerts anti-inflammatory benefits, neuroprotection through glial cell activation in the CNS, upregulates apoptosis, and modulates immune response^{4,6}:

- Regulates lymphocyte responses, down-regulates cytokine production, reduces mast cell activity
- Decreases release of proinflammatory cytokines (TNF, IL-6, IL-12)
- Promotes T cells and NK cells

Typical one month titration:

Days 1-10: One 1.5mg cap PO QD

Days 11-20: Two 1.5mg caps PO QD

Days 21-30: Three 1.5mg caps PO QD (target dose typically 4.5mg QD)

Side-effects: Stomach upset, vivid dreams (dose and titrate based on tolerance)

Considerations: Concurrently on opioids or tramadol? (Leave 4-6 hours between LDN and painkiller)

DO NOT USE WITH SR OPIATES



Compounded SR Melatonin

Melatonin has anti-inflammatory, antioxidant and mitochondrial regulation benefits

Viral prophylaxis: Start with 1mg and increase as tolerated to 6 mg QHS

Early viral treatment: 5-10 mg QHS

Long-COVID: Start with 1mg and increase as tolerated to 8 mg QHS

Post-Vaccine: Start with 1mg and increase as tolerated to 2-6 mg QHS

Compounded povidone-iodine 1% (0.1% iodine) nasal spray

Considered a **first line** antiseptic, anti-viral agent in early viral treatment and post-exposure prevention⁴⁷

Use 1 spray in each nostril 3 times daily for 10 days as needed for illness

(Do not use for more than 5 days in pregnancy)



Final Thoughts

Trace back the inflammation

Address mast cell activation

Restore mitochondrial function

Replete deficiencies

Re-evaluate thyroid requirements

Always consult with the pharmacist about ways to decrease polypharmacy

- > Better service
- > Better health outcomes
- > Lower cost
- > Improved compliance

Thank You!

Pharmacy Phone: 281-828-9088
Pharmacy Fax: 281-828-9669

Website: physicianspreferencerx.com

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