

## COVID-19: Nutraceutical and Botanical Recommendations for Patients

At this time, there are no specific vaccines or uniformly successful treatments for COVID-19. However, emerging research on several specific botanical and nutraceutical agents is promising, as such agents can improve the body's ability to fight off and recover from the illness. Beneficial botanical and nutraceutical agents are listed below, along with dosing recommendations from your Functional Medicine practitioner. For more information on these recommendations, please consult your practitioner directly.

NUTRACEUTICAL OR BOTANICAL AGENT	BENEFITS	ENHANCES IMMUNE SYSTEM	DECREASES VIRAL GROWTH	REDUCES SYMPTOMS
<b>Curcumin</b> 500-1,000 mg, 2x daily	Curcumin has been shown to reduce inflammation and decerase viral activity for COVID-19.	•	•	•
Quercetin  Regular: 1,000 mg orally, 2x daily  Phytosome: 500 mg, 2x daily	Quercetin is found in fruits and vegetables and has a wide range of benefits, including decreasing viral growth.			•
Zinc acetate, citrate, picolinate, or glycinate; zinc gluconate (as lozenge) 30-60 mg orally daily, in divded doses	A large body of research shows that zinc has strong anti-viral properites against many viruses.			
N-Acetylcysteine (NAC) 600-900 mg, 2x daily	N-acetylcysteine promotes the production of glutathione, a potent antioxidant that supports immune function. It also reduces the severity of the flu.			
Vitamin D 5,000 IU orally, daily	Vitamin D enhances immune system function, reduces viral growth, and can reduce upper respiratory infections.	•	•	•
<b>Vitamin A</b> 10,000-25,000 IU, daily	Vitamin A is anti- inflammatory, enhances immune function, and supports the lining of the respiratory tract.			•
Vitamin C 1-3 g orally, daily	Vitamin C contributes to immune defense by supporting various cellular functions of the immune system. Vitamin C has been used in hospital ICUs to treat COVID-19 infection.			

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Melatonin 5-20 mg, taken at bedtime	In addition to promoting restful sleep, melatonin has been shown to reduce inflammation.	•	•	
<b>Elderberry</b> (Sambucus nigra) 500 mg orally, daily	Elderberry is packed with vitamin C, dietary fiber, and antioxidants. It has been used extensively in the prevention of influenza.			
Palmitoylethanolamide (PEA) 300 mg orally, 2x daily (prevention); 600-900 mg, 3x daily for 2 weeks (treatment)	PEA is a naturally occurring anti-inflammatory agent that has been shown to improve outcomes in acute respiratory disease and influenza.	•		
Green tea or epigallocatechin gallate (EGCG) 4 cups daily (green tea) 225 mg orally, daily (EGCG)	In addition to reducing inflammation, green tea enhances the immune system and targets one of the processes involved in COVID-19 replication.	•		
Resveratrol 100-150 mg orally, 2x daily	Resveratrol, a natural compound found in red grapes, has many beneficial health effects and has been shown in the lab to attack a relative of the COVID-19 virus.	•	•	
<b>Beta glucans</b> 250-500 mg daily	Beta glucans is both anti- inflammatory and enhances immune function while specifically benefitting those with upper respiratory tract infections caused by viruses.	•	•	•
*Dosing instructions should be individualized to validated methods and research on specific mushroom genus and species.	Medicinal mushrooms have been shown to support the immune system while having antioxidant and antiviral effects.			
Chinese skullcap (standardized to flavonoids: baicalin or baicalein) 750-1500 mg daily  *Given the variability of standardization, dosing instructions should be individualized to validated methods and research for specific standardized extracts.	Chinese Skullcap enhances innate immune function, reduces viral growth, favorably regulates lungspecific inflammation and injury as well as may reduce symptoms.			

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Licorice root (standardized to glycyrrhizin) 200-400 mg daily in divided doses (short-term use <4 weeks)	Licorice is commonly found in Traditional Chinese Medicine (TCM) formulations and supports immune system function and reduces viral growth.	•	•	•