



Functional Medicine & Long Covid



By Dr. Cynthia Crosser

have healthy gut flora, we are ultimately compromising our immune system.

There is a greater potential for autoimmunity as a result of inflammation that doesn't shut down and an affinity of the viral protein to attack mitochondrial proteins, neurofilament proteins, insulin receptors, and intestinal cells; all creating a perfect storm of potential for inflammation, fatigue, diabetes, IBS, and memory and focus issues.

The microbiome is connected to our diets and lifestyle. 42% of adults in the US gained an average of 29lbs. since March 2020 and 10% gained more than 50lbs. Thus, we have come out of the pandemic with greater inflammation, decreased immunity to infection, activation of viruses that have been quiet within our bodies, dysbiosis, and a risk of autoimmunity.



If we look deeper, we know that stress will also increase inflammatory markers that correlate with cytokines such as IL-6, IL-1 and TNFalpha. Each of these is connected to behavioral symptoms such as fatigue, depression, anxiety, hostility, and pain. We may see difficulty sleeping as IL-6 shifts tryptophan away from producing serotonin and then melatonin down another pathway to produce neurotoxic chemicals. Our isolation reduced our exposure to microbes, blunting our usual immune responses. Less exercise, weight

Did you get COVID? Are you still suffering from fatigue, difficulty breathing, loss of taste and/or smell and even joint pain? Millions of people have contracted the SARSCOV2 virus and it has been estimated that up to 30% of those will develop long COVID and 49-58% of those experience long term fatigue which is not related to the severity of the infection at its onset. Of those who had COVID, 80% are left with at least one symptom which is mediated by inflammation and the immune system.

The microbiome is strongly correlated with disease severity and existing inflammatory chemicals called cytokines and chemokines such as CRP and ESR. These patients were typically depleted in gut bacteria that have immunomodulatory benefits such as Faecalibacterium, Eubacterium rectale and the bifidobacterium species. This dysbiosis (imbalance) persists after clearance of the virus. We also need the production of anti-inflammatory chemicals by special cells called T cells. These are made by SCFA's (short chain fatty acids). These are produced by the fermentation of fiber by bacteria. If we do not eat appropriate fibers and

Long Covid

Chronic Tiredness and Exhaustion (Fatigue)
Sleep Disorder
Inability to Concentrate
Headaches
Hair Loss

Depression
Anxiety
Loss of Taste and Smell
Long Lasting Cough
Sore Throat



Palpitations
Shortness of Breath
Muscle Weakness

gain, and stress all added to chronic inflammation from fat. 90% of neurotransmitters are made in the gut and act on the brain. Again, our functioning is impacted and there is a direct correlation between specific bacteria and neurotransmitters.

We can all use immune enhancement. The challenges of the pandemic clearly put the spotlight on our health. We can increase T cells of the immune system with diet and nutrition (Vitamins A, D, E and omega 3's) to lower inflammation, to enable our immune systems to respond to infection, to resolve inflammation, to resolve infection, and to go back to normal to prevent autoimmunity.

It can be done! Call 302-994-1010 or go to my website at www.crossernaturalhealth.com.

Testimonial

"Dr Crosser has knowledge, background, experience and sincere passion for her work, coupled with a true commitment to help her patients. In my opinion, it is not comparable to any medical professional I have worked with throughout a very serious medical journey the last several years. I had the pleasure of beginning treatment with her a few months ago and can truly say that her ability to recognize, diagnose and understand some of the serious challenges I am facing are quite remarkable. I am in the early diagnostic stages with her of what I know is a long journey ahead back to a state of full wellness. However, I can comment sincerely on what capable and committed hands I know I am in and what a partnership we have in tackling the issues I am facing. I am truly blessed to have met her."

~ Cynthia E.

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