

# What is Long COVID?

Long COVID, also known as post-acute sequelae of SARS-CoV-2 infection (PASC), refers to a condition where individuals experience lingering symptoms and health issues beyond 4 weeks of COVID recovery and a negative PCR or home test for COVID. The [Government Accountability Office](#) estimates that long Covid has affected up to 23 million people in the United States.

As an expert in this field, Dr. Kuon has observed that Long Covid affects individuals of all ages and can manifest in a range of symptoms.

## Key Symptoms of Long COVID

- **Energy issues:** Persistent fatigue including exercise intolerance (post exertion malaise)
- **Neurological symptoms** including brain fog, headaches, memory issues, speech issues and insomnia.
- **Musculoskeletal symptoms** including muscle aches and joint pain.
- **Cardiac symptoms:** Chest pain, dizziness on standing with palpitations (POTS)
- **Respiratory Symptoms:** Shortness of breath, chronic cough.

## Risk Factors of Long COVID

- Pre-existing inflammatory conditions such as diabetes, auto-immune conditions (including Hashimoto's) and asthma.
- Obesity.
- Repeated COVID infections.

COVID can worsen auto-immune conditions and even cause new autoimmunity to develop in some. Because COVID can promote lung inflammation and tissue hypoxia, low iron (ferritin <30 ng/dl) can contribute to ongoing fatigue.



Carla Kuon, MD, is an internist and faculty member at the UCSF Osher Center for Integrative Health. She is Director of the OPTIMAL-IH COVID Clinic.

Dr. Kuon believes that chronic illness like Long COVID can improve by taking a holistic approach that involves nutritional changes, stress reduction, and addressing the underlying drivers of illness. She addresses nutrition as the first crucial step toward regaining health.

She is author of the book, [The Long COVID Solution: A Holistic, Integrative Approach to Post-Viral Recovery](#).

# Dr. Kuon's 3-steps for Long COVID Wellness

- 1 **Start with anti-inflammatory diet and consider a diet free of lectins and histamines.**
- 2 **Use the healing power of plants and key nutrients to close nutritional deficiencies to help the body heal from Long COVID.**
- 3 **Practice mind-body therapies that reduce stress and exercises that improve [vagal toning](#).**

Dr. Kuon focuses on potent anti-inflammatory nutrients and botanicals to build a strong foundation and enable the body to heal.

Before starting any diet or supplement recommendations, Dr. Kuon starts with an assessment of patient's bloodwork including vitamins A, B2 and D, ferritin, histamine, tryptase, high-sensitivity CRP, ESR, zinc, and copper. Based on those results, she recommends a diet, nutrient, and botanicals plan.

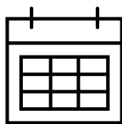
**The following materials represent a basic diet and supplement recommendations. Do not make drastic changes to your daily regimen without first checking with your doctor.**

## Best Practices for Implementing a New Regimen



### Be patient

If you have had Long COVID for over a year, it may take 6 months to return to pre-COVID state.



### Taper bi-monthly

Cut doses by half after the 2-month rule. If symptoms don't return, cut doses by half every 2 months.



### 2-month rule

Maintain full protocol for 2 more months after returning to pre-COVID health.



### Track progress

Track symptoms as you taper. If you flare up, return to previous dosing for 2 more months.

# Anti-Inflammatory Diet

COVID can kick off inflammatory pathways in the body to such high levels, the body is unable to resolve them without added help. Adopting an anti-inflammatory diet is the first step in resolving Long COVID symptoms.



Source: Dr. Andrew Weil, MD

# Lectin Elimination Diet

Lectins are proteins in foods that bind to carbohydrates. The problem with food lectins is that they can enter the systemic circulation and bind to selective tissue targets/organs. Through this mechanism, lectins alter the structure of self-tissue by the addition of the lectin, yielding a new structure that the immune system may not be able to recognize as self. This alteration increases the likelihood of an auto-immune response against self- tissue. This process is called **molecular mimicry**, and it is present in all cases of auto-immune disease.

## Eliminate the following:

- Gluten (100% Strict)
  - Wheat and barley products
- Soybean
  - Tofu
  - Edamame
  - Tempeh
  - Soy sauce
- Dairy
- Peanuts
- Lentils
- Beans
  - Kidney beans
  - Jack beans
  - All other beans must be pressure cooked
- Nightshades
  - Tomato (skin and seeds)
  - Potato (sweet and purple potatoes are allowed)





# The Low Histamine Diet

The diet is recommended for those experiencing frequent rashes, elevated plasma histamine/tryptase level, or mast cell activation.

## Reduce or avoid the following:

- Alcohol, especially fermented beverages like wine and beer
- Smoked and cured meats
- Seafood
- Pickled foods
- Leftovers
- Canned fish or meat
- Berries, especially strawberries
- Nightshades, including tomatoes and potatoes
- Preservatives
- Vinegar
- Consider using DAO enzymes with meals to reduce histamine content

## Download handout:

[https://www.histaminintoleranz.ch/downloads/SIGHI-Leaflet\\_HistamineEliminationDiet.pdf](https://www.histaminintoleranz.ch/downloads/SIGHI-Leaflet_HistamineEliminationDiet.pdf)



## Vitamins & Minerals

1. **Vitamin D** is [critical nutrient that supports killing of pathogens](#). It reduces inflammation and supports wellness in people with autoimmune diseases such as asthma, arthritis, Type 1 diabetes, multiple sclerosis and more. 5000 UI/day.
2. **Vitamin C** is [crucial for immune function](#), microbial killing, and acts as an antioxidant against oxidative stress during infection. 1000 mg/day.
3. **Zinc** is [essential for immune cells](#) and thymus gland activity. It has anti-viral properties and deficiency can cause loss of smell and taste. 30 mg twice daily.

## Antioxidants & Aminoacids

1. **Fish Oil** (Omegas) have anti-inflammatory properties. The [DHA](#) and [EPA](#) found in fish oil help protect the brain from inflammation and form the foundation for the myelin sheath—the [neuro-protective](#) coating surrounding neurons. 3g/day.
2. **Quercetin** has [anti-viral](#), anti-microbial anti-histamine and anti-inflammation properties. It [facilitates zinc transport](#) into cells, strengthening the immune system. 1500mg/day.
3. **NAC** supports [antioxidant activity](#), liver health, and reduces mucus production. 1500-2700 mg/day, divided.
4. **Melatonin** promotes sleep to help your body recover and has [immune fortifying and anti-inflammatory](#) properties. 3-6 mg/day.

## Botanicals

1. **Curcumin** in [turmeric](#) has strong [anti-inflammatory](#) properties. It reduces oxidative stress and modulates the immune response, making it a promising natural remedy for inflammation. 1-2g/day.
2. **Bromelain** has [anti-histaminic, anti-fibrinolytic, and anti-thrombotic properties](#) that reduce inflammation and break down clots in the body, which is crucial for COVID patients. 1200-1400 IU between meals.
3. **Perilla** regulates mast cells, [reduces histamine inflammation](#), and supports immune balance. 150mg twice daily.

## Drug-Herb Interaction Checkers

Before starting any supplement regimen, it is important to see how dietary plants and herbs may interact with your existing medications. Use these free online tools to be safe:

1. [Medscape](#)
2. [Drugs.com](#)
3. [MSKCC](#)

# Stress Management

In addition to dietary and supplement changes, managing stress is extremely important for managing inflammation and promoting overall wellness. The Osher Center offers a number of public classes to support health and well-being.

## Mindfulness-Based Stress Reduction

Mindfulness-Based Stress Reduction (MBSR) is an eight-week program that introduces mindfulness practices in the form of sitting meditation, body awareness, and mindful movement, modeled by Jon Kabat-Zinn, PhD.

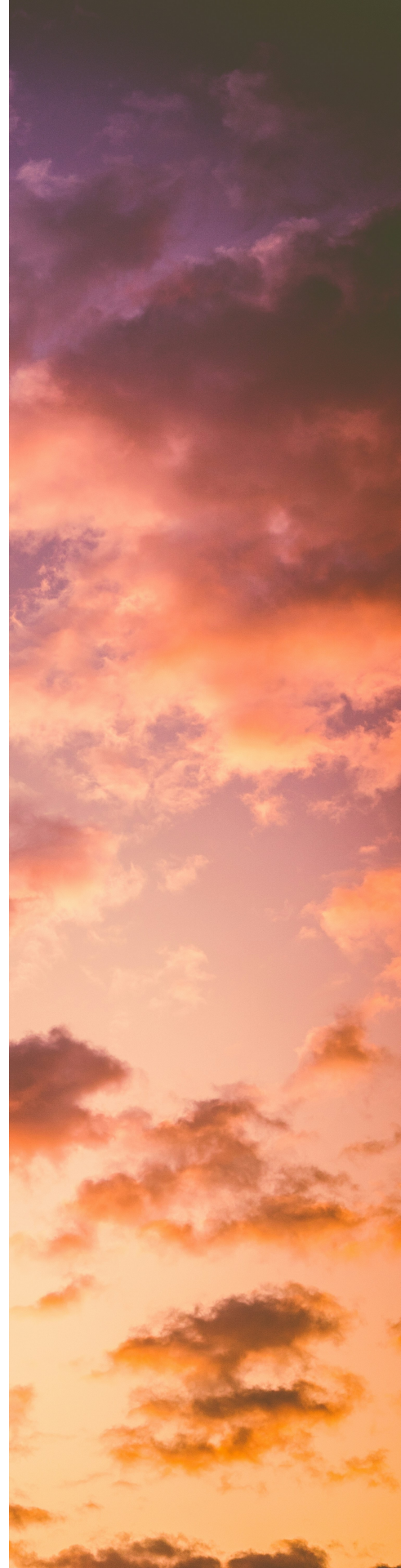
This program can help if stress is having a negative impact on your life, if you are experiencing chronic physical or mental distress, or if you are simply interested in learning ways to maintain health and well-being. [Learn more.](#)

## Laughter Yoga

Laughter has a powerful and immediate effect on our mind, body, emotions, and spirit. Laughter Yoga was founded in 1995 by Dr. Madan Kataria. While conducting research about humor and laughter, he found that our bodies have heightened endorphin levels with both spontaneous laughter or simulated laughter. This class uses laughter exercises to help facilitate a gentle deepening of mindful awareness and an easy connection with other class members. [Learn more.](#)

## Restorative Yoga

Restorative Yoga facilitates health and relaxation by supporting the body in easy and comfortable positions with props. Restorative yoga calms the central nervous system, supports digestion, and improves mood and sleep. This class may help reduce back pain, stress and anxiety, neck and shoulder tension, digestive issues, and insomnia. [Learn more.](#)





# Dr. Carla Kuon's Recommended Reading

