22+ natural remedies (and other things) that could help with long haul symptoms



This is one person's account of long haul and what helped her, in addition to other remedies that may help. Note that there may be affiliate links within this article.

IMPORTANT NOTE: This is not medical advice, and you should talk with your health care provider before making any changes regarding diet or supplementation. The author expressly disclaims any responsibility for any adverse effects arising from the application of the information contained here. The views and experiences shared here are the author's only, and are not reflective of any resource mentioned.

As the Covid-19 pandemic has progressed, many health care providers still do not have answers regarding long symptoms from Covid, also known as long haul. Symptoms can include fatigue, anxiety, panic disorder, shortness of breath, migraines, tachycardia, arrhythmias and more. Some physicians write off these symptoms as merely mental health conditions, treated with antidepressants.

However, as we learn more and more and find other resources and doctors who have a fuller understanding of this illness, progress can be made. The below list is only a list of suggestions and you should consult your doctor about any of these.

Finding the Root

Much of medicine today tends to have protocols for certain conditions and diseases. However, sometimes these protocols are lacking. They may not get to the root issue of someone's medical issue, because they weren't looking in the right place, or weren't looking hard enough.

We won't go into all of that now, but I believe it has created an environment that lacks innovation. Despite the thousands of drugs on the market today, patients stay sick. I believe that's why many have turned to holistic medicine.

With holistic medicine, the philosophy is to look at the whole person and situation to find the root of the problem. Though there are some great allopathic doctors, many of them are doing disease management, not looking past the set standards of care. But with holistic medicine, everything is looked at to try to identify a cause. In-depth testing is done to get to the root. This is especially helpful for chronic ailments such as those affecting the thyroid.

My husband began suffering from extreme anxiety. It got so severe that we could not travel, and being in traffic would cause him to have a panic attack. He was really suffering.

It wasn't until my mom suggested that he could have some imbalances and a friend told us about a great doctor she saw that we got to the root of the problem, which happened to be his thyroid. It took a couple of years, but he is finally back to being himself! The normal thyroid test didn't pick up his issue. We had to find a doctor who would do in-depth testing (and we had to pay out of pocket for his care.)

Holistic medicine tends to try to treat things naturally when possible. When we found an MD with this philosophy, we were very excited. I'd rather start treating something with a natural remedy because there are typically low to no side effects. Medication, on the other hand, may come with a laundry list of side effects, such as those you might hear listed on a pharmaceutical commercial.

I also experienced this working with CovidLongHaulers.com. They requested an in-depth blood work up to find the root of the problem, and their treatment was invaluable, even though they used pharmaceutical medication. I believe both approaches from smart, innovative doctors and smart supplements were the keys to my getting better.

Be Your Own Advocate

It's extremely important to become your own advocate when it comes to your health. Even well-meaning doctors do not know everything, and it may be helpful to get a second opinion. I have watched too many friends suffer at the hands of medical professions who made grave mistakes. It's important that you are on the same page with your doctor and you have a level of trust in his or her abilities and philosophy. Sometimes, it works to have more than one doctor, or a medical doctor and also a naturopath. Overall, it's extremely important to find healthcare providers that listen and understand your situation, and offer helpful solutions. If you do not feel that you have a good doctor, it's so important to find one. Often the best ones can be found through referrals from friends and family.

How Supplements Work

One time I had a call with my doctor and I asked him a question that was plaguing me. Why do some supplements work great for some people and not for others?

"Everyone is different," he said. "There are prescription medications that do not work for everyone. But that's why there are so many options. What might work for most people may not work for someone else."

For example, for the longest time, I have wanted to get rid of awful monthly cycle pain. It wasn't until I tried something recently that it went away. I spent years and years taking Advil until I finally found something natural that worked for me. But, if I had stopped trying, I wouldn't have found my solution. Sometimes you have to keep trying to find something that works. This takes dedication and diligence, but your health is worth it!

Sometimes you may take something for a "preventative" benefit but not see any immediate changes. The apple a day philosophy applies — no one really sees the benefits of eating an apple daily. But, over time, small healthy dietary changes add up to a lifestyle that can prevent major disease.

My Story

My husband contracted the Covid-19 respiratory infection in December, 2021, and through we had all the medicine on hand to help, his fever spiked up to 104 degrees. I was doing pretty good about staying in faith until that point, but when I saw that his fever had spiked, one of my worst fears became real: *Could we lose him?*

A couple of hours later, I had my very first panic attack. I never told my husband because we were quarantining and since he had struggled so much with anxiety I didn't want to stress him further. I called the ambulance and they checked me, but my vitals were fine and I calmed down. Because it came out of nowhere and I had never had one before, I thought at first I was having an allergic reaction. My heart started beating out of nowhere.

Thankfully, the same day his fever spiked, we were able to get the monoclonal antibody treatment. I was able to get it because I was exposed being in the same house as him. Even though the omicron variant was said to be active at the time, later our doctor told us he likely had the delta variant based on his symptoms and how sick he was. It was one week later that the government shut down access to the monoclonal antibody treatment in our area.

The following Tuesday I had a second panic attack that would not calm down. I called 911 again and they rushed me to the emergency room. I remember praying in the ambulance and telling God that I didn't want to die. I had so much more I wanted to do!

After I got to the ER and they ran some tests, they gave me Ativan, and it immediately calmed my symptoms. Since that worked, they said I suffered from panic attacks due to stress and sent me on my way. Little did I know I would be dealing with a 5+ month recovery that was actually long haul Covid. I never had a respiratory infection.

I remember so many days and nights feeling completely terrified. If I pushed myself even a little bit, I could push myself into a full blown panic attack. I was familiar with feeling "on edge," as in feeling irritable due to low blood sugar or lack of sleep. This was a whole new level of on edge. At any given moment, I felt just minutes away from panic — where my fight or flight response would completely take over, seemingly for no reason. My heart would race and there would be nothing I could do to get it to calm down, aside from medication and eventually supplements. Every time I had one I wrestled with the thought, "Am I dying?"

I remember about a week after my ER visit that my husband and I wanted to take the dogs for a walk and get takeout for dinner. I walked our dog briskly, because I was feeling ok, and I

wanted to try to get him as much exercise as possible. But as I walked him I knew I was pushing myself and something wasn't right.

We left quickly and went to pick up dinner. "I don't feel so good," I told my husband. The feeling continued to get bigger and bigger, and I began to experience shortness of breath and an increased heart rate. We made it to the place to get the food and I immediately grabbed the bread, because carbs seemed to help. We pulled over to a drugstore so I could get a ginger ale for more sugar. It was like I was having a metabolic sugar crash but instead of feeling lightheaded or hungry my body went into fight or flight mode and I thought I might pass out or die. (It may seem a little extreme that I might say that, but it's truly how it felt!)

We rushed home after the drugstore and it was the longest 20 minutes of my life. I had taken an Ativan at the drugstore but it took about 30 minutes for it to kick in. I thought, if I could only get home, I'll feel better. But the thing about panic is that it is in your body — there is nothing you can do to get away from it except try to calm down and take medication or supplements that help. It was such an excruciating feeling, it was like I lost who I was and I was only a shell of a person. I felt like something was very wrong. I would often melt into tears at the end of the day because my energy was so limited and I was on the edge of a "panic." I remember gripping the bed at night being so frightened of how I was feeling. Even though I am a person of faith, it felt like my faith had left me. Something felt very wrong.

Tests to Determine if You Have Long Haul

The group I decided to work with, CovidLongHaulers.com, has you working with your primary care doctor and if you decide to work with them, will request a cytokine panel to determine whether you have long haul or may be dealing with some other kind of autoimmune issue such as chronic fatigue syndrome or Lyme. The program is in a "trial" phase, so it's not a standard in the medical community at this time, however many thousands of people have been helped through their work.

Doctors often use a variety of tests to determine whether someone's immune system is struggling, such as complete blood count (CBC), electrolytes, metabolites, hepatic function panels, cardiac biomarkers, thyroid panels and D-dimer, according to <u>UC Davis Health</u>. If you have several of the following symptoms, it's possible you may have long haul:

- Brain foa
- Fatigue
- Headaches
- Dizziness
- Shortness of breath
- Palpitations
- Rapid heartbeat
- Loss or distorted sense of taste or smell
- POTS
- Pain
- Weakness
- Anxiety
- Depression
- Panic attacks
- Insomnia

What Is Causing "Long Haul"?

One of the biggest problems in long haul is the damage to the cell's mitochondria. As you might remember from biology class, the mitochondria is the powerhouse of the cell, and so damage to these important little organisms causes a host of problems, most notably, fatigue.

It is being realized that many people who suffer from "long haul Covid" are in fact suffering from something called dysautonomia.

According to <u>Dysautonomia International</u>, "An estimated 38 million Americans have developed an autonomic nervous system disorder following COVID-19 infection."

Dysautonomia "refers to a group of medical conditions caused by problems with the autonomic nervous system (ANS). This part of your nervous system controls involuntary body functions like your heartbeat, breathing and digestion. When the ANS doesn't work as it should, it can cause heart and blood pressure problems, trouble breathing," and more, according to the Cleveland Clinic.

In many ways, this makes sense, because <u>a study found</u> that "SARS-CoV-2 may damage the **brainstem** through viral invasion, inflammation, and vascular activation." The brainstem helps to "regulate balance, breathing, heart rate and more."

Many medical professionals are unaware of what is causing these problems or how to treat them, and there are only 52 doctors in the US who are board certified in autonomic disorders.

Thankfully, as more and more information is being gathered, we will know more about how to help people with long haul.

Mitochondrial Dysfunction

Later in my journey, I began to suffer from exercise intolerance. I hadn't been trying to work out beforehand, but as I began to feel better, I would try. However, my symptoms would come roaring back for about a week afterward. I would experience irregular heartbeat, tremors, shortness of breath, and anxiety.

I began to feel like there was definitely an energy metabolism issue connected to what I was dealing with. As I did more research, I realized my cells were damaged and I needed to boost my mitochondria in my cells as much as possible. I never thought I would actually be using the information from biology class that was drilled into my brain, "The mitochondria is the powerhouse of the cell," but here we were!

As I began to implement supplements to help boost my mitochondria, my symptoms improved even more. Many of these are listed below, but if you read articles on mitochondrial dysfunction, the following supplements seem to help according to <u>Verywell Health</u>:

- Thiamine (vitamin B1)
- Riboflavin (vitamin B12)
- Vitamin C
- Vitamin E
- Alpha lipoic acid
- Coenzyme Q10

Another article about mitochondrial dysfunction mentions the following supplements in addition to the above:

- Arginine
- Folinic Acid

It's worth noting that Coenzyme Q10 caused insomnia for me, so I could not continue to take it. However, alpha lipoic acid was a tremendous help. (More on that later.)

I came across this article from The Guardian after I discovered I could have mitochondrial dysfunction and these supplements had already begun to help, but it backed up my experiences.

In it, the author says,

"The idea that mitochondria may be involved in the ailments of some of those with long Covid arises from research conducted by Raman and others on patients who find themselves chronically exhausted by exercise following Covid-19, despite showing no obvious heart or lung abnormalities. This symptom is often referred to as post-exertional malaise (PEM), and is also experienced by people with genetic mitochondrial diseases.

In long Covid patients with PEM, Raman has found that their muscles struggle to extract oxygen from the blood as efficiently as might be expected. After coming across research that showed that mitochondria in white blood cells were not as efficient in generating ATP in patients recovering from Covid-19, she concluded that this might be the root cause."

When one of the researchers, David Systrom, took a deep dive into looking at mitochondrial DNA of long Covid parents, he discovered abnormalities deep within the mitochondria.

"In both ME/CFS and long Covid it's most likely that these are acquired forms of mitochondrial dysfunction, perhaps related to the initial infection itself or an autoimmune response to a virus or both," Systrom says. "This impedes the mitochondrial machinery, but doesn't affect the DNA itself, and it means the mitochondria then fail to generate appropriate amounts of ATP to serve the needs of the muscles."

The whole article is definitely worth a read, as it mentions how the mitochondria "fail to generate appropriate amounts of ATP to serve the needs of the muscles." Seeing that the heart and brain are the most ATP-demanding organs in the body, it makes sense that people suffering from long Covid would experience symptoms of dysautonomia.

Read the full article here.

Dr. Patterson's work: Persistence of SARS CoV-2 S1 Protein, Covid Long Haulers clinic

In July, my husband got the virus again, and he gave it to me as well. We were sick for about a week and we had fevers for 3 days, but it was nothing like his experience in December. The hardest part was keeping the fever down, and we did that with a combo of Advil and Tylenol. We used vitamin D, vitamin C, Airborne, antibacterial mouthwash as much as possible to decrease viral load, ivermectin, and aspirin. I used oil of oregano for stretchiness in my throat to try to kill any virus replicating there as well (it has become my go to for cold and flu season in addition to Airborne.) My husband used the steroid inhaler he found so helpful in December

and he also got a Zpack. I developed some myalgia and use the super turmeric to knock that out. We never got to bad to need monoclonal antibodies again, but I really think that's what pushed my husband over to recovery in December.

That Sunday after we were sick we had purchased a racing experience for my dad for his 70th birthday, and we pushed ourselves a bit to get there in the heat, even though we were still tired. I kept believing I was fully recovered, because that's what I wanted to believe.

I did ok for most of the day but since I was still weak from the second bout I had my anxiety supplements and medicine ready if needed. Later that day when we got home I felt so energetic I cleaned the whole house! In hindsight, I should have rested, because the next day I had one of the worst days of my life. It was like my body was a computer and all the tabs were open and I was facing a crash. I didn't know if I had electrolyte imbalances or what since I had been out in the heat. I called my husband to please come home and took an Ativan and once he got there, fell asleep.

Once I recovered from that day, I reached out to the Covid Long Haulers clinic, because I had just watched a video with Dr. Patterson about why what they do works. Though my doctor had recommended them to me in January, I had too much brain fog at the time, and I was concerned they wouldn't be able to help, especially with the process being so pricy. I went ahead and did it because I wanted to see if there was any remaining inflammation and fight this giant once and for all.

I went to the website and got a test kit which was delivered to my house a couple of days later. The cost for the kit was around \$410. If you try this route it's super important that you have a doctor who is on board because he or she will be the one prescribing the medication going along with the program. I think it's also good to go ahead and get baseline TSH, CBC (complete blood count) and CMP (complete metabolic panel) bloodwork. They recommended this before starting any treatment, so to get your results and start taking prescriptions the quickest, this will cut down on additional wait time and another trip to the phlebotomist.

Once I got a test kit, I scheduled an appointment with Any Lab Test Now and brought the kit in with me. Once they collected the sample, they sent it off to Radiance Diagnostics, who does the testing portion. It's important not to do a test on a Friday because it must be shipped quickly back to the lab.

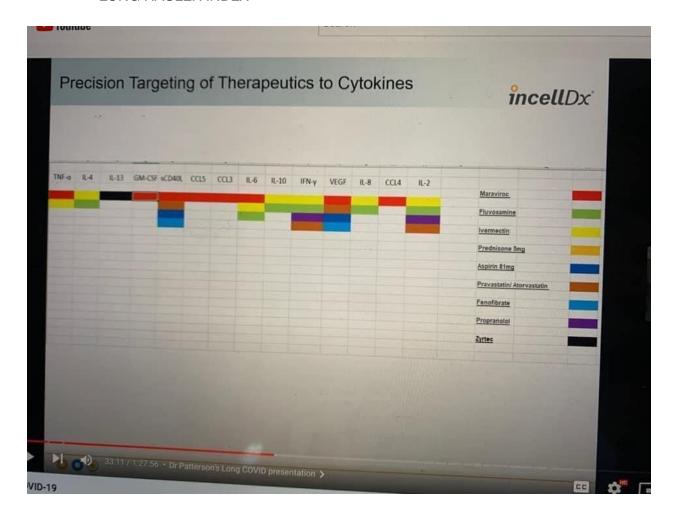
I waited about a week and received my results. Once I received them, I <u>created an account</u> and scheduled an appointment. The cost was \$250 for a Telehealth visit. I was so surprised I was able to schedule it the same day! There was a doctor available in the evening I was able to see, and my husband was able to listen in too.

On the call the doctor explained my results and what they meant. Depending on the markers someone has, they may prescribe statins and maraviroc, an HIV medication. Dr. Patterson explains the protocol and why/how it works in this video. Prior to working on long haul, Dr. Patterson was working on autoimmune disorders. In the testing, they are able to determine whether someone has true long haul and/or if they have a reactivation of some other kind of virus causing symptoms.

The cytokine panel tests:

- IL-2
- IL-4
- IL-6
- IL-8

- IL-10
- IL-13
- GM-CSF
- SCD40L
- CCL3 (MIP-1 ALPHA)
- CCL4 (MIP-1 BETA)
- CCL5 (RANTES)
- TNF-ALPHA
- IFN-GAMMA
- VEGF
- LONG HAULER INDEX



When I got my results back, it was determined that I did have some of the long hauler Cytokines, and I was put on a statin to help clear them out. I felt a difference within the first day. The first few days were rough, as I believe my cells were releasing S1 protein back into my bloodstream, which was what was initially causing my panic symptoms (my theory.) I discovered that **activated charcoal** helped me to avoid getting a panic attack, as it binds to toxins to get them out of the body. (You do want to be careful to not take any other supplements or meds at the same time as taking activated charcoal, because it will make them less effective or not effective at all.)

Below are links to their research and results:

- https://www.frontiersin.org/articles/10.3389/fimmu.2021.746021/full
- https://www.frontiersin.org/articles/10.3389/fimmu.2021.700782/full
- https://pubmed.ncbi.nlm.nih.gov/33186704/
- https://www.researchsquare.com/article/rs-1344323/v1
- https://static1.squarespace.com/static/6203f8fc93625f4735d7db61/t/ 62696fc8a6ff595d5af3399d/1651077065350/03-MEDRXIV-2022-273993v1-Patterson+-+Cytokine+Hub+Classificationof+PASC,+ME-CFS,+and+Other+PASC-like+Conditions+04-21-2022.pdf
- https://www.biorxiv.org/content/10.1101/2021.06.25.449905v1
- https://www.researchsquare.com/article/rs-1844677/v1

Restrictions on Exercise

There is a lot of confusion on whether or not you can exercise when you have long haul. At the beginning of my journey, even a walk was enough to push me into a full blown panic attack. After a while, I was able to walk short distances, and as my body healed more, I could do longer walks with no issue. That was at about month 5 after I had taken ivermectin and after I was taking a ton of cell building and immune building supplements. Walks have been super therapeutic; in fact in studies it has been shown to release natural painkilling chemicals in the body as well as easing joint pain and boosting immune function.

My trouble came when I'd try to do the slightest bit of cardio that would raise my heart rate. When my cardiologist wanted me to do a stress test, I told her absolutely not. I knew how difficult it would be for me and I had not tried running for an extended period.

It turns out my hunches may have been right, because in the Covid Long Hauler program they recommended me not do any exercise that could make me break a sweat; just walking, stretching/yoga, and resistance training. The reason is because if the blood vessels are already inflamed, this could cause a major problem. The inflammation has to be tackled first.

I know many reading this have likely tried all kinds of doctors in pursuit of figuring out what is wrong, only to be told, "There is so much we still do not know." I am a fan of in-depth testing because you can truly see what is going on with your body in order to figure out how to treat it.

Between the cardiologist, supplements, my doctor, hyperbaric oxygen therapy, two naturopaths and this doctor group, I spent nearly \$10,000 trying to get better. Every little bit helped. Some doctor visits were not helpful, but some things I tried helped a lot. My hope is that in the future we'll have tests and treatment options nailed down and they will be covered by insurance.

Other Issues Surrounding Long Haul

I've read people's experiences who say that other ailments come out of the woodwork as they are dealing with long haul. When the body is under stress, dormant viruses can resurface.

A study found that a reactivation of the Esptein-Barr Virus can contribute to long Covid, according to <u>UC David Health</u>, which is also associated with chronic fatigue syndrome.

To determine if this is the case, an EBV serology or EBV viral load test can be done.

Other people report that allergies are significantly worse. They were for me, but after I began taking the Protandim NRF2 supplement listed below, my allergies went away.

Naturopathic Doctors

During my process, I sought help from naturopathic doctors. At first, I went to a naturopath that was recommended to me, but in hindsight I should have seen the naturopath I knew and trusted and had grown up seeing. What a disaster!

When we first did a consult, she decided whether or not I would be a good fit for working with her. In the initial consult, I got the sense that she didn't think long haul was its own illness and that she thought it was more likely to be triggering other issues the body was dealing with. I didn't appreciate the distinction until I had paid all the money upfront to see her and realized I had made a mistake. She wanted me to stop taking all the supplements that were helping me and instead take hers. I was mortified, especially when trying to take one of them, because I ended up getting a panic attack. Though we did initial blood work, she gave me supplements without having an understanding of long haul. I wrestled with what to do next, but ultimately I stopped seeing her after the first visit. I received a refund of 25%, which meant my overall cost for the whole debacle was over \$1,500.

When I went to the naturopath I had seen before, it was so much different. She wanted me to continue taking the supplements that were working, and she gave me a few more. These included homeopathic drops for anxiety, a binder (a blend of substances that bind to bad substances in the body and move them out), and a light blend of detoxification herbs. I did see improvement with these additions and began to have days when I had a great sense of overall well-being.

Invalidation from Medical Professionals and Loved Ones

Probably one of the hardest things in battling this illness is the invalidation from medical professionals and people you love, such as family and friends. The invalidation from the medical community and the constant reply, "there's a lot we do not know," reveals the lack of swift and innovative thinking needed in the medical world as we know it.

When I was dealing with panic attacks, none of the doctors I spoke with wanted to dig deeper. I was left on my own to try to figure it out myself. I knew something was very wrong. Even a naturopath I went to (and spent \$2,000 for), thought what I was dealing with something more along the lines of "underlying health issues" such as an autoimmune condition — not what the virus had done to wreck havoc on my body. (This still might be the case for some though. It's worth getting in-depth blood work to rule out any underlying conditions.) She was surprised when my blood work came back relatively normal.

In my case, I'm so grateful that my husband and some other family members were so understanding. Perhaps because my husband experienced his own battle with anxiety, he knew exactly what I was experiencing, and was and still is so patient and kind with me. Friends who have experienced major chronic health ailments were also very understanding.

Other family and friends were not so understanding. They weren't trying to be intentionally mean, but they did not get it. Some were hurt that I could not hang out as much as I used to be able to. For a while, I could not go anywhere. I was literally fighting the fight of my life. Some thought I was making too big a deal of it. There was no way for me to help them understand,

except for a firm "no, sorry, I am not able to right now." It was painful to feel like I wasn't being believed or crazy, on top of all of my symptoms.

Some family members were the same way. They could not understand why I could not go out to eat or do normal things. It was difficult for them to fathom that on some days, even just waiting in line at the grocery store or a stoplight would be too much for me. I remember tying to go to Costco one day and not being able to buy what I intended to buy. I was afraid I was going to pass out. I unlocked my phone so that in case I did pass out, someone could check my most recent calls to find my family members. Thankfully, I listened to my body and made it to the car. It was a long drive home hoping I would get there without a panic attack. Every mile was a milestone knowing I was just that much closer.

Even if people don't understand, YOU can be your own best encourager. Remember to be patient and kind with yourself. Therapy may be something important to help you cope. I am a fan of therapy in any situation!

One of the most important things you can do is to listen to your body and be your own best advocate. Do what works for you. Social life can wait. Family may not understand, but keep setting your boundaries. Long haul is like an invisible broken bone. Even with the best nutrition, supplements, vitamins, prescriptions, and support, it will take some time to set and heal.

Natural Anxiety Supplements

When I first went to the ER for panic attacks, I was treated as a panic attack sufferer. As I weened off of the prescription medication, I looked to natural solutions. This was before I knew the root of my problem was long haul.

The following natural anxiety remedies helped me:

- EMPower Plus Advanced from True Hope (<u>TrueHope.com</u>) (This wonderful company has a phone line you can call to discuss any current medications and supplements before taking. This supplement helped a friend of mine overcoming panic disorder before the virus was around. They even helped me to understand more about other supplements I could try along with EMPower Plus and how much I could take. One of the most helpful things they told me was don't want until you're having a major issue, take something as soon as you start to feel anxiety coming on to get ahead of it.)
- Inositol
- Choline
- Passionflower
- Melatonin
- GABA
- Magnesium
- L-theanine

Some of these are mentioned in an article by Amen Clinics about Covid-related anxiety.

One thing that True Hope shared with me was to take an anxiety help AS SOON as I started feeling anxious, before it got to be too much. That was such helpful advice. You want to "stave off" a panic episode if you are dealing with these.

Another thing that helped was knowing that it takes about 30 minutes for a medication or supplement to be absorbed into the body. If I was having a really rough moment, even just holding onto the bottle of my more powerful prescription and waiting for the natural supplements to kick in helped me. I knew it was there if I needed it. If I needed the prescription, I started with 1/4 of a pill. I used melatonin gummies and magnesium gummies so they would hit my bloodstream a little quicker, and I had powdered inositol for the same reason. Passionflower tea wasn't quite as potent as the capsules, but it definitely took the edge off quicker.

During my acute phase, I lived on these supplements hour by hour. I learned that passionflower passes through the body fairly quickly, so more can be taken as needed. I drank tons of <u>passionflower tea</u>, especially at night. Consult with your health care provider about these supplements.

Activated Charcoal for Anxiety

Much later in my process as I was going through the <u>CovidLongHaulers.com</u> program, I discovered that about 12 hours after taking my statin I would develop panic symptoms again. At first this was discouraging, because I felt like I was going back in time!

However as I began thinking about how their process works, I decided to take charcoal at the first sign of anxiety to see if that would bind to any particles getting dislodged by the statin. As it turns out, it worked! This may be something else to add to your tool kit as you work through your process toward detoxification and healing. **Get activated charcoal here.**

FLCCC Long Haul Protocol

The FLCCC, Front Line COVID-19 Critical Care Alliance, is a team of esteemed doctors who have been fighting the pandemic with treatment for the virus from the very beginning. This group has a protocol for long haul that can be followed with your primary care physician. If your primary care physician is not able to accommodate the protocol, there is also a list of doctors you can contact for further help.

A friend had reached out to me saying she had experienced injury from the vaccine, and she described similar symptoms as me. Once I realized it could be long haul I was dealing with, I went to the FLCCC protocol for long haul to see what I should do.

Specifically, what initially helped me with my symptoms was ivermectin. The two researchers who discovered this little pill won the 2015 Nobel Prize in Medicine, and it is currently on the World Health Organization's list of essential medicines. It is safer than aspirin in the appropriate dose.

Within 48 hours of taking ivermectin, I was able to go on two hikes with my husband. Before, I was practically bedridden. Taking ivermectin bumped me up from 60% capacity to about 85% overall. I could not believe the difference.

See this article on the benefits of its use. See more studies here.

Zyrtec and Pepcid Protocol

This is one I have not tried myself, but many say it helps them. Mast cell activation syndrome is a condition which results in the patient experiencing allergic reaction symptoms such as hives, swelling, low blood pressure, difficulty breathing, and more. The FLCCC lists H1 receptor blockers such as Loratadine (Claritin), Cetirizine (Zyrtec), or Fexofenadine, and then H2 receptor blockers such as Famotidine (Pepsid) and Nizatidine to treat mast cell activation syndrome.

Another thing that seems to help these patients is an anti-histamine diet, listed toward the bottom of this document.

The <u>iRecover protocol from the FLCCC</u> is available here, and there is also a guide for how to find ivermectin here. In addition, the FLCCC has a <u>protocol for those suffering from side effects</u> from the vaccine here.

If you find that you don't respond well to antihistamines, <u>diamine oxidase</u>, <u>or DAO</u>, is an enzyme that breaks down histamine in the body, and it may be helpful. <u>Healthline has an article</u> for how it works here.

For me, I found that one of the supplements listed below, <u>Protandim</u>, helped me with my histamine issues. Also, a natural allergy supplement called <u>Genexa</u> helped as well.

Following are a list of supplements that have helped me or others with long haul, and corresponding studies. I took them one at a time to see which would help me, and I was careful to research each one to see if it would interact with any of the others. I don't take every one of these, but I still do take many of them for their health and immune-building benefits, even though I am better now. It's important to discuss any supplements you want to take with your doctor to make sure there are no interactions. If you're not familiar with taking supplements on a regular basis, it might be a good idea to see a highly rated naturopath in your area.

1. NAC or glutathione

N-acetylcysteine (NAC) is a precursor to the "master" antioxidant glutathione. According to studies, it can "boost the immune system, suppress viral replication, and reduce inflammation."

Because long haul sufferers have a significantly increased level of oxidative stress and low levels of glutathione, it may be helpful to supplement with either NAC or glutathione.

Though our doctor said that glutathione was helpful for many of his patients, I found that NAC was the most helpful for me.

2. Alpha Lipoic Acid

This is one I stumbled upon, and later I learned it was to become part of the updated FLCCC protocol for long haul!

There was a disturbing symptom I had, and that was an electricity feeling in my chest.

Since it seemed like I was feeling electric, and I knew that the electrical system in the body is comprised of our nerves, I took a shot in the dark and searched "nerve supplement" on Amazon. I happened upon alpha lipoic acid, and though most people were using it for nerve pain, I began researching it more.

An article I came across described how there was evidence it could reduce markers of inflammation such as interleukin-6. I remembered from watching a <u>Dr. Been</u> video that the spike protein from Covid causes an interleukin-6 inflammation response. So I tried it, and within a day the electricity feeling went away!

It is part of my daily regimen now because it has such great immune boosting properties. It is also a free radical scavenger and can reduce oxidative stress.

https://www.verywellhealth.com/alpha-lipoic-acid-88727 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5989440/ https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/lipoic-acid-has-antiinflammatory-and-antioxidative-properties-an-experimental-study-in-rats-with-

carrageenaninduced-acute-and-cotton-pelletinduced-chronic-inflammations/

ADCA3707EA66115655693BA4F402EC7A

3. Melatonin

Though melatonin is thought of as a wonderful sleep aid, and it is, it is also a powerful anti-inflammatory. Our doctor had told us to take it at the start of the pandemic for its anti-inflammatory properties. I have the gummies, and they help me quite a bit when I feel slightly anxious.

Melatonin has even be shown to have a therapeutic role in infection caused by the Ebola virus, and it may be protective against Alzheimer's.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405774/ https://molecularneurodegeneration.biomedcentral.com/articles/10.1186/s13024-015-0027-6

4. Vitamin C

Vitamin C is probably one of the most well-known vitamins. After all, so many people take it when feeling run down and report it helps with symptoms. This vitamin is necessary for growth and repair of all body tissues, and it helps to formulate collagen, absorb iron, and assist in wound healing. There is so much to be said for vitamin C!

Though vitamin D is very helpful to prevent a Covid infection, vitamin C is more helpful in the recovery of long haul, according to <u>research cited by Dr. Been</u>. (In fact, many people report that the <u>Meyers Cocktail Infusion</u> is very helpful for improving their energy and vitality, which includes vitamin C.)

https://pubmed.ncbi.nlm.nih.gov/33807280/

https://www.webmd.com/diet/features/the-benefits-of-vitamin-c

5. Turmeric

We had been taking turmeric, or curcumin as a preventative since before we were ill with the virus. It is recommended by the FLCCC for its anti-inflammatory properties. The problem with curcumin is its absorption. It is said that only a small percentage of turmeric one might take actually gets absorbed by the body. Frontiers in Pharmacology cites curcumin as a potential treatment for Covid-19, and a study in the journal Viruses shows how it can effectively neutralize Covid-19 in vitro.

In November, I came across a very interesting patented turmeric supplement and I have been taking it ever since. It has two different mechanisms — one that allows the turmeric molecules to pass through either lipids or water, (turmeric is oil-based), and then another that makes the turmeric super tiny, allowing it to be much better absorbed into cells.

The first day I took it, I had gotten my period, and I didn't have any pain from cramps. Normally I'd have to take about 6 Advil to get me through the first day!

Other friends have experienced lots of reduced pain and inflammation. Two friends even got their sense of small back after having lost it from the virus for months! There have been many other benefits people I know have experienced that we don't have time to discuss here, but the overall benefits of turmeric as an anti-inflammatory are well-documented by studies.

See more about this brand of turmeric here.

6. Omega-3

Our doctor told us to take omega-3 for health in general. <u>This Healthline article sites 17 science-backed benefits of omega-3</u>, including improving risk factors for heart disease and fighting inflammation. Omega-3 fights inflammation when it comes to Covid too! <u>See the mechanisms here.</u>

7. Magnesium

Magnesium helped me with several different things. Studies are showing that Covid produces severe electrolyte imbalances, and the same appears to be true for sufferers of long haul.

Many people report symptoms getting better by restoring electrolyte balance and drinking something like Liquid I.V. to aid in recovery.

The second reason magnesium specifically helped me was due to heart palpitations I was having. My hypothesis is that due to the electrolyte imbalance I didn't know I had, this caused heart palpitations. Whenever I would get them, I would pop some <u>Calm Magnesium gummies</u>. They helped me almost immediately.

There are different kinds of magnesium you can get. Some people think that magnesium aspartate helps the most when it comes to mitochondria function.

https://pubmed.ncbi.nlm.nih.gov/32266828/https://pubmed.ncbi.nlm.nih.gov/2242840/

8. Resveratrol

Resveratrol is something I began taking because I was concerned about my heart function with the sporadic heavy beats and palpitations. Resveratrol has anti-inflammatory, anti-tumorigenic, and antioxidant properties. It may protect against blood clot formation and stroke, and has potential benefits for many other diseases.

Recently, the <u>FLCCC did a webinar with Dr. Mobeen Syed talking about autophagy</u> and clearing the spike protein out of the cells. It was a fantastic video.

In it, they mention the following to help clear out spike protein:

- Resveratrol
- Spermidine (Can be found as a supplement or in wheat germ, grapefruit and grapefruit juice, pistachios and mushrooms)
- Intermittent fasting
- Ivermectin

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6317057/https://www.nature.com/articles/s41698-017-0038-6

9. Quercetin

Quercetin has anti-carcinogenic, anti-inflammatory and antiviral activities properties. It can help to support the heart by lowering blood pressure. **Note that if you are taking ivermectin, you should not take quercetin at the same time.**

https://journal-inflammation.biomedcentral.com/articles/10.1186/s12950-021-00268-6 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3775217/

10. Juicing

A friend I met recently is a big proponent of juicing, and the results are obvious! Juicing helps the fruit or vegetable to be more easily absorbed by the body. All that straight up nutrition from fresh fruits and veggies gives the cells a significant boost.

When I started juicing, I noticed an improvement in the way I was feeling. Specifically, beet, celery, and orange seemed to help me the most. (Pomegranate did as well, and I drank that to support my heart, but I bought it from from the store instead of juicing it myself.)

Beets are rich in folate which can help heart health, and they contain nitrates, which can lower blood pressure and can also improve the efficiency of the mitochondria. (And as an aside, I find it fascinating that beets actually look like a heart!)





Meanwhile, celery juice is rich in antioxidants and enzymes, and contains anti-inflammatory properties. All of these can help reduce oxidative stress in the body.

Oranges are loaded with nutritional benefits, one of them being a high concentration of vitamin C. They have anti-inflammatory properties and they can help promote heart health, among other benefits.

For more on juicing and how to get started, visit Rosie's Raw Living!

https://www.healthline.com/nutrition/benefits-of-beets#TOC_TITLE_HDR_2 https://www.wellandgood.com/is-celery-juice-healthy/

https://www.healthline.com/nutrition/oranges#beneficial-plant-compounds

Pomegranate for Endothelial Dysfunction

I wanted to write this short little bit about why I wanted to start drinking pomegranate juice. Heart issues, as they are, are completely frightening. When I was in the midst of them, I was looking for clues about why my heart was acting the way it was and what I could do about it.

I discovered that Covid can cause severe endothelial damage. This quote from <u>Cedars Sinai</u> sums up what the endothelium is:

The endothelium is a thin membrane that lines the inside of the heart and blood vessels. Endothelial cells release substances that control vascular relaxation and contraction as well as enzymes that control blood clotting, immune function and platelet (a colorless substance in the blood) adhesion.

When I read what they were and what they did, I realized how very possible it was I may be dealing with an endothelial issue when it came to the heart issues I was experiencing.

There are some supplements you can get that are specifically geared toward protecting the endothelium, but I decided I would go for the juice first.

Pomegranates have so many benefits, including vitamin C, cancer prevention, antioxidants — the list goes on and on. Not only that, it's very enjoyable to drink, and a great alternative to wine, in my opinion.

I have since discovered through cardiology testing that my heart is 99% normal, even though I had the scary symptoms. My cardiologist has cleared me for more exercise, as I feel ready.

https://hospitalhealthcare.com/covid-19/persistent-endothelial-dysfunction-a-potential-cause-of-long-covid/

https://pubmed.ncbi.nlm.nih.gov/32250215

https://www.cedars-sinai.org/programs/heart/clinical/womens-heart/conditions/endothelial-function-testing.html

https://www.medicalnewstoday.com/articles/318385

11. Herbal helps, such as pine needle tea, star anise tea, and carvacrol

These teas helped me a bit, but they may help others more. A study postulated the potential benefits of certain essential oil compounds against the spike protein, and it shows potential.

★★★★★ Cured a SERIOUS alcohol and Adderall addiction

Reviewed in the United States on June 24, 2018

Verified Purchase

I do not typically leave reviews, but I have to for this supplement. It is phenomenal. First, let me start with my issues and the reason I decided to start taking this. I am addicted to both Adderall and alcohol. DAILY, for years, I was taking about 120-130mg of Adderall a day (yes, insane, tolerance builds) and also DAILY drinking a pint of vodka a night. I knew I had to stop but repeatedly failed each time I tried (I never lasted long). I decided instead of trying to stop both Adderall and alcohol at the same time, that maybe I should just start with quitting alcohol first. Trying to do both was way too overwhelming. So I went 2 days without drinking. I was in complete misery. I couldn't sleep one night and I was frantically searching the internet for something that could relieve me of the terrible cravings. I stumbled onto some articles about L-Glutamine and how it can help with alcohol cravings and, bonus, it could also help with the sugar cravings because I was beginning to have some intense sugar cravings from not drinking. The primary reason my drinking got so out of hand was because my brain was constantly tormented with Adderall cravings. Never-ending and it drove me crazy and I absolutely hated it. I realized I was drinking like that simply to escape the horrible cravings for Adderall. Sad but true. So, long story short, the first night I took this, it was like I had a completely new, different, NORMAL feeling brain. I haven't had the exact same sensation again as I did the first night I took it (it's still working, but that first time must of REALLY been needed by my brain). The first night I literally felt like I could feel this supplement overcoming my serious Adderall cravings in my brain. Washing over them. It was the most bizarre, incredible, and happiest sensation I have ever experienced in my life. I thought it must of been a fluke, but it's not. L-Glutamine is still helping me. Not only did it help me stop drinking, but even more importantly for me, it stopped those awful Adderall cravings that consumed me for SO long. I was not expecting it to help with the Adderall cravings. I am over the moon. This saved

^ Read less

1,813 people found this helpful

Carvacrol, found in oil of oregano, has powerful anti-inflammatory, antiviral and immunomodulating properties. An article in Frontiers in Plant Science presented evidence that it could be a possible candidate for Covid-19.

As for myself, I have experienced the benefits of oil of oregano in past years. I took it when my husband was sick before, and I did not get sick, whereas before when I did not take it, I would get sick, despite my best efforts with other supplements.

https://www.frontiersin.org/articles/10.3389/fpls.2020.601335/full

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8069155/

https://www.e-nrp.org/pdf/10.4162/nrp.2011.5.4.281

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8170460/

https://worldcouncilforhealth.org/resources/spike-protein-detox-guide/

12. CoQ10

CoQ10 have been shown to have many benefits, including improving heart health, potentially preventing migraines, improving blood sugar, and potentially aid in preventing cancer.

For long haul, CoQ10 can help to reduce oxidative stress and aid in boosting the mitochondria.

Though it helped me greatly, it also caused insomnia for me, so I can only take it if I want to stay up all night to work or research. However, several friends take it with no problem at all.

https://www.healthline.com/nutrition/coenzyme-q10

https://clinicaltrials.gov/ct2/show/NCT04960215

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7680046/

https://www.immunologyresearchjournal.com/articles/coenzyme-q10-and-vitamin-d-interventions-could-ameliorate-covid-19-related-cellular-bioenergetic-dysfunction-and-cytokine-storms.pdf

13. Glutamine

Though I'm listing all the major antioxidants later, I wanted to mention glutamine because I could tell a difference when I took it.

Glutamine is a fuel source for immune cells, and it <u>has so many benefits</u>. A review article in Nature cited that people at risk for Covid includes those who have low levels of glutamine and NAD+.

Unrelated to long haul, there was also a <u>profound review from Amazon</u>, which I think just shows how powerful this particular amino acid is. I am including a snapshot of it below.

https://www.healthline.com/nutrition/glutamine#TOC_TITLE_HDR_4 https://www.nature.com/articles/s41418-021-00892-y

14. Acetyle L-Carnitine

I have to be honest, this is one supplement I have not gotten to yet. But people say it helps. And I intend to try it because it has an entire host of benefits!

This is also an amino acid that is important to call out on its own because it can do so many things.

L-carnitine transports fatty acids to the cell's mitochondria, and so it can help the cells burn fat to create energy. Acetyl L-carnitine has been studied to possibly benefit people with neurodegenerative diseases. The <u>anecdotal reports from people describing its benefits</u> are worth a look.

According to ClinicalTrials.gov, it "positively affects the development and maturation of T lymphocytes, involved in the immune response to viral agents. It also contributes to the inhibition of ROS production and to the remodulation of the cytokine network typical of the systemic inflammatory syndrome."

https://clinicaltrials.gov/ct2/show/NCT04623619

https://www.sciencedirect.com/science/article/pii/S2049080121010955

https://www.healthline.com/nutrition/l-carnitine

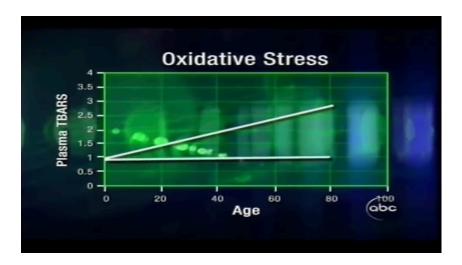
15. Protandim

In my search for more answers, I came across a very cool supplement highlighted in this video: https://www.youtube.com/watch%20?v=dP28GutRXew&t=2s

I decided to try it and was amazed that my allergies went away within a week. My allergies had gotten the worst they had ever been this year, and I'm convinced it was from my getting long haul and my immune system being run down. I had a couple of days this year when I was

sneezing all day and holding a tissue to my nose. I was miserable — but I told Justin I'd rather have allergies than have panic attacks!

I went outside after my husband mowed the lawn and normally the next day I'd be suffering massively. No sneezing. No runny nose. No issues! I also think it is one thing that has helped me feel so much better over the last little bit.



It works by boosting the body's production of antioxidant enzymes superoxide dismutase and catalase. Long haul is a disease of severe oxidative stress, which means there is a massive release of free radicals accompanied by a depletion of antioxidants.

Learn more about this supplement here.

https://www.mlo-online.com/disease/infectious-disease/article/21235906/oxidative-stress-makes-longhaul-covid19-like-chronic-fatigue

https://www.sciencedirect.com/science/article/pii/S0098299711000501

16. <u>NAD</u>

When you begin to get into the study of how the cells work, it is fascinating. It is said that the human body is comprised of over 37 trillion cells making up our tissues, muscles, and organs.

Since I was experiencing symptoms as I ran out of energy, I wondered if there was a metabolic component to what was happening.

When we eat food, this food goes into a conversion process depending on what it is. Eventually, it gets converted into ATP which happens within the mitochondria of the cell. ATP is the body's energy molecule. There are several different pathways for the body produce ATP.

According to this study, "Mitochondrial ATP production and membrane potential require the universal cofactor nicotinamide adenine dinucleotide (NAD)." It plays a big role in supporting mitochondria and therefore energy production. It is so important, in fact, that we wouldn't be able to live without it.

Currently, NAD is being studied for its role in aging. It's so popular that people are getting IV infusion cocktails with NAD mixed in!

I began to study NAD because I found some information to show that NAD+ deficiency may be part of what predisposes people to mortality from Covid.

There's also a cascading effect with one thing affecting the other in the cells. The amino acid L-Tryptophan was being disrupted with Covid. According to this study, "L-Tryptophan is the main precursor of serotonin and other neurotransmitters which have a key role in the pathogenesis of depression and anxiety." (I was going to test taking this amino acid by itself, but then I bought a blend with all of the essential amino acids and that helped!)

One theory of the disruption of NAD says that a lack of tryptophan and vitamin B3 due to the lack of NAD/NADH+ triggers a huge inflammation response in the body.

Another theory states that when NAD+ is depleted, "the body tries to make body tries to make up for low NAD+ by feeding in tryptophan, which is the precursor for serotonin, causing low serotonin. Mast cells are activated locally to release serotonin instead, leading to histamine release and mast cell activation issues. Neurological effects are due to low serotonin and NAD+, which also effects the microbiome and general homoeostasis."

No matter how you look at it, increasing NAD seems to be an important part of long haul recovery.

Here are some ways to increase NAD:

- Fasting
- Exercise
- Certain foods:
 - Milk
 - Fish
 - Mushrooms
 - Yeast
 - Green vegetables
 - Whole grains
- Supplements

https://www.frontiersin.org/articles/10.3389/fnut.2022.868845/full

https://www.sciencedirect.com/science/article/pii/S0306987720314742?via%3Dihub

https://www.klarityclinic.com/blog/how-to-increase-your-bodys-nad-levels-naturally

https://www.nmn.com/precursors/what-is-nad

https://www.clinmedjournals.org/articles/jide/journal-of-infectious-diseases-and-epidemiology-jide-8-243.php?jid=jide

https://www.thailandmedical.news/news/covid-19-supplements-studies-show-that-nad-nicotinamide-adenine-dinucleotide-could-play-a-key-role-in-treating-covid-19-and-long-covid https://clinmedjournals.org/articles/jide/journal-of-infectious-diseases-and-epidemiology-jide-7-195.php?jid=jide

17. B Vitamins

As an important segue from NAD, B vitamins are extremely important in long haul recovery, especially since they can be significantly depleted from a Covid infection.

In the journal <u>Nature</u>, they sate, "vitamin B3 (niacin or nicotinamide) is highly effective in preventing lung tissue damage. It might be a wise approach to supply this food supplement to the COVID-19 patients."

According to the <u>National Library of Medicine</u>, niacin acts as a building block of NAD and NADP.

I have just learned from a <u>video</u> that <u>B1/benfotiamine</u> is vital in nerve health, and it can protect against damage to the endothelium. I also learned that it can significantly help people with nerve pain. Look up Dr. Eric Berg — Practical Keto on YouTube.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7428453/

https://www.frontiersin.org/articles/10.3389/fnut.2020.562051/full

https://www.healthline.com/health/food-nutrition/vitamin-b-complex#benefits

https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/en/covidwho-1022367

https://www.healthline.com/health/food-nutrition/vitamin-b-complex#benefits

https://www.nature.com/articles/s41418-020-0530-3

18. Black Seed Oil

Black seed oil can reduce inflammation, according to studies, and it can help with high blood pressure, back pain, headaches and infections.

This cyclist says black seed oil helped him with vaccine complications he experienced.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8204995/https://www.healthline.com/nutrition/black-seed-oil-benefits

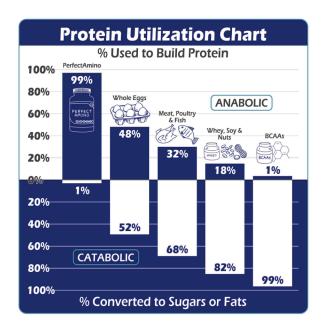
19. Animo Acids

Since I learned that the spike protein from Covid, which it attaches to cells, removes amino acids when it does so, I wondered if I needed to help heal my cells with the addition of amino acids. My search landed me on body building blogs. Of course, those people know a little something about building cells!

There's no way to know for sure if my hypothesis was correct, but I did sleep much better taking all 9 essential amino acids at night, and I felt better about the possibility of doing my best to try to repair any damaged cells. I also began to take <u>collagen</u> for its cell building properties.

This particular amino acid complex called Perfect Amino from Body Health is supposedly up to 99% absorbable. Compare this to just 1% from BCAA aminos, 18% from whey, soy, and nuts, and 32% from meat, poultry, and fish. I am not sure how they did their research, but I do know that absorption is one of the biggest problems in the supplement industry. Any time you can find a supplement that can help you absorb the nutrients better, that is a win. (Use promo code ITCOULDHELP20 to save 20% on Perfect Amino.)

I was lifting weights before long haul, and because of that I drink several <u>protein shakes</u> every day. I believe this also helped in my recovery.



20. Hyperbaric Oxygen Therapy

This is something I just started at the direction of one of my doctors. There are a couple of studies about it helping with long haul, but there are many people who say it helps them. It can help with the exercise intolerance people experience as a result of long haul.

According to Hopkins Medicine:

"HBOT helps block the action of harmful bacteria and strengthens the body's immune system. HBOT can disable the toxins of certain bacteria. It also increases oxygen concentration in the tissues. This helps them resist infection. In addition, the therapy improves the ability of white blood cells to find and destroy invaders."

"HBOT encourages the formation of new collagen and new skin cells. It does so by encouraging new blood vessel to grow. It also stimulates cells to produce certain substances, like vascular endothelial growth factor. These attract and stimulate endothelial cells needed for healing."

This is also an interesting tidbit from a retired RN friend of mine. I found it so fascinating, I had to include it here!

"While in New Orleans pre Y2K, I had the privilege to know about a case where a patient came in to the hospital due to overdose on heroin and was deemed clinically brain dead. As a part of Tulane University's study on hyperbaric chambers, the family allowed the patient to be put in the hyperbaric chamber for 3 days. It was the hope of the hospital to cleanse his organs for transplant. The artificial 10g atmosphere cleansed his organs and his brain and at the end of 3 days he walked out of the hospital perfectly recovered. Hyperbaric chambers in 10g atmosphere actually aid in brain injury recovery and mental retardation birth defects."

https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/hyperbaric-oxygen-therapy

https://pubmed.ncbi.nlm.nih.gov/34862223/https://pubmed.ncbi.nlm.nih.gov/35168680/

https://www.rcpjournals.org/content/clinmedicine/21/6/e629

On the oxygen note, I heard about this from someone that it may be helpful, but I have not tried it myself: https://liveo2.com/

21. Electrolytes

This is something I didn't quite figure out until late in my recovery when I was trying to tackle my exercise intolerance. (Side note: Ivermectin helps with exercise intolerance! I took it after I would try to exercise to ward off any ill effects.)

The body needs the correct balance of electrolytes to function. <u>According to this article</u>, "low sodium signs include dizziness, low blood pressure, muscle weakness or a very rapid heartbeat. Low potassium signs include a hard, thumping heartbeat; thirst; insomnia; or muscle cramps. Low magnesium signs include muscle pain/stiffness, headaches, and skipped heartbeats."

Wow! I had been experiencing all of these at various intervals, and even though my heart tests came back mostly clear, all the things my heart was doing were a mystery (and quite scary, I might add.)

I tried different electrolyte powders, and some were loaded with sugar, increasing my insulin, which I did not want. (For more on the effects of insulin on the body, check out Dr. Berg's YouTube videos.) Others did not have the correct balance of electrolytes. The RDA of potassium is 4,700mg, while sodium is 2,300mg and magnesium RDA is about 400mg.

Finally, I realized that <u>Dr. Berg had an electrolyte powder</u> that was appropriately balanced and would not spike my blood sugar! It helped me immensely.

NOTE: It's important to keep electrolytes in balance. Too much potassium can be a serious issue. There are other <u>sugar-free electrolyte powders</u> out there with different proportions of the electrolytes. It's important not to overdo it and listen to your body. Potassium should not be taken along with <u>certain medications</u>. Ideally, you'd want to have your electrolyte levels tested.

https://www.sassvholistics.com/magnesium-sodium-and-potassium/

On this note of support for the heart, vitamin B complex and vitamin E, specifically the tocotrienol kind, increases the amount of oxygen in the heart and protects the lining of the artery according to this video from Dr. Berg.

22. Rest and Good Sleep

This might seem like a given, but rest and deep sleep is so important for the body to do its reparative work. According to a <u>video from Dr. Been</u>, it doesn't matter whether the sleep was induced by medication — any sleep is still helpful to repair the body.

Sleep can aid your mental health, mental function, heal your heart, balance your blood sugar and more. The importance of sleep and rest cannot be overstated!

https://www.webmd.com/sleep-disorders/benefits-sleep-more

23. Evening Primrose Oil

I don't know about you, but long haul exacerbated menstrual issues for me. I learned about evening primrose oil and began to take it, and I noticed an immediate difference in mood just before my period was going to start — I no longer felt agitated! It also made the process so much easier.

At the time, I was also really focused on eating clean and healthy with lots of cruciferous vegetables, so I'm sure that probably had something to do with it as well. However, these Amazon reviews are quite astounding, and I noticed a definite difference taking it versus not.

24. Lumbrokinase

The more I've gone along, the more I've realized that long haulers is a disease of vascular inflammation. Fibrinolytic enzymes such as lumbrokinase and nattokinase have some amazing benefits.

In one review on Amazon, this man says:

"This is a true account. I suffered a stroke in May of 2020. It was later discovered that I had a 100% blocked carotid artery on the left side. No pulse. They could not do anything to repair or clear the artery because it was thought that the procedure would be much to dangerous, and better to leave it and hope for the best. I had recalled reading a lot about Lumbrokinase and how it had both blood thinning and clot dissolving abilities. I decided what have it got to loose, the mortality rate for people in my position is lousy. I'll take a 20mg Lumbrokinase capsule every day in the morning with my prescribed 325mg enteric encoded aspirin, and one at night when going to bed. After about a month I could feel that a pulse had begun in my blocked left carotid artery. It was a bruit pulse (labored) but still there all the same. At that point I decided to purchase a stethoscope so that I would hear whether there was truly a pulse again and if so how strong. After about 2 months the labored bruit pulse had turned into an almost normal pulse. After 3 months I could clearly hear that the pulse in my left carotid artery was loud, clear and normal all up and down the neck and chin area. There is NO DOUBT in my mind that it was the Lumbrokinase that totally dissolved the clot. The pity is how many people could be helped with lumbrokinase, but the medical profession either wont acknowledge it or prescribe it. I quess long hospital stays and surgery is much more profitable."

Wow! Other people describe fibroids going away in addition to more cardiovascular benefits.

I tried lumbrokinase myself, and several hours after taking the full feeling in my head subsided. I also took it along with activated charcoal in case anything would "break up" and be released into the bloodstream.

This is an in-depth article about how Nattokinase and Lumbrokinase work with studies.

25. Armra

Armra is a super cool colostrum supplement. Colostrum is produced by mammals in the first 48 to 72 hours after giving birth, and contains tons of incredible nutrients. It's been linked to fewer respiratory and GI infections in kids and adults, with over 5,000 studies documenting its

benefits. I noticed a difference drinking it, and it's an important part of my regime now. You can save 20% with my code, **ICH20**.

Other helps:

- **Sleeping elevated**: For POTS sufferers, it may be helpful to sleep elevated, and when exercising, trying recumbent exercises. I have had to sleep elevated so my heart would not race at night.
- <u>Sunshine</u>: Though it's important to wear sunscreen when out in the sun and some long haulers may be sensitive to heat, there are many benefits to sunlight, including boosting serotonin and melatonin, strengthening your immune system and more. As mentioned above, melatonin is an anti-inflammatory for the brain.
- <u>Craniosacral Massage</u>: This is a treatment that can help the brain depose of toxins from the virus. Dr. Mobeen cites this treatment <u>in this video about brain issues and long haul</u>.
- Avoiding heat: Some sufferers report that heat therapy or hot baths worsens their symptoms.
- Vagal exercises: Learning how to do vagal exercises has helped me, especially if I am in a situation where I am not able to take something for anxiety, such as being in line at the grocery store. (Although, this issue for me is nearly gone!) This woman has a series of vagal exercises that can be done in a video on YouTube. (And, when you consider that the vagus nerve has its origin in the brainstem, it makes a lot of sense that vagal exercises would help!) Here are some other ways to reset the vagus nerve.

Nutrition for Long Haul - Low Histamine Diet

Many people say that a low histamine diet helps with their long haul symptoms, especially if they are dealing with the mast cell activation syndrome.

Below are some foods that promote the release of histamine, and people who avoid these find that it helps their mast cell activation syndrome:

- Avocado, tomatoes, spinach
- Brussels sprouts
- Fermented or canned vegetables
- Legumes, including peanuts
- Walnuts
- · Bananas, strawberries, pineapple, papaya, citrus, kiwi,
- Wheat, barley, rye, spelt
- Seafood and shellfish
- Mackerel, tuna, sardines, smoked and canned fish,
- Yogurt, cheese, sour cream, buttermilk
- Vinegar, miso, soy sauce, pickles, olives, fish sauce, tamari
- Cocoa and chocolate
- Butter
- Coffee
- Kombucha
- Energy drinks
- Alcohol
- Vinegar

Below are foods that seems to be ok for those dealing with mast cell activation syndrome:

- Most fresh fruits and vegetables except for the above
- Plant milks
- Healthy fats
- Herbal tea
- Fresh herbs
- Meat, poultry, eggs, some fresh fish
- Fresh ginger, galangal and turmeric

This is a short-term diet, and is meant to remedy symptoms. Once symptoms have dissipated, foods on the high histamine list can be gradually reintroduced. This is a restrictive list, so it may be best to keep track of your foods and how they affect you.

https://www.getthegloss.com/article/long-covid-low-histamine-diet https://www.youtube.com/watch%20?v=KvFsUS4XcHQ

Eating to Reduce Inflammation

Eating low-inflammatory foods in general is good for health, but especially so if you are dealing with a chronic health issue such as long haul. Avoid sugars, unhealthy fats, and processed grains and meats, and eat as much organic produce, whole grains, sustainably caught fish, and grass-fed meat as you can. Drink a lot of water to flush out toxins.

- Eat mostly whole foods
- Avoid sugar & artificial sweeteners (includes soft drinks and fruit juice.
 Acceptable healthy sweeteners include stevia, monk fruit to avoid spiking blood sugar. Honey and maple syrup are ok unless you're not supposed to have sugar.
- Know your food sensitivities (I am not supposed to have gluten or soy)
- Limit pork it tends to have high amounts of bacteria and parasites
- Eat organic when possible due to pesticides and the toxic load on the body
- Eat hormone-free meats
- Avoid fried food
- (For me. I avoid dairv)
- Eat tons of veggies, this should be 40% of your diet
- Eat some fruit, the lowest sugar fruits include berries
- Eat healthy fats such as avocado, cold-pressed olive oil in dark bottles, coconut oil, and nuts and seeds
- Avoid hydrogenated fats and oils
- Limit starchy carbs such as potatoes and rice eat brown rice instead of white rice. Limit high glycemic carbs.
- Cook with stainless steel
- Relax while eating

Exercise for Long Haul

Exercise intolerance is common for long haul. It means that if you try to exercise, specifically raising your heart rate, it could activate your long haul symptoms.

This was the case for me, and I am still working through this part of it. In addition to all the supplements above, I am taking it slow and walking daily. Light yoga or tai chi can be another exercise to try depending on how you feel, as this will help the body to get more oxygen and stretch and strengthen the muscles.

If you are doing any exercise and it's causing you issues, it may be prudent to scale back. Though I am cleared to exercise by my cardiologist, I am starting very slow back to weight lifting, using lift weights and working out just one body part at a time to see how I do. For some, it may take up to a year to get back to normal exercise activity levels, perhaps longer. The important thing is to listen to your body and avoid pushing yourself. Recumbent exercises can also help those suffering from POTS. The hyberbaric oxygen therapy is said to help long haul, and as I said earlier, ivermectin helped me immensely, as did <u>balanced electrolytes</u>.

https://www.verywellhealth.com/exercise-long-covid-athletes-5195661 https://www.standinguptopots.org/livingwithpots/exercise

Practical Tools

There are some practical tools you might want to have in your toolkit as you look to defeat long haul or even look to stay healthy.

- Spreadsheet or diary for medication and supplement tracking (I had gotten this one for Christmas, and it was very helpful for managing my supplements and nutrition and for chronicling my symptoms.) I also use Google Sheets for daily supplement tracking.
- Oxometer (This was super important when we monitored Justin's symptoms, and it gave me peace of mind when I was feeling shortness of breath.)
- Blood pressure monitor
- <u>Supplemental oxygen</u>: This is something I recently found, and I do wonder if I had this on hand during my critical phase if it would have helped by symptoms. There are no studies on this however, and making it to a hyperbaric oxygen therapy facility will likely be far more advantageous.

Tips for Brain Health

There is a <u>series of great videos with Dr. Mobeen Syed</u> that are extremely helpful regarding the virus, long haul, and general health. In one of them called "<u>Brain Fog and Neurogenesis</u>," Dr. Been cites several things that could help with brain recovery:

- Novelty, doing new things, fun to remember
- Reading
- Sleep
- Sex
- Learning
- Running
- Intermittent fasting
- Calorie restriction (20 to 30%)
- Blueberries
- Flavonoids
- Curcumin
- Caffeine
- Resveratrol

- Omega-3 fatty acids
- Folic Acid/B vitamins
- Zinc
- Vitamin A
- High-sulphur foods
- Eating crunchy food
- Avoiding sugar
- Avoiding saturated fat
- Avoiding alcohol

This list makes complete sense to me. As I began to get better, I craved going out and doing new things, and walking seemed incredibly helpful. It's possible my brain was trying to tell me that new experiences would help my brain recover from the damage caused by Covid. Art is also supposed to be beneficial for neurogenesis.

The Top 7 Things That Helped Me

It's difficult for me to pick just three things that helped me the most because all of them helped in one way or another. I take many supplements for overall health including <u>Omega-3</u>, <u>Vitamin D</u>, a <u>probiotic</u>, a thyroid supplement containing ashwaganda and iodine, iron, and <u>my special turmeric</u> (I would not be without it for pain!) But, here are my top choices if I had to pick just seven.

- <u>Ivermectin</u>: I won't duplicate my story above, but like I said, night and day difference! Once I learned it also helped me with the exercise intolerance I was experiencing, that was such a relief as well.
- Alpha Lipoic Acid: I was so surprised this helped me, but I was so relieved. Because it was such a disturbing symptom and such a marked change, I am including this in my top 3. It is also said to help people with nerve pain. Vitamin B1 benfotiamine can help with nerve pain as well.
- <u>Protandim</u>: Because this one made my allergies go away, (and they had gotten the
 worst they had ever been), I knew it was doing something major. The week I started
 taking it was the week my husband and I had gone to the beach and it was also the
 first week I had *three normal days*. That was a huge win!!
- A statin from <u>CovidLongHaulers.com</u>. I'm not the biggest fan of statins due to
 potential side effects, but I experienced an IMMEDIATE change after taking it for just
 a few days. I had to use charcoal to help with the initial side effects, but after
 several days of treatment, it felt like my head had deflated, much like a balloon. I did
 not realize my head had been so full! I was amazed at the difference.
- Activated charcoal: I could not believe the difference in taking this. It made my panic from the **CovidLongHaulers.com** treatment disappear!
- Axio: This drink has been a favorite of mine. I drink the decaf because I don't want any caffeine right now since that can raise cortisol. This drink has helped me immensely with brain fog and mental clarity. It has green tea, magnesium, B vitamins, quercetin, L-theanine and pine bark extract (something my doc told me helps his long haul patients.) I also take the L-theanine separately.

<u>Perfect Amino</u>: Since my overnight panic attacks stopped when I started taking aminos and Protandim, I knew those were both an important part of my recovery. Now I take Perfect Amino for the body building I've been doing, and it definitely helps in the recovery. I love that it's 99% absorbable. (<u>Use promo code ITCOULDHELP20 to save 20% on Perfect Amino.</u>)

The week we went to the beach, I had one night that was really rough when I didn't sleep at all. I was walking on the beach and caught the sunrise, but I was so upset I didn't get any rest. That's when I found these shells and some of them were broken and I found one that was whole. I wasn't quite there at that point, but I am so grateful to report that *I am now the third shell*.

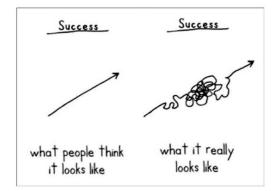


How I Am Now

I am back to normal for the most part, and I am now lifting weights and doing cardio. I haven't had a panic attack since I did the CovidLongHaulers treatment, which was over three months ago. I just got through an insanely busy season at work, and we did very well. I can stand in line and sit in traffic without feeling anxious. I can do a lot of things and not feel exhausted. I can keep up with our pups and go to social events. I feel a sense of well-being and ease. I can't tell you how grateful I am to feel normal again!!

Success Can Be An Up and Down Journey

At the very end of this eBook, I've included some journal entries about my experience. Even as your cells are healing, it will be an up and down process.



I did not understand my exercise intolerance until way into my journey. I had felt great one day and then I lifted weights. The next week I had a cascade of symptoms and a panic attack. Healing is definitely a cha cha.

Ending Note

Long haul was terrifying for me. I had no idea what was wrong with me, or how to fix it, and I had no idea whether I was going to get better. If you are in that place, know that most people with long haul recover. The body needs a chance to repair itself, and the more support you can give it, the better.

In my case, I believe that ivermectin kicked off the fight to reduce the inflammation or the "fire" that was happening in my body. I wish I had discovered activated charcoal much sooner. All the other supplements listed above helped a great deal to give my cells the tools they needed to put out the fire and repair and recover from the damage. Ivermectin is not the only medication that can help — there are many more medications that are showing promise. I often enjoy watching <u>Dr. Mobeen Syed's videos</u> discussing different studies related to helping people recover from Covid. I think the <u>FLCCC protocol</u> is the best place to start if you are looking at options for treating long haul symptoms.

It all, it took me 2 months to figure out what was wrong, and then 3 months to begin the recovery process. I didn't start everything all at once. I wish I had known about these supplements sooner, because it's possible I would have recovered sooner. But, I am so grateful to know about them now and I am so grateful to be able to share them with you.

I wish you the best on your healing journey. Know that you will need a lot of rest and remember to be patient with yourself. Long haul is an invisible illness and it can be helpful to find a support group with others who know what it's like. (If you are not in one and you'd like to be, we have one we just started here.) I hope you find everything you need to fully recover!

2023 Update

Since feeling better from long haul I discovered more things to investigate with my health. But this was after I could exercise and felt completely functional again.

My naturopath picked up mold on one of their tests and lo and behold, we had it in our HVAC system! We had to remedy that and I took more supplements to help support my body's detoxification systems to get rid of the mold.

Another thing I discovered was that I had an infected root canal tooth! I had gone to two different dentists to ask why my tooth was discolored. Many months later, I found out about the documentary *Root Cause*. After I watched it, I was amazed! I found a biologic dentist and he confirmed that yes, my tooth was infected. I had a Cone Beam scan (CBCT) to see what was going on, and am in the process of getting my body ready for the extraction. For now since I'm in Invisalign, I'll do a temporary tooth. Other options include a zirconia implant (not metal, there are reasons not to do a titanium implant but we'll save that for another time!), a Maryland bridge that doesn't file down the rest of your teeth, and a flipper or partial denture. I'll probably opt for the least invasive option once my Invisalign is done.

To get ready for my extraction, I've been doing more detoxification. I've done intermittent fasting and used strong herbs to get rid of any other smaller infections or parasites in my body. Each time I've done a fast, it's really brought my mental clarity to a new level. Don't attempt to

fast without a doctor's supervision. I have done them in the past so I had an idea of what I was in for! It's important to know what you are doing and drink electrolytes (I drink <u>sugar-free</u> so as not to spike blood sugar) and have other things on hand that can support you. It's really best not to do any kind of vigorous activity while fasting, so I don't lift weights during my fast. <u>The FLCCC had an awesome webinar on fasting</u>. Dr. Paul Marik has put his diabetes into remission by fasting!

I've been observing many stories in the long haul community, and there are many cases where, despite treatment from the Patterson group, someone does not get better. The person then finds out they have been suffering from Lyme or another co-infection. In my case, it required supplements AND the IncelIDX treatment to get better. The likelihood that someone may have Lyme or another infection similar to it is high. For whatever reason, the traditional medical community is not trained to look for Lyme or some of these other infections.

I recently watched the documentary <u>Under Our Skin</u> and I was completely appalled that the movie was made 15 years ago. A friend of mine has been suffering from daily 7-8 level pain for over 10 years. I texted her while watching it and said, "You have to watch this!!" She did and it brought tears to her eyes, because she has spent thousands of dollars on doctors only to be told she has "fibromyalgia" and that there is no solution except to "eat better." She connected with a Lyme literal doctor and has been undergoing treatment for Lyme. If the medical community had been trained in Lyme, she wouldn't have been suffering for so long!

This article from Dr. David Ou highlights many health aspects that are missed by traditional medicine that may be causing people to remain chronically sick. I can't stress enough the importance of finding a good provider that is willing to dig deeper with you and knows how to. If you haven't found such a doctor, keep looking! Many of these kinds of doctors don't take insurance. I know this trips many people up but I have grown accustomed to it because of the results my husband and I have experienced with our doctor. Check a potential provider's ratings at healthgrades.com.

In spite of my infected root canal tooth, I'm currently in another bodybuilding challenge, and I can't wait to see my results. I'm doing things I enjoy such as paddleboarding and hiking with our pups. I'm so grateful to continue to be seeing progress in my health. I have experienced more mental clarity and well-being since slowly adding in more detoxification to my routine.

If you need any help with your health, <u>please let me know!</u> I became a certified health coach as a result of my experience and would love to help you get on the path to feeling better. I will be sharing more of what I've been learning over at https://linear.com, so be sure to sign up for the newsletter to receive any updates.

Further reading:

- The Care and Feeding of Your Mitochondria
- How to Conquer Fatigue and Low Energy
- Mitochondrial Dysfunction May Be to Blame in Long COVID-19
- How to Treat Long-Haul COVID

For treatment:

- https://www.covidlonghaulers.com/
- https://drsyedhaider.com/
- https://drpierrekory.com/

If you purchased a supplement mentioned here, thank you! This will help me to continue sharing information that I hope will help people recover.

Nothing in this document is intended to treat or cure any disease. Consult your healthcare provider regarding any changes to diet or supplementation.

ItCouldHelp.com

Journal Entries

Note: I am a Christian and I believe God speaks to us! You may notice things I felt God was saying to me and I wrote them down to encourage myself.

December 28, 2021

I had planned to do so much these past few weeks. Go to the beach, finish the eCourse, etc.

Yesterday I went to the cardiologist and I felt nervous on the way there. Nervous in the office. I hadn't taken Ativan but I had taken Paxil hoping it would have the same effect.

When I got in the room with the doctor was super nice. She said the tests from the hospital looked good but she was happy to do more tests if I wanted. I asked her about Ativan and Paxil and she said that Paxil takes a couple weeks to get into the system while Ativan is immediate. She said both could be taken together.

I found an online psychiatry/counseling place and I have an appointment tomorrow.

January 2, 2022

Took pups for a walk, but that was a mistake. Pushed myself to the brink doing that. Itchy all night, went to bed at 5am from inositol, then some hives. Then panic attack at 6:30. Had to take Ativan.

Justin said to me, "This is just a moment, it's not your whole life."

January 4, 2022

I am so grateful to Justin for coming home after I had a mini panic attack and buying more supplements for me to try.

January 10, 2022

Had mini panic attack at 11:30/12am. Got better with 2 passionflower & 2 choline. Took 1/4 Ativan.

"You won't feel this way forever."

January 13, 2022

God is bigger than the giants we face.

I learned I have Covid antibodies from my blood test! I feel a bit of electricity today.

January 18, 2022

Faith is the substance of things hoped for, the evidence of things not seen.

February 5, 2022

I felt so much better today! Have been taking ivermectin since Thursday night. Even went on a date night to Casa Nueva! Went on two hikes!!

February 6, 2022

I had some moments today but I not like before....couldn't believe the difference yesterday!

Running, skipping, etc.

February 16, 2022

Last night was kind of rough. I think it was due to eating chocolate and I had missed True Hope. Feeling better now! Slightly jittery...

February 21, 2022

The panic attack I had yesterday only lasted a few minutes. Struggles can develop character.

March 10, 2022

Something really happened the last two nights. I started alpha lipoid acid and it was like water was being poured on the electrical fire happening in my chest!

March 12, 2022

I didn't take passionflower or choline all day! Only a tiny bit of shakiness...

March 26, 2022

Feeling so much better than I have been! First weighted workout where I didn't feel bad afterward!

March 27, 2022

Shaky, didn't sleep well. Woke up stressed overnight.

March 30, 2022

Justin came home to be with me. Didn't make it to the cardiologist. :(

"My beautiful girl. I am so sorry this has happened to you. Remember, faith -> healing."

April 6, 2022

Current symptoms: Slightly shaky on and off but nothing like it was. I'm getting these bumps on my hands like I used to get on my fingers. I think it may be pre-diabetes? Itchy. Bumps on head.

April 9, 2022

Exhausted from 3 hours of sleep.

When I couldn't sleep all night, I was researching health stuff and came across protandim. God was singing over me, "Light at the end of the tunnel."

April 11, 2022

Feeling so much better, even though I had crazy bad allergies! Justin was so sweet and made dinner and got me allergy meds.

April 5, 2022

Good Friday! No period pain with Curcuma Plus. Feeling a bit shaky.

April 18, 2022

Feeling puny today. God is my healer, the joy of the Lord is my strength.

April 19, 2022

Don't feel shaky!!! Took protandim today and yesterday!!

April 20, 2022

Tired today. Took short nap after work and then heart felt shaky after. Woke up at 4am with fast beating heart. Feel ok now. Felt like a little motor was running in my chest.

April 21, 2022

Woke up at 2am with a quivering heart. Fell back asleep. Feel rested now.

"You're going to be ok."

April 23, 2022

Feeling a lot better today. I think the protandim has kept me from having allergies this week! I was feeling jittery before bed and I took alpha lipoic acid and it went away!

April 30, 2022

(Went with my husband to the beach for our anniversary.)

This is an awesome trip!!! I've had some hard moments but doing better than I thought I would.

Did a little yoga on the beach and it was too much for my heart. :(Got a great nights' sleep after.

May 11, 2022

Great sleep. Took aminos. Finally feel caught up from Sunday.

"I love you, and I didn't cause what happened to you."

May 14, 2022

Such a great day! At sunset I told God how grateful I was to have had such a good day.

The song Heart of the Father came on and I was singing to it but starting crying because it had been so hard. Told Justin I was so excited to have a normal day!

May 28, 2022

Lost 5 pounds since I started low carb May 5!

Going to try ivermectin after I exercise to see if it alleviates symptoms. Felt shaky yesterday due to running less than a min on Thursday night, so I couldn't fall asleep due to overactive heart—took anti-anxiety stuff and finally fell asleep. Felt funny again on Friday and took alpha lipoic acid and ivermectin.

There was a time when scrolling on Facebook, singing, or watching TV was too much for me.

September 16, 2022

I started lifting weights this week. The statin has helped, though I have to take it a little at a time. I'm almost better.