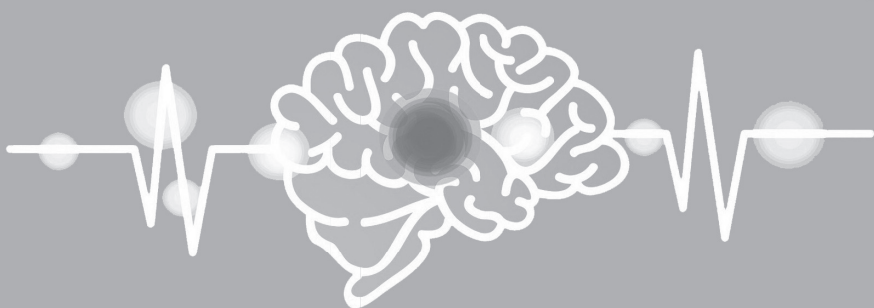


SHAKE IT OFF

An Integrative Approach to
Parkinson's Solutions



DR. GREGORY ECKEL

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READ THIS FIRST

Your health journey can oftentimes be overwhelming. I've created some special resources for you to accompany this book.

And just to say thanks for downloading my book, I'd love to give you access to some very special video lessons and my brain health supplement guide.

The videos show the specific Qi Gong sequence and super brain yoga flow that you can implement immediately (of course get clearance from your medical providers).

My brain health supplement guide gives you the list of possibilities that I've written about in the book (plus a few more). It isn't meant for you to run out and get them all, as you'll find out how I implement these supplements in my clinic (in the book).

Visit [Http://www.shakeitoffbook.com/thanks](http://www.shakeitoffbook.com/thanks)



DEDICATION

To the mystery and faith.

To the women in my life—past and present.

To you, looking for answers and a possible path forward.

To the understanding we are all one, walking each other home.

To our journey together.



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P R E F A C E

THE WHY AND HOW I GOT HERE

“I have never seen anything like this in the eighteen years I’ve been in clinical practice.” This is what I told the third provider we went to, trying to figure out the cause of my wife’s sudden rapid memory loss.

“She fits the criteria for a psychotic break” is what the well-intentioned specialists would retort.

I knew there was something else going on. The previous month, we had taken a lovely family trip back east to see family, watch hockey games, and tour New York City.

My wife, Sarieah, had been in great spirits—her typical cantankerous self. She had just watched her “boys,” the Chicago

Blackhawks, beat my Pittsburgh Penguins in Pittsburgh! She even went behind the scenes to meet some of the players.

That was the last normal trip we took. The next eighteen months were filled with uncertainty, searching, and ultimately caretaking. Without a diagnosis, I went on a journey as a loving husband and naturopathic physician looking for answers.

As a medical professional with a lot of empathy for the journey, it was now time to doctor my wife. The “experts” weren’t much help, and the diagnosis was narrowed down to some rare brain disorders. One, in particular, Creutzfeldt-Jakob Disease (CJD), was becoming the front-runner. That might have brought some comfort, except that there is no known cure, and in order to get a brain biopsy for a definite diagnosis, the person has to die!

Unfortunately, my travels through the medical literature looking for cures didn’t save my wife, Sarieah. She died and, upon her death, was officially diagnosed with Creutzfeldt-Jakob Disease. However, what I uncovered through my research into brain disorders—which I call *Sarieah’s gifts*—may benefit your own journey.

You see, what I discovered while looking at prions (the misfolded proteins that congest and destroy the brain) is that a slew of chronic neurodegenerative conditions—Parkinson’s,

Dementia, Alzheimer's, to name a few—are very similar on a lot of levels.

I wrote this book for you. And your loved ones.

One of Sarieah's gifts comes in the form of researching Dimethyl Sulfoxide (DMSO), which I'll introduce a little later in the "Therapies" section. Mark, one of my first patients to use the nasal spray, wanted to make sure I shared it with you, as he noticed that using the spray improves his speech for hours afterward.

I would have never extrapolated the use of DMSO to use with patients with Parkinson's (PwP) had it not been for this heart-wrenching experience. I like to think that this journey was not for nothing. In sharing what I discovered, I hope it may serve the highest good.

Since Sarieah and Mark, I have tuned and refined this program. I call it the FAN-C approach to Parkinson's, and it is now Sarieah's gift to you.

■ A Different Approach

This FAN-C approach may be different from anything you are familiar with. It addresses your many facets as the heart-centered, dynamic being you are.

F stands for *functional*. We will address you as a dynamic being moving through time and space. We can do this by using the principles of naturopathic medicine, with the primary understanding that the body can heal itself when given the right information and when causes are removed.

A stands for *assessment*. An evaluation and assessment of causes should include consideration of environmental, immunological (in particular, viruses in a molecular mimicry fashion), and protein misfolding components. These are essential to creating an individualized and comprehensive treatment program and are currently not addressed for complete care.

N stands for *nerve and brain health*. Providing the blood and body with the nutrients and information it needs through diet, targeted supplementation, and intravenous treatments is essential.

C stands for *cells*. Utilizing regenerative medicine and mesenchymal stem cells to their fullest capacity is key.

There have been no breakthroughs in neurodegeneration in years. Heck, we are just now attempting to accurately diagnose problems at earlier stages of the disease, even before symptoms occur. Without any remedy or corrective strategies, this earlier diagnosis may provide the opportunity to slow the onset of disease, though that's about it.

Perhaps we are looking at the progression of Parkinson's disease all wrong. The focus on the end stage of this illness (dopamine) hasn't provided any insight or remedies yet.

I'm suggesting we take a much broader approach, looking at maximizing your body's ability to heal, removing any obstacles (toxicities), and assessing other possible causes of neurodegeneration. Then we can address possible mental and emotional causes of disease and introduce you to a whole host of nontraditional but very promising therapies, which may change your life.

All too often, I've seen people with Parkinson's frustrated on their annual check-ins with their provider team, going through the battery of tests only to be told, "Yes, you are getting worse."

What I usually hear is, "Yeah, Doc, I could have told them that!"

Shake It Off is for you if you are worried about developing Parkinson's disease, have been recently diagnosed with it, or have been on the medications that either aren't producing results or aren't working as well as they have in the past.

I'm excited to share some of Sarieah's gifts with you and the holistic approach I've come to call the FAN-C regenerative program for brain health.

My purpose is to help as many people as I can achieve optimal wellness through an integrative care model. This means that while I appreciate advances in modern medicine and am happy to use them, I also feel that there's room for less traditionally "Western" forms of medicine. My approach to medicine and health has evolved through time. When I first graduated from medical school, I was really dogmatic about naturopathic and Chinese medicine. You know, "We don't need Western medicine."

With humility and practice, I've realized there is room here for an integrative approach. In fact, the best approach on the planet is for a practitioner to meet you where you are and design a specific program for you as an individual. It's not a one-size-fits-all program.

This book, *Shake it Off*, is an integrative, alternative, and holistic approach. The information here is the culmination of being in clinical practice since 2001, combined with living through a related neurodegenerative process with my wife, Sarieah, resulting in a very doable program for brain regeneration.

A foundational understanding comes from my doctoral thesis on allergies and asthma, and immune system functions. The result of this for me, as a physician, is the ability to consider the interaction between the immune system and neurology. As a naturopathic doctor, I treat *people*. I don't

treat *conditions*, I don't treat signs, I don't treat symptoms. The holistic approach is to address you as a heart-centered being—the whole dynamic person you are. That's really the best approach, and it is how we get the best results using the holistic aspect of medicine.

We address root imbalances, and by correcting at the core, we bring about balance and health to the individual. I find a lot of patients want to know about a specific therapy. This type of approach really misses the mark. That is a piecemeal Western thought process that doesn't work very well.

To give you a visual of this concept, I have these beautiful, old oak trees outside my office. They really are majestic, taller even than the red brick walls at Portland's Central Library. We really need to address the whole tree for it to flourish. Instead of treating the leaves (which, in this analogy, are the symptoms the person brings into the clinic), we need to trace the symptoms to the branch, the trunk, and finally, the roots. Then we can address any problems at that "root" level to get lasting change. The classical Chinese medical system is also built on this thought process, treating the underlying imbalance to restore wholeness and well-being.

The other problem I see in the clinical setting is what I call the shotgun approach to medicine. Patients will bring their bags full of well-researched supplements. "If this one thing is good for me, I should do a lot of that, and I've researched

these twelve other remedies, and I'm taking all of them as well." The only problem with this is their bodies have to digest and absorb all of them, and most of the time they work in different directions. Essentially, this means that they can pull the vital force in different directions. We get very little traction from treating in this fashion.

In Chinese medicine, we have a concept called the *Zheng of a formula*. This is to describe the herbal prescriptions where there's an empress or emperor herb, and then there are generals and assistants. Each piece of the formula lines up to move you in a certain direction. Using this concept, Zheng of the formula, I've developed the FAN-C brain regenerative program.

Current treatment for Parkinson's is limited to the end-disease process of trying to increase dopamine. I have not found the reductionist approach to treatment with pharmaceuticals or natural supplements to be beneficial in long-term success for patients. I propose we look further upstream and treat you as a whole, dynamic being. This involves a more comprehensive approach.

Your treatment program will involve understanding and individualizing your specific needs. To get to the root imbalances, we need to look at them from a genetic, nutritional, biochemical, and environmental level. Then we will put in the right pieces to get movement and change for you.

I have designed the FAN-C program to work for most people. Addressing gait, stability, speech, and tremor begins with a Chinese medicine assessment. Our four-day report of findings is designed to discover how your body responds to natural therapeutics. Everybody responds differently. In our clinic, we utilize the body's response to acupuncture to get a sense of how your body responds to natural therapeutics. I've found there are three responses to acupuncture: no response, feeling worse or feeling better.

While perhaps unfair to judge so simply, it has shown to be a great guide in designing the right program for our patients.

We use those three responses to see how your body responds to natural therapies. A positive response is obviously good. A negative response, while not what we are after, has a better prognosis. No response means you have deep-seated issues, and we will have to do some other therapeutics on top of a base plan for you. We gauge how steep the incline to healing is. What are you coming in with? How much trauma have you had throughout your life? How much has been resolved? How much is not resolved? What can we do to help with that? Are there family lineage issues at play?

With Sarieah, I found family constellation work (a type of therapy) to be really potent. This piece of the puzzle is rarely addressed or assessed in Western medicine.

Throughout the four-day program, we take a thorough case history, listen to what is happening for you at this current time, evaluate in a comprehensive fashion (this is currently not happening for many folks diagnosed with Parkinson's disease), and put together a comprehensive plan that works to get results. The FAN-C brain regeneration program specifically designed for you is created in this fashion.

To develop your personalized FAN-C program, we must first look at your symptoms. We will explore your obvious symptoms but also look at the subtle signs that may be warning us of things to come.



CHAPTER 1

SIGNS AND SYMPTOMS

Parkinsonism is a syndrome manifested by rest tremor, rigidity, bradykinesia (slow movement), and postural instability (which generally develops later in disease progression).

The prevalence of Parkinson's disease increases with age, affecting between 100 and 200 per 100,000 people over forty, and over 1 million people in North America alone. Traditionally, it's been considered a motor disorder, but it is now recognized as a more complex condition. A correct diagnosis rests on the clinician's ability to recognize its characteristic signs and associated symptoms, especially in the early stages.

Tremors are one of the first symptoms. As they begin to manifest, people experiencing them are at rest and have what's been called *pill-rolling*. They are the most noticeable when

the tremulous body part is supported by gravity and not engaged in active movement. The tremor, at the beginning of the disease progression, is typically intermittent and not really noticeable to others.

I've heard from numerous patients that it took them several years for their practitioners to listen to them about their resting tremors. Often, this is the first big symptom to appear, and often it is ignored by medical professionals. When patients complain of these slight tremors, many providers will simply say, "You are getting older." One patient had this experience. After several years of mentioning her tremor to her provider and being brushed off, she was standing talking with a gentleman with Parkinson's disease. She noticed her symptoms looked a lot like his, and at that moment, she realized she also had Parkinson's disease. Only then, on her insistence to her provider, was she taken seriously, and discovered to have Parkinson's disease.

Bradykinesia, or generalized slowness of movement, is present at the onset of Parkinson's disease in approximately 80% of patients.¹ While this is a very prominent symptom for many patients, it is one of the hardest to describe. *Weakness*, *incoordination*, and *tiredness* are often used to describe the decreased ability to initiate voluntary movement.

Rigidity, the feeling of not being able to move, is the increased resistance to passive movement about a joint and occurs in

approximately 75–90% of patients with Parkinson’s disease. This often begins unilaterally and typically on the same side the slow movement (bradykinesia) started on.

Postural instability is tested with the “pull test.” In this test, the examiner stands behind the patient and firmly pulls the patient by the shoulders. Patients with normal postural stability can maintain their balance and step backward, but no more than one step. Initially, a positive pull test may be the only sign of imbalance impairment. This is the one symptom least likely to respond to dopaminergic (Levodopa) therapies.

There are a host of nonmotor symptoms. In some research, 97% of patients report having at least eight nonmotor symptoms present.

These include:

- Cognitive dysfunction and dementia
- Psychosis and hallucinations
- Mood disorders, including depression, anxiety, and apathy/abulia (the absence of willpower and not having the ability to act decisively)
- Sleep disturbances
- Fatigue
- Autonomic dysfunction (involves involuntary nerves, causing dizziness upon standing and heart rate issues)
- Loss of smell (olfactory dysfunction)

- Gastrointestinal dysfunction (constipation)
- Pain and sensory disturbances
- Dermatologic findings (seborrhea, which is a red, itchy rash with white scales)
- Nasal congestion (rhinorrhea)

I want to highlight a few of the peculiar signs here, as these may be early telltale signs in the progression of this condition.

Acting out your dreams. This means that as you dream, your body moves around in your bed, mimicking the dream. It is an early sign to consider. After reading an article in the *New York Times* on this topic, Alan Alda went in to get checked for Parkinson's disease. He described having a recurring dream of hitting people with a sack of potatoes. In reality, he was hitting his wife with his pillow. If you are acting out your dreams in real-time, please bring this up with your providers.

Constipation. As an early marker, this has some merit. I write more about it in the upcoming section "Did It Start in Your Gut?" As more and more data is coming out about the microbiome, and as our understanding of the gut-brain connection deepens, this is a very compelling area of research. Alpha-synuclein is an inflammatory molecule in the gut, and it has been shown to be found in very high levels in the brains of people with Parkinson's (PwP).

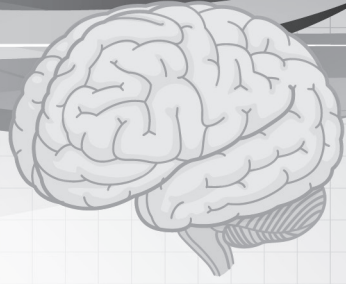
Loss of sense of smell. Your sense of smell, olfaction, can be affected early on. It may also provide us with the opportunity to try some novel approaches to help out. This can be done with nasal sprays, DMSO, HOCL, glutathione, and intra-nasal stem-cell procedures. All are novel routes to get to the brain and bypass the blood-brain barrier.

Zinc deficiency. Underlying the loss of smell may be a connection with zinc deficiency. For this reason, in our assessment section, we cover testing for a zinc deficiency (which has been implicated in DNA, RNA, and protein synthesis in brain development).

There is a simple in-office test we use to determine zinc deficiency, though you can measure the amount of zinc in your blood as well.

As you can see, Parkinson's disease, while traditionally considered a movement disorder, has a host of nonmotor signs that accompany it and may precede the movement disorder aspects by over a decade.

From early to late signs and symptoms, this diagnosis carries some weight with it, as there is no known cure, and we are just gaining some insights as to what is happening with the disease. We will next look at the progression and prognosis of the disease.



CHAPTER 2

PROGRESSION AND PROGNOSIS

What may make Parkinson's disease be more aggressive and cause symptoms to appear more quickly? What, if anything, can slow it down?

The prognosis of Parkinson's disease is not great, though there are studies showing symptom improvement by following the current regime starting with Levodopa or, even more recently, by using nerve conduction stimuli to help with motor skills.

Though, as mentioned earlier, there have not really been major breakthroughs with this condition. A new thought is that Parkinson's disease should be relabeled as less of a disease and

more of a constellation of symptoms. It's been proposed by my colleague, Laurie Mischley, ND, MPH, Ph.D., that the definition of disease doesn't fit anymore, as our understanding of the different aspects of Parkinson's disease has evolved.

“As we start breaking down this disease and learning more about the pathophysiology, we realize that the whole body has Parkinson's disease. We could give the standard medications and two-thirds of the symptoms would remain. There is still a loss of smell, terrible sleep, balance issues, constipation, and so on.”¹

Progression is variable, and there are no symptoms or signs in Parkinson's disease that allow us to accurately anticipate the course of the disease. This is why it is imperative to understand that one-size-fits-all medicine doesn't work here. There have been several observations that provide some insight.

In an early landmark study of patients with Parkinson's disease conducted from 1949 to 1964, the proportion of people who were severely disabled or dead within five years of disease onset was approximately 25%. This increased to 67% at 5–9 years and 80% at 10–14 years.² Not a great statistic. As I counsel my patients, no one is a statistic. The brain is a goal-achieving machine. However, I share these stats not as definitive course but rather to shed some light on the need for a different approach to this condition.

Another study found impairment (defined as difficulty with daily activities without loss of independent function) to disability (loss of independent function) generally occur between three and seven years after the onset of Parkinson's disease.³ Perhaps you are beating the odds already. Perhaps not.

The first big shift to tip the odds in your favor starts with a thorough assessment. With our current understanding of Parkinson's disease, and with an environmental toxicity component as a possibility of triggering event, it is time we start assessing more thoroughly. This is how we design a FAN-C program for you!

■ Assessment for Complete Care

The current assessment and work-up of treating Parkinson's are incomplete at best—woefully lacking, even to negligent at worst. Currently, the work-up and assessment looks only at the end stage, or end cause situation, for folks. By the time motor deficits occur, there has been considerable damage to the substantia nigra and dopaminergic receptors. This is a layer of deeply pigmented gray matter in the midbrain, which contains the dopamine-producing nerve cells that tend to be deficient in Parkinson's. By the time it is damaged, patients are at the end process of the disease.

We want to take a broader look, a meta-picture about what's going on for you. You'll see as we talk about therapies and

possible root causes why this approach makes sense. There's an old saying in Chinese medicine: "You are in the universe, the universe is in you." In the West, we tend to walk around and pretend we're up in the gray matter of our brains, not attached to our bodies, and not in the environment. In reality, we are in our bodies and in the environment. Of course, our environment affects our health!

Looking at the environmental component of a chronic neurodegenerative issue such as Parkinson's is very important. I find folks are not getting a comprehensive workup to take this aspect into consideration. We need to look at the multifactorial aspects to find what the root cause is and what possibly created the imbalance. Taking a complete history (where you grew up, what jobs you were doing, what you were exposed to in those jobs) is the first step. Questioning and investigating all possible exposures at work or home is also necessary for a proper work-up.

We're exposed to 80,000 chemicals a week in the United States, so looking at the chemical burden or toxic burden on the body is definitely necessary when we're talking about chronic neurodegenerative disease. This isn't currently the standard of care. It really needs to be.

Pesticides and solvents are implicated in Parkinson's disease. For example, I've had patients that grew up in rural places in Oregon, and they were crop dusted. Well, they were playing

in the crop dust (pesticides). I guess it seemed fun at the time! Then decades later, they developed Parkinson's symptoms. In the work-up, I will also discuss cleaning up your home environment, as the cleaners and solvents we have in our houses can be quite toxic.

Did you know that indoor air pollution is often much worse than what you find outside your house? These are things we can control or have a significant impact on lowering our total exposures.

One of the basic tenets of naturopathic medicine is the body knows how to heal itself. We need to remove obstacles in order to cure ourselves. This environmental toxicity component is often lacking in the assessment and treatment of neurological disorders. I find working on the detoxification component first, and then incorporating it into a long-term lifestyle really does help clean up the terrain of the body.

If you look at where we store toxins, we store toxins in our fat. Our brains are made up of fat! We could call each other *fathead*, affectionately of course. Since we store toxins in our fat, and fat surrounds our brains, a comprehensive approach includes detoxification of the central nervous system and brain to address at the root of the problem.

We will start by looking at the gut, the detoxification pathways, solvent exposures, and heavy metal buildup in the body,

then proceed into what we can do to lower our overall toxic burden through our diet and our home environment.

■ Did It Start in Your Gut?

Parkinson's could start in the gut with the vagus nerve, innervating the bowels. The vagus nerve, also known as cranial nerve 10, is the parasympathetic (rest and regeneration) control of the lungs, heart, and digestive tract. You have to be in a restful state to have a bowel movement. For example, when the saber-toothed cat is coming to eat you (sympathetic flight-or-fight-or-freeze response) you won't be able to have a bowel movement. Why do I share this?

Patients will often share that constipation may have been present for at least one or two decades before symptoms of Parkinson's disease began to show. Does this mean everyone with constipation is at risk for developing Parkinson's disease? No. However, it is something to consider. At a Parkinson's support group, I asked this question: "Just a quick show of hands for any digestive issues for folks in the room." Almost 100% of all participants had some type of bowel issue.

The vagus nerve and its influence on the digestive tract are being studied for possible connections to Parkinson's disease. The vagus nerve is really important in parasympathetic (rest and regenerate) activity.

There is some interesting research on where the location of the vagus nerve innervates in the brainstem and the association with Parkinson's disease.⁴

Another aspect of the vagus nerve is its role in parasympathetic activity (rest and digestion). You can indirectly measure the influence of the nervous system with regards to hormone balance and tone on the system by getting your blood pressure measured sitting to standing (orthostatic testing of blood pressure).

Ideally, if there is good tone on your nervous system, a good balance between the sympathetic and parasympathetic nervous system, your blood pressure should go up 5 mm/Hg or more. When you think about why...it makes sense—it's stressful on the body to stand up. There is one atmosphere of pressure on our bodies, and we have to regulate the blood flow to our heads/brains so we don't get dizzy and fall down.

This physiological stress (standing up) is the same process (just less dramatic) as a saber-toothed cat coming to eat us! We shunt blood out of the gut (not digesting that burger) to the legs (to flight/run) and to the head (so we can see what is coming at us) to make a decision to fight or flight (sympathetic nervous system).

We use this test to measure the influence of stress on digestion and the tone of the nervous system. This has an impact on

the digestive tract and should be considered in a whole-person approach. Stress may be at the root and cause imbalance decades before full-blown symptoms of Parkinson's disease surface.

A fall in blood pressure on standing indicates that there is a hormone imbalance in epinephrine/norepinephrine, testosterone for men, estrogen and progesterone for women, and thyroid hormones—the endocrine triangle I see impacted by stress (which we measure indirectly with this test).

The stomach is also considered the second brain of the body. A lot of neurotransmitters are made there. There was an association made with slow motility and constipation about a decade prior to the diagnosis of Parkinson's. Ten to twenty years ago, if you were experiencing a lot of constipation, this may have been the first sign of the development of the disease.

The microbiome-gut-brain axis is shown to be one of the biggest areas of research and promise in recent times. The gut happens to be the overlap and connection that I have used since 2001 to intertwine Chinese medicine and naturopathic medicine.

The gut connection also gives us a very novel approach for treatment, which we will share in the “Treatments” section of

the book. We do this with one of the most advanced functional tests of the stool: GI-Maps.

“A better understanding of the brain-gut-microbiota axis interactions should bring new insight to the pathophysiology of PD [Parkinson’s disease] and permit an earlier diagnosis with a focus on peripheral biomarkers within the enteric nervous system. Novel therapeutic options aimed at modifying the gut microbiota composition and enhancing the intestinal epithelial barrier integrity in PD patients could influence the initial step of the following cascade of neurodegeneration in PD.”⁵

Very promising indeed. I wanted to include some mention of this exciting research as there may be some new angles to incorporate into our treatment plans in the near future.

Our understanding of Parkinson’s disease continues to evolve with the evidence of a biomarker, alpha-synuclein, a presynaptic neuronal protein that is linked genetically and neuropathologically to Parkinson’s disease.

Recent research into this biomarker showed:

[p]eople who’d had their appendix removed (an appendectomy) had a 19.3% lower chance of Parkinson’s disease. Those who lived in rural areas and had an appendecto-

my had an even lower chance, 25.4%. People who'd had an appendectomy and developed Parkinson's showed a delayed onset of the disease relative to those who still had their appendix—an average delay of 3.6 years for those who'd had an appendectomy at least 30 years prior.

The team also found a buildup of the toxic form of alpha-synuclein in the appendixes of healthy volunteers. This suggests that the appendix may be a reservoir for the disease-forming protein and may be involved in the development of Parkinson's disease.⁶

While this association is new as well as the findings of alpha-synuclein (a protein) in the general non-Parkinson's population, research is moving more in the microbiome-gut-brain axis study. Alpha-synuclein is the protein found in the Lewy bodies formation in Parkinson's disease patients. Lewy bodies are abnormal aggregates of proteins that develop inside nerve cells, contributing to Parkinson's disease.

There is also a connection between an immune system response to these alpha-synuclein proteins which isn't yet known to be a response or cause to contributing to the progression or development of Parkinson's disease.⁷

What is interesting is that these proteins, alpha-synuclein, do get misfolded and resemble prions. Prions are misfolded proteins implicated in the Cruetzfeldt Jakob disease that my wife passed from and are what originally sparked this book! How's that for full circle?

It gets complicated quickly. However, in the larger picture, the saying “You are what you eat” may fully come to the fore-front. The gut plays a role in our overall health. While we will definitely cover diet and what to eat, we will first finish our discussion of comprehensive assessment.

■ Heavy Metals

Remember, our brains are made of fat, and fat is where we store toxins. Heavy metals, such as mercury, cadmium, arsenic, and lead, are ubiquitous in our environment and wind up in our bodies. The brain is the fattiest organ in the body and is made up of about 60% fat.

Fifteen years ago, David Perlmutter, MD, put out a YouTube video of a patient with Parkinson's. In the video, he did a “glutathione push.” Glutathione is a master antioxidant involved with body detoxification and immune system function. Dr. Perlmutter used an IV to give a large dose of glutathione. Once done, the video showed a gentleman walking the hallway. He had progressed from the typical stuttered step char-

acteristic of advanced Parkinson's disease to an elongated, smooth gait. It was nothing short of miraculous.

I thought, "Wow, that's awesome. I'm a naturopathic physician, and I do IV glutathione all the time. Let's do this." I started using glutathione more purposefully with Parkinson's disease in 2004, and it didn't work. I wondered if Dr. Perlmutter had hired an actor. What in the world? What I discovered was that when glutathione didn't work, patients had an underlying heavy metal burden.

Now, naturopathic doctors do environmental medicine. We look at what the environmental components to health are. What happens in the macrocosm (environment) happens in the microcosm (your body). Our environment affects our health!

Let's look at metals—where do we store metals? We store metals in our fat. Where's the fat? It's around our nerves. We are fatheads (I don't tire of that, sorry). And you look at the epidemiologic research, and lo and behold, all of us have heavy metals in our systems.

When I learned about this as a student, I tested everyone. But that's like Pandora's box because you're invariably going to come back with some heavy metals in everyone tested. The research in North America shows that to be the case. In chronic neurodegenerative states, this has to be done in an

assessment. In order for the body to be able to heal itself, we have to remove obstacles to cure. Heavy metals are definitely an obstacle to cure.

The most common metals found when testing people with Parkinson's diagnosis are cadmium, arsenic, mercury, and lead. Heavy metals need to get taken care of because if these substances are in the body, that's a showstopper in my clinic. They just muck up the system—that's the technical term. It doesn't matter what you do therapeutically. Not everyone with a Parkinson's diagnosis has a heavy metal burden though. Again, we all have heavy metals in our bodies, but there's a threshold of influence these metals have on our health.

We know no amount of lead or mercury (or other metals for that matter) is actually healthy in our bodies. As environmental specialists, we've drawn a threshold at 75% or above the level of the National Health and Nutrition Health Survey (NHANES) data.

NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in that it combines interviews and physical examinations.

Roughly every five years, they're testing the public on a public health level to see what levels of these metals are in individuals' bodies.

I often get asked where these metals come from. There are some websites such as <http://scorecard.goodguide.com/index.tcl> where you can type in your ZIP code, and they'll tell you any exposures that have occurred above the limits of the EPA allowable levels. Until 1975, leaded gasoline and lead paint were everywhere. For complete care, heavy metals should always be in the assessment.

What about testing water? If your home is older, there's a possibility of lead pipes. How does that water get to your house? One quick way to check your water supply is through Vox, which did us all a service by creating a map out of public data by ZIP code about lead concentration in water (<https://www.vox.com/a/lead-exposure-risk-map>). These maps show a majority of municipalities have lead in the water, not just Flint, Michigan.

I'm originally from Pennsylvania. There were five cities in Pennsylvania that had worse lead than Flint in their water source. At the same time the Flint, Michigan lead water revelation happened, in Portland public schools, where my kids go to school, lead was discovered in the drinking water fountains.

So you see, what happens in the macrocosm, happens in the microcosm. Our environment matters, and it may be having dire consequences for those of you with this chronic neurodegenerative condition we call Parkinson's Disease.

Proper testing is crucial to understand the best approach for you as an individual. If you have a metal burden, you must take care of it at some point in your care plan; otherwise, you won't see much change.

Not all testing is created equal here. Blood tests are only valuable if you have acute exposures. You will also see controversy about chelation therapy and whether to test the hair or urine.

The best testing will assess the current levels of metals in your connective tissues. I do not do hair analysis anymore in my clinic. I did many hair analyses (for heavy metals) versus intravenous (IV) chelation and found that for some, there's a genetic predisposition that prevents metal excretion through the hair. I just don't find it to be a valuable test.

Proper testing for heavy metals involves a pre- and post-provocation urine test. The metals get stored away in the body, fat, and bone. If you don't pull them out with a chelating agent (think a magnet that attracts these metals to it), they aren't coming out.

We want to make sure that you do not have an acute exposure in your water source, air, or environment. So, you first do a pretest by collecting your first void (urine) in the morning. We do the morning void pretest before arriving into the clinic, then you come in, you get an IV with a chelating agent, and you then collect your urine for six hours after the IV. We

then compare the before and after tests to get an assessment for this moment in time.

You may be wondering at this point where the exposure could be coming from. Maybe there is a potter two houses down with a furnace outback, and he's still using leaded dyes, which people still do.

It doesn't give you a total body burden, as some metals are locked in the bones or in the brain. We are clearing the connective tissue space and may see an increase in metals on the next testing (after a round of chelation) if you have a higher body burden (metals were in the bone matrix or deeper fat layers). It is important to note this, as I've seen some tests after a round of chelation come back higher, which can be very upsetting to the patient.

You may be asking what do we do if a heavy metal burden is discovered. What's the treatment?

You have a couple of options. It also depends on what metals come up. Different chelation agents have different affinities to different metals. The magnet has a stronger pull toward different metals. And so it gets complicated quickly. Don't let your eyes roll yet.

As a patient, you have a couple of options for testing for metals. I call it the *slow boat* or the *fast boat*. The slow boat

takes about three to five years, and it's oral dimercaptosuccinic acid (DMSA). For the fast boat, there's IV therapy with ethylenediaminetetraacetic acid (EDTA) and/or 2,3-dimercapto-1-propane sulfonic acid (DMPS). You do an oral treatment (slow boat) or IV therapy (fast boat). For IV therapy, we do these in a series of twelve treatments. You do ten chelation treatments and two replenishing IVs during that set. And then you retest.

Occasionally, as I mentioned above, it looks worse with the retest, and you get a higher level of excretion. People get really upset at me if I don't tell them—before we start—that this is a snapshot. The testing is not about total body burden, and because it's pulling from your connective tissue, as I mentioned before, the repeat testing may show higher levels of the metals than the first test. This is called diffusion, where molecules (in this case, heavy metals) move from high concentration to low concentration.

Where do we store toxins besides our fat? Metals are also stored in bone. They'll diffuse out of the bone and go into the connective tissue, resulting in a higher amount there.

What we've seen work since 2001 is that it usually takes one to three rounds of IV chelation to clear these metals out of the system. I haven't seen anyone needing more than three rounds of chelation for this use.

Circling back to the connection of heavy metals and why the glutathione wasn't working—when you get the metals cleared, then the glutathione works really well for stability and fluidity of gait. This really helps with ensuring movement, and exercise can remain in the treatment plan.

Once you get the lead out, everything else starts to work better, and it just continues that way. Lead is one of the heavy metals that I see being the biggest burden and obstacle for most people with Parkinson's diagnosis.

In the Pacific Northwest, where my clinic is, there is an annual exposure that comes by way of China. A plume of dust coming from coal-fired plants in China every year gets swept across the Pacific. We are exposed to lead and mercury in this dust fallout. It's part of being on this planet these days. I know it's depressing, though we really need to take the environment into our assessment.

In addition to calling the stomach the second brain, we also need to assess hormones and the thyroid for brain health.

■ Hypothyroidism of the Brain

There's new evidence coming out that says Parkinson's is hypothyroidism of the brain. If you look at some of the symptoms of Parkinson's and of hypothyroidism, there is some

overlap. Lo and behold, the majority of the patients I see with a Parkinson's diagnosis are on some type of thyroid medication.

The three key reasons to be suspicious of a hypothyroidism diagnosis are fatigue, weight gain, and constipation. Look at what the thyroid does for the body. It regulates temperature and metabolic rates. It also works on the gut. Therefore, a lot of patients with hypothyroidism will have constipation as a keynote symptom.

Of note, levodopa (a medicine commonly used for treating Parkinson's disease) also has a negative effect on thyroid-stimulating hormone (TSH) levels, with some associations showing it lowers the TSH, which in turn reduces thyroid levels circulating in the body.

There have been some associations with hypothyroidism worsening tremors in Parkinson's patients as well as mimicking Parkinson's disease entirely.⁸ There is a case study where Parkinson's disease symptoms were reversed by correcting hypothyroidism. The symptoms may mimic each other.

I recommend a complete work-up of thyroid function that includes TSH, free T3, and total T4. See the resources section on testing.

Besides heavy metals, there is another aspect that gets overlooked and needs to be included in a thorough assessment: chronic viral illnesses.

■ Viral Influences

It's not that you're sick with any old virus. In particular, Epstein-Barr virus (EBV), cytomegalovirus (CMV), and herpes simplex virus (HSV) are the three I see most commonly that distract our vital force and can create neurological changes.

There is a condition called postencephalitic Parkinson's, which is post-viral illness causing the degeneration of the substantia nigra, which then follows the typical course of Parkinson's disease. While rare, it does indicate that viral components need to be ruled out. If you have had any of the viral illnesses listed, there are specific blood tests I recommend evaluating for that look at antibody levels of EBV, CMV, and HSV. Please see the resources section on testing.

Additionally, there are some compelling hypotheses about molecular mimicry in the causation and progression of Parkinson's disease. Some data shows a possible role of the immune system in the pathogenesis of Parkinson's disease and that HSV-1 infections may lead to a progression of the disease.⁹ Alpha-synuclein and HSV cross-reactivity is com-

ing to light in some recent research as a possible contributory relation.

Molecular mimicry in medicine has involved homologies of primary protein structures, which cause disease. Molecular mimicry can be expanded beyond amino acid sequences to include microRNA and proteomic effects, which are either pathogenic or salutogenic (beneficial) in regard to Parkinson's disease, Alzheimer's disease, and related disorders.

Viruses of animal or plant origin may mimic nucleotide sequences of microRNAs and influence protein expression. This shows that these viruses have the ability to mimic Parkinson's disease progression and must, in my opinion, be considered for complete assessment in people with Parkinson's.

As if this isn't enough, there is yet another layer to the story and assessment needed to be comprehensive. Genetics and ancestral expression come into play here. For a complete work-up, we need to consider these aspects as well.



CHAPTER 3

GENETICS AND ANCESTRAL ASPECTS

■ Genetics

When I started practicing medicine in 2001, I was looking at health biochemically and physiologically, though it's much more complicated than that in the real world. There's a genetic component, possibly even an intergenerational aspect. By intergenerational I mean, it could've been three generations ago—the traumas or illnesses of your great-grandmothers or grandmothers could impact the expression of your genes today.

For instance, there was an extreme ice storm that went through Quebec City, which shut the city down for two months. The geneticist community uses the population of

Quebec to study the impact of this trauma on future generations of those born to parents who went through this.

This genetic component has made my job as a physician so much harder, and a lot of us don't know our family trees or histories in this much depth. Some of us are fortunate enough to have information that has been kept by our families. However, most of the time, I find that families don't keep track of or speak about the trauma they went through. The onset of genetic testing becoming more affordable has helped with this inquiry. What used to be a \$10,000 procedure to get our genetic history checked is now under \$200, which is pretty phenomenal.

While the reports offered by different companies are interesting, the gold in genetic testing is the raw data (if a big enough set), which can be imported into programs that bring the data to life. Currently, I use the raw data set from 23andMe and upload that into a program called Opus23.

Current research is looking into some specific genetic single nucleotide polymorphisms (SNPs) with regard to Parkinson's. Although most cases of Parkinson's disease appear to be sporadic, there is increasing evidence that genetic factors play a role in the pathogenesis of Parkinson's disease, particularly when symptom onset occurs before age fifty. The genes of particular interest are PARK 1–15, which relate to familial

association. While there is some promise here, this is a complex area of study, and it is too soon to tell if useful.

SNPs are one access point of genetic data. The other is through the work of family constellations and ancestral traumas/experiences.

■ Family Constellation Work

Another way to access healing is through ourselves. The traumas of our ancestors are not the only impact on our health. Our own traumas have a significant influence on our health. A system of therapy that accesses both realms is *family constellation work*.

Bert Hellinger, a physician out of Germany, developed this theory after his work in Africa in the 1940s. Many of us unconsciously “take on” destructive familial patterns of anxiety, depression, anger, guilt, aloneness, alcoholism, and even illness as a way of “belonging” in our families. Bonded by a deep love, a child will often make sacrifices against her own best interests in a vain attempt to ease the suffering of a parent or other family member.

Using this framework of looking at family constellation work, you can actually heal your whole family tree.

I would encourage you to truly address this process. If you have a strong belief, and there doesn't seem to be any reason for you to have it, I would highly encourage you to pursue this aspect of care.

For example, if you have a fear (maybe it's a fear of heights or fear of fire—something along those lines) then your family constellation work may really add to your therapeutic approach. This may help clear the energetic and/or the intergenerational aspects of what may be at the root cause of your Parkinson's diagnosis.

My recommended assessment includes typical blood work, with a full hormone work-up (definitely including a full thyroid panel, TSH, free T3, and total T4); homocysteine, iron panel, virus antibody panel, neural zoomer, GI MAPS, and heavy metal assessments; a genetics work-up and ancestral tree; and a complete environmental work-up (places lived, jobs, possible exposures, household cleaners, and detergents used).

Now that we've got a great start on assessment, we will shift gears into prevention and treatment.



CHAPTER 4

PREVENTION AND TREATMENT

How can these both be together? Prevention and treatment are typically in separate chapters. I've grouped prevention and treatment together because the actions one takes to treat a condition are definitely the same things that help prevent it from occurring in the first place.

A basic tenet of medicine is "do no harm." If we take that into consideration for brain health, what are the steps we can take to have the best brain ever? Simple and actionable.

First, do no harm. Toxic substance reduction and elimination are key. We live in a world where we are exposed to toxins. Thankfully, our bodies are set up to help rid our bodies of these, though the amount of exposure has been growing.

A first tenant in environmental medicine is the removal of toxicants. As I mentioned earlier, our indoor air is sometimes some of the most toxic on the planet. Dust particles and debris from our shoes or pets get tracked into our homes and settle in the carpet. Then it gets recirculated through our air. Add to this “air fresheners,” odorous detergents, dry cleaning airing off, vinyl coverings in our bathrooms (to name a few), and you can see we are constantly swimming in a toxic stew.

Let’s start with one of the main things you can do to reduce your body’s burden. Take your shoes off when you enter the house. Remember, what happens in the macrocosm happens in the microcosm. When the neighbors get their weeds sprayed with pesticides, you risk tracking them in. I had the pleasure of meeting one of my heroes, Professor Seralini from France. It was his lab that studied glyphosates (the cancer-causing agent in the pesticide) and the pesticide solution that it came in. He found that the whole bottle of pesticide solution was ninety-nine times more cancerous than the claimed active ingredient, glyphosate, which has been proven to be cancer-causing.

So, pesticides are implicated not only in Parkinson’s but also in cancer. If this isn’t enough to have you reconsider and educate your neighbors, I’m not sure what is. In our lifetimes, chances are one of every two of us will get cancer. I know this is a book on Parkinson’s, though this stat alone hopefully will help you make swift changes in your toxic burden!

Another actionable item is to make sure you are changing the filters on your furnace if you have central air. There's nothing like recirculating toxic air!

How about what you put on your skin? This is a highly unregulated industry, and there are toxins found in skincare products. Please utilize the Environmental Working Group's website (ewg.org) and consider a reputable company, such as my friend Dr. Trevor Cate's Spa Dr. line. (She is listed on the EWG site.) Nail polish is particularly toxic and absorbs directly through the keratin layer of your nails, which then enters your bloodstream consequently affecting your brain. This route of exposure is rarely addressed.

The odors/scents in cleaning supplies aren't so lovely when you discover there are solvents released from them that are known neurotoxins. I'm not making this stuff up. We have been inundated with this stuff so much it's hard to tease it out and reduce our body's burden.

All right, that gives you a starting point for reducing your body's burden from exposures you have control over. Next up, foods that can either help or harm.

With a neurodegenerative condition, we definitely need to aid the body with what we eat and do on a daily basis.

I developed a smoothie recipe with specific benefits in mind. Clearing protein structures out of the brain was my foremost priority, though essential nutrients and beneficial fats were also included to get these super nutrients on a daily basis.

■ Brain Health Smoothie Recipe

Resilience whey (high vibration protein powder and super-food nutrition formula): 3/4 cup

Brain Octane: bulletproof. 1 Tbsp.

Brain Health Omegas (nice lemon flavor): 2 tsp.

Giant KETO, exogenous ketones: different flavors, 2 scoops

Trehalose complex (D'Adamo brand): 2 tsp.

Pro Greens (Nutricology brand): 1 scoop

In 16 oz. of hemp milk (may use water, but I used the hemp to increase caloric intake):

Hemp hearts: 3 Tbsp.

Berries: 1 c.

For vegetarians: Liposomal DHA (Liposomal DHA Vegan Non-GMO Non-Allergen): 6 oz., 1 Tbsp.

**Yogurt (to increase calories): 1 c.

**Coconut oil (to increase calories again): 1 Tbsp.

■ Other Brain Health Nutrients

Brain Essentials

Dopamine is essential for the normal functioning of the central nervous system and is associated with attention, learning, movement, balance, and mood regulation. The primary ingredient in DopaBoost™ is *Mucuna pruriens*, a botanical which naturally contains L-dopa, the metabolic precursor to dopamine which can cross the blood-brain barrier. Additional ingredients include epigallocatechin gallate (EGCG), acetyl-L-tyrosine, quercetin, and vitamin B6—all selected for their synergistic roles in the production and regulation of dopamine.

Liposomal Glutathione

Glutathione is one of the most powerful antioxidants naturally produced in the body, as it protects virtually every tissue. Research suggests that many with a Parkinson's disease diagnosis have a deficiency in glutathione intracellularly.¹

Chinese Herbs

These are best prescribed according to your particular constitution, and there are some patterns that are typical for Parkinson's disease patients. It is too much to go into here,

though my recommendation is to go to a well-trained Chinese medicine practitioner.

Cannabidiol (CBD)

The whole endocannabinoid (eCB) system wasn't taught about when I went to medical school. We have Professor Mechoulam, an Israeli organic chemist and professor of medicinal chemistry at the Hebrew University of Jerusalem in Israel, to thank for the exploration of the eCB system. He and his team discovered that the whole eCB system has more receptor sites in our body than all of the other neurotransmitters combined! The eCB system underlays the nervous system and hormonal system. It may be the missing link in stress disorders. While there is plenty of research for the treatment of anxiety, depression, fibromyalgia, migraines, and irritable bowels, there isn't much in the Parkinson's disease department.

That said, I do include it in the considerations category, as many of my patients have found benefit with it as a relaxing, nutritious supplement.

HOCL/DMSO nasal spray

HOCL is an organic and naturally occurring component of the internal defense system. Our own immune system secretes this to surround and neutralize viruses and bacteria, re-

duce inflammation, control responses to injury, and enhance the healing process.

DMSO will be listed and discussed later in the “IV Therapy” section. We’ve put these two together in a spray bottle to help deliver the HOCL, which has been shown in the research to clear unwanted misfolded proteins (prions, alpha-synuclein) from the brain. This, coupled with the chaperone molecule DMSO to aid its travel into the brain, makes HOCL a very powerful tool for aiding the brain in healing.

Foods

Colorful berries, particularly blueberries, are excellent. Though all berries are helpful, the color on the berries provides proanthocyanidins, which one of my mentors, Dr. Bill Mitchell, a co-founder of Bastyr University (a naturopathic university founded in 1978) once called “the molecule to save humanity.”

When discussing foods for a specific medical condition, patients start to gloss over since there has been so much confusing information released about what is beneficial and harmful.

Eating organic is very important to lower the amount of pesticides you are exposed to.

One of my favorite groups to support, because of their stellar work, is the Environmental Working Group. They put out a dirty-dozen list annually that notes the fruits with the highest concentration of pesticide contamination. Here is the most current list to definitely get organic:

In 2019:

1. Strawberries
2. Spinach
3. Kale
4. Nectarines
5. Apples
6. Grapes
7. Peaches
8. Cherries
9. Pears
10. Tomatoes
11. Celery
12. Potatoes

Notice I haven't written about a specific diet here. I have purposefully kept the title on food. In general, eating a whole-foods diet with macronutrient levels of 40% vegetables, 30% protein, and 30% fat tends to do most bodies well. This is most similar to the Zone diet popularized by Dr. Barry Sears. Food is our best medicine and the foundation for all treatment plans.

There's been a lot of buzz about the ketogenic diet, which I find tough for most of my patients. We actually did a lot of work around the ketogenic diet for people with cancer, and it was ineffective at best. The work it took to maintain ketosis was not sustainable for the majority of patients, and we've stopped incorporating this into plans. I will remain open to it if there is compelling research that gets real clinical results. Until then, the benefits of the ketogenic diet for nervous system symptoms in Parkinson's disease are only theoretical.

Stick to a whole-food 40/30/30 diet or a Mediterranean diet. I also incorporate blood type diets in for those patients who do well with a list!

In addition to supplements and foods, movement is a key ingredient in a comprehensive plan, and some great research suggests delayed progression of Parkinson's symptoms due to movement.²

■ Movement

Movement (a.k.a. *exercise*, which is a loaded term for many, so we'll stick with *movement*) does many things for the body and brain. It decreases the stress response and increases brain-derived neurotrophic factor (BDNF). This helps new neurons grow, increases growth hormones (the fountain of youth), helps circulation, and aids in thyroid function, among other things!

The types of exercise I recommend are Qigong (energy work) and super brain yoga. Of course, good old fashioned weight lifting is helpful with aging gracefully and gaining strength.

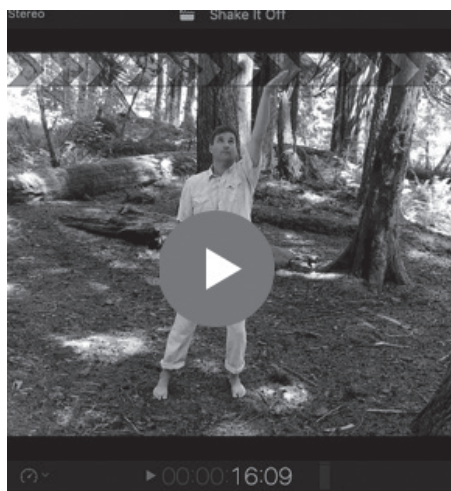
■ Qigong

While traveling in the eastern region of Tibet, known as Kham, I was able to do Qigong, which is energy work. *Qi* is energy, *gong* is work, and it is done at a very high elevation. We were crossing passes in that region of Tibet, at 14,000 feet. For comparison, in the United States, the 14,000-foot peaks are the highest peaks that we've got in the lower 48 states. In Tibet, we were looking at the pass. The base of the mountain really is at 14,000 feet. It was at this very high elevation that we were doing this energy work of Qigong. My teacher, Wang Qingyu, is the lineage holder of the Daoist form called *Jinjing* (muscle tendon change). It was a very special time to be able to do this over in Tibet with him. I mention the location of study as it definitely influenced the transmission of information on a cellular level.

In 1998, when I visited, the region of Tibet called Kham was like the Wild West. I saw these gorgeous Khampan rebels riding around on their horses, still with sabers and guns, their long, black hair down past their belt buckles. They really looked like cowboys over there. This was the last region of Tibet to fall. Given the amazing spirit and fierceness of the

population, perhaps the macrocosm (the Himalayan mountains) had an influence on these people. It's truly a powerful region on the planet.

One of the components that I want to teach you in this book is called *cloud hands*. It really helps with balancing the body. You can check out the video:



Go to [Http://www.shakeitoffbook.com/thanks](http://www.shakeitoffbook.com/thanks), which is easy to follow. And I will describe the exercise below.

You get into the horse stance, also known as the universe stance. The saying goes, "you are in the universe, and the universe is in you." (A slightly different take on how the macro-

cosm affects your microcosm...) Your feet are shoulder-width apart. You've got your toes clenching into the earth, but if you're in your living room, that's fine. Just imagine your toes clenching down as though you are grabbing stones on the floor with them.

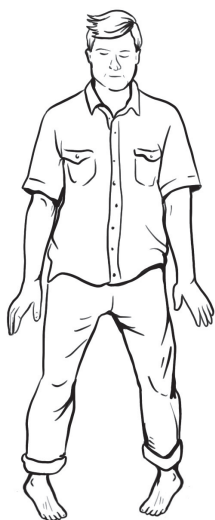
Then, inhaling, you raise your arms up gently in front of you. Raise your arms up like there's a string pulling from your wrist, and you are relaxed. Then you sit down just a little bit with a little bend in your knees. It's a pretty solid stance. This is a militaristic stance, the universe stance.



Shoulders are relaxed as you take some deep belly breaths in and out. Imagine you are seaweed at the bottom of the ocean. You don't want to be stiff, but you want to be solid. As you breathe in, flip

your palms up. As you breathe out, stretch your arms back and out.

Then, as you breathe in, you bring your arms above your head, palms together, almost touching, but not. Once you get to the top, go up on your toes and hold your breath.



Now breathe out, and flip your hands out and down.

Let your arms slowly drift back down to the earth, and notice the feeling that you get as you get closer to the midway point on the way down. Let your hands and arms dangle there at the bottom. Your knees are bent, your toes are still gripping the earth.

Then, breathe your arms back up in front of your body, as though there is a string at the wrist, just kind of pulling it forward and up.

The visualization with this is that there's a tree in front of you, and you're like a tree hugger (yeah, I am from the Pacific Northwest). You've got a mountain behind you, and you imagine from your thighs down that you're in the earth and that your torso is up in the clouds.



This pose signifies you are in the universe and that the universe is in you.

Now, from here, you can do cloud hands. As you breathe in, you take your left hand, palm up and your right hand, palm down. Really stretch it out, palm facing up stretching up, palm facing down stretching down.



Then, exhale, flip your hands, and switch the direction of the stretch. As your right hand is going up, go over to the right leg a little bit more—lean to the right, and then breathe out.

Left palm up, going up, up, up as you slowly shift your weight to the left side, knee bent.

Stretch it, stretch it, stretch it, and then breathe in. Right hand up, left palm down. Rotating, shifting your weight to the right side. Stretch it, and you're going to do this twenty times, really slow and gentle. Notice the energetic shifts between your left palm going up and your right palm going down. Feel that stretch, almost that pole or tension in your palms as you flex out.



Keep switching from side to side. That's cloud hands, and it is a great exercise to do for balance and integration. With Qigong, you're making a great connection between the right and left hemispheres of your brain. If you're having any stability or balance issues, including your gait, this is a great exercise to use.

Do this first thing in the morning. You can also do it right before bed.

A different movement that you can do right in your bedroom or living room is super brain yoga.

■ Super Brain Yoga

Another exercise that I want to talk to you about is super brain yoga. They've got functional MRIs of special education kids doing this in their classrooms. The MRIs show changes in brain function and well-being in these children. For folks with neurodegeneration and Parkinson's in particular, this is a great thing that you can do. If your balance is very affected by these conditions, please consult your providers to see if this is appropriate since there is more movement with this, and falling is not advised at any time.



Go to <https://www.shakeitoffbook.com/thanks> for the video of super brain yoga

What you do is face east toward the sun. Cross your left arm in front of your body and grab hold of your right ear, with your thumb on the front part of your ear lobe. Then, cross your right arm in front of your body to your left ear, thumb in front of your ear lobe.

It feels a little bit funky, but facing east toward the sunrise energetically aligns you on the planet.



One way we can develop an understanding of the concept “what happens in the macrocosm happens in the microcosm” is grounding with our connection to the earth, to the planet, and to nature.

With your arms still crossed and the hands holding your earlobes, you complete the movement by doing a squat. To do a squat, you want to keep your feet shoulder-width apart, then



sit back as though sitting into an imaginary chair. Breathe in as you squat down. Breathe out as you stand back up.

You do that in a series of seven, building up to three sets for a total of twenty-one squats. If seven is what you have in you, start with that. Then build up to fourteen squats, then eventually up to twenty-one squats.

Again, if you have balance issues, consult your providers on appropriate exercises for you. When doing squats, you ultimately want to be able to get your hips below your knees on that squat, a deep squat. We're not putting any weight on this, just our body weight. That's really going to help with core function and strength. It will increase your strength and balance.

There are a lot of other resources for people living with Parkinson's (PwP). The Brian Grant Foundation has a website with exercise videos. They do a great free training for medical professionals and offer exercises specifically for

Parkinson's disease. Some patients prefer boxing. Another great organization is called Rock Steady Boxing, a nationwide network of boxing outfits with specific training to helping PwP.

I heard an amazing interview with Mohammad Ali. He said that in the latter stages of his fight with Parkinson's disease, he could get into the boxing ring and really go at it. It helped him find some temporary relief from his tremors.

We've covered prevention and lowering our exposures, both in the home and dietarily. We've discussed some foods that would be most appropriate and given an overview of diet recommendations, including a smoothie recipe and a listing of potential supplements. These are the things you can get started on right away.

What we are going to cover now are some of the therapeutics to consider in a FAN-C solutions to Parkinson's program.

■ Therapies

Now we will explore the process when patients come into the clinic. There are a lot of therapies that I'm going to list out here that have potential benefits for you. The art and practice of medicine are determining which ones are best for you.

All too often I see patients that are well researched on supplements and therapeutics, but they are asking me the wrong questions. People will ask about a certain IV therapy or a certain nutrient. However, rather than simply doling out treatments or medicines, you ultimately want a practitioner to guide you through the process, not make every decision for you. This will help you really pick the path that has the best potential benefit for you.

Picking the right path starts with a thorough assessment. Remember that the assessment involves looking at environmental toxicity, viruses, thyroid disorders, pesticides, solvents, and heavy metals. Those all too often go overlooked, but they are very important and help dictate the plan that gets individualized for you!

When we talk about finding the right action plan for you, we're talking about something I call the *therapeutic order*. This means that you want all the therapies to line up and support each other synergistically. In Chinese medicine, for example, we have a concept called the *Zheng of a formula*. The idea behind it is that there is an emperor at the peak. Then there are generals, and then there are assistants. Everybody lines up to support the emperor, which is the heart. Having things ordered like this ensures movement in a particular direction. It's like an arrow cutting through time and space.

On the other hand, there's a concept in North America, which I call the *shotgun approach*. We've all seen it. People will be well researched, and they'll have twenty things that they're taking. Imagine standing in water above your shoulders with your arms out by your sides, shoulder height and pushing the water straight forward. You won't get very far doing that. If you put your hands together in an arrow shape in front of your head, and you kick through the water, you will move much more quickly. That's the concept of the Zheng of the formula.

The shotgun approach is to line up everybody and take gobs of supplements. The issue with this is that it pulls your vital force and your own healing ability in way too many different directions. We really want to get movement in the direction toward health. Movement toward "wellville" is what I call it, whether that be decreasing or eliminating the tremor, increasing your stride, strength, and stability, or improving your speech. Those things can all happen, and I've seen them occur with these therapies.

The *C* in the FAN-C program stands for cells. In regenerative medicine, stem cells, exosomes, and growth hormones come together to aid the body to heal itself. Let's cover those now.

■ Regenerative medicine

The ability of the body to heal itself given the correct information is, by definition, “to bring into existence again.” Regenerative medicine and specifically stem cell therapies were not even on my radar before my experience with Sarieah’s CJD. As I shared in the introduction, I went digging through the research, and my wife, Sarieah, didn’t have time to wait. I’m sure if you’ve made it this far in the book, you are possibly wondering the same thing: Is this it? Is there anything else we can do?

You’ve been going to the doctor’s office. You’ve possibly been prescribed medications. And then it’s crickets, just watching and waiting. Hoping the Parkinson’s doesn’t progress. Hoping for a little more time before it gets worse.

I was pleasantly surprised about the amount of research out there on stem cell procedures. At the very least, the research shows that stem cell procedures are safe to use in humans. I started using these cells, first on myself, then Sarieah, then with my patients. You must know right here that what I’m going to describe and talk about is not currently an approved therapy by the FDA in the United States. Note, however, that there are no surgeries that have FDA approval either.

Each year in the United States, surgeons perform approximately 64 million surgical pro-

cedures, ranging from tooth extraction to open-heart surgery. Yet, notwithstanding the frequency of surgical procedures and their often critical importance to patient health, no state or federal agency either approves the use of new surgical procedures or directly regulates existing procedures.

The absence of surgical procedure regulation differs from the regulation of new pharmaceutical products, which can be introduced into interstate commerce only after the Food and Drug Administration (FDA) has reviewed “adequate and well-controlled [clinical] investigations” and concluded the data from those studies sufficiently establish the drug’s safety and efficacy. Surgical procedures, by contrast, are more often conveyed from professor to student, the result being that surgical approaches may vary considerably from one geographic region to another.³

I raise this comparison since the discourse on where stem cells get classified in the medical system is still open to debate. Is using them classified as surgery or another procedure? It’s not a settled discussion, and there is room for interpretation.

There are many misconceptions surrounding stem cells: Is the procedure safe? Where do they come from? Will they

cause a reaction, if not blood typed? These are the top three questions I hear on a weekly basis.

Here, I'll do my best to answer them. As of the writing of this book, the FDA does regulate stem cell banks, which are proliferating all over the country. This is a highly regulated industry, for good reason, and they are preserving cells to be used in people. Up until the past few years, the birth tissue (placenta and umbilical cord) was just thrown away.

We use a very reputable stem cell bank that has been around for fourteen years without incident. In fact, it has been on the cutting edge of the regulatory bodies and has been used as an example in the industry. The women are screened throughout their pregnancy, go through a fifty-page screening document, are checked for any known diseases, genetic disorders, and other conditions that would exclude them from donating their birth tissue to the stem cell bank.

In the case of bone marrow transplants, hematopoietic stem cells are sourced from healthy adult donors. However, for regenerative medicine, perinatal mesenchymal stem cells (MSCs) are sourced from the birth tissues of healthy mother donors. These tissues include amniotic tissue, umbilical cord tissue, placental tissue, or uterine tissue (from legally performed C-sections). Birth tissues are only collected from pre-screened, pre-tested, and consenting donors. The tissues are packaged in sterile containers and cryopreserved to pro-

tect cell viability. All of the processing and handling are done per the Food and Drug Administration's Tissue Reference Group (FDATRG). There is no harm to the mother and no harm to the baby.

The cell preservation process has been well known for many years and is standardized across the industry. However, very few stem cell banks scrutinize their own finished products, the stem cells, with third-party testing. If you are considering this procedure, you want to make sure your clinician has done their due diligence on this process and knows where their product is coming from.

As with herbal medicine, where the entire herb and not just "active ingredient" is crucial, we are strong advocates for whole cord products, as there is much more to this than just cell counts. What you will see on the market is a wide variety of products from different anatomical pieces of the cord. With our practice, we are getting results for our patients with a whole cord and tissue product.

I give the example of herbal medicine here because there have been many attempts to isolate the "active" constituent of different herbs, and they all fall flat and have increased side effect incidences as a result. There are almost no known standardized extract concentrations that work better than the whole plant in herbal medicine. Mother Nature has created a perfect product. I like to say, "Let's not mess with perfec-

tion.” The same goes for the whole cord product we use for our patients.

There are thought to be three key mechanisms of action of MSCs in regenerative medicine.⁴ The first is called *homing*, where stem cells are attracted to the site of injury or degeneration by a chemical gradient. The second mechanism is the ability of stem cells to differentiate into multiple cell types, which restores degenerative tissue. The third mechanism is the ability of stem cells to secrete bioactive substances, such as cytokines and growth factors, which augment the regenerative process.

Much of the rationale for brain regenerative MSC treatment comes from animal models of neurodegenerative conditions. Studies in mice, rats, and monkeys show that inhalation of MSCs rapidly delivers stem cells to the brain and upper spinal cord within ten minutes. Animal studies suggest that MSC therapy holds promise for conditions like neonatal brain injury.⁵⁻¹⁰

Studies suggest that intranasal MSC therapy has anti-inflammatory properties, preserves neurological function, and improves sensorimotor function. MSC therapy has also been explored in human clinical trials for Alzheimer’s disease.¹¹

The intranasal delivery method is the preferred delivery method to bypass the blood-brain barrier. The blood-brain

barrier, which is a security filter on blood flow to the brain, makes it hard to deliver any information to the brain.

Intranasal stem cell procedures show benefits in animal studies for Parkinson's disease and have anti-inflammatory and neurotrophic properties. This is a noninvasive procedure, which uses a flexible catheter and is relatively painless. The procedure feels a lot like falling while water skiing and getting water into your sinuses.

This is important as it's been very difficult to get cells through the blood-brain barrier. This intranasal procedure helps bypass the blood-brain route.

Research¹² is showing that the mesenchymal stem cells reach the cerebrospinal fluid within ten minutes, which surrounds our brain, brain stem, and spinal cord.

When I first learned of this procedure, I brought it up to my patients. The first response that I received was, "Look, Doc. I get it. There's research on this, but have you done it?"

I said, "No, no."

He responded, "All right, you go do it. And if it doesn't kill you, you can come back and do it on me."

So I went and received the intranasal procedure. I wear hearing aids, I have middle-age eyesight loss, and in general, I want to extend my healthspan (the amount of full-contact living you can have for as long as you can). If I'm going to push my age to 150, this is the stuff to help me do it, right?

So, I had the procedure done. And what occurred was very impressive. Although it hasn't had an effect on my hearing (I had it checked four months after the procedure; it was stable, but not improved) and has had only a minor, short-term effect on my vision (I was able to use reading glasses less frequently, though that seems to have passed), I did receive systemic anti-inflammatory benefits. I didn't even know I had swelling in my hands, but the absence of the swelling was marked—so much so that over dinner the next day, I started flexing my hand closed and open, holding my hands together. They just felt different. The inflammation was gone!

The biggest benefit of the treatment occurred less than twenty-four hours afterward. I had chronic hip pain from an old injury acquired in Colorado while inner tubing with my then six-year-old boy. We went over a rapid in the river, and my papa instincts had me holding on to my son!

As you can imagine, the weight of the two of us rapidly took us under, and I hit my right hip on a rock at the bottom of the river. Ten years of intensive therapy, acupuncture, physical therapy, massage, injection therapy, prolotherapy, chiropractic

adjustments, ice, stretching, yoga—you name it, I did it—to no avail. Then, with this procedure, ten years of chronic hip pain was gone in less than twenty-four hours.

You may be saying, “That’s fine for the doctor with hip pain, but we are talking about central nervous system issue here with Parkinson’s disease.” Remember my patient who asked me to go get the treatment I mentioned earlier?

In the first two weeks, he reported improved speech and memory. Delayed speech is a component that comes up for a lot of folks living with Parkinson’s; their minds are about three sentences ahead of what their mouths are saying. It is incredibly frustrating for my patients, so I was thrilled to see so much improvement in my patient. **You can see his testimonial here.**

Another exciting component of stem cell therapy involves the signaling aspect of these miraculous cells, the exosome. In the framework of regenerative medicine, we’re actually showing the body healing itself given the right information. This also happens to be a naturopathic principle—the body can heal itself. The exosome is also in the birth tissue. Exosomes are also secreted by the stem cells themselves. It is in the matrix, filled with very low MSCs, leukocytes, platelets, and serum (very interesting proteins and needed for cryopreservation), hematopoietic stem cells (HSCs), CD 34+ cells as well as membrane tissue which contains the following: scaf-

folding, defensins, cells-secreting very active growth factors, cytokines, and proteins. This tissue also includes organelles with mitochondria, exosomes, and lysosomes. In the exosomes, you have an intracellular matrix, proteins, structures, and scaffolding. As you can see, this is a very complex tissue and should be used holistically as Mother Nature intended.

Arnold Caplan, Ph.D., named these cells. He says that if he could do it over, he'd call them *medicinal signaling units*. They operate by coming in as a type of conductor to our symphony of an immune system, and they orchestrate our body's ability to heal itself. Stem cells in our own bodies are called *pericytes* (next to = peri, cytes = cells), which then get called to action when our bodies need repairing.

Have you noticed that it takes longer to heal as we age? That is the response of our own stem cells, which diminish in numbers as we age. There is also a theory that we die when we no longer have stem cells left in our bodies.¹³

We don't just stop there, though. Another time-tested therapy is acupuncture, which works on blood flow and has been shown to increase bodies' stem cells.

■ Acupuncture

Another component of our complete FAN-C treatments includes acupuncture. Procedures such as this are taken

from Chinese medicine frameworks and are influenced by the comprehensive plans we put together for our patients. They should be considered for yourself or a loved one with Parkinson's disease.

Acupuncture has been one of the best therapeutic interventions that I've seen, working for the most amount of people. This system has been on the planet for three to five thousand years. It often gets overlooked in the Western brain and mindset.

Acupuncture, or why acupuncture works, is not well understood. Additionally, the mechanism of action (how to do it) is also misunderstood. Science will someday catch up. A compelling recent development is the finding of microtubules in the body, which may represent the ever-elusive meridians or lines of acupuncture points on the body.¹⁴

The way that I describe acupuncture is really about blood flow. You've got the healing properties of the body that travel in the blood. You've got oxygen, vitamins, and minerals that go into the cell. You've got carbon dioxide and waste products that come out of the cell.

All of your hormones travel in the blood. All of your neurotransmitters travel in the blood. All of your immune system travels in the blood. The healing properties of your body travel in the blood. It's like the garden hose analogy: If you

get a kink in the hose, what happens to the water if you're watering your garden? The water doesn't come out when that hose gets bent.

What we do with acupuncture is unkink your proverbial garden hose. Get your qi, or energy, flowing. This then moves your blood. We then "inform" what's in your blood. This means that by addressing your diet, prescribing supplements, herbal formulas, and hyperbaric oxygen treatment, the blood is full of the things it needs to give the body what it needs. We'll discuss this next.

After getting your pulses taken (the Chinese medicine way to assess imbalances in the body), acupuncture meridians are then balanced out, your meridians are opened up, and those channels get the circulation going. To bring blood flow into areas of the body, you either need more blood to the brain or less blood to the brain and more circulating throughout the body. That's how acupuncture works.

A recent meta-analysis concluded:

We performed a systematic review and meta-analysis to evaluate the use of acupuncture for relief of Parkinson's disease symptoms and found that acupuncture has significant positive effects. Acupuncture can be considered as a combination treatment with conven-

tional treatment for patients with Parkinson's disease. Acupuncture was effective in relieving Parkinson's disease symptoms compared with no treatment and conventional treatment alone, and acupuncture plus conventional treatment had a more significant effect than conventional treatment alone.¹⁵

Acupuncture is quite remarkable and should be part of everyone's treatment program.

Now that we've talked about informing what's in the blood and ensuring blood flow with acupuncture, let's focus on a hidden gem for patients with Parkinson's: hyperbaric oxygen.

■ Hyperbaric Oxygen Therapies

"Doc, my shoes are two sizes too big!" This is what I heard from an early participant in our program upon getting out of the tank. The hyperbaric oxygen tank, that is.

Hyperbaric oxygen is a backbone of what I put into our FAN-C program, and it's a treatment you should definitely consider as a preventative and treatment. Hyperbaric oxygen is delivered in a chamber that you get into, and it hyper-oxygenates the body. You go into 1.4 atmospheres of pressure, which is about the equivalent pressure to if you were nine feet under the water.

There's no water on you, but that's the equivalent pressure on the body that actually hyper-oxygenates the plasma and the body. That plasma goes right to the brain. Oxygen is a big part of how the body heals itself. The reason patients sometimes feel their shoes are too big after using the hyperbaric chamber is due to the anti-inflammatory effects of the oxygen on the body!

Hyperbarics are well known in the diving industry. When a person comes up from deep dives too quickly, there is too much nitrogen on the red blood cells (RBC), which creates "the bends." The diver gets bent over in a cramp since oxygen can't get to the cells by riding on the RBCs (because nitrogen is holding on hard). These divers are immediately put into hyperbaric tanks and pressurized to literally push the nitrogen off the RBC and replace it with oxygen, effectively reversing this critical condition for the divers.

This therapeutic treatment emerged thirty years ago, and it involved higher pressures in metal chambers. Research is coming out now regarding lower atmospheres of pressure, which is much safer to implement, and the use of soft-sided chambers.

In essence, hyperbarics (HBOT) will hyper-oxygenate your body, adding oxygen in the plasma, which is able to go through the blood-brain barrier. We're seeing it involved in research in traumatic brain injury and stroke, two conditions

that need more oxygen to the brain. In Europe for instance, if you were to have a stroke, the standard of care is forty sessions (hours) in a hyperbaric chamber.

In the United States, Daniel Amen, MD, is doing research on SPECT analysis of the brain. SPECT analysis is like an MRI, but it's a color picture of our brains. His research shows the positive effects of the low-atmosphere chambers on the injured brains of people with traumatic brain injuries (think NFL players, soccer players, and anyone who has ever had a head trauma).

Using the SPECT analysis, his research shows holes in the "before" images of people with brain injury. These can come from mold toxicity, traumatic brain injury, PTSD, or a variety of other injuries. Then, after hyperbaric oxygen with some IV therapy, their brains appear fully colored and whole. The brain can heal itself given the right information.

Research has shown a decrease in the progression of Parkinson's disease in as little as eleven weeks with hyperbaric oxygen therapy. Keep in mind that in these studies, the researchers were doing three hours a day three times a week, for a weekly total of nine hours. Over the course of the study, 198 hours obtained a decrease in progression. You can safely do an hour and a half at a time with a three-hour break in between sessions to really get up to these therapeutic hours

of hyperbaric oxygen therapy. In other words, your therapy could go faster.

To make therapy even more effective, we “stack” light therapies inside of the hyperbaric oxygen chamber. While our patients are in the HBOT, we use pulsed electromagnetic fields (PEMF) and low-level light therapy (LLLT), effectively stacking these therapies together.

■ Light Therapies

We are beings of light. The bioluminescence of cells has been captured by scientists around the globe. New research on pulsed electromagnetic frequency (PEMF) and low-level laser therapy (LLLT) show much promise in enhancing the healing of the brain.

Researchers have noted that the localized light application to the cortical region of the brain produced a very significant increase in ATP (which is the fuel source for every cell in your body). Studies also showed that in these regions of the brain, there was an increase in the mitochondrial membrane potential (the energy factories of every cell), as well as a reduction in intracellular calcium concentrations (which brain tissue considers excitotoxic and harmful to the brain). These treatments also appear to reduce oxidative stress and nitric oxide levels. Such changes in the brain are associated with protecting the brain cells from excitotoxicity (which is

normally seen following brain injuries, in neurodegenerative disorders, and even in spinal cord injuries).

This activity of the lights helps increase the healing activity of the body. We have seen back, neck, elbow, and foot injuries heal in half the expected time with the use of the PEMF and LLLT pads.

We use these light pads in conjunction with the hyperbaric treatments at Nature Cures Clinic. This counteracts some of the negative effects of life with neurodegeneration from damaging wavelengths.

These damaging wavelengths can come from cell phones, routers, or microwaves. We may see more neurodegeneration as we expand into 5G networks, as there is some concern over the effects of the wavelengths damaging the mitochondria (energy factories) in our cells.¹⁶

I suggest looking at your home environment and assessing where the outlets are located in your bedroom. You do not want these to be near your head. Also, any routers, Wi-Fi, or wireless phones should not be near your headspace during sleep. Although we can't see these wavelengths, they are affecting our bodies. The science is not entirely in on this, though in light (pun intended) of the pathology going on, it seems wise to err on the side of caution.

With oxygen therapy using hyperbarics coupled with light therapies (PEMF and LLLT), the synergistic effects are noticeable. There is another therapy we employ that allows us to get therapeutic levels of nutrients directly into the bloodstream and bypass the first-pass effect (where nutrients get used up through the digestive tract and liver). It is called intravenous (IV) therapy.

■ Intravenous Therapy (IV Therapy)

We have found over the last twenty years of helping people with this diagnosis that IV therapy is one of the quickest ways of getting nutrients into the body at concentrations sufficient enough to create change. We have already discussed ruling out heavy metal toxicity in previous sections of the book.

Let us now discuss four approaches that may be considered: glutathione, liponic acid, nicotinamide adenine dinucleotide (NAD), and dimethyl sulfoxide (DMSO).

Glutathione (GSH) is known as the “mother of all antioxidants.” It is made up of three amino acids: L-cysteine, L-glutamic acid, and glycine. Researchers have shown that cellular levels of GSH are great predictors of life expectancy and are considerably lower in those with Parkinson’s disease. What is unique about GSH is that it is inside all of our cells, where it protects cellular function from the harms of free radicals.

Whenever I talk of free radicals, I envision the May Day parade of years past in my town of Portland, Oregon. During the parade, some of the youth took to the streets, and some “free radicals” threw bricks through store windows on the streets. That, in essence, is what free radicals do in the body—they throw proverbial bricks at your cells and do “damage” to cellular processes.

There have been some very dramatic responses to GSH, with patients increasing their stability and elongating their stride (from the stutter-step often seen with the progression of Parkinson’s).

Our second approach, **Poly-MVA**, is a lipolic acid polymer that has been shown to be neuroprotective, which means it protects the mitochondria of the cells. This complex has been shown to be a potent free radical scavenger (you see a developing theme here). The reason I began this book with a discussion of the often inadequate work-ups of patients diagnosed with Parkinson’s disease is that there are multiple pathways to aid the body in healing itself, and many of them are underused or never used at all.

Poly-MVA has been shown to increase GSH and protect against the age-related decline of mitochondrial function. It has been shown to decrease neuro-inflammatory markers and function. Though not a stand-alone therapy, it should definitely be considered, and a therapeutic trial may be indicated.

Our third consideration, **nicotinamide adenine dinucleotide (NAD)**, is an abundant cofactor that participates in many aspects of cellular metabolism. Some believe that it may be used as the fountain of youth. It has been used since the 1950s for help in alcohol and opioid detoxification. We will add it to the regime for fatigue and mitochondrial support. Again, you see the mitochondria come into play, as they are the energy factory in all of our cells. When working on helping the body heal, we must ensure there is enough energy on a cellular level to accomplish this.

Last but not least, our fourth consideration and one of the most interesting therapies I uncovered in the Sarieah's gifts category is the use of **DMSO**. It is most notable for its ability to aid in the proper folding and clearing of proteins from the brain. DMSO has been shown to suppress the effects of activation of NF-Kappa B, which controls immune and inflammatory responses.¹⁷

It acts as a chemical chaperone whose function is to help correct conformational diseases characterized by protein misfolding, which includes neurodegenerative disorders.¹⁸

DMSO has been shown to be superior to mannitol treatment in reducing intracranial pressure, mean arterial pressure, cerebral blood flow, and oxygen metabolism.¹⁹ Mannitol has been the standard of care in helping heal brain traumas. I

have presented at medical conferences suggesting we should instead use DMSO for this treatment, as it is far superior given the research.

It's safety and history of use, coupled with its known ability to reach the brain and chaperone capabilities, make it an exciting addition to any Parkinson's disease treatment protocol. In our earlier chapter on supplements and nutrients, I put DMSO into a nasal spray with HCOL. Patients who use this are reporting improved speech.

I list these IV ingredients not for you to become an expert, but rather to let you know there are some very compelling nutrients that can be delivered in adequate levels to affect change in the body.

For a comprehensive program to be developed, one has to have options. I hope I've provided you some options going forward and perhaps provided some hope along the way.

Last but not least, I'd like to discuss mindset in this section. With no known cure, Parkinson's can get mighty overwhelming and depressing really quickly. I have been particularly interested in the untapped power of our minds in healing. I want to remind you that our minds can be a powerful ally in our healing as well as in our outlook and ability to live fully and in the present moment.

■ Mindset

Oftentimes with a diagnosis such as Parkinson's disease (a disease with no known cure), things can be very disheartening, to say the least. A lot of emotions may arise—anger, confusion, hopelessness, feeling out of control, and depression. These are all-natural emotions to have in this process.

I started out the book with some mindset strategies, but I wanted to mention them here again. Your brain is a goal-achieving machine. You have to watch what you put into it and what your self-talk is telling you.

As a physician, I leave room for the possibilities—not well-wishing, not overpromising—just remaining open to total resolution. I'll never promise you that we can “definitely” reverse or halt your symptoms. Though what I can share is that we have seen that happen for our patients.

You always have a choice to remain in a state of suffering, or you can use your experiences as grist for the mill. In other words, you can learn from them. Perhaps this experience is a wake-up call to get on with what you came here to do, to spend time with those you love, or to get into a new hobby or passion pursuit.

If you find yourself in a suffering state or feel stuck or depressed, seek out your medical professional. Remember that

we live in an amazing time. There are so many possibilities that may be able to help you.

There is some great research on the simple act of gratitude. Acts of kindness and feelings of gratitude flood our brains with a chemical called dopamine. Rather important in Parkinson's disease, no?

Gratitude activates the hypothalamus, which is the switch-board operator of the body, keeping us in homeostasis (or trying to keep us in homeostasis). Since gratitude activates it (and in fact, our entire limbic system), when we are thankful it becomes easier for us to fall into deep, healthy, natural sleep. This deep sleep is important to activate glymphatics, which are responsible for cleaning up the garbage in our brains (think misfolded proteins, alpha-synuclein and the like).

Numerous studies on the benefits of gratitude practices have shown that keeping a gratitude journal or writing and sending thank you notes can increase our long-term happiness by more than 10%. A simple practice called “three good things” can be helpful. Just as the name implies, you write down three good things that occurred in your day, big or small. The studies of the “three good things” activity have found that participants who tried it reported enhanced subjective well-being, better access to positive memories, and reduced stress and a greater sense of flourishing in life.^{20,21}

This one is awesome to include and a great reminder that the mind is a powerful ally in our journey. We just need some gentle reminders to use it!

■ A FAN-C Approach to Parkinson's: Tying It All Together

Whew. There are a lot of different therapies and approaches that should go into developing a FAN-C program for you. I always practice in a way that I would want my dear family members treated. This program came out of my desire to help my wife, Sarieah, with an incurable condition that is very similar to Parkinson's disease in many fashions.

My FAN-C brain regenerative program includes many of the broad pieces mentioned and explored in this book.

Once again, here it is:

- ***F stands for functional.*** We will address you as a dynamic being moving through time and space. We will use the principles of naturopathic medicine with the primary understanding that the body can heal itself given the right information and the removal of causes.
- ***A stands for assessment.*** The comprehensive inclusion of possible causes—including the environment, viruses, and protein misfolding components—is essential

to creating an individualized and comprehensive treatment program.

- ***N stands for nerve and brain health.*** Providing the blood and body with the nutrients and information it needs through diet, targeted supplementation, and intravenous treatments will help the patient improve.
- ***C stands for cells.*** Utilizing regenerative medicine and mesenchymal stem cells to their fullest capacity is also key to the best treatment.

My wish for you is that *Shake it Off* has given you some options, opened up possibilities and perhaps inspired some hope in your journey to wellville. By employing some of these therapeutics, I hope you will be able to increase your vitality and hopefully the quality of your life. And who knows, perhaps a spontaneous remission of Parkinson's disease progression.



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ABOUT THE AUTHOR



Dr. Gregory Eckel has lived in the Portland area since 1992. Dr. Eckel became increasingly aware of and concerned about the over-use of medications with children while teaching preschool. This experience inspired his entry into Naturopathic and Chinese Medicine. In 2001, he co-founded Nature Cures Clinic.

The combination of Naturopathic and Chinese Medicine (acupuncture and botanical medicine) has provided Dr. Eckel with a variety of tools to treat both acute and chronic illnesses while valuing the principles of prevention and wellness.

He has developed a deep and personal knowledge of chronic neurological conditions in the recent past. His wife, Sarieah, passed of Creutzfeldt-Jakob disease (CJD), a condition with no known cure. As she was the love of his life, and being a good husband and doctor, he set out to research—to “swing for the fences”—in order to help her. Although he did not find a remedy for Sarieah, he uncovered Sarieah’s gifts.

Dr. Eckel’s deep dive uncovered regenerative medicine and the development of a brain regenerative program. The development of a nasal spray specific to calm neuroinflammation in the brain. Procedures such as intranasal stem cell delivery to bypass the blood-brain barrier. Mind-body techniques to reverse anxiety and post-traumatic stress disorder. The list goes on, and so does the impact of Sarieah’s all too short life on the planet.

Be well. Let me know what you think. If you have any questions please reach out. I am here to serve. In addition to this book, I’ve developed an online Parkinson’s mini-summit, **which you can enroll in here: <http://www.shakeitoffbook.com/thanks>** Along with other resources, the brain health supplement guide, videos of the exercises described in the book as well.



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