

# PLAN A: LOWERING INFLAMMATION LENGTHENS LIFE

*Preventing and combatting chronic mental and physical disease*

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*On behalf of our chronic disease workgroup, please enjoy and utilize this resource that presents strategies to reduce your body's inflammatory response.*

*Our mission is to deepen our understanding of the root causes of chronic disease. You can lower the chances of developing a chronic mental or physical disease, including chronic pain. If you already have a chronic illness, the approaches will help you achieve better health. Breaking through into a life where you thrive isn't only possible, it's probable by learning and implementing effective medically proven strategies.*

*Watching and helping people take back their lives is what motivates us to keep moving forward.*

*Be Well,  
The Polyvagal Workgroup*



**DOC Journey**  
Direct your Own Care

# Plan A - Lowering Inflammation Lengthens Life

Author: David A. Hanscom, MD, orthopedic spine surgeon, Oakland, CA

Contributors: Polyvagal Work Group

David R Clawson, MD—Physical Medicine and Rehab, Seattle, WA

Stephen Porges, PhD—“Distinguished University Scientist” Indiana Univ Bloomington

Les Aria, PhD—Lead pain psychologist, Kaiser Northern CA, Sacramento, CA

Steve Overman, MD—Rheumatology, Seattle, WA

Alison Escalante, MD, FAAP—Pediatrics, Rush University, IL

Sue Carter Porges, PhD— “Distinguished University Research Scientist”, Kinsey Institute, Indiana Univ, Bloomington, IN

Matt Lederman, MD—Internal Medicine, Co-founder of Kinectin.com

Steve Lederman, MD—Cardiology

Ray Bunnage—Database and Visualization Developer, U of WA Medicine, Seattle, WA

Hara Marano—Senior editor-at-large, Psychology Today, New York, NY

James Taylor, MD—Anesthesiologist, Pain physician, Pinehurst, NC

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## OVERVIEW

The main issue with COVID-19 is not the rate of infection, but rather that it has such a high potential to trigger a fatal, inflammatory response. This is especially true for people who are already experiencing chronic stress (inflammation), which manifests in many different physical and mental disease states. Interestingly, the approach that allows you to successfully combat chronic diseases, including chronic pain, is the same one that increases your chances of survival against COVID-19. Fortunately, learning the skills to thrive (and survive) are not hard to learn and implement.

### CHRONIC STRESS IS INFLAMMATORY AND DEADLY

Most of us are geared towards getting through the day, dealing with problem after problem. This mindset stretches into weeks, months, and years. Eventually, life isn't as enjoyable as it used to be. When you feel trapped, your body's neurochemistry will spiral out of control. "Stress management" is not a useful construct in that it is the stress you cannot control that is the most damaging. In fact, it is well documented that chronic stress can kill you. Here is a short list of the diseases connected with chronic adversity.

- Autoimmune disorders
- Cardiovascular disease
- Cancer
- Anxiety/depression/suicide/bipolar disorder/obsessive compulsive disorder
- Shorter life span
- Hypertension
- Obesity
- Eating disorders
- Adult-onset diabetes
- Peripheral vascular disease

There is a famous ongoing Harvard study that is one of the world's longest studies of adult life. It began in 1938 by looking at the health of 268 sophomores and observing what correlates with a long, happy life. They expanded the study to the men's offspring and included about 1300 people. The clear message continues to be that the best predictor of a long and happy life is not social class, IQ, or genetics – it's having and developing close relationships. One of the later research directors also presented six factors that predicted healthy aging (Vaillant). All lower inflammation and social connection stimulate oxytocin, which is anti-inflammatory.

- Physical activity
- Smoking abstinence
- Absence of alcohol abuse
- Mature stress-coping mechanisms

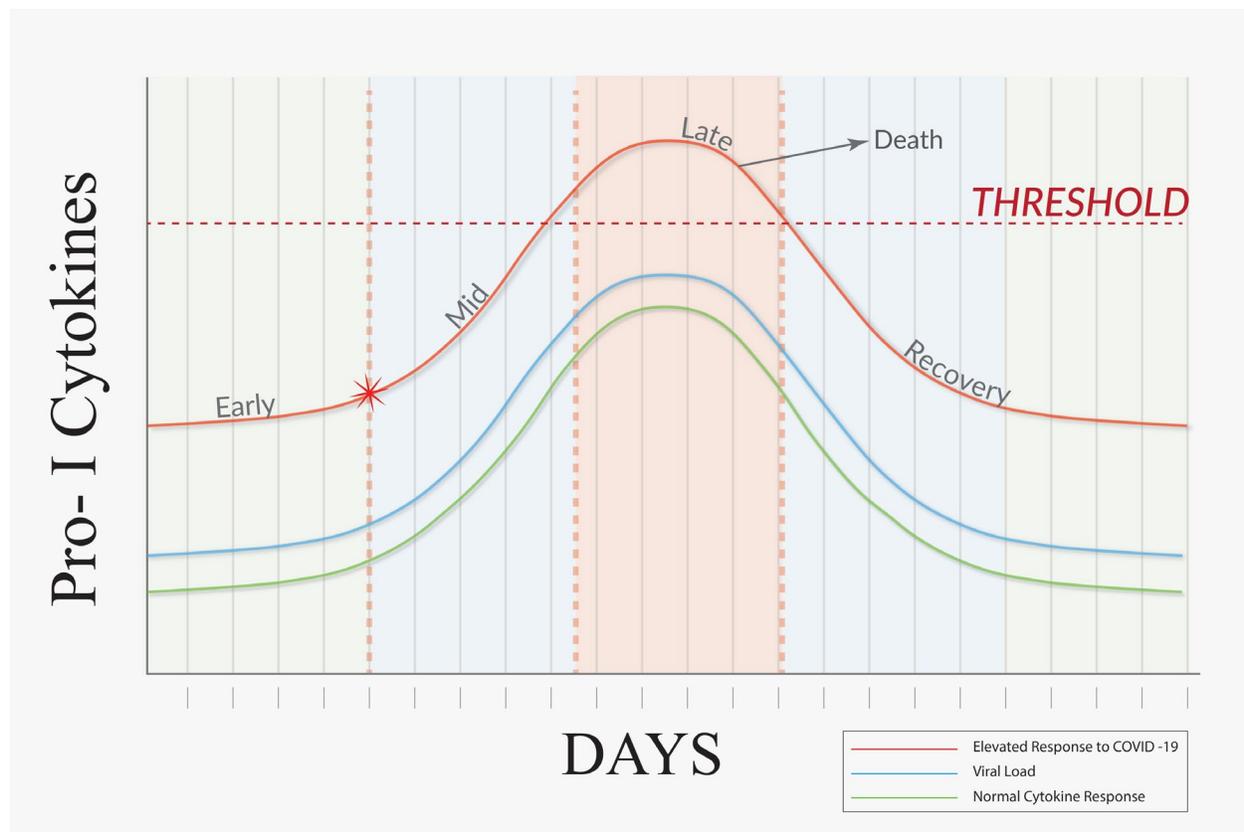
- Healthy weight
- Stable marriage

The bottom line is that learning to process stress and thrive will improve both your survival and quality of life. This skill is critically important in dealing with the overwhelming assault on your body that can occur with a COVID-19 infection.

This paper is especially intended for those of us who came from difficult family backgrounds and were not taught or modeled effective life skills or coping mechanisms. Fortunately, this is a solvable problem with the only requirement being a willingness to learn.

### DEALING WITH COVID – AND LIFE

There are several ways of stopping a deadly pandemic. One is through developing a herd immunity, by exposure to the virus and through inoculation with a vaccine. Another is to prevent people from experiencing a heightened inflammatory response. When pro-inflammatory (Pro-I) cytokines are triggered above a certain level, the body will start attacking itself, which results in tissue destruction and organ systems shutting down. The graph below illustrates the issue:



Graph by D. R. Clawson, MD

## **CYTOKINES**

Cytokines are small proteins that serve as messengers transmitting higher-level signals and coordinating activities at the cellular level. They are central to modulating the immune system and inflammatory response. There are two kinds of cytokines: pro-inflammatory (Pro-I) and anti-inflammatory (Anti-I). While Pro-I cytokines protect us by warding off acute perils, Anti-I cytokines keep us safe by allowing us to regenerate and also prepare us for battle with environmental enemies.

Both Pro-I and Anti-I cytokines are necessary for survival. However, sustained elevations of Pro-I cytokines can destroy parts of the body and give rise to chronic mental and physical disease. In acute situations, levels of Pro-I may spiral out of control and cause failure of multiple organs. This is the cause of ARDS (Adult Respiratory Distress Syndrome), the most common cause of death from coronavirus, which impedes the lungs from providing oxygen to the blood.

Pro-I's are elevated in almost every chronic disease state. In one example, researchers discovered that even some types of depression are inflammatory responses of the central nervous system (Simmon). In fact, any type of threat will elevate Pro-I's. That is the desired, normal response and is usually successful in protecting you from harm. However, the COVID-19 virus can induce that same defensive reaction to spin out of control.

One term used to describe the excessive elevation of the inflammatory cytokines is a "cytokine storm." It is unclear whether there really is a "storm" or whether the normal rise of already elevated cytokines pushes people over a critical threshold. The goal of treatment, aside from defeating the virus, is to prevent the levels of pro-inflammatory cytokines from crossing that fatal point of no return.

There are two ways to accomplish this goal. One is to arrest the production of Pro-I's before the level of inflammation reaches a crisis point. In the previous graph, the horizontal dotted line represents the level of inflammation where cytokines cause severe damage to body organs. Once that threshold is reached, mortality rate is high. The asterisk (\*) represents the point where interventions to halt this "cytokine storm" are being explored. There are definite possibilities.

The other approach is to ensure that patients begin with a lower cytokine load so that should the Pro-I's rise when faced with COVID-19, the level of elevation does not cross the critical threshold. There are several strategies that we can easily implement in our lives in order to achieve that goal.

However, before we pursue those strategies, it is first important to understand the nature of threat.

## **THREAT**

Any mental or physical threat, perceived or real, is going to be met with a defensive response from your body. Much of this is mediated through the vagus nerve, at the core of the autonomic nervous system. The response is the well-known flight, fight, freeze, or faint reaction (Porges). We are all familiar with the physical manifestations of increased heart rate, sweating, muscle tension, elevated blood pressure, etc. But what you may not know is that the immune system also gets fired up and mobilizes against many types of invasive cells such as bacteria, viruses, and cancer cells. The result is inflammation where the "warrior cells" exit the blood stream through widened openings in the vessels to destroy the invaders (antigens). Cytokines are small proteins that are the "switches" activating and deactivating this response.

Although threats come in many forms, they always activate pro-inflammatory (Pro-I) cytokines. Besides obvious physical threats, mental threats are even more inflammatory and harder to manage because we can't physically escape them. They create a sustained inflammatory response that forms the basis for chronic mental and physical disease. Examples of mental threats are memories, negative thoughts, suppressions, repressions, insecurities (social, financial, health, etc.), cognitive distortions, loss of life perspective and purpose, and social isolation (Coughlin).

Discovery and acknowledgement of all our threats – whether real, imagined, anticipated, or repressed – is the first step towards addressing them. The second is choosing an adaptive rather than a maladaptive escape to safety, whether the threat be physical or spiritual. We are better at physically escaping to safety than we are at dealing with spiritual crises (Fredheim). If you don't feel safe and peaceful, you are carrying elevated levels of inflammatory cytokines. If you encounter the additional threat of a COVID-19 infection, you will have less chance of surviving, since you'll already be closer to a critical threshold.

There are several distinct ways to reduce your inflammatory cytokines. First, I am going to summarize them, and then I will discuss each in greater detail. **We understand that due to current circumstances, many of the suggestions will be impossible to follow. However, engaging in the ones that are possible and understanding the overall concepts will contribute to your well-being.**

## LOWERING YOUR CYTOKINES

Below, I have outlined **twelve categories** of ways to reduce your Pro-inflammatory cytokines. First, I am going to summarize them, and then I will discuss each in greater detail. Each method will lower your pro-inflammatory response (Pro-I's) and thereby improve your chances of surviving the COVID-19 infection, as well as lowering your risk of other serious chronic diseases.

1. **Understand and treat anxiety.** Anxiety is a simply a word that describes the sensation you feel when your body senses danger. It is generated by an increase in stress hormones, activation of the sympathetic nervous system, elevated Pro-I's, increased metabolism, and inflammatory reaction. It is *not* primarily a "psychological issue," although mental threats are more likely to over-stimulate the nervous system than physical ones. It has been well-documented for decades that chronic stress causes disease and shortens your life span. Also note that the stress that is the most damaging is that which you have little or no control over. The key is how you react and process it. Effective means to lower anxiety will be discussed below.
2. **Employ expressive writing.** You can't control your thoughts and emotions but writing them down and then immediately tearing up the paper separates you from them. The practice has a remarkable well-documented impact on both mental and physical symptoms.
3. **Calming techniques.**
  - a. Decrease the stimulation of your nervous system.
    - i. Limit watching the news.
    - ii. Avoid watching violent and over-stimulating shows, especially at night. In fact, an Australian study showed that higher TV viewing was associated with an increase of inflammatory-related mortality, regardless of the program content (Grace).

- iii. Stop negative talk, such as complaining, gossiping, discussing your medical problems or care, giving unasked-for advice, and criticism.
  - b. Practice taking deep, regular breaths.
  - c. Employ active meditation strategies.
- 4. **Get adequate sleep.** Consistently getting seven hours of restful sleep a night lowers your stress response and inflammation.
- 5. **Address anger/Practice forgiveness.** Anger creates a powerful neurochemical reaction with marked elevations of Pro-I's and inflammation. There is no shortcut to overcoming anger, but it needs to be dealt with quickly and consistently. You also must address your deepest wounds. Do you want the person or situation you hate to be what ultimately kills you?
- 6. **Directly address family issues .** All families trigger each other, but there are many effective ways to create a structure that will minimize conflict.
  - a. Living in chaos is not only unpleasant, it also negatively impacts your health.
  - b. Your family is generally the source of your most powerful triggers.
  - c. Do you like your family? Be nice! Any member of your family who feels trapped, including you, is at higher risk for an illness or chronic disease.
- 7. **Examine your nutrition.**
  - a. Following an anti-inflammatory diet will make a significant difference in lowering inflammatory markers.
  - b. Even without losing weight, being aware of inflammatory foods and minimizing their intake will help.
- 8. **Maintain an exercise regimen.**
  - a. Exercise for at least 30 minutes a day.
  - b. Your exercise regimen should be both moderate and enjoyable in order to sustain it.
- 9. **Stay on top of your medical problems.**
  - a. Comply with all of your recommended medical treatments.
  - b. Stay in touch with your doctor, even about issues you consider minor.
- 10. **Play.** A curious and playful mindset is one of the most powerful ways to stimulate the production of anti-inflammatory cytokines and relaxation hormones. It is a necessary aspect of life in order for your body to regenerate. This often gets buried under life's demands and this inability to shore up your body's resources contributes to illness. It is more a mindset than physically playing and is also a learned skill.
- 11. **Giving back.** There are tremendous benefits from helping others. Human connection stimulates the production of a hormone called oxytocin. In addition to engendering a sense of well-being, it exerts a powerful anti-inflammatory effect. Additionally, your

attention is directed away from you and your problems.

12. **Regaining your life vision/Reconnecting with life.** Once you have the skills to process anxiety and anger, you will have the capacity to connect to your vision of what you'd like your life to look like, as well as having the energy to get there. Stepping into the life you want is the final answer to calming down your nervous system and lowering your body's stress reaction. It is a deliberate and ongoing practice. How are you going to live the life you desire if you don't know what that might look like?

## SECTION 1 - UNDERSTAND AND TREAT ANXIETY

In a nutshell, anxiety is the unpleasant sensation you feel when your body prepares to fend off a threat. It is not primarily a psychological problem, but rather an involuntary neurophysiological response to real or perceived danger. Anxiety is necessary because it allowed us to evolve and continue to survive. It is not subject to conscious control. So, the only way to deal with anxiety is to understand its nature and then use self-directed tools to lower your stress chemicals and inflammatory response. Without comprehending the powerful physiological nature of anxiety, it is impossible to treat, and you are at its mercy. It will disrupt your life, and often with severe consequences. Conversely, breaking free from it allows you to experience life at a level you never dreamed was possible.

### UNDERSTANDING ANXIETY

#### Avoiding threats

The central nervous system maintains the delicate balance of your body's chemistry and sends signals to different organs and glands when it perceives that you are in danger. During those times, your body secretes hormones, such as adrenaline, histamines, and cortisol, and releases pro-inflammatory cytokines (Pro-I's). The result is an increased capacity to flee from danger, modulated by the autonomic nervous system, which also induces responses such as increased heart rate, rapid breathing, dilation of certain blood vessels, and constriction of others.

All these functions give you the ability to leap into action, but what *compels* you to do so? It is that feeling of dread that we call anxiety. The sensation is so uncomfortable that you are forced to act. Once the threat is gone and the body chemistry is back in balance (homeostasis), you can go on with your life. All living creatures have a version of this reaction, but humans have language and call it anxiety. There are also many subcategories of this word that describe the various levels of it.

Anxiety is merely the sensation generated by body's response to a threat. It is a description—not a diagnosis, disease, or disorder.

#### Seeking rewards

Conversely, survival also depends on engaging in behaviors that allow you to flourish and procreate. It is enjoyable to eat, quench your thirst, inhale a breath of fresh air, take a nap, be in nature, and spend time with close friends and family. When you are lying in the sun or holding your newborn baby, your body is full of reward chemicals such as oxytocin (love drug, bonding), dopamine (rewards), serotonin (mood elevator) and GABA chemicals (anti-anxiety). Your heart rate is slower, and your muscles are loose

- what a great chemical bath! There are also numerous anti-inflammatory cytokines (Anti-I's). Many words encapsulate this scenario, but the one I prefer is "relaxed." Relaxation is the antithesis of anxiety. The cumulative sensation is security and safety and is also just a description, not a diagnosis.

Shifts in your body's chemical balance occur by the millisecond, and chronic illness and disease occurs when sustained levels of stress hormones and Pro-I's disrupt the balance. This assertion has been supported by the data for decades (Cohen, Rahe).

#### The curse of consciousness

The universal problem of being human is what I call the "curse of consciousness." Recent neuroscience research has shown that threats generated by unpleasant thoughts or concepts are processed in a similar area of the brain and with the same chemical response as physical threats (Eisenberger). The

“curse” is that none of us can escape our thoughts, so our bodies are subjected to an endless neurochemical assault. Repressed thoughts and emotions are even more problematic. This translates into more than thirty physical symptoms (Schubiner), many disease states, including autoimmune disorders (Song), and early death. However, the most intolerable symptom is relentless anxiety.

Is “relaxed” a diagnosis? No. Is “anxious” a diagnosis? No! Anxiety is the essence of life. It allowed us to evolve and now ensures our survival.

### **Treat it—now**

Treatment can be considered from two perspectives.

- Provide symptomatic relief.
- Learn tools to lower your body’s response to threat.

### **SYMPTOM RELIEF**

It is important when managing any chronic illness to provide relief from uncomfortable symptoms in order to absorb new concepts, learn tools, and let your brain change. For example, when I was the primary physician for my spine patients suffering from chronic pain, I would maintain the same dosage of all of their medications. Immediately decreasing opioids would increase their anxiety and pain. I wanted to minimize symptoms while they healed. I rarely had a problem weaning patients off high-dose narcotics because as their pain diminished, they no longer wanted to be on medications. In retrospect, I was addressing their anxiety in several ways:

- I got to know my patients well enough that they felt safe.
- We always addressed sleep issues first.
- I would prescribe anti-anxiety medications such as Xanax for a few months. It was helpful in calming them down and their pain would drop. Currently, cannabinoids may be a better choice.
- They stayed on the same narcotic dose and controlled the rate at which they weaned themselves off the drug. Any breaches required a face-to-face visit. Feeling (and being) in control reduced their anxiety.
- As their pain decreased, they would frequently come off all medications. Time frames varied considerably. Only later would I make the connection that their anxiety was their pain.

Obtaining symptomatic relief from anxiety is helpful in allowing you to engage in the other healing practices to lower your threat response. Ask your doctor for help. Some suggestions include:

- Benzodiazepams in a low to medium dose, understanding that it is only temporary.
  - These have fallen out of favor in light of the opioid epidemic. Both of them cause respiratory depression and many overdoses are caused by the combination of the two.
- Cannabinoids (CBD)
  - CBD helps with both sleep and anxiety
  - Also has an anti-inflammatory effect (Papagianni)
  - Safer to use than benzodiazepams
- Antidepressants can be effective, but they have a slower onset and less predictable response

- Neurontin/Lyrica
  - Anti-seizure drugs that are membrane-stabilizing
  - Can be effective with anxiety
  - Only use with close supervision from a physician
- Applying focal deep pressure. Deep pressure sends a message of safety to the nervous system and turns down the threat response. Try squeezing the fleshy part of your hand or pressing on your thighs with your palms. For more sustained comfort, use a weighted blanket or wear a therapeutic “hug” vest. Even doing push-ups or planks sends a deep pressure message that helps calm your system, as it reminds you that you are strong.

## **LOWERING YOUR RESPONSE TO THREAT**

If anxiety is the feeling generated by stress hormones and Pro-I’s, **the only way** to decrease your anxiety level is to reduce your levels of stress hormones and Pro-I’s themselves. But how can you reduce your anxiety if you can’t consciously control it?

### **Three aspects of lowering your stress response**

Regarding anxiety, the problem is not so much the threat as it is your neurochemical reaction to it. The first step is to separate your “identity” from this survival reaction. Then, there are two categories of approaches to optimize your body’s chemical profile. One is directly through tools such as mindfulness, visualization, deliberate relaxation strategies, better sleep, meditation, and exercise. The other approach involves stimulating neuroplastic changes in your nervous system.

### **The first step: Detachment/separate your identity from it**

Anxiety is a characteristic that you possess, but not who you are. The survival response is powerful, amoral, and destructive with one task – to keep you are alive. Who you are is your conscious brain, which has the smallest fraction of processing capacity compared to the unconscious brain.

While you can’t avoid anxiety, you can separate from it. For example, as you begin to feel anxious, you might visualize a large thermometer on a wall and imagine that the gauge represents your levels of stress hormones and Pro-I’s. As you watch the “temperature” rise with your level of anxiety, learn to use the phrase, “elevated threat response,” rather than “anxiety.” Remind yourself that this reaction to a real or perceived threat doesn’t define you. Permanently delete the word “anxiety” from your vocabulary.

### **The second step: Directly dampen the stress response and seek safety**

The following are strategies to deal with day-to-day stress. Find ones you enjoy and can commit to. The only mandatory one is expressive writing.

- Expressive writing— the foundation and starting point (discussed below)
- Mindfulness
- Active meditation—focusing your attention on a bodily sensation for a few seconds
- Meditation practice

- Visualization
- Martial arts
- Exercise
- Practice gratitude – consider keeping a journal or sharing with a friend
- Listening—more productive than re-hashing your own views

You might be asking yourself, “I’ve already heard about all of these, so what’s new?” The answer is, “Maybe nothing,” but it is important to consistently incorporate some of these tools into your life if you’re not doing so already.

### **The third step: Stimulate neuroplastic changes in your brain**

Changing your brain (neuroplasticity) to respond differently to threat is another important approach to reducing anxiety. Instead of constantly generating a reaction to threat via an automatic survival mechanism, you can learn how to create distance between the stimulus and the response. Once you create this space, you can substitute a more functional and appropriate response.

The steps to accomplishing this shift are 1) awareness, 2) separation, and 3) re-programming. “Positive thinking” doesn’t work because it suppresses awareness. However, positive *substitution* is key. One metaphor is that of learning a new language. If you want to learn a new language, you can’t accomplish it merely by refraining from speaking English. Your brain will not develop new circuits by trying to alter old ones. In fact, the attention you pay to “fixing” yourself will only reinforce the existing circuits—your native language.

The first two steps of awareness and separation are necessary to stimulate neuroplastic changes in your brain. You cannot redirect until you know where you are at. Then you do need some “space” to accomplish it. Examples of ways to accomplish these two steps are expressive writing, forgiveness, and meditation. This will be discussed later. Some ways to “reprogram” your brain include:

- Reconnect with the best part of yourself
- Re-engage with favorite arts, hobbies, music, dance, sports, etc.
- Spend quality time with family and friends (53% of Americans are socially isolated [Cigna]).
  - a. If you cannot physically see each other, research has shown that FaceTime/video calls with direct eye contact create the same physical responses we get in person (Hietanen).
- Re-learn how to play
- Resolve never to discuss your chronic pain, complain, criticize others, or gossip. Your brain will develop wherever you place your attention.
- Somatic work—associating thoughts with physical sensations
- Create a detailed vision of how you want your life to look
- Get organized, in order to execute your vision
- Give back—there are endless possibilities

Again, you might wonder, “How can these types of interventions make a difference?” It has been demonstrated that the brains of patients suffering from chronic pain physically shrink (inflammation destroys neurons), but when pain is successfully treated, the brain re-expands (Seminowicz). Participating in these activities stimulates creativity and growth.

## SECTION 2 - EMPLOY EXPRESSIVE WRITING

The more neuroscience research advances, the more emotions such as pain, anxiety, and anger are viewed merely as progressions of neurological circuits and physiological responses. Once embedded, these patterns cannot be consciously controlled, changed, or removed (Wegner). However, you *can* detach or separate from them and form “detours,” creating new, more functional circuits. In order to begin this process, you need to create distance between your thoughts and your embedded, automatic reactions.

### WRITING BEGINS YOUR PATH TO HEALING

Expressive writing is an effective tool to help you create distance from your thoughts. Its ability to nurture a keen awareness of your thoughts, whether positive or negative, facilitates detaching from them. The effectiveness of this practice has been demonstrated in over a thousand research studies (Pennebaker). While we can't be sure exactly why expressive writing works so well in reducing anxiety, here are a few theories:

- Writing down your thoughts creates an association with your senses, particularly vision and touch. Associating thoughts with physical sensations forms new neurological connections.
- Writing down thoughts distances you from them.
- As your brain associates that distance with sight and touch, it establishes a physical basis for detachment from your thoughts.

### THE STARTING POINT: FREE FLOW OF THOUGHTS

Expressive writing is easy to do, but it requires a commitment to yourself and to your health. The process looks like this:

- Write down specific thoughts. They do not have to make sense or even be legible. They can be positive, negative, rational, irrational—anything.
- Do this once or twice a day for 10-20 minutes per session. Even a few minutes will make a difference.
- Resist the temptation to analyze your thoughts. The more attention you give them, the more you reinforce them. All the “issues” are just thoughts, and it is counterproductive to focus on them – that would only reinforce those circuits.
- Immediately destroy the pages. Tear them up into tiny pieces and discard them where no one can read them. This step is critical if you are to write with complete freedom.
- Ordinary journaling or retaining these writings is counterproductive. One of my pain colleagues made a succinct observation that patients who held on to their writing held on to their pain. This is just an exercise, not to be confused with other forms of written expression.

Write in this free-flow format for a couple of weeks.

### THE NEXT STEP: ENHANCE WITH CBT (COGNITIVE BEHAVIORAL THERAPY)

After you have become comfortable with the free-writing exercise, try the “three-column technique,” outlined in Dr. David Burns’ book, *Feeling Good* (Burns). It is an excellent format in which to apply the principles of cognitive behavioral therapy (CBT). He outlines ten “errors in thinking” that cover a range

of cognitive distortions. He uses these concepts to fortify expressive writing with cognitive behavioral therapy. Some of the categories he lists are:

- “Should” statements
- All or nothing thinking
- Overgeneralization
- Mental filter
  - Ignoring the positive
  - Dwelling on the negative
- Discounting the positives
- Jumping to conclusions
  - Mind reading
  - Fortune telling
- Magnification or minimization
- Labeling
- Emotional reasoning
- Personalization or blame

### **THREE-COLUMN TECHNIQUE**

Before you begin to write, divide your page into three columns. In the first column, write down your “Automatic Negative Thoughts (ANT).” For example, say your son just flunked a test. Your first response might be, “He is lazy and stupid.” You would record that thought in the first column. This step increases your *awareness* of your disruptive thought, a key component of stimulating neuroplasticity.

In the second column, write down the “error in thinking” that the thought represents. As you categorize the thought and understand the effect it has on your peace of mind, you separate yourself from it. In our example, you would note that your thought represents the error in thinking called “labeling.”

In the third column, write down a more rational version of the thought. The more specific you are, the better. This is precisely how you create new circuits and rewire your brain. Concerning your son in this situation, you might write, “My son just flunked a test. I wonder why - is he being bullied at school? Could he be depressed? I am going to try to find out what is going on. He isn’t lazy. He is my son and I love him.”

When you are finished, immediately destroy your work.

By writing down your thoughts in this manner, and coming up with a more rational response, you are short-circuiting an automatic reaction. Instead of reacting to your son’s grades with anger, you may be in a more receptive and open state of mind.

### **BENEFITS OF EXPRESSIVE WRITING**

People who practice expressive writing usually experience a shift in anxiety and frustration within a short period of time. Using the three-column technique provides even more focus and structure. However, if the writing feels overwhelming to you, don’t do it. If you are in therapy, let your doctor know. It is important to coordinate these efforts with your therapist. He or she may not want you to do the writing.

Keep in mind that, although the writing is only one step in the healing journey, it is a necessary one. The benefits, which have been universally documented, are striking for such a simple exercise. Some of them include improved wound healing, decreased asthma symptoms, better memory and school performance (Baikie), lower viral load (Petrei), improved autoimmune symptoms, decreased depression, and decline or resolution of obsessive thought patterns (Wegner).

This is just a small sampling of the benefits. Please take a few minutes each day to practice expressive writing to begin calming your body's stress responses.

## SECTION 3 – CALMING TECHNIQUES

### DECREASE STIMULATION OF YOUR NERVOUS SYSTEM

A sensitized nervous system creates anxiety, so the approaches described in the anxiety section are the first step. However, it is important to be mindful of activities you engage in that also fire up your brain. It is not a matter of right or wrong. The point is to observe the effects on your nervous system. Consider what you feel happening to your body when you:

- Play intense video games or watch violent movies
- Argue with family members
- Watch news that upsets you

Some suggestions to keep calm are:

- No discussing your pain or medical care with anyone except your health care providers.
- Limiting the time that you spend watching news and other over-stimulating programs.
  - It is normal for your nervous system to scan the environment for danger.
- Choose less intense video games.
- No complaining about anything, including the pandemic.
- No criticizing anyone. You are simply projecting your view of yourself onto them.
- No offering advice that is not requested.
- No gossip.

As logical as these suggestions might seem, they are difficult to implement. It is because these behavioral patterns are deeply ingrained. One research paper showed that keeping a gratitude journal decreases the need for gossip and negative talk and you are able to view the world in a better light (Locklear).

Work on increasing your awareness of these behaviors. We all engage in these negative habits of communication from time to time, and it takes a deliberate effort to change a behavioral pattern. In short, be kind, regardless of the circumstances.

### BREATH WORK

There is a lot of research that has been done on the effectiveness of meditation. It is challenging to measure as there are so many schools of thinking that espouse different methods. However, one common factor was looked at in an extensive literature review (Zaccaro), which was slow breathing. A respiratory rate of > 6 breaths per minute (bpm) and < 10 bpm was consistently correlated with stimulation of the parasympathetic nervous system, which decreases inflammatory cytokines. It did not matter whether you paid attention to your breath. There is some suggestion that breathing through your nose during either inhalation or exhalation could be of some benefit. Other modalities that also incorporate breathing and calming down your nervous system include biofeedback, martial arts, meditation, and medical hypnosis.

Here are five easy tips to sooth your nervous system and lower your stress reaction:

- A cold compress to the face (Mäkinen), especially after exercising or if acutely stressed.
- Meditation with deep breathing. Try using a counting method (such as 4 counts breathing in and 4 counts out; or 4 counts in, hold for 7, and release for 8); alternating nostril breathing (block one nostril while breathing in and the other nostril while breathing out); or just focus solely on your breath (Mason).
- Singing, humming, or chanting (Vickhoff)
- Socializing (Kok)
- Laughing with your “tribe” or watching comedic movies (Berk, Miller).

The bottom line is to use common sense to actively calm yourself and avoid activities that stress your nervous system. It’s surprising how much of a difference it can make.

## **MINDFULNESS/ACTIVE MEDITATION**

A basic tenet of many Eastern philosophies is that worrying about the future and thinking about the past causes internal unrest. There is anxiety around the future and many regrets and frustrations about the past. By staying only in the present moment these disruptive thoughts can be minimized. But how do you accomplish this?

We know from a 1987 paper, Paradoxical Effects of Thought Suppression, (1) by Dr. Wegner out of Harvard, that the more you try not to think about something the more you will think about it. The paper has been nicknamed, “White Bears.” The idea is that when someone says, “I want you to **not** think about white bears,” of course you immediately will do so. And in the process of trying to suppress that thought, you will only think about white bears more. When you frame this discussion in terms of neurological circuits instead of psychology this phenomenon becomes a huge problem. As you age, these kinds of disruptive thoughts will progress.

### **Substitute your sensory input**

You are not your thoughts. Skilled meditators are able to connect deeply with the environment and detach from their thoughts. Although meditation is effective in calming your nervous system, it requires much repetition. There is another quicker option called “active meditation.” It is simply placing your attention a specific sensation. Any of them will work – sound, sight, taste, touch, or smell. What you are doing is switching sensory input to your central nervous system from disruptive or repressed thoughts to more pleasant sensations.

### **Three steps from Eastern philosophy**

These are from Alan Wallace, a prominent researcher in integrating Buddhist contemplative practices with Western science.

- Relaxation
- Stabilization
- Focusing on a sensation

**Active mediation**

Sit back in your chair, let your shoulders sag and jaw relax. Take a deep breath and let it go (relaxation). Stay relaxed for 5-10 seconds (stabilization), while you listen to a sound. Then shift your attention to your feet on the floor, and back to a sound. You have now shifted your attention away from racing thoughts to the current moment through sensory awareness. Choose any sensation that your attention lands on. All of this can be done in as little as 10 seconds and becomes almost automatic with practice.

## SECTION 4 - GET ADEQUATE SLEEP

Restful sleep is paramount for both coping with stress and bolstering the immune system and cytokine load. We also know that lack of sleep induces chronic pain (Agmon). Here are some guidelines for acquiring regular, quality sleep.

### SELF-DIRECTED

- 1. Sleep hygiene**—a set of well-established basic principles to optimize sleep  
Sleep is an important stress reducer at any age, but the older you become, the more important it is to practice good sleep hygiene. The ability to get a good night's sleep drops sharply around age twenty-five and then again at age forty-five. Follow these suggested practices to improve your sleep quality:
  - Wait until you are ready to fall asleep before getting into bed. Watch TV, read, etc. in another room.
  - Avoid caffeine after noon.
  - Minimize alcohol intake in the evening. It may help you fall asleep but not stay asleep.
  - No intense exercise in the evenings.
  - Remove any clocks from the room.
  - Do something relaxing just before going to bed.
  - If you are hungry have a light snack.
  - Concentrate on relaxing each muscle group in your body from head to toe.
- 2. Stress management at bedtime**
  - Don't read your emails within an hour of bedtime. Many of them bring up situations that demand action and attention. Usually there is not much you can do at that point in time and it's better to look things over in the morning.
  - Leave smartphones and laptop devices in another room and don't bring them to bed or even into the bedroom. The light from them is stimulating; but if you must read from a device, use one that has a more calming screen.
  - Don't discuss controversial issues with your partner within a couple of hours of bedtime.
  - Read a good book, or, better yet, a boring one. My medical journals are some of my best sleep aids.
  - Avoid watching intense TV programs or movies before bedtime—or any time of the day, for that matter. You will produce adrenaline and more inflammatory cytokines.
  - Consistently include soothing activities in your day. Suggestions include listening to guided meditations, quiet music, sounds from nature, or an author reading a favorite book.
- 3. Exercise**—overall physical conditioning, as long as it is not performed too close to bedtime.
- 4. Expressive writing**—helps decrease the time it takes to fall asleep.
- 5. Cognitive Behavioral Therapy Insomnia (CBT-I)**—can be performed online or in person. It is CBT focused specifically on sleep habits and has documented to be effective.
- 6. Over-the-counter sleep aids**—It is a reasonably safe starting point but should not be used or needed long-term. Let your physician know if you are using them.

### UNDER THE GUIDANCE OF A PHYSICIAN

- 7. Prescription medications**—Many medications are effective in dealing with insomnia. I have observed that chronic pain sufferers in particular often need a kick-start with fairly strong sleep meds. But once your nervous system quiets down, you can and should discontinue them relatively

soon. I would not recommend using narcotics to get to sleep, as they can create additional problems.

8. **Diagnosing a sleep disorder**—There are over a hundred sleep disorders, but the most common one is sleep apnea. In sleep apnea your airway becomes blocked while sleeping, and you wake gasping for air. As this happens several times during the night, sleep quality is poor, and you are tired the next day. More importantly, sleep apnea has an adverse effect on your heart, so it is important that it be diagnosed and treated. Restless leg syndrome is another common sleep disorder that is treatable with the correct medications.
9. **Addressing past traumas**—At night, when there are fewer distractions to take your attention off pain and racing thoughts, past memories may flood your brain, keep you in a hyper-vigilant state, and generate nightmares. You may want to seek professional counseling to help process these issues.

Finally, take a “can do” approach to solving this issue. I saw very few patients who couldn’t consistently get a good night’s sleep within six weeks—with or without pain relief—if they committed to a deliberate, focused effort.

## SECTION 5 – ADDRESS ANGER / PRACTICE FORGIVENESS

As we saw earlier in our discussion about anxiety, *anxiety creates a need for control*, letting loose a dangerous sequence. *Anger arises when aggressive effort is needed to exert control*. When the effort is successful, the body's chemistry returns to normal. *If the situation cannot be resolved, anxiety and anger continue, with ongoing inflammation*.

In other words, feeling trapped (whether real or perceived) is deadly to the organism. People sicken and develop life-threatening diseases as the result of chronic inflammation.

When confronted with a threat, you'll produce anxiety that you may or may not be aware of, but your first impulse is to defend yourself. This is the fight response, necessary for survival. You will experience some level of upset, ranging from slight annoyance to all-out rage. Your body elevates Pro-I cytokines and stress hormones to increase your odds of success in defending yourself. Your dopamine (rewards) and testosterone levels also increase.

While anxiety reveals your vulnerability, anger covers it up. Anger precipitates actions to regain control—whether these actions are commendable or not is a different discussion. Even if regaining control is out of the question (and you can't control your thoughts), anger allows you to feel as if you are in control. What's more, anger is nearly impossible to relinquish. Nor should you—it is a normal survival reaction.

If anger actually helps you to regain control or have more power, your Pro-I cytokines will drop, and anti-inflammatory ones will increase. For example, bullies have lower than average inflammatory markers and those who are bullied have elevated ones (Copeland, Takahashi). There is a physiological reward for power, and the consequences for feeling powerless and trapped for any reason are severe. —contributed by David R Clawson, MD

Several studies have shown that the vast majority of people in chronic pain still blame the person or situation that caused their injury. Interestingly, the person they often blame the most is themselves (Carson). Research has shown that anger not only obstructs healing, but also increases pain levels (Takahashi).

Anger lives in many forms, and it is your job to identify and confront it within yourself. By being aware of your anger and understanding how powerful and potentially destructive it can be, you can learn to separate from it and avoid unleashing its destructive power. The bottom line is that you are not going to mentally or physically heal until you can confront and process anger and truly calm down.

### ADDRESS YOUR ANGER

Here are some suggestions to begin your process. Each person will have a unique approach and experience.

#### 1. Understand the impact of anger on your life

Renowned psychologist Abraham Maslow focused on normal human behavior as the basis for his theories. He developed a "hierarchy of needs," citing basics such as air, food, water, and sleep. But what he omitted was "not being in pain." When a basic need continues not to be met, anger can evolve into rage.

#### 2. Acknowledge your disguises

Disguising victimhood is a highly developed “skill” for most of us. Remaining aware of this tendency is a daily practice. How do you disguise yours?

### **3. Admit your victimhood**

There is a genealogy of anger/frustration:

- Circumstance over which you have lost control
- Laying blame
- Assuming a victim role
- Frustration and anger

Many people are not aware they are playing a victim role. We dislike both the word and its implications. But the tendency is universal, and it is important to understand your style of dealing with it. A lack of awareness can and will control you.

### **4. Choose to reject victimhood**

You simply have to make the choice to give it up. Being a victim is a powerful way to gain control, so it is no surprise that it is so difficult to let it go.

## **FORGIVE**

This step is where you have an opportunity to change your life and thrive at a level you have never known before. Remaining upset, regardless of the reason, keeps your body full of stress hormones and elevated levels of Pro-I’s with significant negative consequences. Conversely, if you cannot move on, you truly are stuck. You must especially forgive the person or situation that has treated you the worst and forged your deepest wounds. Be kind, and don’t forget to forgive yourself.

One excellent resource is Dr. Fred Luskin’s book, *Forgive for Good*. Dr. Luskin has committed his career to researching and teaching forgiveness, and his book lays out a clear path to effectively processing anger.

## SECTION 6 - ADDRESS FAMILY ISSUES

Humans have flourished due to our ability to communicate and cooperate. There is a distinct evolutionary advantage to belonging to a “tribe,” both emotionally and physically. The deeper the connection, the better. However, the stronger the bonds, the worse the emotional triggers. Intellectually, we know better. Why would you want to inflict trauma on those closest to us, whom we care about the most? Yet, the lifetime incidence of physical domestic violence is about 30% for both men and women (Breiding). Survival reactions are powerful and not subject to rational control. Understanding that these automatic behaviors are a result of “neurological trickery” is an important first step in dealing with them.

### NEUROLOGICAL TRICKS

**Thought suppression:** When you try to avoid thinking about something, you not only think about it more, but you also think about it a *lot* more (Wegner). By trying to suppress your thoughts, you actually focus on them even more.

**Mirror neurons:** Your mood will stimulate a similar part of another person’s brain, which subsequently “mirrors” your mood. For example, yawning and laughing will cause others to do the same.

**Reactive patterns:** Learned and carried with you from your family of origin, they continue to play out in the new family you establish as an adult. Your strongest triggers lie in your household.

**Anger:** Impedes awareness, which is the foundation of any relationship.

**The need to belong:** Humans are social creatures. The need to belong and connect with others is almost as strong as the need for food and water. This need explains how people can put up with negative group situations and why people stay in abusive relationships.

### ADDRESSING FAMILY PAIN

I encourage you to make a focused effort to create a haven of safety within your home. The home is a powerful healing force but can be equally strong in holding people back.

A “trigger” is a stimulus or situation that resembles a past unpleasant experience and prompts you to react. Any time you are anxious or frustrated, you have been triggered. Your family of origin patterned your choices for negotiating life and your triggers will play out in your new family, in spite of your best intentions.

Powerful triggers must be addressed if family members are to feel safe. Since reactions to triggers are automatic and unconscious, you can’t “talk through them.” Here are a few suggestions, but please pursue every resource you have available to make your home a place of peace and joy.

### THE FAMILY RULES OF ANGER

1. When you’re upset, disengage.
  - No relationship is improved by angry interactions—*ever!*
  - Stop and take a “time out.”

- Have a family meeting and ask your children and spouse/significant other what it's like to be around you when you are angry. (The answers typically aren't pleasant.)
- *All arguments must be taken outside.* Make the confines of your home a safe space. If you can't count on relaxing and regenerating at home, where can you?

2. Apologies later don't make up for damage done earlier.

3. Imagine that you are a child watching yourself returning home after you have just had an argument with your boss. Would you, as the child, be excited or full of dread?

4. How attractive is your partner when he or she is angry? Compare that to when they are smiling. How attractive do you think you look when you are upset?

5. Listen—only listen—for at least a month.

- Do not give advice to your children or partner for at least a month—preferably indefinitely.
- Advice should be given only when asked for.
- Do not criticize. You will simply be projecting your own self-judgements onto someone else.

6. Your opinion of your children's values is not helpful. They are only children. Making them feel safe should always be your primary concern.

- Find out who your children really are. They are more interesting than you think.
- Read the classic book *Parent Effectiveness Training* by Thomas Gordon. It is one of the most powerful and helpful books on parenting (Gordon).

7. Commit to being a source of inspiration and joy to your family.

It doesn't take months or years to experience the payback from these guidelines. With engagement, you will often see a significant impact within a few weeks. It doesn't require that the whole household be involved (although it helps); even *one* person committing to the guidelines can precipitate changes. Helping your family create structure around reactions and conflict creates a safe space for them—and you—to thrive.

## SECTION 7 - NUTRITIONAL CONSIDERATIONS

### ANTI-INFLAMMATORY DIET

A nutrient-dense diet centered around whole foods that include fruits, vegetables, whole grains, nuts, seeds, and plant-based sources of protein, supplemented by herbs and spices, is extremely healthy. These whole foods are high in fiber, phytonutrients, and good fats, and more than meets one's protein requirements, thus significantly improving immunity and decreasing inflammation.

On the other hand, calorie-dense diets such as the typical western diet are high in processed foods and contain significant amounts of saturated fat and salt, are low in fiber, and have few of the health-promoting nutrients found in a more plant-based diet, thereby promoting inflammation, and weakening immune function.

Regardless of your weight, an anti-inflammatory diet will contribute to lowering your levels of inflammatory cytokines. However, the issue of being overweight needs to be separately addressed, as fat cells increase your Pro-I cytokine load and contribute to adult-onset diabetes.

### INTERMITTENT FASTING

Being overweight is especially hard on your health if your body mass index (BMI) is greater than 35. BMI is a calculation based on your height and weight, and you can easily look yours up on the Internet (for example, at [cdc.gov](https://www.cdc.gov)). The ideal range is from 18.5 to 24.9. A BMI between 25 and 29.9 is considered overweight, and over 30 is considered obese. The greater your BMI, the higher your risk for chronic disease.

Intermittent fasting has been consistently associated with lowering inflammatory markers. The intervals vary. Two common approaches are fasting for two out of seven days. Another schedule is fasting for 16-18 hours daily, which means skipping one meal every day (de Cabo).

Dieting is always difficult, but many find that intermittent fasting is not as challenging as the other alternatives. Even if you only partially engage in this approach, it will help. Don't overlook this simple strategy.

### SUPPLEMENTS

Vit K2 – 1000 mcg daily

Vit C – 500 mg three times per day

Vit D – 5000 units daily – Low levels are associated with a higher COVID-19 mortality

Vitamin B's

Zinc 5 mg every 8 hours

Magnesium – 400 mg per day for adults – critical for enzyme function

For a surgeon to be discussing nutrition is ironic, since we seldom have enough time to eat, much less think about what we are eating. I do not pretend to be an expert on the topic, but I find the data on the anti-inflammatory diet consistent and compelling. The fact that it can lower your inflammatory markers has been well documented. To find reliable information that can both educate and guide you, visit the website: <https://nutritionfacts.org/topics/inflammation/>.

## SECTION 8 - PHYSICAL INTERVENTIONS

### EXERCISE—CONDITIONING

Regular exercise improves almost every aspect of life, including sleep. Activities can involve aerobics, resistance training, or both. However, per the sleep hygiene principles, intense exercise should not be performed in the evening. If you must exercise late in the day, keep it light and relaxing; otherwise, you will trigger an adrenaline response, which greatly disturbs sleep (Ueshima).

The key to incorporating exercise into your care is to select an activity you enjoy from the start. Exercise is a long-term commitment, and it is important to have fun while you do it. It's easy to look at your exercise equipment at home and feel bad that you aren't using it more than you should, but those thoughts are counter-productive to your healing. That's why I strongly encourage my patients to exercise outside their homes. If you reframe exercise as a reward comprised of leaving the house and moving your body, you're more apt to keep it up.

Social engagement is important for mental and physical health. The experience of connection promotes a feeling of safety and lowers Pro-I cytokines (Danzer). Invite a friend to join you, take a neighbor's dog for a walk, accompany a grandchild to the park, join a local sports team - these kinds of activities allow you to connect not only with your body, but also with your community.

### THE WEIGHT ROOM

Strength training is a major factor in reducing pain and improving your sense of well-being. There are several reasons why increasing strength promotes healing. First, there is the obvious benefit of having stronger muscles; a smaller percentage of your energy is spent on normal, daily activities. You are able to stay well away from the pain threshold.

Second, you have more capacity to engage in vigorous physical activities that are enjoyable and relaxing. Actively placing your attention on these neurological circuits stimulates neuroplasticity in a desirable direction. Many of these activities can be shared with other people. Social isolation is over 50% in the U.S. (Cigna) and spending quality time with others is a part of staying healthy.

Third, although it's not going to be at the level of the long-distance runner, there is some degree of endorphin response with strength training. (**Endorphins** and **enkephalins** are the body's natural pain killers.)

Finally, I feel the most important contribution that strength training adds is a reprogramming function. You are now sending a different set of signals to body parts that are normally firing pain impulses to the brain. As you are voluntarily stressing a given muscle group, you have control as to the intensity of these signals. Somehow, the combination of control and different proactive output has a significant impact on pain and function.

Muscle mass decreases 3-8% per decade after age 30 and is more accelerated after age 60 (Volpi, CDC). This can be slowed with consistent training. International recommendations for physical activity and exercise in older adults are moderate level aerobic exercise for 30 min per day for five days of the week, combined with two days of strength training (Taylor).

Regarding the workout program, essentially all of the machines are safe. You should begin with using light weights and high repetitions of fifteen to twenty per muscle group. You can work opposing muscle groups. Avoid the free weights, as there is more the risk. Also avoid unsupported bending at your waist, no matter what the situation. Supported bending is fine and so is twisting.

Most health clubs offer at least one free personal training session to get you set up and to make sure you are safe. Many physical therapists will help transition their patients from the specific/functional exercise phase into a long-term conditioning program.

It is preferable to do the weight training outside of your home. Few people will consistently work out in the confines of their house. It's helpful to be in an environment where others are working out; also, the equipment is better. Pilates is also excellent in that it emphasizes core strength. Yoga can be helpful if extreme postures are avoided.

It is important to acknowledge that with current pandemic restrictions in place, exercising in a gym, or with friends, may not be possible. Make your best effort and know that exercising in any capacity will help.

## SECTION 9 - STAY ON TOP OF YOUR MEDICAL PROBLEMS

Over half of patients don't comply with their doctor's orders. That includes taking important medications. You will simply in better shape if you:

- Closely monitor and control your diabetes
- Take your cardiopulmonary medication
- Control your blood pressure
- Consider a medication review to see if the regime can be simplified. It is a core principle to minimize the number of medications you are taking. It seems more common over the last decade to see patients on long lists of medications. The number of potential side effects from the drugs is problematic, as well as the adverse interactions.
  - This must be done under the careful supervision of your physicians. Begin with your primary care physician.
  - Wean off of opioids, if possible. They are stress response chemicals and are inflammatory. Lowering these meds would help decrease Pro-I cytokines.

## SECTION 10 - PLAY

Studies show that cultivating optimism, having a sense of purpose, and feeling hopeful causes a reduction in pain and an improvement in mood and function (Hausmann). One paper had participants visualizing their “best self” for five minutes a day over a course of two weeks. They all experienced feeling significantly better (Meevissen). Your brain will develop where you place your attention.

All mammals play, as part of their maturation process. As our brains grow, play features prominently in how we develop language and consciousness. Even if it seems they are deeply buried, your “play” circuits are still there, waiting to be accessed (Brown).

What brings you joy?

### PLAY TIME

#### 1. People

Dr. Louis Cozolino wrote in his book, *The Neuroscience of Human Relationships*, that humans evolved by interacting with other humans. Therefore, the consequences of becoming isolated are consistent and often severe. Studies out of Australia have shown that there are damaging mental health effects when workers become disabled and out of the workflow of the day. Sitting around the house without a sense of purpose is not a great way to thrive (Waddell).

So, make the effort to connect with fun and safe people. Be part of a “tribe” that accepts you fully as you are. Remember, this also means not discussing your pain or complaining. Focus on enjoying yourself and the other person. Currently, this will have to be done with social distancing in mind.

#### 2. Places

Be thoughtful about choosing different experiences that soothe your nervous system by engaging your five senses. Being out in nature is healing, but you can choose to be mindful in your own home.

#### 3. Perspective

Engage in activities that bring you fully to the present moment, also known as, “the flow.” When we engage in something that you find enjoyable and are passionate about, time flies by. When we enter this state of “flow,” we get to rest our nervous system and start to release our stress hormones. This is a great way to bring back balance back and to reset your nervous system. It stimulates the vagus nerve, which soothes your nervous system.

You can always make a choice. For example, elect to enjoy your time at work versus being constantly agitated by all the things that are wrong. Obstacles can become, “challenges,” and a chance to demonstrate and sharpen your skill set.

#### 4. Pets

There is a reason many people are getting a pet during the coronavirus pandemic. Playing with the right pet can release oxytocin, which makes you feel safe and is anti-inflammatory (Marshall-Pescini). During COVID-19, owning a dog has been shown to protect against loneliness (Oliva).

Play isn't just a way to distract yourself from anxiety. You can't outrun your mind. Rather, it is mindset of curiosity, deep gratitude, listening, awareness, and improving your skills to calm your nervous system. The result is a sense of contentment and peace. It is a powerful and rapid way to optimize your health.

*"This is the real secret of life -  
to be completely engaged with what you are doing  
in the here and now.  
And instead of calling it work,  
realize it is play."  
~Alan W. Watts*

## SECTION 11 – GIVING BACK

Studies show that cultivating optimism, having a sense of purpose, and feeling hopeful causes a reduction in pain and an improvement in mood and function (Hausmann). One paper had participants visualizing their “best self” for five minutes a day over a course of two weeks. They all experienced feeling significantly better (Meevissen). Your brain will develop where you place your attention.

A powerful phase of moving forward on your healing journey is giving back. Your brain will develop wherever you place your attention, which is the essence of neuroplasticity. When your attention is focused on those around you, you’ll move a long way from your pain/threat circuits.

### EMPATHY/COMPASSION

The Oxford dictionary defines empathy as, “the ability to understand and share the feelings of another.” It is a core component of nurturing human relationships. If you don’t have an idea of how someone is feeling, you can’t interact with them in a meaningful way – you might as well be in another room. The capacity to feel empathy is an inherent part of the human experience. From an evolutionary perspective, it was the species of humans who learned to cooperate that had the highest likelihood of survival.

In healthy relationships, compassion is the step that follows empathy. Nurturing compassion has two parts: 1) engaging in practices that engender empathy, and 2) removal of any interference connecting you with your own compassion.

### NURTURING COMPASSION

Here are a few suggestions to consider, which will help you formulate your own ideas of how to give back.

- Remain committed to your own journey. You can’t help others if you are not doing well.
- Practice awareness. Remain aware of yours and other’s needs, listen carefully to others and try to see situations through their eyes. Awareness and allowing yourself to feel vulnerable is the foundation of all nurturing relationships.
- Don’t discuss your pain, complain, give unasked-for advice, or be critical. None of these are compassionate acts.
- Your highest priority is your immediate family. Even if you’re in mental or physical pain, treat them well.
- Make a random list of ideas of ways to give back that are interesting to you—write them down. They can be small actions.
  - Pick the top five
    - Prioritize them
    - Pick one
  - Develop a specific plan.
  - Do it!!
- Create a vision of what you’d like your life to look like in one year and five years.
  - Be as specific as possible.
  - Learn organizational skills to implement your vision.

## **SECTION 12 – REGAIN PERSPECTIVE / RECONNECTING WITH LIFE / THE SPIRITUAL JOURNEY**

### **LIFE IS TOUGH**

It is easy to drop into a survival mode. Life is tough, competitive, and challenging. For animals without consciousness, it is far simpler. They either learn the skill and cunning to survive – or they don't. There is also a lot of luck.

When it comes to human survival, we have the additional characteristics of language, socialization, and dealing in the abstract. One of the greatest curses of consciousness is that we know we are not going to live forever. It is the ultimate fear, and we unconsciously spend a lot of time distracting ourselves and trying not to think about it.

### **THE PARADOX**

Here is the paradox. The more anxious and frustrated you are, for any reason, you are adding to your threat load. This creates a higher chance that you will develop a severe, disabling disease and die earlier. Additionally, while living in this state, your capacity to enjoy the time you have been given on this earth is compromised. In short, the more relaxed you are, the healthier and happier you will be.

### **THE SPIRITUAL JOURNEY**

My definition of a spiritual journey is quite broad. I define it simply as looking and experiencing life outside of yourself and focusing on the bigger picture. You will begin to lose your sense of self-importance and increase your awareness of the needs of those around you. I think that this step requires a conscious effort to pursue it. It can take an infinite number of forms:

- Quality time with family and friends
- Spiritual organizations
- Good food, wine
- Energizing experiences
- Creative hobbies
- Art
- Time in nature

Any experiences that involve active engagement and feeling connected are worth pursuing. Passive experiences will not help you as much in achieving spiritual growth.

### **MOVING FORWARD**

It is fine and necessary to be aware of your past and understand how it might be playing out in the present, but then it is critical to move on. Many of us are intent on improving ourselves only by analyzing our flaws. We also try to “find ourselves” by deeply discussing the past and then try to fix our faults. This approach, when used alone, will not work. Your brain will follow familiar circuits, and the more you look backwards into your pain, the more you will sink into negative patterns.

A positive outlook and “can do” mindset are basic to neuroplastic reprogramming of your brain. This is different from positive thinking. Positive thinking is a global way of suppressing your emotions and repressed feelings will limit your healing (Dantzer).

You have to first understand where you are before you can move on. Doing battle with your past does not move you forward. If you are in a survival and fixing mode, you will stagnate. However, creating a vision of where you want to go and taking steps to get there is a much different approach. I frequently use the metaphor of diverting a river into a different channel.

## **CREATE YOUR VISION AND PURSUE IT – YOUR “PERSONAL BUSINESS PLAN”**

Create the vision of where you want to be, and then break it down into doable steps. Visualize yourself as a small business trying to accomplish specific goals. Here is a suggested template:

### **SELF-INVENTORY TEMPLATE**

Overview of self today:

#### **Core Values**

- Self
- Family
- Friends
- Career
- Finances
- Giving back

#### **Character**

- Strengths
- Flaws

#### **Skills**

- Highest (expert)
- Strong (Competent and can contribute)
- Moderate (competent)
- Light (participant)

#### **Dreams**

#### **Where do I want to be in five years?**

- Overview
- Specific areas
  - Self
  - Family
  - Friends
  - Career
  - Finances
  - Giving back

## **Action Plan**

- Each area
  - Specific steps
  - Time frames

## **THRIVE AND SURVIVE**

Instead of surviving and hoping to thrive someday, it is important to flip the paradigm. Relaxation is a learned skill, similar to learning a new language. Once you have learned it, your odds of survival improve dramatically regardless of the circumstances – including COVID-19.

Thrive and survive!

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# DOC Journey

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Direct your Own Care