Why mind-management is the solution to cleaning up your mental mess

WHITE PAPER

DR. LEAF

SWITCH ON YOUR BRAIN

New research brings hope for dealing with anxiety, depression, toxic thoughts, burnout and cleaning up your mental mess.

BY CAROLINE LEAF, PHD, COMMUNICATION PATHOLOGIST & COGNITIVE NEUROSCIENTIST, SWITCH ON YOUR BRAIN

We can no longer ignore the rise of anxiety, depression, anger, frustration, toxic stress and burnout in people of all ages in our society. We need to address this head on. Stressors and changes in life situations trigger responses and changes in our biochemistry, brain function and genetics, which not only affects our health, but can also be passed on through generations, which is known as epigenetics. This is both a question of how we want to live today and how we want our children to live in the future.

Many current mental health strategies, including pharmaceuticals and interventions with medical devices, have not helped us fully manage or eradicate the devastating mental health conditions that plague our society. Nearly 800,000 people die by suicide in the world each year, which is roughly one death every 40 seconds. Suicide is the 2nd leading cause of death in the world for those aged 15-24 years. Unmanaged depression is the leading cause of disability worldwide.[1]

The availability of simple mind-management tools for personal use, to address and ameliorate such warning signals as anxiety, depression, toxic thinking, inability to concentrate, irritability, exhaustion, burnout, before they take over someone's mind and life could potentially help innumerable persons of all ages to experience improved mental and physical health and well-being.

"Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less."
— Marie Curie

OVERVIEW

- Stressors and changes in life situations trigger responses and changes in our biochemistry, brain function and genetics, which not only affects our health, but can also be passed on through generations, which is known as epigenetics.
- True, personal transformation requires mind management to rewire neural pathways and create new habits.
- There is a significant amount of research indicating that the suppression of thoughts, which causes mental distress, is related to telomere shortening and biological aging-our life experiences are reflected in our biology.

[1] https://save.org/about-suicide/suicide-facts/

- New thoughts are formed over 21 days, and these new thoughts are formed into habits within 63 days.
- Even if we still feel anxious or depressed, acknowledging, embracing and processing our issues will optimize brain function and create coherence, which will give us the ability to see our issues clearly and deal with them.
- Uncontrolled, toxic thinking has the potential to create a state of low-grade inflammation across the body and brain, affecting cortisol levels, hormones, inflammatory factors, brain functionality and even the telomeres on the chromosomes.
- People who have been taught to “tune in” to their nonconscious mind to manage their thought life and “detox” and “build” the brain are better able to navigate the ups and downs of life because they have a sense of control, which gives them hope.
- In our clinical trial, the subjects in the experimental group improved their mental health, brain health, blood physiology and cellular health by using the 5 steps of mind-management in the NEUROCYCLE app, and so can you!

I have developed a simple 5 step mind management process, **that I call the neurocycle,** based on my research and the latest brain science, to help you manage your mind, and overcome issues like depression, anxiety and burnout, which can come from chronic recurrent stress, acute sudden stress, trauma, identity issues, isolation, disrupted sleep patterns, lack of exercise, poor diet and so on. This 5-step process, which is based on the science of thought and brain science specifically how we form thoughts with our minds, incorporates strategies which I have developed working with my patients over the last 38 years. It **incorporates but, more importantly,** goes beyond self-help and mindfulness exercises, focusing on sustainable mind management strategies.

Eventually, as we manage our thinking, the entire state of the brain and our cellular structure shifts and establishes a new and healthy level of balance in the mind, brain and body!

These 5 steps were developed as a response to my patients’ need for a simple yet sustainable and effective way to manage their chronic and acute mental health issues.

I have also observed this in my most recent clinical trials. True, personal transformation requires mind management to rewire neural pathways and create new habits. Eventually, as we manage our thinking, the entire state of the brain and our cellular structure shifts and establishes a new and healthy level of balance in the mind, brain and body!

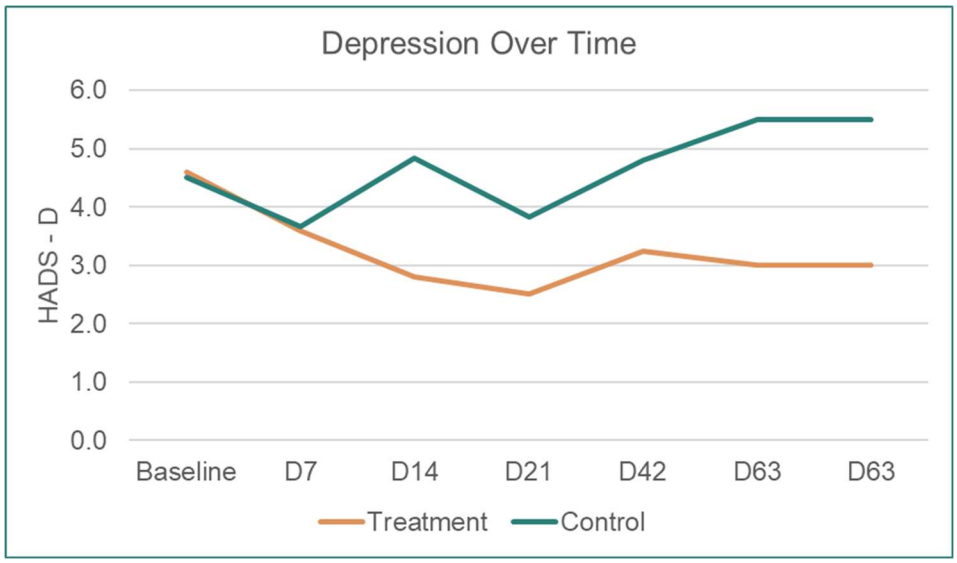
WHAT DID OUR RESEARCH FIND?

Throughout our research trial, we saw *significantly positive* changes in the experimental group at a cellular level, which is based on changes in telomeres (the caps on chromosomes), *significantly positive* changes in electrical activity in the brain (based on QEEG-measured changes in the brain), *significantly positive* changes in psychosocial profiling (based on changes in psychological scales and narratives), and *significantly positive* changes in the blood tests (including changes cortisol and homocysteine levels). Our results also indicate that there were positive changes in the nonconscious mind (QEEG), conscious mind (LMM), body (telomeres and blood) and the whole person (narrative). **The subjects in our experimental group, by using the 5 steps of mind-management in the NEUROCYCLE app, improved their mental health, brain health, blood physiology and cellular health, and so can you!**

When you learn how powerful your mind is, there is no going back.

Preliminary results from our trial also demonstrated a significant reduction in depression and anxiety, through mind-management, by up to 81%, in the experimental group compared with the control group. The experimental subjects were learning how to **embrace and** make the anxiety and depression work for them and not against them, which is a much more sustainable approach than simply trying to numb or remove emotions and feelings completely.

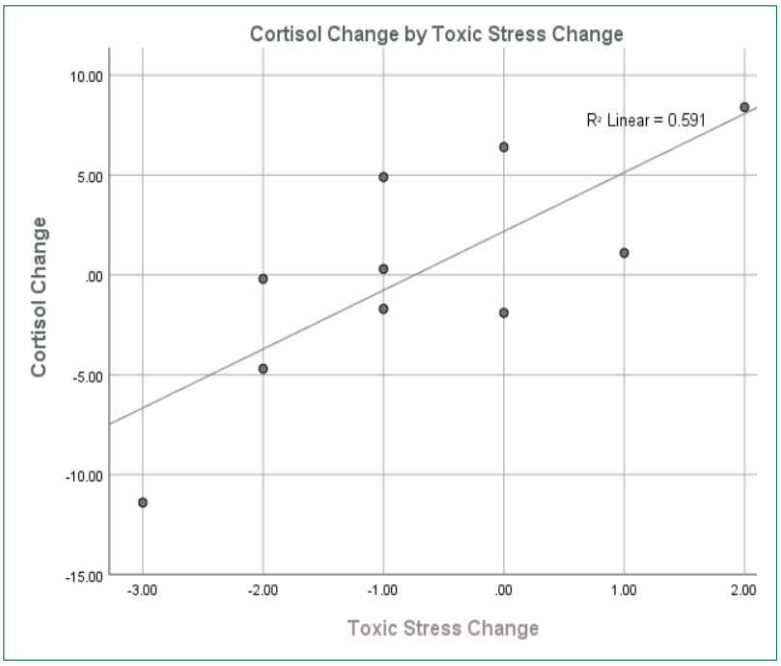
We also saw evidence of neuroplasticity. Through QEEG analysis, we observed new thoughts with memories forming, which correlated with a reported improvement in the management of the symptoms of depression and anxiety, including fewer toxic thoughts, toxic stress, and an improved sense of life satisfaction and wellbeing.



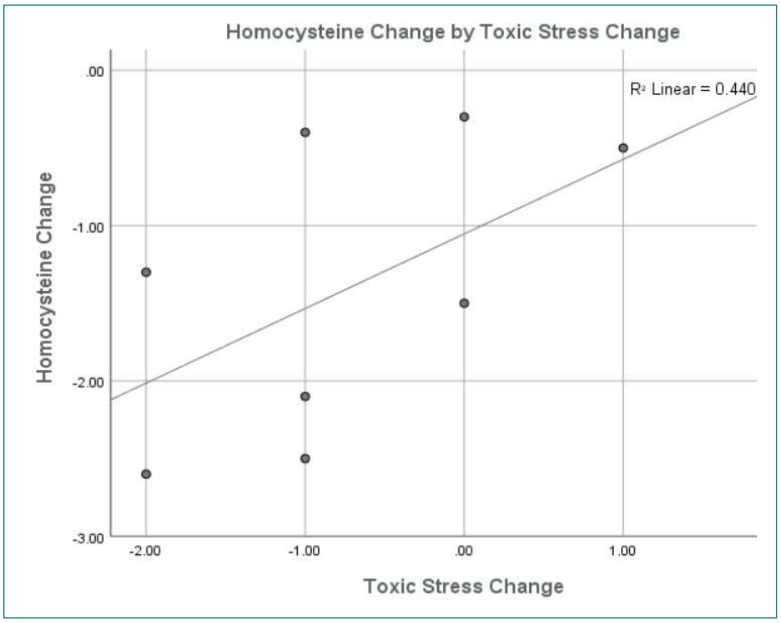
Over time, we saw these new thoughts stabilize at 21 days and become automatized (established as a habit) over the next 42 days. By day 63 (9 weeks after first use of the NEUROCYCLE app) the experimental group had literally *changed their minds and the structure of their brains,* sustaining this new way of thinking. This highlights something many of us intrinsically understand: it **takes time to learn and form new habits that will impact how we function**, which are, at their core, useful memories. *New thoughts are formed over 21 days, and these new thoughts are formed into habits 63 days*. This is extremely important to learning and life, because there are a lot of myths

surrounding habit formation happening over just 21 days. This myth seems to have been started by a self-help book written by a cosmetic surgeon in 1960[2], and has been repeated so often that it has become an entrenched concept as though it's a fact, but it's not. My clinical trial adds additional evidence to the 2010 UK study on habit formation,[3] and indicates that habits form over at *least* 63 days, and some may take even longer--they need time to be automatized as useful information that will impact behavior in both the short and long term.

As the subjects managed their toxic stress (i.e. improved LMM Toxic Stress scores) using the 5 steps of mind management, *they improved their homocysteine and cortisol levels*. So, not only did reducing their toxic stress significantly reduce their risk of mental health issues, but they also potentially reduced their risk for cardiovascular and neurological concerns and other health issues. This is a very important finding!



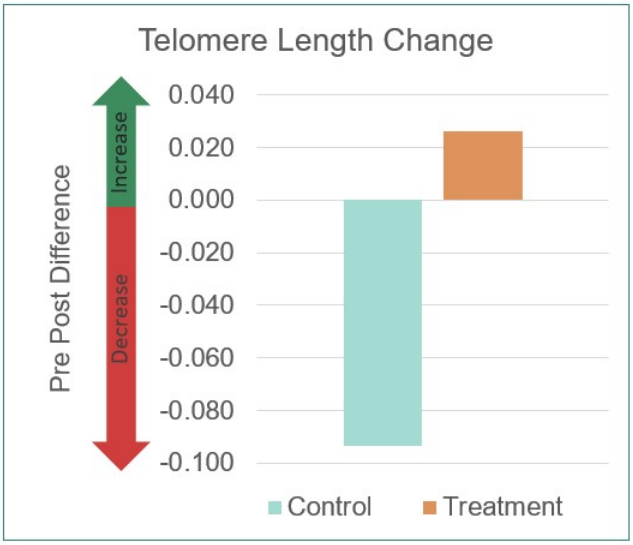
On a cellular level, we also observed several fascinating changes. Telomere length (TL) has recently emerged as a proxy measure of biological aging and a correlate of severe stress, which means that the more you have unmanaged toxic stress in your life, the more the telomeres will shorten, and this is bad for your mental and physical health. A telomere is a structure at the end of a chromosome, a bit like the plastic at the end of a shoelace. It's very important for cell health because when it wears out - “frays”, the cell will age more quickly and won't be as effective in keeping us healthy - much like a shoelace becomes hard to thread when it frays. Each time cells divide, they rely on telomeres, among many other factors to do this properly, so the goal is to keep a healthy telomere length.

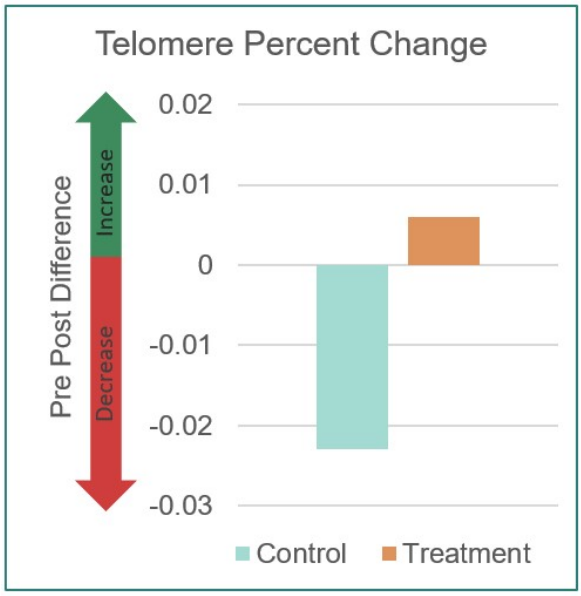


[2]https://www.nbcnews.com/health/body-odd/think-it-takes-21-days-make-resolution-habit-triple-n2881

[3] Lally, Phillippa, Cornelia HM Van Jaarsveld, Henry WW Potts, and Jane Wardle. "How are habits formed: Modelling habit formation in the real world." *European journal of social psychology* 40, no. 6 (2010): 998-1009.

Our study also assessed the association between telomere length (TL) and the implementation of mind-management techniques. Over the course of the study, the experimental group's TL increased as they used the 5-step mind-management strategy, the neurocycle, while the control group, who had no clear mind-management strategy, saw a decrease in TL. This is so important because telomeres have a lot to do with cellular health, the shorter your telomeres are, the unhealthier you will be mentally and physically, and your vulnerability to disease increases dramatically. Unmanaged toxic stress puts the body into a low-grade state of inflammation, which in turn increases the risk. This clinical trial adds to the body of research that shows that managing toxic stress is critical to our health. Telomere length varies widely between adults, and these findings suggest that mind-management could explain some of these differences. The deliberate, intentional self-regulated thinking associated with the 5-step process appears to promote a healthy biochemical milieu, which, in turn, could improve cell longevity!





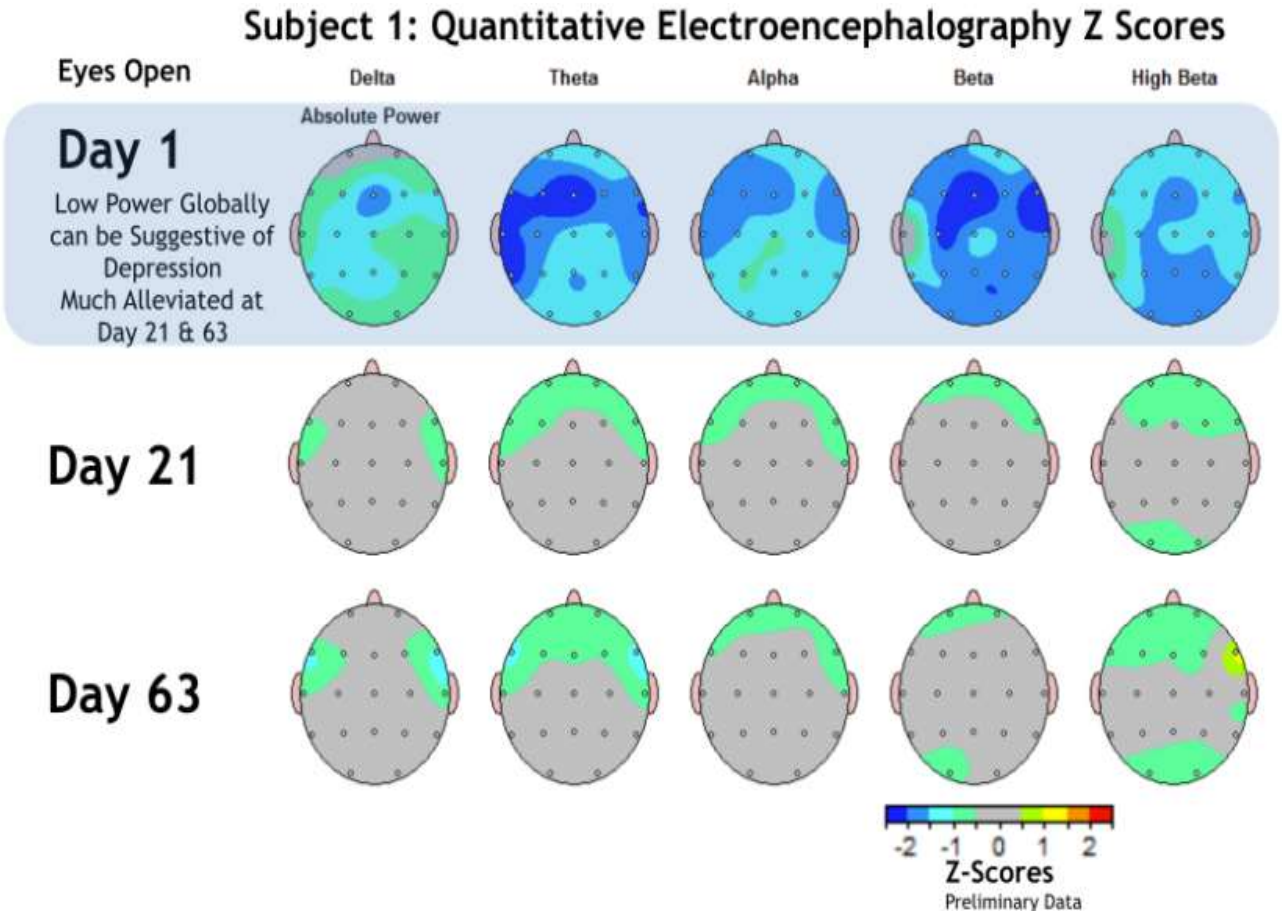
We observed a similar pattern regarding the participants' telomeres and relative age percentile. The control group's relative age percentile decreased over the course of the study, which means that they got biologically older, whereas the experimental group's percentiles held stable--their biological age stayed the same. This means that if we don't manage our minds, the organs in our physical bodies will get older than our actually chronological age. For example, we had one subject at the beginning of the study whose biological age was nearly twenty years older than their actual chronological age - they were in their mid-thirties but had a body age of a sickly 50-year-old!

There is a significant amount of research indicating that the suppression of thoughts, which causes mental distress, is related to telomere shortening and biological aging. Suppressing thoughts can lead to psychological inflexibility--a sort of pretending to oneself that the thoughts don't exist. This suppression, in turn, is affecting cell health, which means organ health, so suppressing thoughts affects our heart and brain and GI system and so on. In our study, we observed that the participants who did not want to deal with their suppressed thoughts and feelings had more negative telomere and QEEG results. QEEG changes in our study showed increased, high beta and delta when correlated with measures that assessed thought suppression, which is supported by other research that shows that high beta activity is associated with anxiety. High delta during

the day generally shows undealt with toxic thoughts and poor sleep quality. Additionally, our blood work results, though unreliable as stand-alone data, show spikes and dips which could reflect stress on the body from suppression of thoughts, that is, not dealing with thoughts.

AN EXPERIMENTAL SUBJECT'S STORY: LEARNING TO MANAGE DEPRESSION

Below is the QEEG head-map of one of the subjects in the experimental group. At baseline, the subject reported feeling significantly depressed; they were not sleeping, battling with memory and relationship issues, feeling burned out, emotionally exhausted and quite cynical. At day 1, the blue color indicates significantly lower than average energy in the brain across all frequencies. This pattern is consistent with a person who is severely depressed. By day 21 the energy in their brain has increased – as indicated by the grey color, which represents the average or expected brain activity in a non-depressed person, as compared to a normative database.



The experimental subject's QEEG pattern was still developing at day 63 as their mind-management skills continued to improve. Neuropsychological measures and narrative data demonstrate that the improvement in symptoms of depression and anxiety in the subject was sustained at a follow-up three months later, which was evident in their neuroscientific data and bloodwork.

Essentially, this means that the subject was learning to identify the cause of their depression and manage their mind over the course of 63 days. They were learning how to manage their thinking on a daily basis, and as a lifestyle – they were using mind-management to direct their neuroplasticity. This data was supported by their neuropsychological self-reporting scales and their narrative, which described how they no longer felt severely depressed, and had less anxiety, burnout, cynicism, and emotional exhaustion. They were sleeping better, and felt that they had the mind-management skills in place to cope. They also felt like they had increased mental resilience.

What is really interesting with this subject is that at day 1, they were quite insightful and aware of their issues, as is evidenced by the flares of green in the alpha frequency, along with the flares of green in the frontal lobe in the delta frequency in the image above. However, the blues, particularly the darker blue colors, indicate that they did not know what to do about how they felt. This finding is corroborated by the subject's description of their experience from their narrative, which suggested they felt stuck, and from their psychosocial test scores, specifically the results on the LMM and narrative, and their telomere data. Their cortisol and homocysteine levels were also problematic at the beginning of the study.

By day 21, this feeling of not knowing what to do had changed to actionable insight. The subject felt they were starting to process what was making them feel depressed, which made them feel both hopeful and ill-at-ease. They felt hopeful that they were starting to get insight into their issues, but ill-at-ease because it is painful facing and dealing with our problems. As they say, the night is darkest before dawn, and often things get worse before they get better. We see this in the QEEG with the increased activity in the alpha frequency, which is indicated by the grey color.

WHAT DOES ALL THIS DATA MEAN?

When the body and brain are in a highly tense state, seen as multiple areas of high beta and low alpha activity on our QEEG results, as well as erratic changes in bloodwork and shortened telomeres, it can cause cellular aging, which impacts our physical health and our mental wellbeing over the short and long term. Not only does intense unmanaged toxic stress arousal states shorten telomeres, a restless mind can also leave the body in a chronically stressed out state, suppressing the ongoing housekeeping and restorative functions of cell repair, which can lead to a low-grade inflammation and accelerate the aging process.

The bottom line is that our *life experiences are reflected in our biology*, including our telomere length. However, mind management interventions, like the 5 step neurocycle tool used in our clinical trial, appear to act as a "reset" or induce critical periods where we can "shake up" our system to a healthier, younger state characterized by longer telomeres, more balanced energy flow of delta, theta, alpha, beta, and gamma and significantly reduced homocysteine and cortisol levels as well as improved DHEA/cortisol ratio. This is what we saw in our experimental group. The Leaf Mind Management (LMM) scale that we used, was in fact able to pick up on this mindset shift, since it was more sensitive to the changes happening on the nonconscious level, where our

memories are stored. We also observed these changes in the QEEG results, more than in other traditionally used clinical scales like the HADS and PHQ. As the participants practiced using the 5-steps, they had more balanced brain function and neuroplasticity, felt better and more empowered!

The more traditional scales, which are questionnaires used in hospital and mental health settings, like the Hospital Anxiety and depression scale (HADS) and Patient Health Questionnaire (PHQ), tended to only pick up how the group was feeling in the "*now"* moment. This is perhaps because the questions are very direct and leading. For example, the identity of self is reflected in the frontal cortex of the brain, and when we examined the QEEG data, that area didn't change very much over the period of the study in either the experimental or the control group. This suggests that the subjects were still *identifying with the label* of being depressed or anxious, so when asked a question in a leading way, as on the HADS and PHQ, they answered in a certain way because they still thought of themselves as a "depressed" person. They had not made the transition yet on a conscious level to being a person who is not depressed or anxious even though they were experiencing symptoms of depression and anxiety. They did, however, show improvement in the LMM, QEEG and narrative measures, which represented the nonconscious level of thinking, that is where the deep level of processing occurs and where what you are *really thinking and believing about yourself, and long-term memories reside*. This incongruence undergirds the dangers of labeling people with a "mental illness": it appears to affect their perceived identity, potentially keeping them stuck in a certain mode of thinking and with a particular label *even as* they are going through the process of healing.

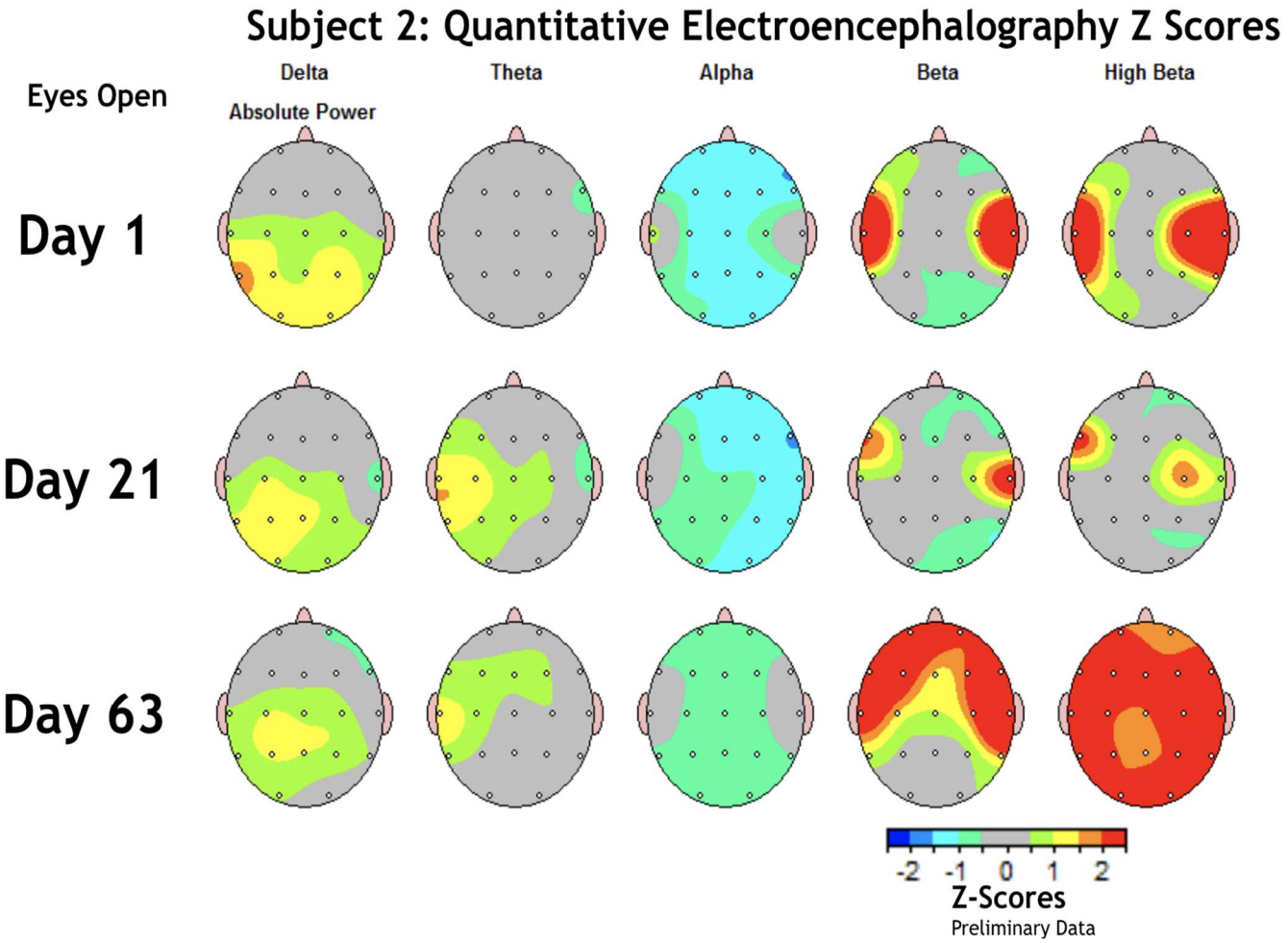
A CONTROL SUBJECT'S STORY: FROM ANXIETY TO ANXIETY

The QEEG figure below is of a subject, a millennial, who was part of the control group of our clinical trial, which means they weren't given the intervention (the 5-step mind management program via the SWITCH app). They did however, complete the evaluation instruments, including our Leaf Mind-Management (LMM) scale, blood work, telomere evaluation, and QEEG studies.

During the course of the study, this subject reported feeling slammed and overwhelmed by life. Everything was too much: their work, relationships, financial pressure and so on. This is corroborated by their narrative and self-reported well-being scores, as well as the anxiety, depression and self-regulation psychological evaluations that they filled out seven times over the six months of the study. These evaluation instruments are designed to increase self-awareness of how the subjects are feeling emotionally and how they are functioning mentally, including what kind of lifestyle decisions they are making, and how these are impacting their day to day activities.

The subject's QEEG showed patterns suggesting they were suffering from extreme anxiety, experiencing frequent panic attacks and not sleeping well because of the pressure they felt from everything in their life, which is not an uncommon story these days (I am sure you will agree we all feel like this from time to time!). They were ruminating a lot, battling with intrusive thoughts, and felt very stuck. These feelings were affecting their brain energy and blood physiology.

At day one of the study, their brain had a lot of high beta activity over the amygdala region in the brain, an area that we use to respond to and process emotional perceptions--see the “red brain” in figure x above. This suggests that they were highly anxious and distressed and reflects the pattern of intrusive thoughts and ruminating. The amygdala is like a perceptual library filled with “books” containing the emotional perceptions attached to our thoughts. If there is too much activity here, it is like reading too many books about the bad things that can happen and ruminating on what you just read, which is like being stuck on a hamster wheel.



When we get into this state, we tend to overreact, over generalize, and even catastrophize situations. We can easily get into the kind of thinking patterns that over exaggerate yesterday’s issues, overemphasize tomorrow’s and undervalue the significance of what’s happening today, and how we can change things. The poor brain, which does the bidding of the mind, has all the wrong energy flow through the internal networks, and quantum energy in the tiny protein “supercomputers” are experiencing earthquake-like shakes. Staying in this pattern means, unfortunately, that the “earthquake” can end up doing a lot of damage, which is what we observed happening with the subject in the clinical trial. However, with mind-management, we can get out of this negative spiral.

WHY IS THIS SO IMPORTANT?

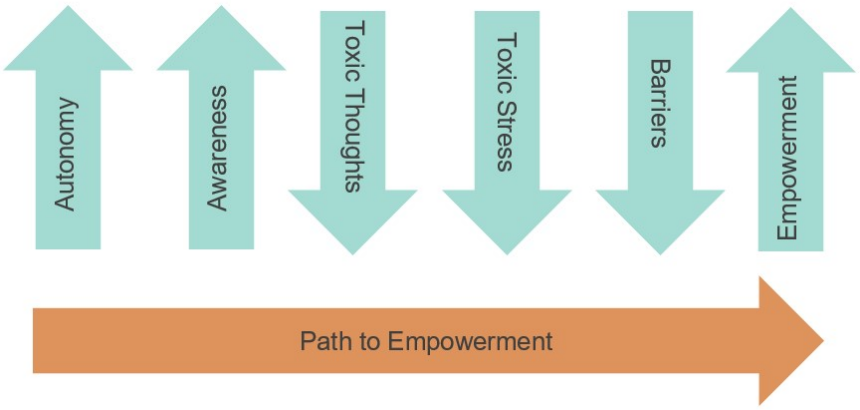
A person who continues to “identify” with being depressed or anxious may choose to give up on therapy or a mind management strategy because they are not aware they are improving, even though there is evidence in their non-conscious mind that they are getting better. The label seems to remove their autonomy and instill a sense of helplessness in them. They are not empowered to continue the hard work required during the healing process. On the other hand, knowing that changes are occurring beneath the surface, on a nonconscious level, can be a powerful motivator, because it brings with it a sense of autonomy, encouraging someone to persist with therapy and mind-management techniques even if they don’t “feel” different for some time. This is similar to when you are first trying to become fitter or lose weight, and you don’t immediately see or feel different but you are empowered to keep going because you are aware of how your muscles are developing and fat is being lost on the inside before it is evident on the outside. In fact, when it comes to exercise, your nervous system changes first, followed by your muscles.

True change takes time and effort--there is no escaping this, no magic pill when it comes to our thinking. Working on something like identifying toxic issues needs to be approached, not as a one off 63-day event, but rather as an ongoing lifestyle. We are always going to be fixing something in our mental space, so this is a lifetime commitment. Knowing scientifically that it takes 63 days (a defined period of time) is empowering, because as humans we love defined periods as this reduces some uncertainty in what may otherwise be a very uncertain process.

HOW CAN ALL THIS SCIENCE HELP YOU?

These results, when viewed alongside the observed changes in the scores of my validated Leaf Mind Management (LMM) Scale in the experimental group, are significantly noteworthy - so we need to pay attention to them. They demonstrate that the subjects who used the 5 steps in the NEUROCYCLE app, transitioned from an awareness of their toxic thinking, *without* a mind management strategy, to being able to independently process and reconceptualize their toxic thoughts *with* the specific 5 step mind management technique. In short, they moved from awareness of having a problem to being empowered to manage and overcome their problem using the 5 steps. So, this is what this science means for you: you can transition from being aware of your chaotic and toxic thoughts to being empowered to catching them in their early stages, managing them and improving your overall peace and wellbeing! The path to empowerment was achieved by increasing their autonomy and feeling of control. This, in turn, led to increased awareness of and the ability to deal with their toxic thoughts, which helped them control toxic stress and change their perspective about how they were looking at the world. They started seeing challenges and barriers as opportunities, and felt more in control and had more overall life satisfaction.

As we gain increased autonomy by taking control of our mental health, we become more aware of both our issues and our capacity to deal with the toxic thoughts and control toxic stress. When we change our perspective, we see opportunities instead of barriers. This process leads us to become more empowered so we can control our lives by controlling our minds!



This clinical trial, along with an increasing number of studies in the neuroimaging and mind-brain literature, indicate that with appropriate mind-management training and self-regulation, which is what "cleaning up the mental mess" is all about, people can systematically use their mind to take advantage of the neuroplasticity of their brain to rework and rewire the their thoughts. By doing this, they can transform their neural circuitry, which will enable them to manage and improve a variety of mental and physical states. This means that we can literally take dysfunctional brain networks and physiology and alter them with our minds! We can manage our thinking and clean up the mental mess with habit forming cycles of 63 days, which gives a new thought pattern enough energy to become a habit that influences our behavior and communication. And if this is done continually as a lifestyle, overall wellbeing, peace and wisdom are the reward!

HOW DOES TOXIC STRESS IMPACT YOU?

When people get into toxic thinking habits, it can mess up the stress response. This response is actually good for us if it is part of a balanced lifestyle. Think about taking a test: a healthy stress response helps us stay energized, focused and awake, which boosts our mental performance. However, if we start panicking in the middle of the test, or a challenging situation, we start experiencing mental fog and can't think clearly--this is toxic stress, and it occurs when we let our thoughts run amok.

Toxic stress is no joke. Psychoneuroimmunology research has shown how conscious thinking controls the function of the immune system--when we stress, we impact the body's ability to protect itself. In fact, research has shown how healthy and constructive thinking can lead to the *placebo effect*, allowing the mind to fight disease, while toxic thinking can create the *nocebo effect*, which can increase our vulnerability to disease. We saw this in the results of this clinical trial.

Toxic stress has been demonstrated as being responsible for up to 90% of illness, including heart disease, cancer and diabetes. [1] When an individual is in a toxic thinking state, the release of stress hormones such as cortisol, ACTH and even prolactin shuts down the immune system to conserve the body's energy for the flight/fight response. This is good if you are running away from

a man-eating predator or getting ready for battle or need to be focused in a business presentation or deal with a relational crisis. However, stress works in cycles of tension and release and if the release does not come, so if this state becomes chronic, we get in the habit of perceiving the physical sensations of stress as bad for us, instead of being good for us. We then react negatively to daily stressors over long periods of time, which compromise instead of enhance the immune system. We saw this type of elevated cortisol and homocysteine at day 1 of the clinical trial, and then saw it reduce over the course of the study. As the subject learnt how to manage their mind, the body's cortisol and homocysteine came back into balance and DHEA/cortisol ratio, highlighting the integration between the mind and the body. We also saw this subject's telomeres lengthen and the biological age decrease over the course of the 6 months of the clinical trial in response to them using the 5 steps of mind-management to make stress work for them and not against them.

We need to understand that our thinking is real, and has real effects on the brain. If we don't manage our minds, we can fall into the trap of living in a "netherland" where everything feels terrible and hopeless, where there is a terrible nagging sense of anxiety constantly hovering over us. That relationship, that work situation, that political situation, that traffic jam, those family members...it feels like they are all conspiring against you. It is that "when it rains it pours in my life/glass half empty" thinking.

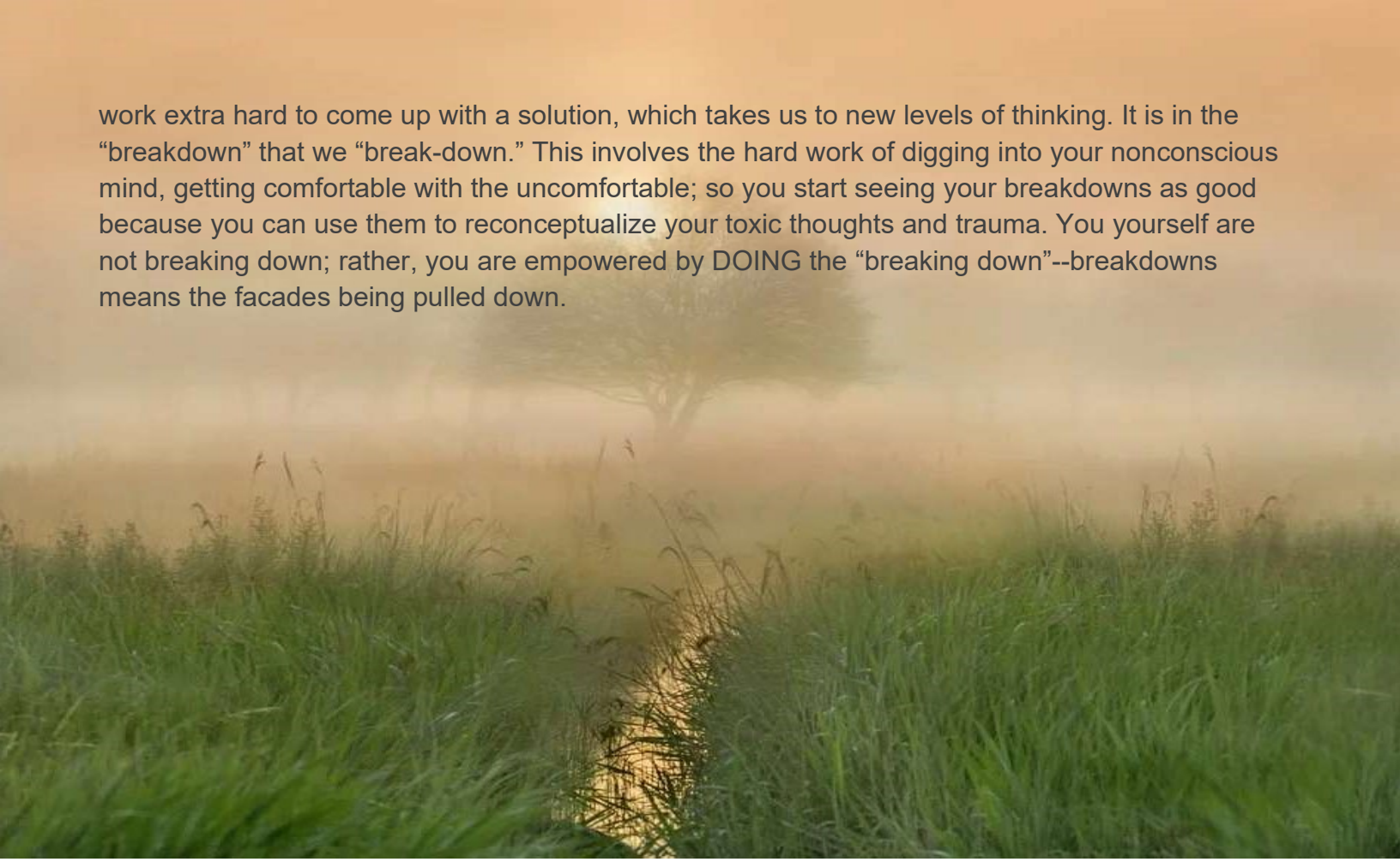
We know that negative spirals go nowhere, and when we learn to manage our minds, we can start healing the brain and body! This kind of brain damage is reversible, because the brain is neuroplastic: it can change, it always changes, and it is never too late to change.

HOW CAN MIND-MANAGEMENT HELP YOU?

The brain and body don't lie. They reflect what we are thinking and doing and respond accordingly. This is why any kind of successful "doing" has to be supported by embracing the uncertainty you face in all its scariness and ambiguity, because inside this is the solution, the way forward--you cannot move on till you are honest about where you are. Your brain cannot change until you accept the anxiety and depression as a signal giving you information on the cause and therefore make the anxiety and depression work for you and not against you. This is not necessarily clear cut; your journey will be as unique as you are. The subjects in the experimental group recognized this - they "knew" and "knew" how to manage this new knowledge; the subjects in the control group, on the other hand, resorted to suppressing their issues because they felt disempowered and overwhelmed by their awareness of their issues - it was too much. We need to "know" *and manage* what we "know."

The 5 steps of mind-management will give you a way to handle with confidence uncertainty and the unknown, which can help you face your issues and deal with them in a constructive and sustainable way. As you use them in your life to manage your thinking, you will find that immensely trying times can have hidden dimensions that we may miss if we don't accept all the uncertainties! This is often when the breakthroughs happen--when we don't understand something, our brains

work extra hard to come up with a solution, which takes us to new levels of thinking. It is in the "breakdown" that we "break-down." This involves the hard work of digging into your nonconscious mind, getting comfortable with the uncomfortable; so you start seeing your breakdowns as good because you can use them to reconceptualize your toxic thoughts and trauma. You yourself are not breaking down; rather, you are empowered by DOING the "breaking down"--breakdowns means the facades being pulled down.



We can get ourselves into serious, hamster-wheel cycles of rumination and destructive worry, which progress rapidly into anxiety and panic and panic attacks (the RED BRAIN) if we refuse to face our issues head on and we don't progress forward. Going around and around and never making any progress leads to loads of anxiety--if we don't transform our pain through reconceptualization, we will transmit it, which can take over our thinking. We need to reflect on the experiences we are going through in such a way that we accept that even though we may not be able to make sense of them, we can still deal with them - this will help us move forward.

So many times, we get stuck looking for the *why someone did something to you* because it feels like this is where our peace will come from if we know their reason for doing what they did. Unfortunately, often we cannot understand why someone does something or why so many things go wrong at once - we aren't experts on other people's motives or experiences, we are only experts on ourselves. In trying to make sense, we often see the actions and words of others' through the lens of our own experiences, but we can never really know what another person is thinking, and we may never be able to make sense of the pain they caused you in the way you want to make sense of it. And doing this will keep you stuck in the pain. In the same way, we can't progress forward and have peace in our life if we see our past mistakes as time wasted. We need to look back and see all the lessons we have learned and how we have grown and changed and that time is never wasted.

Accepting uncertainty may be how you finally find eventually peace about a situation, which can reduce your anxiety and allow you to move on. We observed this in our clinical trial. As the subjects in the experimental group started coming to grips with their issues, and we saw changes in the nonconscious mind reflected in the brain. Throughout the study we saw an increase in the alpha wave activity, which is often referred to as the alpha bridge, because it reflects the "bridging" between the nonconscious mind and the conscious mind. Alpha increases when we choose to tune in to our thoughts, and face and deal with our issues, which means the other brain waves (delta, theta, beta and gamma) are flowing more coherently and the brain is calming down.

People who have been taught to "tune in" to their nonconscious mind to manage their thought life and "detox" and "build" the brain, directing their neuroplasticity on a daily basis, are better able to navigate the ups and downs of life because they have a sense of control, which gives them hope.

This was the trend we observed in the experimental group. The preliminary results of this study suggest that the subjects who used the NEUROCYCLE app daily as part of their mind management strategy were *learning* to identify the cause of their depression and/or anxiety and burnout, and manage their mind on a daily basis (as a lifestyle strategy). They were making their depression and anxiety work for them and not against them. They learnt how to use their *conscious* mind to tune in and connect with the warning signals in their *subconscious* mind, which enabled them to find the thought pattern they wanted to deal with in the *nonconscious* mind. They were processing their thoughts and learning how to reconceptualize them. Through this simple proactive approach to managing their toxic stress and anxiety, they were able to direct the neuroplasticity of their brain in a therapeutic way, which resulted in less depression, less anxiety, and fewer symptoms of burnout. They were on the path to empowerment!

Depression and anxiety are highly correlated with burnout, so we'd expect to see a reduction in anxiety leading to burnout if depression and anxiety are managed. The subjects in the experimental group reported this in their narrative and we observed this trend in the psychological scales. We also saw these positive trends correlating with changes in their neuroendocrine hormones, the stress axis called the Hypothalamic Pituitary Axis (HPA) and in their genes, specifically telomeres (the caps on the ends of chromosomes in the DNA which reflect cellular health), which are all strong indicators of how well toxic stress is being managed.

HOW TO DIRECT OUR BRAIN CHANGE?

True transformation requires mind management strategies to rewire neural pathways. Directing the way your brain changes using the neurocycle (that is using mind management to direct neuroplasticity) changes energy patterns in the brain, changes our blood measures and eventually establishes a new and healthy level of balance in the brain and body. We can methodically use our mind to take advantage of neuroplasticity to rework our neural circuitry, managing and improving a variety of mental and physical states, even if we have very dysfunctional brain networks and physiology from toxic thoughts and trauma!

The path to empowerment is not only attainable, it is within you! Your mental health and well-being do not lie in some pharmacological cure or device. *You* can guide and direct changes in your brain. Your mind is something you can learn to optimize, with my scientific, 5-step mind-management process. These 5 steps, the neurocycle, will not only empower you to push through the pain that may come from the healing work, but also give you a structured scientifically researched plan that works *and* a defined time period for the process, which will further reduce your pain, uncertainty, and make the process more effective and sustainable.

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Will Bulsiewicz, MD | Gastroenterologist and Integrative Medicine

Nick Baptiste | Phlebotomist

Dr. Caroline Leaf is a communication pathologist and cognitive neuroscientist with a Masters and PhD in Communication Pathology and a BSc Logopaedics, specializing in cognitive and metacognitive neuropsychology. Since the early 1980s she has researched the mind-brain connection, the nature of mental health, and the formation of memory. She was one of the first in her field to study how the brain can change (neuroplasticity) with directed mind input. She has helped hundreds of thousands of students and adults learn how to use their mind to detox and grow their brain to succeed in every area of their lives, including school, university, and the workplace.

DR. LEAF
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info@drleaf.com
www.drleaf.com