

Unlocking the POWER of the Chiropractic Adjustment!

Clint Steele, D.C





BRAIN BASED HEALTH SOLUTIONS

FOR PRACTITIONERS

THE BRAIN BASED PRACTICE BLUEPRINT

**At a foundational level what is
it we do as chiropractors?**





**Nature needs no help,
just no interference.**

B. J. Palmer

Nature aka:

Source

Innate

God

Universe

Flow

Universal Intelligence

Spirit

Many more...

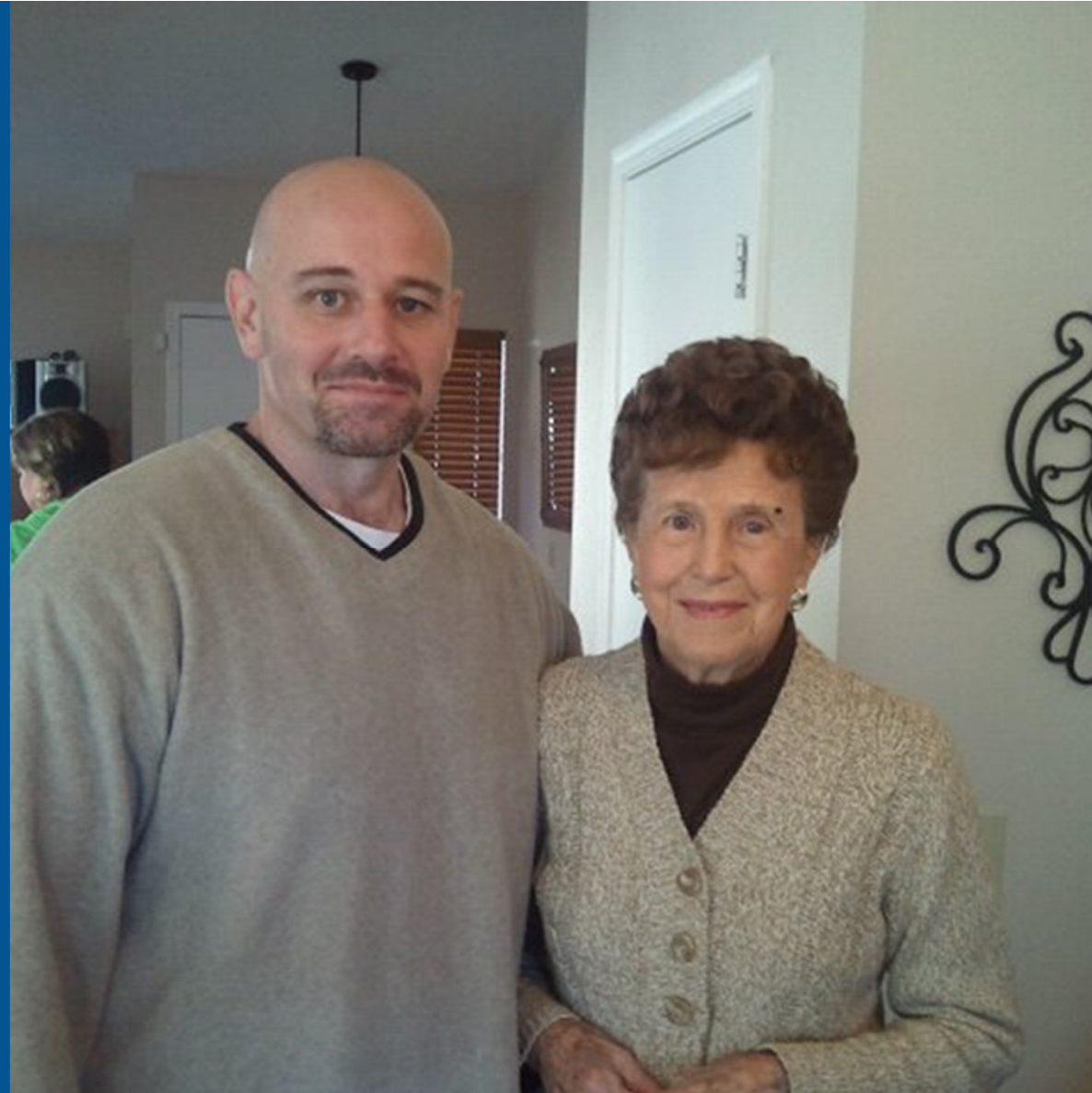
Episode #6
A Day I Will Never Forget

My Mother Molly is suffering from
Lewy Body Dementia at age 66

It gets worse with each passing day.

I decided to document our journey with
a weekly video series to help others
understand more about Dementia.

**My Grandma
Thanksgiving - 2010**



My Grandma - 2014



THIS IS ALICE AT 80 YEARS OLD

Entered my office with anxiety, high blood pressure, and dementia which her MD told her was due to her age and nothing could be done for her.

Multiple times she forgot what she was saying in the middle of a sentence.



ALICE

THIS IS ALICE AT 82.

3 month into care she was MUCH better. At 6 months into care her husband gave me a hug and said “thank you for giving me my wife back!”

On this day she had been to the fair the day prior and that night was going to dinner with her kids.

All this was done by doing the things I am going to share with you today.





**If she had followed her medical
doctors advice, where would she
have been today?**



You know how most people think chiropractic is about neck and back pain and most chiropractors make a living by mostly treating neck and back pain even though chiropractic is about so much more...my mission in this presentation is to help change that!



**Have you every helped
someone reverse
dementia in practice?**





HOW ABOUT ANXIETY

NO MORE ANXIETY MEDS FOR THIS 7-YEAR-OLD

At age 7 Jason's parents noticed Jason was becoming very anxious. He would not get on the school bus, he stopped eating losing 10% of his bodyweight, and he stopped sleeping through the night and more. Anxiety meds were not working and his pediatrician was preparing to send him in for an endoscopy.

That is when his parents brought him to a brain based health solutions office. Once they measured Jason's brain it was determined that he was suffering from Stressed Brain Syndrome. A full brain health care plan was implemented and within 3 weeks Jason was no longer having any issues, he was eating again, gained back 4 lbs and is no longer on anxiety medication all thanks brain based care.

The POWER of a properly functioning brain!

HOW ABOUT COLIC AND TORTICOLLIS

NO MORE COLIC FOR 5 MONTH OLD WESLEY

Wesley was born at 33 weeks and had severe colic so bad that he was not sleeping. His mom was not sleeping either.

Following just 8 weeks of brain based care colic completely resolved and torticollis totally resolved,



HOW ABOUT CHRONIC EAR INFECTIONS SLEEP ISSUE AND WALKING ISSUES

NO MORE OF THESE ISSUES FOR 18 MONTH OLD GEORGIA

Georgia entered the office brought in by her mom for ear infections, severe sleep issues and she had trouble walking so much so her pediatrician was going to put her in braces. Within in just a few weeks of brain based care Georgia's mom noted that her ear infections stopped, her sleep improved and she started walking on her own.





HOW ABOUT CROHN'S DISEASE

NO MORE CROHN'S DISEASE

21 year-old Kayln was referred to Dr. Steele by her mom who cared enough about her to find out if Brain Based Care could help her.

Kayln had been recently diagnosed with Crohn's Disease and she was experiencing ulcers throughout her intestines. She had been given medications and told she would need to be on them for life and that her condition would worsen over time. She was told she would eventually need surgery and parts of her intestines would need to be removed.

Kayln began Brain Based Care immediately. Eight weeks after beginning care she had a re evaluation with Dr. Steele. It was during this re-evaluation that she informed Dr. Steele she had just been reevaluated by her medical doctor as well and that her ulcers were gone and her Crohn's disease was much improved and that her MD could not believe it and he had never seen anything like that improve and improve so quickly.

Since that time Kalyn has gone on to run a marathon and also now competes in physical fitness competitions.

The POWER of the body!



HOW ABOUT STAGE 4 KIDNEY DISEASE?

KIDNEY DISEASE HEALED

Dale started noticing some blood in his urine one day. It obviously concerned him. He immediately called his MD. Following some advanced testing he was diagnosed with stage 4 Kidney disease. He was told that he would need to start dialysis and a kidney transplant soon.

It was at that time Dale did not accept this as his only option.

He decided to start Brain Based Care and started noticed changes in his lab work within just a few months. Now, over 2 years later, Dale's lab work is back to normal and has been given a clean bill of health.



HOW ABOUT FIBROMYALGIA?

FIBROMYALGIA HEALED!

Lori was suffering with severe pain in her neck, shoulders, back and legs. She had been diagnosed with Fibromyalgia. She was being treated with anesthesia shots and anti-inflammatories, which were just masking her pain. Her stress response evaluation revealed a low BrainScore indicating she was suffering from Stressed Brain Syndrome.

After just a few months of brain-based care specific to her brain and nervous system patterns at her Brain Based Health Solutions office, Lori feels awesome and hasn't had a shot or any drugs in over 8 months.

This is the power of a properly functioning brain!



HOW ABOUT DIABETES?

NO MORE DIABETES

Jamie had just been diagnosed with diabetes by her MD and told nothing could be done because it was genetic and both her father and grandfather had it.

When her Brain Based Health Solutions practitioner told her this was not the case and it could be reversed Jamie was all in. Her stress response evaluation revealed a low BrainScore indicating she was suffering from Stressed Brain Syndrome. A specific care plan was instituted and followed based on her specific brain and nervous system patterns and 3 months later her diabetes gone.

This is the power of a properly functioning brain.



HOW ABOUT ALZHEIMER'S DISEASE

DEMENTIA REVERSED!

Lauris entered her Brain Based Health Solutions center having lost 30 lbs in just over a month but not intentionally. She was nauseous and could not keep any food down. In addition, she was starting to lose her memory and had been diagnosed with early onset dementia.

After a full assessment Lauris showed a very low BrainScore indicating she was suffering from Stressed Brain Syndrome. A specific to her brain based care plan was instituted and followed. She quickly gained her weight back and her Montreal Cognitive Assessment had improved immensely all thanks to brain-based care.

This is the power of a properly functioning brain!



**This is the POWER of chiropractic that is
FOCUSED on removing INTERFERENCE...**

THE INTERFERENCE BETWEEN MAN AND GOD!





**When we do this we not only see an improvement in
health but in LIFE!**

Relationships, Careers, Finances, Jobs, Spirituality ...





I am NOT talking about once in a while.

**I am talking about being able to do this
CONSISTENTLY!**





**DISCLAIMER: Not claiming that we can “cure”
any of these conditions BUT..**





What I am claiming is that when we follow the principles of the TRUTH of chiropractic, we will see these things happen CONSISTENTLY





My goal for this presentation is to help each and every one of you LEVEL UP what it is we do. Not only in your minds BUT in your community's minds!





This METHODICAL approach will not only help each one of you see more people, make more money but more importantly MAKE MORE OF AN IMPACT!





**"THE POWER OF THE CHIROPRACTIC
ADJUSTMENT IS NOT IN CHANGING
THE SPINE BUT IN CHANGING THE
MIND BY FIRST CHANGING
THE BRAIN!"**

Dr. Clint Steele



**BRAIN BASED
HEALTH SOLUTIONS**
Improving Lives By Improving Brains

Here is the step-by-step approach:

- 1. Accept them for what they are coming in for.**
- 2. Change their perception of the cause of their health issue to being a BRAIN ISSUE!**
- 3. Develop care plans that lead to an improved brain state.**
- 4. Allow them to get into alignment with innate so the “miracles” can happen via a change of consciousness which is the ultimate removal of interference!**

**At the foundation, the cause
of diseases/illness and so
many more is due to...**



**In fact, I will even be so bold
as to say the cause of 100% of
ALL death is due to...**



**Something DD Palmer spoke of over
100 year ago...**

**What has been proven over and
over again since the early 1900's
(hundreds of thousands of research
articles)**

**What the National Institutes of
Health states is the cause of over
90% of all illness and disease.**

STRESS!!

More specifically the brain's inability to adapt to and recover from stress.

(the inability to move into a state of consciousness in alignment with Innate) (more on this later)



We like to call it

**STRESSED BRAIN
SYNDROME!**

■ **So why as
chiropractors
should we care?**




■ **What body system
is chiropractic
about?**



■ If that is the case and a poorly adapting brain and nervous system is the CAUSE of over 90% of all disease

- **Why are so many chiropractors focused on pain?**
- **Why are most chiropractors new patients coming in for pain?**
- **Why are most patients leaving once their pain is gone?**
- **Why if you ask 100 people what chiropractic is 99 of them will say they take care of neck and back pain?**



**As a Chiropractor
who focuses on the
BRAIN all that
changes!**

**I call it BRAIN BASED
CHIROPRACTIC!**

Lets start with some basic questions!

- **What coordinates EVERY function in the entire body? In your life?**
- **What is the reason for the chiropractic adjustment?**



**Is Your Practice CONGRUENT
With These Answers?**

Which would you rather be...

01. A back doctor

02. A pain doctor

03. A musculoskeletal doctor

04. **A BRAIN AND NERVOUS SYSTEM DOCTOR**

**WHICH ONE DO YOU
THINK YOU ARE
KNOWN AS NOW?**

Hint: What referrals come in
for is what you are known as.


Want to change it?

Really very simple and most
are sooooo close!!!



Who Am I and Why Should You Listen To Me?





**17 years later I wanted OFF
the merry go round!**





1 Year

1 Million **POSITIVE** Acts of **KINDNESS**.

Over 1 Million Lives **CHANGED**.

September 28, 2012 – September 28, 2013





KIRBY®

Dr. Clint's Story

First Practice Pain Based:

12 PVA/ 130 PV A Week On Average...17 years/7000 Patient Files When I Quit I Still Needed MORE NEW PATIENTS!!!! AFTER 17 YEARS!!!! 97% Neck and Back Pain

My Practice Now Brain Based:

PVA of Over 200/At my peak 540 PV A Week. 5 Years Less Than 1000 Patient Files. I Have Stopped Accepting New Patients. 90% something other than neck and back pain.

I didn't do this alone






Tina's Story

When we first met she did not want chiropractic care. She had bad experience and did not want it. Then she heard the TRUTH and started care and changed her life!

Not only did her life change but her families health changed! So as the practice took off we needed help and decided it would be her. At the time she was using her masters degree in higher ed.

She came in and took over networking, community outreach, social media, events etc. and was instrumental in helping us reach more people with the TRUTH!

Tina Steele

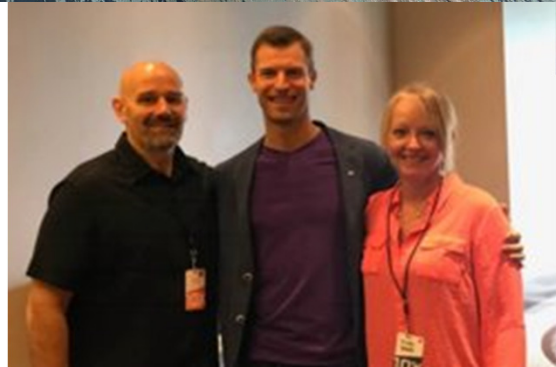
-  **Expert in the area of education based marketing and shifting the paradigm from pain to brain.**
-  **Master's degree in Adult and Higher Education.**
-  **BrainScore Specialist/Trainer**





The **START** of **TRUCHIRO**

TRUCHIRO 



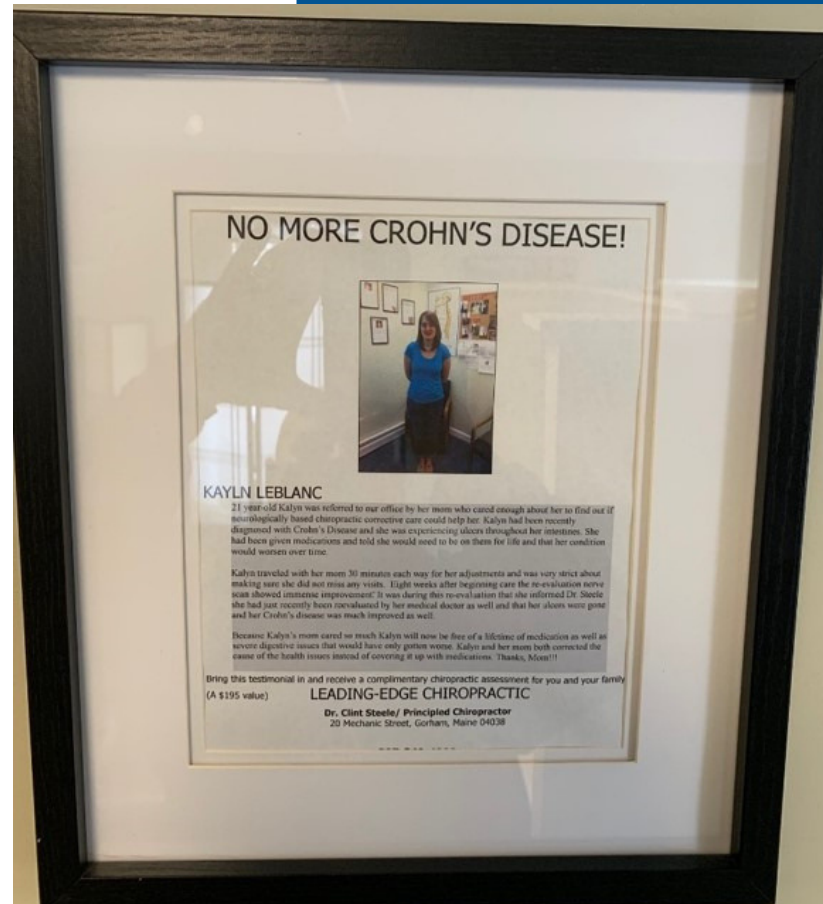
**All this led to the advancement of
our company that we now call...**



**BRAIN BASED
HEALTH SOLUTIONS**

Improving Lives By Improving Brains

My why...





STRESS And DISEASE!

Going back to the early 1900's experts have stated the cause of DISEASE is STRESS

America's #1 Health Problem



The American
Institute of Stress

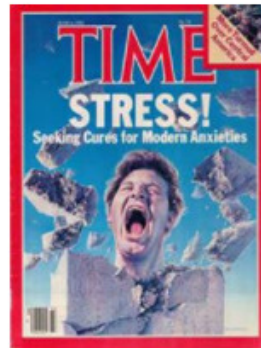
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America's #1 Health Problem



Time magazine's June 6, 1983 cover story called stress "The Epidemic of the Eighties" and referred to it as our leading health problem; there can be little doubt that the situation has progressively worsened since then. Numerous surveys confirm that adult Americans perceive they are under much more stress than a decade or two ago. A 1996 Prevention magazine survey found that almost 75% feel they have "great stress" one day a week with one out of three indicating they feel this way more than twice a week. In the same 1983 survey only 55% said they felt under great stress on a weekly basis. It has been estimated that 75 – 90 percent of all visits to primary care

physicians are for stress related problems.* Job Stress is far and away the leading source of stress for adults but stress levels have also escalated in children, teenagers, college students and the elderly for other reasons, including: increased crime, violence and other threats to personal safety; pernicious peer pressures that lead to substance abuse and other unhealthy life style habits; social isolation and loneliness; the erosion of family and religious values and ties; the loss of other strong sources of social support that are powerful stress busters.

It has been estimated that 75 – 90 percent of all visits to primary care physicians are for stress related problems.

America's #1
Health Problem



America's #1
Health Problem



Stress Management

Stress Management for the Health of It

Organization(s): [Clemson University Cooperative Extension Service](#)



[More Like This](#)



Stress! The idea stirs up many images - rushing to work, watching the stock market drop daily, seeing a hail storm wipe out a newly emerging crop, working long into the night on a project. All of these situations can build up irritation and fatigue that dare not show at an important meeting. Stress in such situations means pressure, conflict, loss of control, and uncertainty. These feelings can lead to a variety of problems for all members of a family. That is why stress has such an ugly ring.

What Is Stress?

Stress is your body's physical and psychological response to anything you perceive as overwhelming. This may be viewed as a result of life's demands, pleasant or unpleasant, and your lack of resources to meet them.

When stressed, your body creates extra energy to protect itself. This additional energy cannot be destroyed. If not used, it creates an imbalance within your system. Somehow the energy must be channeled into responses to regain a balance.

Stress is a natural part of your life. Without some stress you would lose your energy for living. You will thrive on certain amounts; but too much or too little stress will limit your effectiveness. Ideally, you find your optimal level of stress—the balance at which you are most motivated. This home study program is designed to help you do that.

Why Be Concerned About Stress?

Excessive stress in your life interferes with your interpersonal relationships at home, on the job, and socially. It can make you spend your efforts on not being unhappy, rather than on being happy. Stress can waste your vitality and deplete your personal energy resources that could be used for enjoyment. You can become negatively influenced in your attitudes and feelings about yourself more easily. In addition, medical research estimates as much as 90 percent of illness and disease is stress-related. Stress can interfere with your physical functioning and bodily processes. High blood pressure, cardiovascular disease, and heart disease have been linked to stress factors. Other stress-related ailments include ulcers, allergies, asthma, and migraine headaches. Most health professionals agree stress can be a contributing factor in making existing medical problems worse.

Environmental and societal pressures—our competitive, success-oriented way of life—may lead us to potentially hazardous health. According to the United States Center for Disease Control in Atlanta, Georgia, "Eighty-three percent of all deaths for adults between the age of 21 and 65 are related to lifestyle." Unmanaged stress is increasingly a characteristic of many Americans today.

Stress Management

Stress Management for the Health of It

Medical research estimates as much as 90 percent of illness and disease is stress-related. Stress can interfere with your physical functioning and bodily processes. High blood pressure, cardiovascular disease, and heart disease have been linked to stress factors. Other stress-related ailments include ulcers, allergies, asthma, and migraine headaches.

Physiological Effect

What Is The Actual Physiologic Effect Of Stress

When chronic stress is experienced, the body makes more cortisol than it has a chance to release. This is when cortisol and stress can lead to trouble. High levels of cortisol can wear down the brain's ability to function properly.

According to several studies, chronic stress impairs brain function in multiple ways.

Physiological Effect

What Is The Actual Physiologic Effect Of Stress

- 1) Disrupt synapse regulation, resulting in the loss of sociability and the avoidance of interactions with others.
- 2) Stress can kill brain cells and even reduce the size of the brain.
- 3) Chronic stress has a shrinking effect on the prefrontal cortex, the area of the brain responsible for memory and learning

Physiological Effect

While stress can shrink the prefrontal cortex, it can increase the size of the amygdala, which can make the brain more receptive to stress.

“Cortisol is believed to create a domino effect that hard-wires pathways between the hippocampus and amygdala in a way that might create a vicious cycle by creating a brain that becomes predisposed to be in a constant state of fight-or-flight,”

You can even become ADDICTED!


-Psychology Today



Harv Rev Psychiatry. 2015 Jul; 23(4): 263–287

Fear and the Defense Cascade: Clinical Implications and Management

Evolution has endowed all humans with a continuum of innate, hard-wired, automatically activated defense behaviors, termed the defense cascade. **Arousal is the first step in activating the defense cascade;** flight or fight is an active defense response for dealing with threat; freezing is a flight-or-fight response put on hold; tonic immobility and collapsed immobility are responses of last resort to inescapable threat, when active defense responses have failed; and quiescent immobility is a state of quiescence that promotes rest and healing.



Each of these defense reactions has a distinctive neural pattern mediated by a common neural pathway: activation and inhibition of particular functional components in the amygdala, hypothalamus, periaqueductal gray, and sympathetic and vagal nuclei. Unlike animals, which generally are able to restore their standard mode of functioning once the danger is past, humans often are not, and they may find themselves locked into the same, recurring pattern of response tied in with the original danger or trauma. Understanding the signature patterns of these innate responses—the particular components that combine to yield the given pattern of defense—is important for developing treatment interventions. Effective interventions aim to activate or deactivate one or more components of the signature neural pattern, thereby producing a shift in the neural pattern and, with it, in mind-body state. The process of shifting the neural pattern is the necessary first step in unlocking the patient's trauma response, in breaking the cycle of suffering, and in helping the patient to adapt to, and overcome, past trauma.





Amygdala Hijack and the Fight or Flight Response (Verywellmind)

The term "amygdala hijacking" was first used by psychologist Daniel Goleman

Goleman's term aims to recognize that we have an ancient structure in our brain, the amygdala, that is designed to respond swiftly to a threat.

While the amygdala is intended to protect us from danger, it can interfere with our functioning in the modern world where threats are often more subtle in nature.



Amygdala Hijack and the Fight or Flight Response (Verywellmind)

When you see, hear, touch, or taste something, that sensory information first heads to the thalamus, which acts as your brain's relay station. The thalamus then relays that information to the neocortex (the “thinking brain”). From there, it is sent to the amygdala (the “emotional brain”) which produces the appropriate emotional response.

However, when faced with a threatening situation, the thalamus sends sensory information to both the amygdala and the neocortex. If the amygdala senses danger, it makes a split-second decision to initiate the fight-or-flight response before the neocortex has time to overrule it.

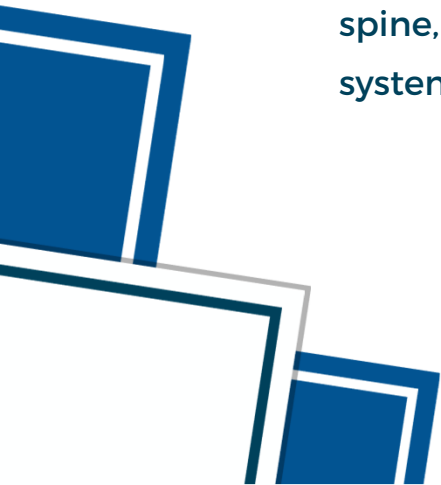
This cascade of events triggers the release of stress hormones, including the hormones epinephrine (also known as adrenaline) and cortisol.

These hormones prepare your body to flee or flight by increasing your heart rate, elevating your blood pressure, and boosting your energy levels, among other things.

The Amygdala, the adrenals, and the wide reach of the human stress response

Australian Spinal Research Foundation

How many times have we heard that the causes of subluxation are “trauma, toxins and stress,” or in other terminology, “physical, chemical or emotional stress”? Truthfully, it is difficult to separate chiropractic from stress if these are the very things that cause subluxation. However, it is one thing to understand how this impacts the movement of the spine, and another thing to take in the broader picture and see how this impacts the whole system.



The Amygdala, the adrenals, and the wide reach of the human stress response

We know that the amygdala is the part of the brain that detects a stressor. It does not, however, distinguish what type of stressor it is: be it real, imagined, mental, emotional, physical, internal or external. It's all just stress. The body then does what it is innately and instinctively programmed to do for the survival of the organism. Therefore, we react the same way to a roaring lion as we do to nerves over public speaking (for example).



The 14 Foundational Premises for the Scientific and Philosophical Validation of the Chiropractic Wellness Paradigm Dr. James Chestnut

In the broad and detailed discussion of the **human stress response**, Chestnut set out the **far-reaching physiological effects of the stress response**. You can read that in his original work, referenced below [1], but here's the scoop. **The stress response kicks off a chain reaction that involves the following** [1, pp. 20]:

- **Increased cortisol**
- **Increased heart rate**
- **Increased vasoconstriction**
- **Increased blood pressure**
- **Increased blood glucose levels**
- **Increased blood lipid levels**
- **Increased blood cholesterol levels (increased LDL: decreased HDL)**
- **Increased clotting factors**
- **Increased protein degradation of muscle and connective tissue**
- **Insulin resistance**



The 14 Foundational Premises for the Scientific and Philosophical Validation of the Chiropractic Wellness Paradigm Dr. James Chestnut. Cont.,

- **Increased feelings of stress, fear, anxiety, and depression**
- **Decreased short term memory, ability to concentrate and learn new material**
- **Decreased serotonin levels; increased noradrenaline levels**
- **Increased sensitivity of sensory systems including those for pain**
- **Decreased cellular immunity**
- **Decreased anabolic hormones like growth hormone and testosterone and luteinizing hormone etc.**
- **Bone loss, muscle fibre type changes.**



The implication is clear:

There is no system of the body that is not somehow impacted by stress physiology – regardless of the kind of stress that kicked it off. What is also clear is that the body is simply not supposed to deal with stress in a chronic fashion. We are made for recuperation time, where the parasympathetic nervous system takes over to restore homeostasis, after stressors. Yet in the modern lifestyle chronic stress is all too common

(NOTE For Later: Two states of consciousness:

1. Sympathetic, Survival, Ego, Worry, Fear, Man, Primal State etc
2. Parasympathetic, Thrival, Healing, Joy, Love, God, Spirit, Flow, Powerful State)

What the public is seeing now!



Stress and its effect

Stress and its effect on blood pressure

Stress and its effect on blood pressure

Published May 12, 2020

Tags: [Coronavirus](#), [Health explained](#), [Heart Health](#)

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When you're stressed, you're likely to feel physical signs in your body. But the one symptom you may not feel could have the greatest impact on your health.

Life can be hectic, and with everything we have to manage, it's normal to sometimes feel stressed out. But that stress can affect our bodies in more ways than we realize.

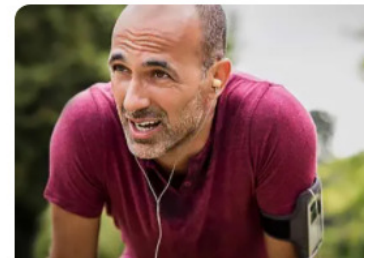
How does stress affect the body?

"Everyone feels stress at different times in their life. But it's when those pressures go unaddressed and build up over time that we're left with chronic stress," explains [Dr. Michael Kayal](#), a cardiologist at [Geisinger Community Medical Center](#), "which can show up in the body as physical symptoms."

Some of these symptoms include:

- Sleep problems
- Depression or anxiety
- Nausea
- Diarrhea
- Headaches
- Heart palpitations
- Body aches

Chronic stress, if left untreated, can also lead to higher blood pressure. "Elevated blood pressure is a common side effect of stress. And because high blood pressure doesn't typically cause symptoms, when it happens, we often have no idea," Dr. Kayal says.



Stress and fertility

Stress puts double whammy on reproductive system, fertility

Stress puts double whammy on reproductive system, fertility



In the reproductive system, the brain's hypothalamus produces GnRH, which stimulates the p...

University of California, Berkeley, researchers have found what they think is a critical and, until now, missing piece of the puzzle about how stress causes sexual dysfunction and infertility.

Scientists know that stress boosts levels of stress hormones - glucocorticoids such as cortisol - that inhibit the body's main sex hormone, gonadotropin releasing hormone (GnRH), and subsequently suppresses sperm count, ovulation and sexual activity.

The new research shows that stress also increases brain levels of a reproductive hormone named gonadotropin-inhibitory hormone, or GnIH, discovered nine years ago in birds and known to be present in humans and other mammals. This small protein hormone, a so-called RFamide-related peptide (RFRP), puts the brakes on reproduction by directly inhibiting GnRH.

The common thread appears to be the glucocorticoid stress hormones, which not only suppress GnRH but boost the suppressor GnIH - a double whammy for the reproductive system.

Stress and IBS

Stress and IBS

📄 Content 🕒 Last Updated: 20 March 2020

"Stress" is a term doctors use to describe normal responses in the body that are needed for health and survival. Understanding the responses of the mind and body when called upon during stress may provide insight to an underlying cause of IBS and open the door to new and more effective treatment.

One way to understand irritable bowel syndrome (IBS) is that there is increased gastrointestinal (GI) response to stress. The stress can be understood as anything that can stimulate the GI tract, including:

- Diet
- Hormonal changes
- Physical activity
- Psychological stress

Stress can arise from a perceived or actual event that disturbs the balance between mind, brain, and body. Stress can occur with or without conscious feelings of anxiety, distress, or anger.

Stress can be acute (short term) or chronic (long acting, more than three months). It can range from daily hassles to life-threatening events.

Chronic stress experienced in early life (less than 18 years of age) has been shown to be associated with an increased prevalence of many medical conditions, including:

- Asthma
- High blood pressure
- Obesity
- IBS

Stressors are any factors that produce stress. There are various types of stressors which may impact IBS symptoms. These may be physical (such as infection, surgery) and/or psychological (such as loss of job, divorce, history of abuse) in origin.

Stress and Immunity

Stress Weakens the Immune System

Stress Weakens the Immune System

Friends, relaxation strengthen health.

What the Research Shows

Stressed out? Lonely or depressed? Don't be surprised if you come down with something. Psychologists in the field of "psychoneuroimmunology" have shown that state of mind affects one's state of health.

In the early 1980s, psychologist Janice Kiecolt-Glaser, PhD, and Immunologist Ronald Glaser, PhD, of the Ohio State University College of Medicine, were intrigued by animal studies that linked stress and infection. From 1982 through 1992, these pioneer researchers studied medical students. Among other things, they found that the students' immunity went down every year under the simple stress of the three-day exam period. Test takers had fewer natural killer cells, which fight tumors and viral infections. They almost stopped producing immunity-boosting gamma interferon and infection-fighting T-cells responded only weakly to test-tube stimulation.

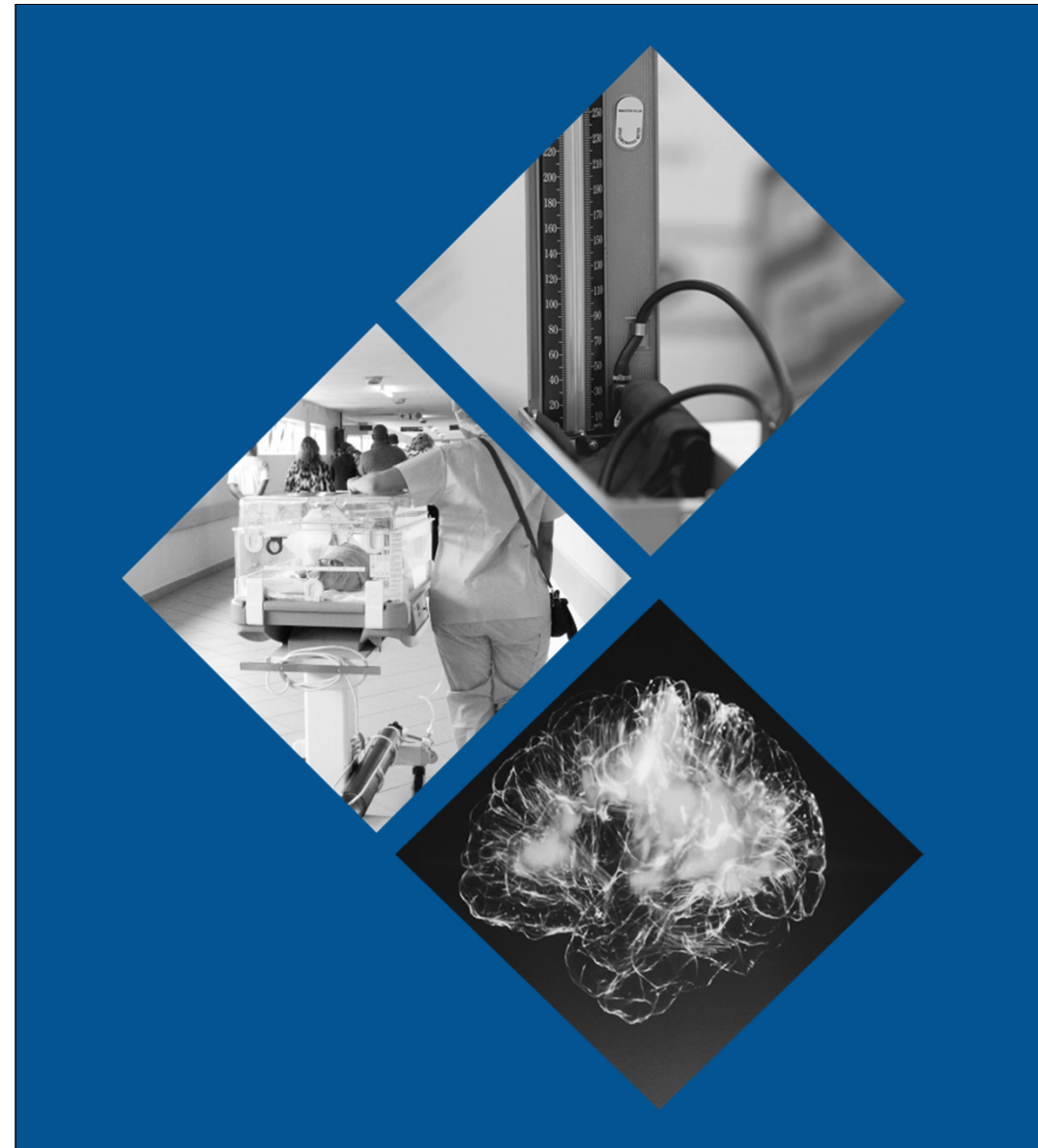
Those findings opened the floodgates of research. By 2004, Suzanne Segerstrom, PhD, of the University of Kentucky, and Gregory Miller, PhD, of the University of British Columbia, had nearly 300 studies on stress and health to review. Their meta-analysis discerned intriguing patterns. Lab studies that stressed people for a few minutes found a burst of one type of "first responder" activity mixed with other signs of weakening. For stress of any significant duration - from a few days to a few months or years, as happens in real life - all aspects of immunity went downhill. Thus long-term or chronic stress, through too much wear and tear, can ravage the immune system.

The meta-analysis also revealed that people who are older or already sick are more prone to stress-related immune changes. For example, a 2002 study by Lyanne McGuire, PhD, of John Hopkins School

**So How Does This All Apply To Patient
Presentation?**

Let's Use Alice As Our Patient.

- High blood pressure.
- She was starting to cry more than usual.
- She was starting to become depressed.
- She started to notice she was becoming very anxious.
- Heavy Head
- Inflamed Arthritis
- And finally...she was starting to lose her memory.



She saw her MD who did the following:

Started her back
on BP meds (
which we had
gotten her off of
previously)

She started her on
anxiety meds

She was
diagnosed with
early stage Alz.
Disease

Lastly she was told, “
there is nothing you
can do about your
memory, it is because
of age and it will only
get worse”.

Let's start with posture, gait, balance...

This is from

<https://www.sciencedirect.com/science/article/abs/pii/S0091302219300354>

Potential confounding factors

Overall, the collected evidence from both human and animal studies indicates that:

- the cerebellum is heavily connected with a variety of areas that mediate stress-related behavioral alterations,
- acute and/or repeated stressor application exerts a myriad of effects on cerebellar integrity and function in non-human experimental animals and humans, and



Frontiers in Neuroendocrinology

Volume 54, July 2019, 100774



Review article

The cerebellum under stress

Josep Moreno-Rius

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<https://doi.org/10.1016/j.yfrne.2019.100774>

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Abstract

Stress-related psychiatric conditions are one of the main causes of disability in developed countries. They account for a large portion of resource investment in stress-related disorders, become chronic, and remain difficult to treat. Research on the neurobehavioral effects of stress reveals how changes in certain brain areas, mediated by a number of neurochemical messengers, markedly alter behavior. The

Why is this important?

From the Journal Of Neuropsychology:

The role of the cerebellum is associated with coordination of voluntary movement, gait, **posture**, speech, and motor functions.

(we also now know it coordinates emotional balance as well)

Here is how they compare:

**Density of Muscle Spindles
Per Gram Of Muscle Tissue**

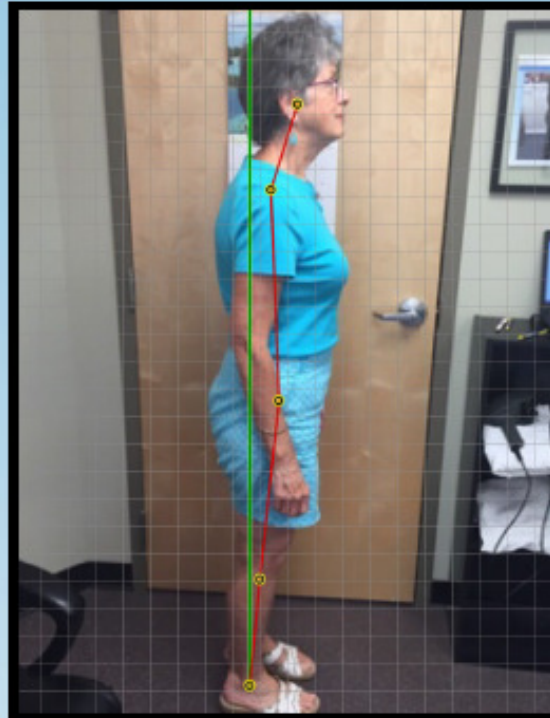
- **Inferior Oblique 242**
- **Superior Oblique 190**
- **Rectus Capitis Posterior Major
98**
- **Rectus Capitis Posterior Minor
98**
- **Lateral Pterygoid 20.3**

- **Opponance Pollicis 17.3**
- **First Lumbrical 16.5**
- **Trapezius 2.2**
- **Latissimus Dorsi 1.4**

Posture...

What do you think I saw on posture?

Your Posture from Side



Your Posture Viewed from the

Your head weighs approximately 12 lb and is shifted 5.72" forward

Based on physics, your head now effectively weighs 83.9 lb instead of 12 lb

Shoulders are shifted 1.70" backward

Hips are shifted 4.02" forward

Knees are shifted 2.19" forward

How about the high blood pressure?

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3694268/>

Exposure to chronic stress has been hypothesized as a risk factor for hypertension...

Chronic Psychosocial Stress and Hypertension


[Tanya M. Spruill](#)

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See other articles in PMC that [cite](#) the published article.

Abstract

Go to: 

Genetic and behavioral factors do not fully explain the development of hypertension, and there is increasing evidence suggesting that psychosocial factors may also play an important role. Exposure to chronic stress has been hypothesized as a risk factor for hypertension, and occupational stress, stressful aspects of the social environment, and low socioeconomic status have each been studied extensively. The study of discrimination is a more recent and rapidly growing area of investigation and may also help to explain the well-known racial disparities in hypertension. Research regarding mechanisms underlying stress effects on hypertension has largely focused on cardiovascular reactivity, but delayed recovery to the pre-stress level is increasingly being evaluated as another possible pathway. Recent findings in each of these areas are reviewed, and directions for future research are discussed.

And it continues...

...delayed recovery to the pre-stress level is increasingly being evaluated as another possible pathway of HBP.

ALLOSTASIS!!!

And lastly

...thinking about stressful events, in addition to experiencing them directly, can delay BP recovery.

How about inflammation (hrt disease) (arthritis etc)

<https://www.everydayhealth.com/wellness/united-states-of-stress/link-between-stress-inflammation>

Stress causes the body to release pro-inflammatory cytokines...as a result of chronic stress inflammation occurs not only in the joints but also in the cardiovascular system and other organ systems.

Chronic Conditions Linked to Stress

- **Rheumatoid Arthritis (RA)** It's understood that inflammation is behind RA, a disease in which the body's immune system attacks joints and tissues, causing stiffness and pain. Over time, inflammation can damage joints and bones, causing abnormalities. Inflammation in RA is partly caused by cytokines, chemicals that are released by stress. So if you're stressed you'll release more of these chemicals, increasing the amount of inflammation in your body. It may also be the case that the inflammation associated with RA can lead to other medical issues, such as heart attack, stroke, or even cancer, according to research published in January 2016 in the journal *Arthritis Research & Therapy*. Researchers concluded that the inflammation that caused the RA, plus further inflammation caused by the RA, may be the culprit.

Emotions...From McGill University in Montreal

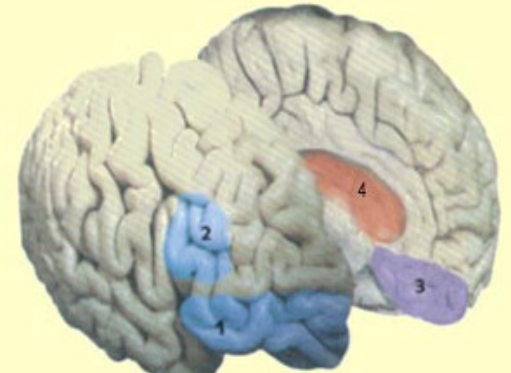
https://thebrain.mcgill.ca/flash/i/i_08/i_08_cr/i_08_cr_dep/i_08_cr_dep.html

The prefrontal cortex is known not only to be involved in emotional responses, but also to have numerous connections with other parts of the brain that are responsible for controlling dopamine, norepinephrine, and serotonin, three neurotransmitters that are important in mood regulation.

PARTS OF THE BRAIN THAT SLOW DOWN OR SPEED UP IN DEPRESSION

Though depression involves **an overall reduction in brain activity**, some parts of the brain are more affected than others. In brain-imaging studies using PET scans, depressed people display abnormally low activity in the **prefrontal cortex**, and more specifically in its lateral, orbitofrontal, and **ventromedial** regions. And the severity of the depression often correlates with the extent of the decline in activity in the prefrontal cortex.

The prefrontal cortex is known not only to be involved in emotional responses, but also to have numerous connections with other parts of the brain that are responsible for controlling dopamine, norepinephrine, and serotonin, three neurotransmitters that are important in mood regulation. More specifically, the **lateral prefrontal cortex** seems to help us choose a course of behaviour by letting us assess the various alternatives mentally. The **orbitofrontal cortex** seems to let us defer certain immediate gratifications and suppress certain



Now...how about memory!

<https://www.annualreviews.org/doi/abs/10.1146/annurev.neuro.22.1.105>

Two forms of structural plasticity are affected by stress: Repeated stress causes atrophy of dendrites in the CA3 region, and both acute and chronic stress suppresses neurogenesis of dentate gyrus granule neurons.

STRESS AND HIPPOCAMPAL PLASTICITY

Annual Review of Neuroscience
Vol. 22:105-122 (Volume publication date March 1999)
<https://doi.org/10.1146/annurev.neuro.22.1.105>

Bruce S. McEwen
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Sections

ABSTRACT
KEY WORDS
INTRODUCTION
STRUCTURAL CHANGES PRODUCED BY HORMONES IN THE HIPPOCAMPUS

Abstract

▪ **Abstract** The hippocampus is a target of stress hormones, and it is an especially sensitive target of gonadal, thyroid, and adrenal hormones, which modulate changes in synapse formation and volume during development and in adult life. Two forms of structural plasticity affect dendrites in the CA3 region, and both acute and chronic stress suppresses neurogenesis of dentate gyrus granule neurons. Acute stress suppresses neurogenesis of dentate gyrus granule neurons by suppressing proliferation of neurogenesis in the dentate gyrus. Chronic stress suppresses neurogenesis of dentate gyrus granule neurons by suppressing proliferation of neurogenesis in the dentate gyrus. Chronic stress also suppresses neurogenesis of dentate gyrus granule neurons by suppressing proliferation of neurogenesis in the dentate gyrus. Chronic stress also suppresses neurogenesis of dentate gyrus granule neurons by suppressing proliferation of neurogenesis in the dentate gyrus.

Stress is a biologically significant factor that...can disturb cognitive processes such as learning and memory, and consequently limit the quality of human life.

Review > [Nat Rev Neurosci. 2002 Jun;3\(6\):453-62. doi: 10.1038/nrn849.](#)

The stressed hippocampus, synaptic plasticity and lost memories

Jeansok J Kim ¹, David M Diamond

Affiliations + expand

PMID: 12042880 DOI: [10.1038/nrn849](#)

Abstract

Stress is a biologically significant factor that, by altering brain cell properties, can disturb cognitive processes such as learning and memory, and consequently limit the quality of human life. Extensive rodent and human research has shown that the hippocampus is not only crucially involved in memory formation, but is also highly sensitive to stress. So, the study of stress-induced cognitive and neurobiological sequelae in animal models might provide valuable insight into the mnemonic



**This also explains
depression and anxiety and
more.**

**Stress SHRINKS the
prefrontal cortex!**

**This also
INCLUDES PAIN!**



**A PAIN PROBLEM IS A
BRAIN PROBLEM!**

A study conducted by Seminowicz et al in 2011 investigated the effect of chronic pain on brain anatomy and whether effective treatment would reverse these changes. They found that in chronic pain patients, there was a decreased cortical thickness in the DLPFC, anterior insula, anterior cingulate cortex and primary somatosensory cortex.[6] The loss of cortical thickness corresponds with a loss of neurons and a slower speed of synapses.

In 2004, Apkarian and colleagues at Northwestern University published their initial findings on patients with chronic back pain.¹ By use of brain scans they determined that chronic pain caused brain shrinkage by as much as 11%—equivalent to the amount of gray matter that is lost in 10-20 years of normal aging. The decrease in volume in the prefrontal cortex and the thalamus of the brain was related to the duration of time spent in pain. Every year of pain appeared to decrease gray matter by 1.3 cubic centimeters.

Malays J Med Sci. 2015 Dec; 22(Spec Issue): 52–61.
Pain in Times of Stress

Stress modulates pain perception, resulting in either stress-induced analgesia or stress-induced hyperalgesia, as reported in both animal and human studies. The responses to stress include neural, endocrine, and behavioural changes, and built-in coping strategies are in place to address stressors. Peculiar to humans are additional factors that modulate pain that are experienced in times of stress, notably psychological factors that potentially influence the directionality of pain perception.

Step 1

Science News

from research organizations

An effective new treatment for chronic back pain targets the nervous system

Date: August 2, 2022

Source: University of New South Wales

Summary: A treatment that trains both the brain and the body has shown important effects on pain and disability, a new study has found.

Share: [!\[\]\(642aa997563f9a325b310230bb5078b7_img.jpg\)](#) [!\[\]\(9bef82f5a53106f2ad06a2de7acf5bcf_img.jpg\)](#) [!\[\]\(7ed4b959e7161d2c60a33aeb43710ff2_img.jpg\)](#) [!\[\]\(9a1c9bf02665d1d8af419e98d46187a2_img.jpg\)](#) [!\[\]\(0eb1c3fb8762ba6f12cea583077849e5_img.jpg\)](#)

WHAT IF...

The results you are getting for improved pain happened BECAUSE YOU WERE IMPROVING BRAIN FUNCTION!

That is in fact exactly what happens...

The 4 stages of PFC Dysregulation

PFC is 90% INHIBITORY

1. Posture 2. ANS 3. Mood 4. Pain

Step 1

Accept them for what they are coming in for.

What are most people seeing chiropractors for?

What are most chiropractors seeing the majority of their patients for?

Step 2

Start of this process is DIFFERENTIATION!

Outside the office but also once they enter the office. (website, signage, social media, networking, referrals, speaking etc)

Office Tour (walls, testimonials, technology etc)

Intake Form

History/Consult leading to the TRUTH (I call it the Fire Alarm Analogy)

Step 2

Connect that dots between not only their brain problem being the cause of their pain problem but their brain problem also the cause of their other health problems!

Begin the process of changing their perception of the cause of their health issues and what it is you do!

Fire Alarm Analogy

Step 2

Another part of this process is YOU understanding that as brain-based chiropractors, we can change the brain through a concept called NEUROPLASTICITY!

NEUROPLASTICITY

“...the physiological changes in the brain that happen as the result of our interactions with our environment. From the time the brain begins to develop in utero until the day we die, the connections among the cells in our brains reorganize in response to our changing needs. This dynamic process allows us to learn from and adapt to different experiences” Dr.Celeste Campbell/Positive Psychology

Cerebral metabolic changes in men after chiropractic spinal manipulation for neck pain.

Altern Ther Health Med 2011
(Nov); 17 (6): 12-17

Takeshi Ogura, DC, PhD; et al...

Conclusion:

The results of this study suggest that CSM affects regional cerebral glucose metabolism related to **sympathetic relaxation** and pain reduction.

Relation To Brain Based Chiropractic Adjustments:

Chiropractic adjustments have an effect on the sympathetic nervous system! Today's society is sympathetic nervous system dominant which effects everything from high blood pressure, anxiety, and memory to infertility, constipation, sleeping issues plus so much more! **CHIROPRACTIC ADJUSTMENTS HAVE A POSITIVE EFFECT ON THE BRAIN!**

**Cervical spine
manipulation alters
sensorimotor integration: A
somatosensory
evoked potential
study**

**Journal of Clinical
Neurophysiology 2007 Feb
HeidiHaavik-
TaylorBernadetteMurphy**

Conclusions Spinal manipulation of dysfunctional cervical joints can lead to transient cortical plastic changes, as demonstrated by attenuation of cortical somatosensory evoked responses. (**No Pain Indicated**)

Relation To Brain Based Chiropractic Adjustments: This study at first glance may not seem like a big deal but what this study proves is that chiropractic adjustments, REGARDLESS OF PAIN, have a positive effect on the brain/nervous system. It does not matter whether or not a person has pain...chiropractic adjustments have a positive effect on the nervous system and therefore the body and should happen regularly, symptoms or not!

Interactions between Pain
and the Motor Cortex:
Insights from Research on
Phantom Limb Pain and
Complex Regional Pain
Syndrome

Physiotherapy Canada
Volume 63 Issue 3, Summer
2011, pp. 305-314

Conclusion: Acute experimental pain has been clearly shown to exert an inhibitory influence over the motor cortex, which can interfere with motor learning capacities. Current evidence also suggests a relationship between chronic pain and motor-cortex reorganization, but it is still unclear whether one causes the other. However, there is growing evidence that interventions aimed at normalizing motor-cortex organization can lead to pain relief.

Demonstration of central conduction time and neuroplastic changes after cervical lordosis rehabilitation in asymptomatic subjects: a randomized, placebo-controlled trial

[nature.com/scientificreports](https://www.nature.com/scientificreports)

These findings indicate restoration of cervical sagittal alignment has a direct influence on the central conduction time in an asymptomatic population. (improved spine function improves brain function and improved brain function leads to improved spine function).

The Modification of Cortical Reorganization and Chronic Pain by Sensory Feedback

Applied Psychophysiology
and Biofeedback
September 2002

We discuss research on phantom limb pain as well as chronic back pain that revealed functional reorganization in both the somatosensory and the motor system in these chronic pain states.

NEUROPLASTICITY

“...the physiological changes in the brain that happen as the result of our interactions with our environment. From the time the brain begins to develop in utero until the day we die, the connections among the cells in our brains reorganize in response to our changing needs. This dynamic process allows us to learn from and adapt to different experiences” Dr.Celeste Campbell/Positive Psychology

NEUROPLASTICITY

It is NEITHER good nor bad, IT JUST IS!

So in order to make the correct plastic changes shouldn't we first KNOW what is going on with their brain to begin with?

Step 2

The last part of this process is **PROVING** to your patient that they have a brain problem. It is one thing to say they have a brain problem but another to **PROVE** it to them!

Step 2

Lead In Assessments!

30-60 second “tests” you can do during your consult to PROVE to them they have a brain problem.

Step 2

Full Assessment/Examination

Once you prove to them in a lead in assessment that they have a brain problem now you actually TEST their brain function to see if it can ADAPT to and RECOVER from STRESS!

Step 2

In order for us to move from a perceived pain only profession to a brain/nervous system profession we have to actually measure the brain and nervous system.

The power of the brain and nervous system is in being able to **ADAPT!**

NOT in a static relaxed state but rather in a dynamic state!

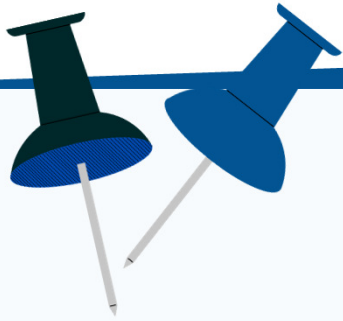
DYNAMIC REAL TIME OBJECTIVE MEASUREMENTS!

(not x-ray, rolling thermal, posture, bilateral scales, motion palpation, rom, sEMG, even static HRV)



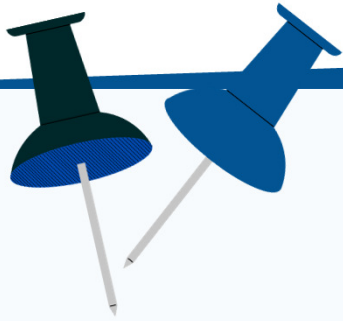
Regarding your examination ask yourself: Does this measure the ability for the brain and nervous system to adapt to and recover from stress in real time?



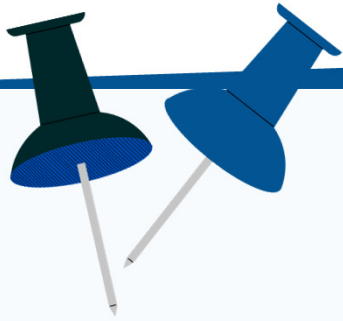


Did something upstream cause this?

Is this actually the CAUSE or is it a downstream effect?

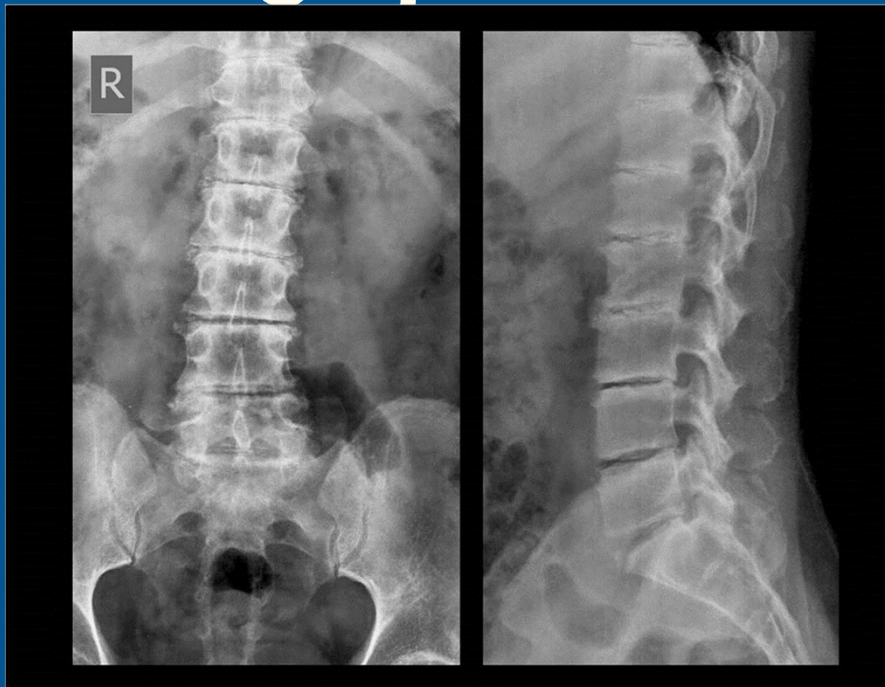


ALLOSTASIS: the ability for the brain and nervous system to MAINTAIN homeostasis during STRESS and then into recovery.

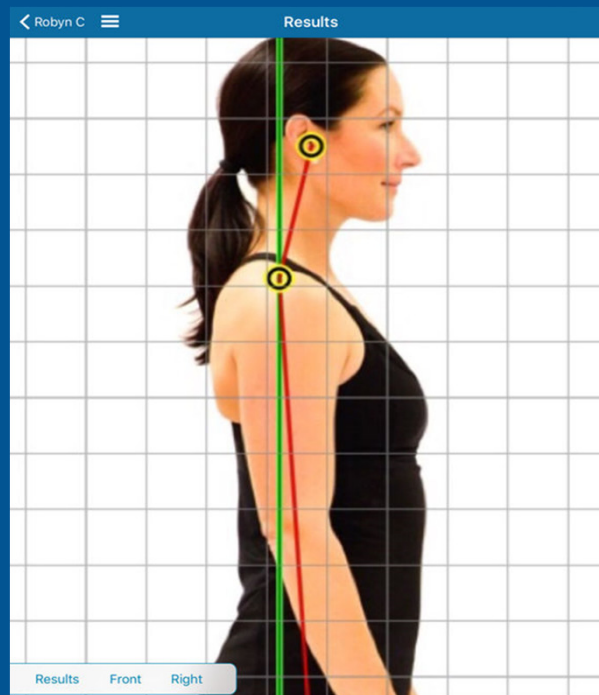


Heart Rate Example: Fire alarm

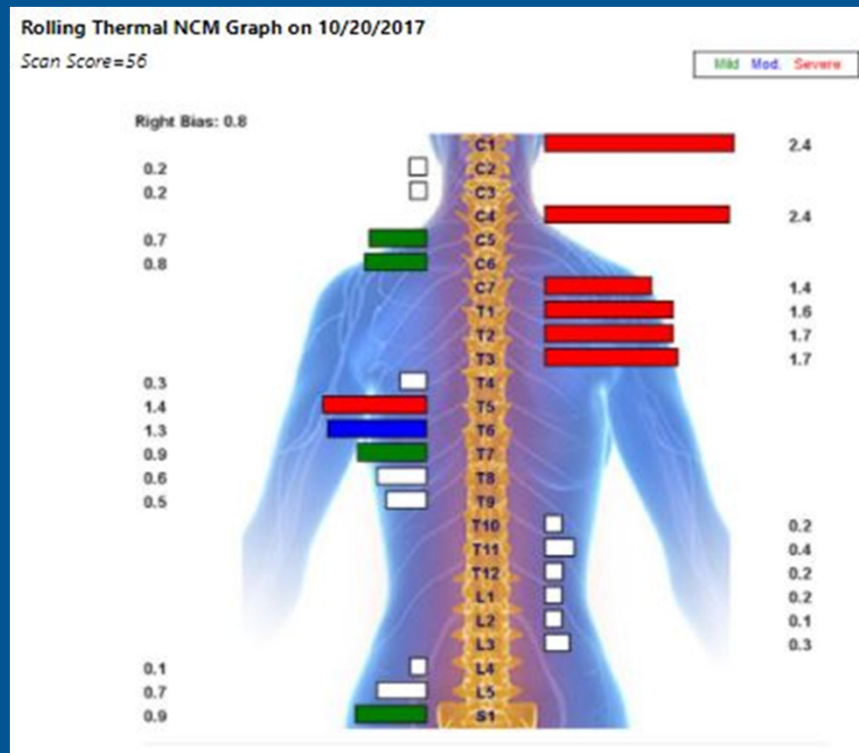
**Does X-Ray measure Allostatics?
Did something upstream cause
this?**



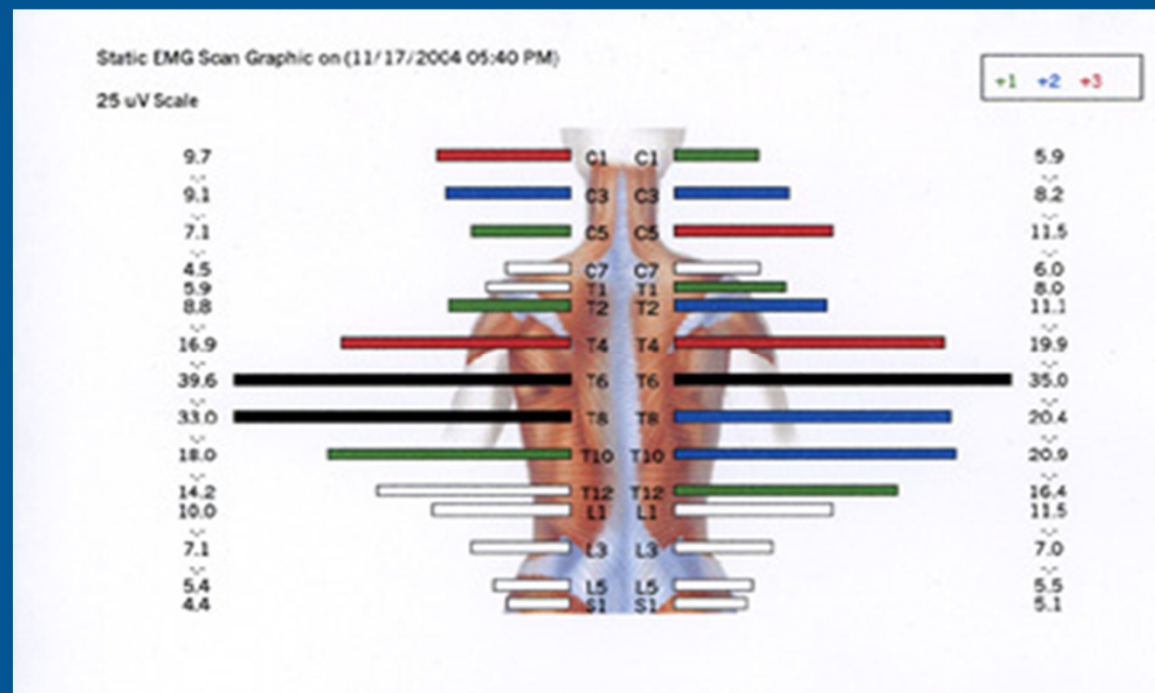
**Does posture measure Allostasis?
Did something upstream cause
this?**



Does rolling thermal measure Allostasis? Did something upstream cause this?



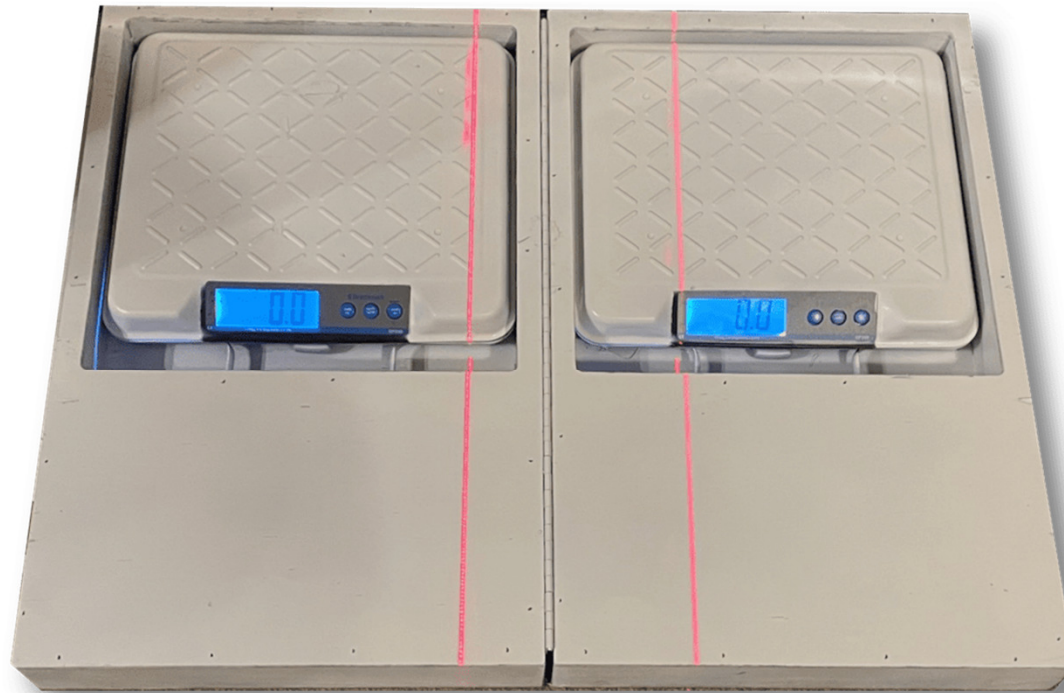
Does static sEMG measure Allostatics? Did something upstream cause this?



**DOES STATIC HRV MEASURE
ALLOSTASIS? Did something
upstream cause this?**

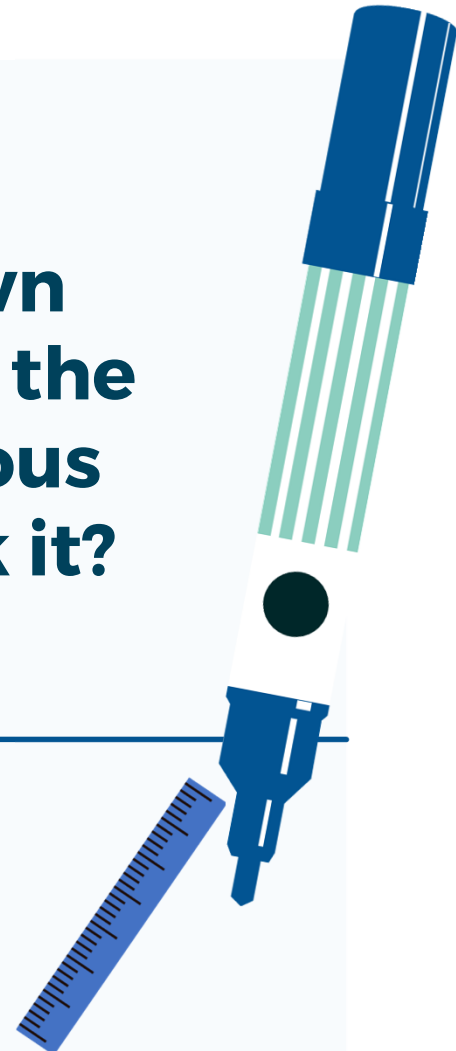


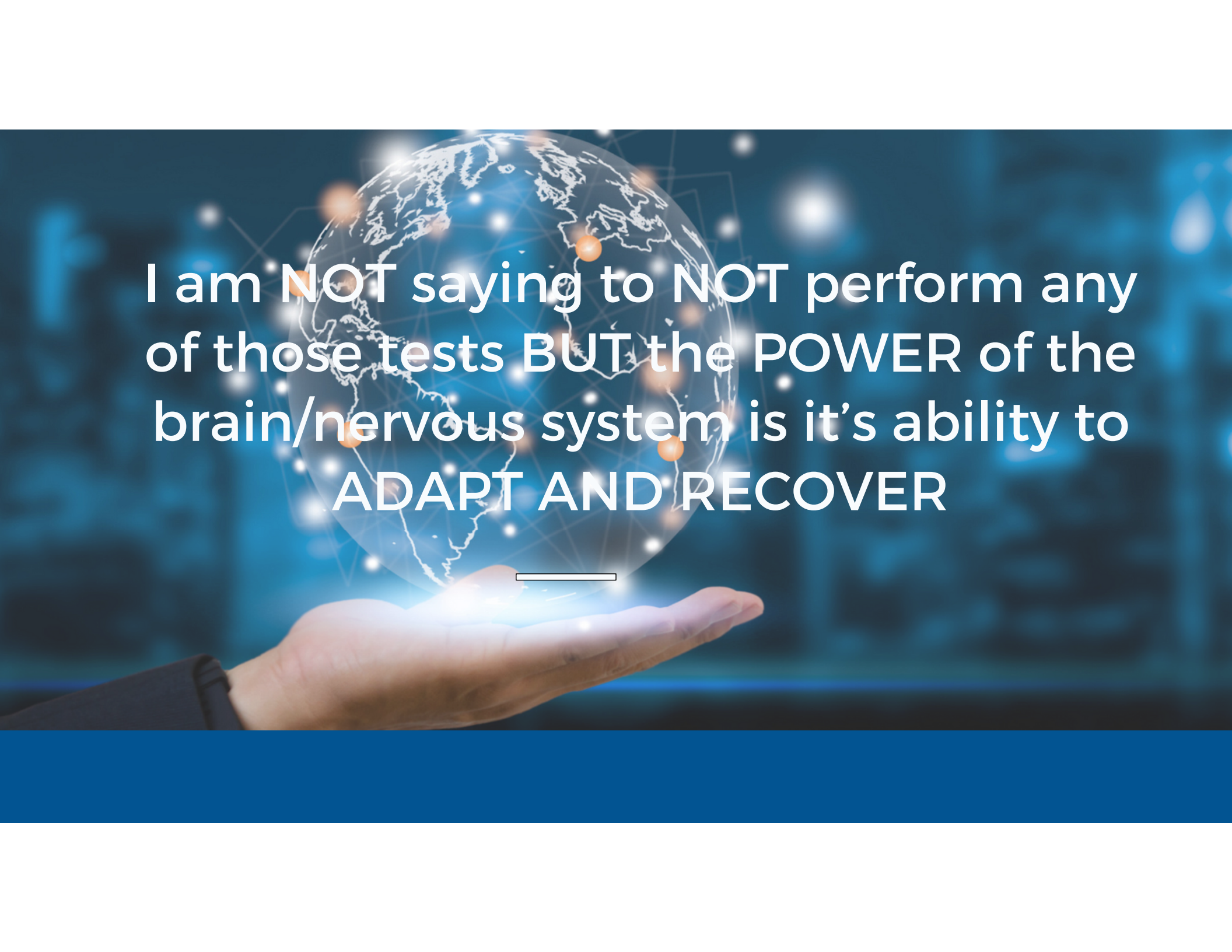
**Do bilateral weight scales measure
Allostasis? Did something upstream cause
this?**





All fine measurements in their own right BUT do they actually measure the adaptability of the brain and nervous system and then allow you to track it?



A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is covered in a network of white lines and dots, with several orange dots highlighting specific locations. The background is a dark blue gradient with bokeh light effects. The text is overlaid on the globe and hand.

I am **NOT** saying to **NOT** perform any of those tests **BUT** the **POWER** of the brain/nervous system is it's ability to **ADAPT AND RECOVER**

A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is covered in a network of white lines and dots, with several orange dots highlighting specific locations. The background is a dark blue gradient with bokeh light effects. The text is centered over the globe.

So let's see what happens when we
measure that ability and then care for
it.

A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is covered in a network of white lines and dots, with several orange dots highlighting specific locations. The background is a dark blue gradient with bokeh light effects. The text is overlaid on the globe and hand.

What I use in my office allows me to
measure 7 areas of physiologic function
DURING 4 DIFFERENT STRESSORS
AND RECOVERY PERIODS.

A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is covered in a network of white lines and dots, with several orange dots highlighting specific locations. The background is a dark blue, blurred cityscape at night. The text is overlaid on the globe.

Brain Function: How does the brain
coordinate EVERY function in the
entire body?

A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is overlaid with a network of white lines and orange dots, representing a global network or data flow. The background is a dark blue gradient with bokeh light effects.

2 Step Process

1. Perceive the environment. (external and internal. i.e. INPUT)
2. Change physiologic function to match the input. (i.e. output)

A hand is shown from the bottom left, holding a glowing, semi-transparent globe. The globe is overlaid with a network of white lines and dots, with several orange dots highlighting specific locations. The background is a dark blue, blurred cityscape at night. The text is overlaid on the globe and background.

Safety Pin Cycle

Old outdated version

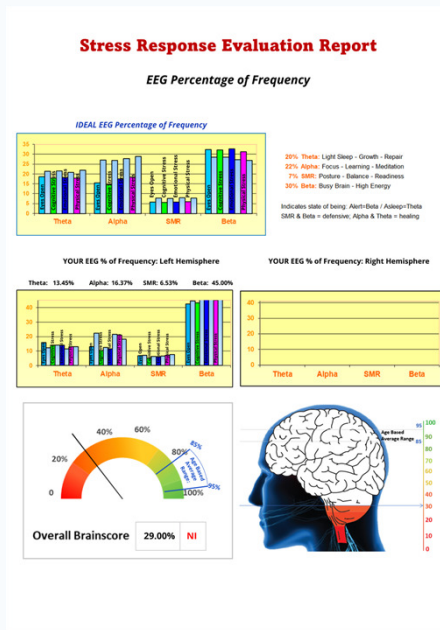
New 21st Century Version

1. How Can We Measure How The Brain Perceives The Environment? BRAIN WAVES!

In my office I use lead(s) that will show me the % power output of each brain wave. The reason for this is because the way your brain perceives the environment will lead to changes in % power output of each brain wave leading ultimately to how it directs or should direct bodily functions.

1. Brain Waves: EEG

Overall Brain Score



Anything lower than this indicates that your brain is not:

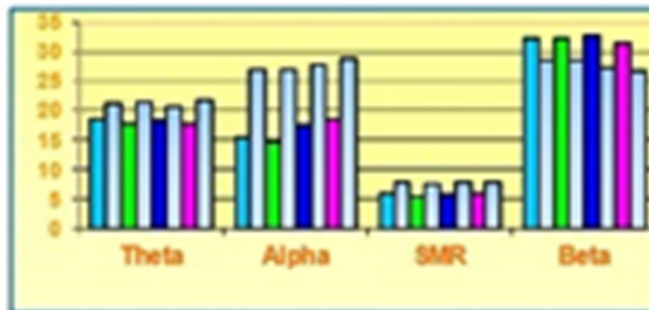
1. Perceiving the environment as it should
2. Communicating that perception to the body properly
3. Combination of both.

Research indicates when this happens the cortex of the brain begins to shrink leading to numerous health issues.

1. Brain Waves: EEG

EEG Percentage of Frequency

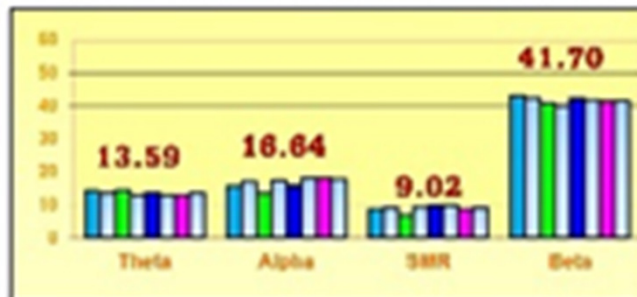
IDEAL EEG Percentage of Frequency



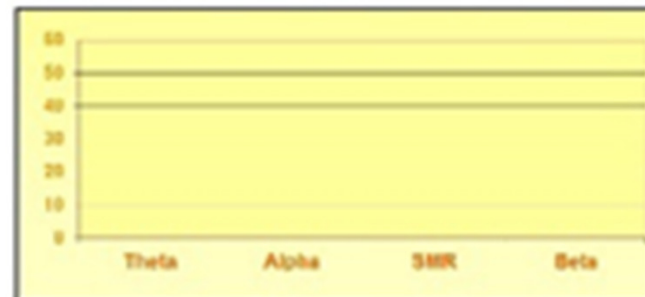
- 20% **Theta**: Light Sleep - Growth - Repair
- 22% **Alpha**: Focus - Learning - Meditation
- 7% **SMR**: Posture - Balance - Readiness
- 30% **Beta**: Busy Brain - High Energy

Indicates state of being: Alert=Beta / Asleep=Theta
 SMR & Beta = defensive; Alpha & Theta = healing

YOUR EEG % of Frequency: Left Hemisphere



YOUR EEG % of Frequency: Right Hemisphere



2. How do we then determine IF the brain is then changing physiologic function to match how the brain perceives the environment?

2. Measure limbic system patterns.

In my office we measure:

1. Dynamic HRV
2. Dynamic Heart Rate
3. Dynamic Resp Rate
4. Dynamic Muscle Tenstion
5. Dynamic Skin Conductance
6. Dynamic Hand Temperature

How do we know though if:

1. The limbic system patterns match the brain's perception of the environment?

2. If the limbic system patterns change when the brain's perception of the environment changes (i.e. brain body communication

The technology I use:

1. Measures brain waves at the same time as limbic system patterns.
2. Measures both during 4 different types of stressors and then a recovery period after each stress.

TRUE Heart Rate Variability

TRUE Heart Rate Variability

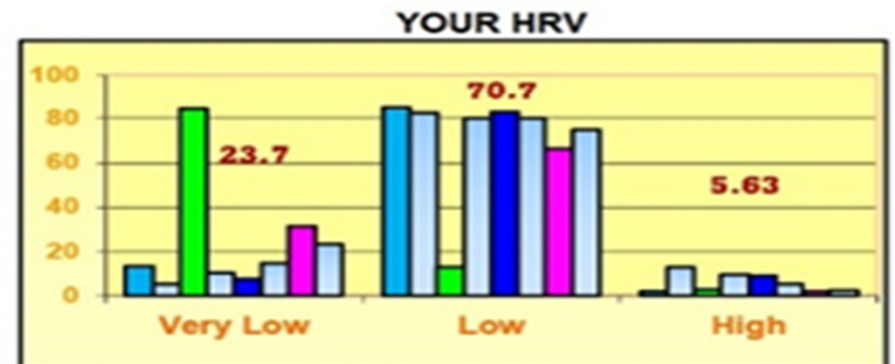
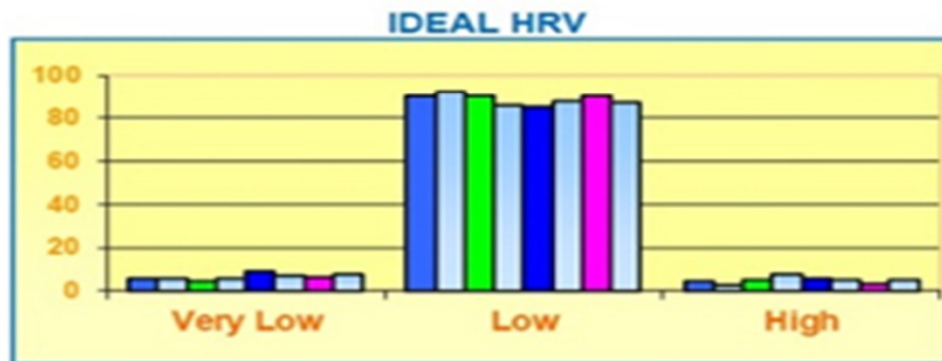
The next measurement we take is what we refer to as TRUE HRV.

I will explain why,

2. TRUE HRV:

- Use frequency domain measurements.
- measure with a respiration belt.
- Measure during stress and recovery.

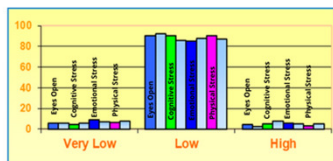
HRV



Stress Response Evaluation Report

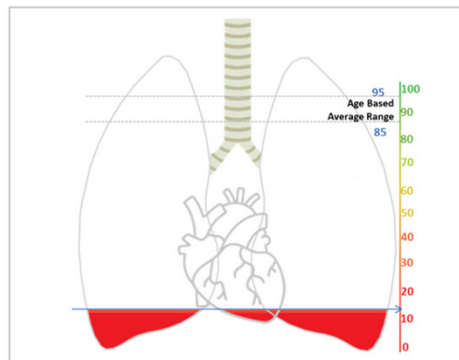
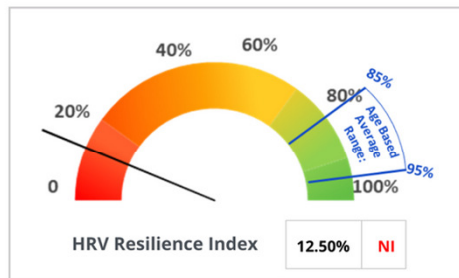
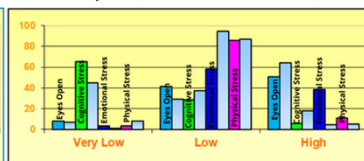
Heart Rate Variability (HRV)

IDEAL HRV



YOUR HRV

Very Low: 18 Low: 57.67 High: 24.70

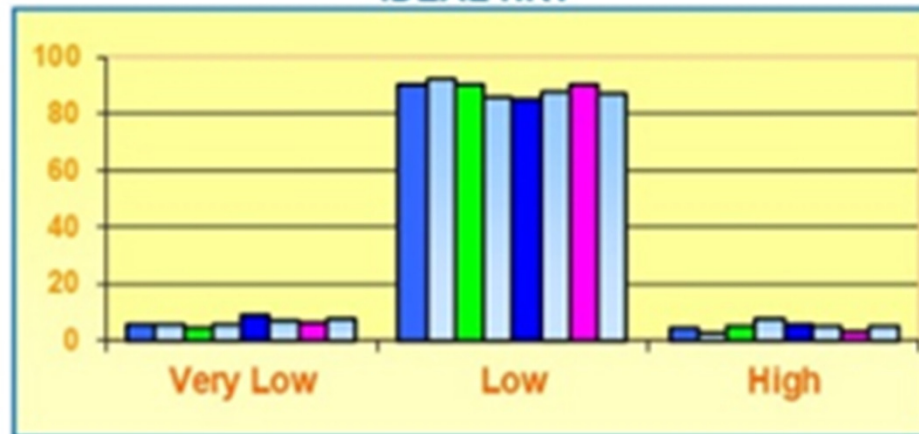


2. TRUE HRV

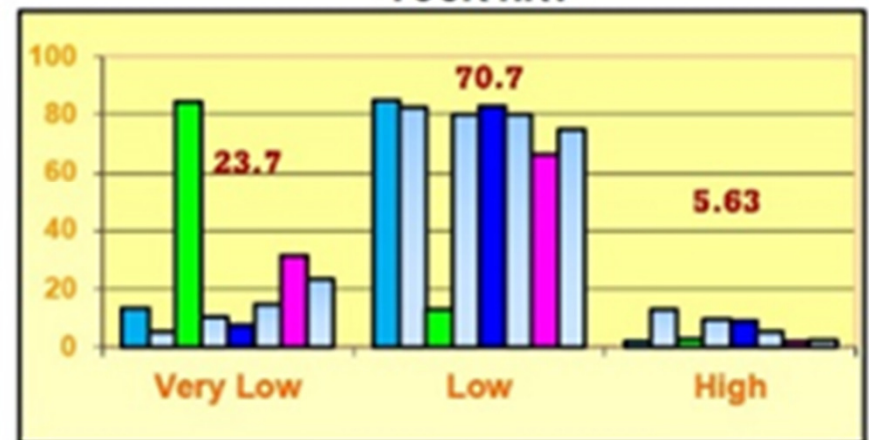
2. Heart Rate Variability

HRV

IDEAL HRV



YOUR HRV



Dynamic Heart Rate

This lead very simply measures heart rate. The instrument will provide not only the average heart rate over the 12-minute assessment but then also the ability for the heart to speed up with stress and slow down during relaxation.

This is very easy for patients to understand by simply asking what should happen to your heart rate when under stress?

Dynamic Heart Rate

What should happen to your heart rate when you close your eyes and relax. We all know this. What happens however in about 50-60% of patients is their heartbeat speeds up when they are closing their eyes to relax. This is a BIG problem and patients know this!

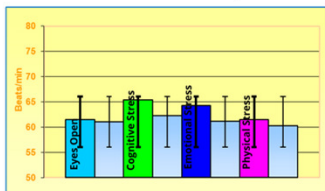
Now you can relate their brain's inability to coordinate their heart beat to not being able to coordinate their other functions related to their symptoms/illness.

Stress Response Evaluation Report

Heart Rate

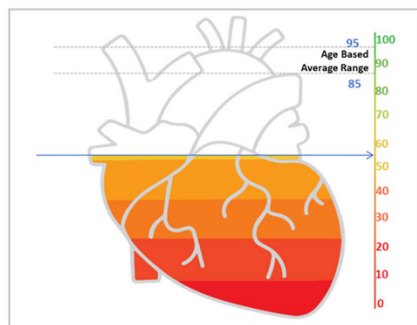
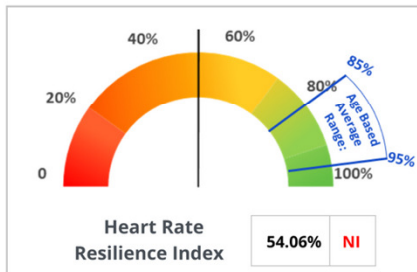
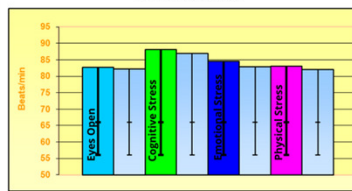
IDEAL Heart Rate

Ideal rates should be 56 to 66 beats per minute.



YOUR Heart Rate

Heart Rate: 84.1

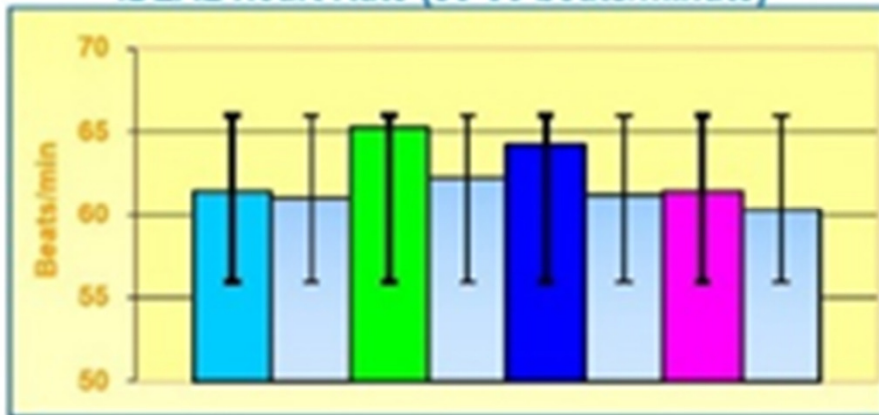


3. Dynamic Heart Rate

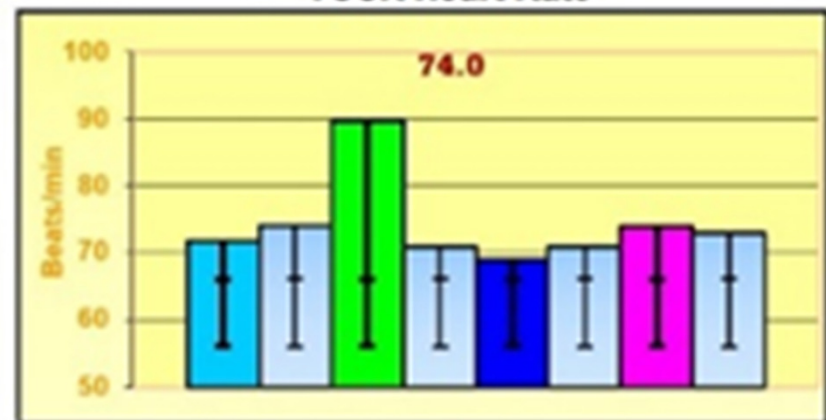
3. Dynamic Heart Rate

Heart Rate

IDEAL Heart Rate (56-66 beats/minute)



YOUR Heart Rate



Dynamic Respiration Rate

This lead very simply measures respiration rate. The instrument will provide not only the average respiration rate over the 12-minute assessment but then also the breathing rate to speed up with stress and slow down during relaxation.

This is very easy for patients to understand by simply asking what should happen to your breathing rate when under stress?

Dynamic Respiration Rate

What should happen to your breathing rate when you close your eyes and relax. We all know this. What happens however in about 50-60% of patients is their breathing rate speeds up when they are closing their eyes to relax. This is a BIG problem and patients know this!

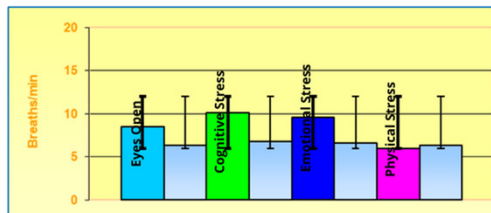
Now you can relate their brain's inability to coordinate their breathing rate to not being able to coordinate their other functions related to their symptoms/illness.

Stress Response Evaluation Report

Respiration Rate

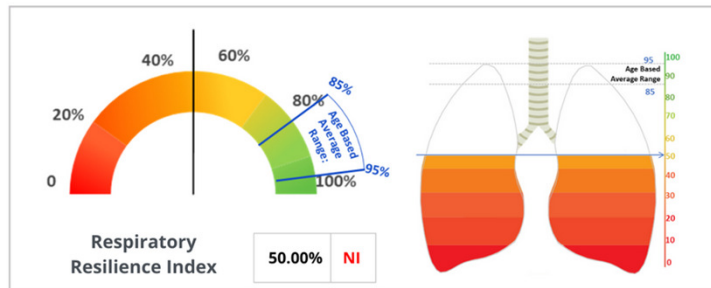
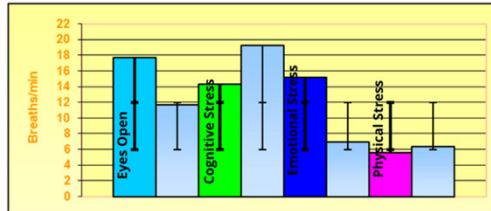
IDEAL Respiration Rate

Normal respiration rate is 6 to 12 breaths a minute.



YOUR Respiration Rate

Respiration Rate 12.1

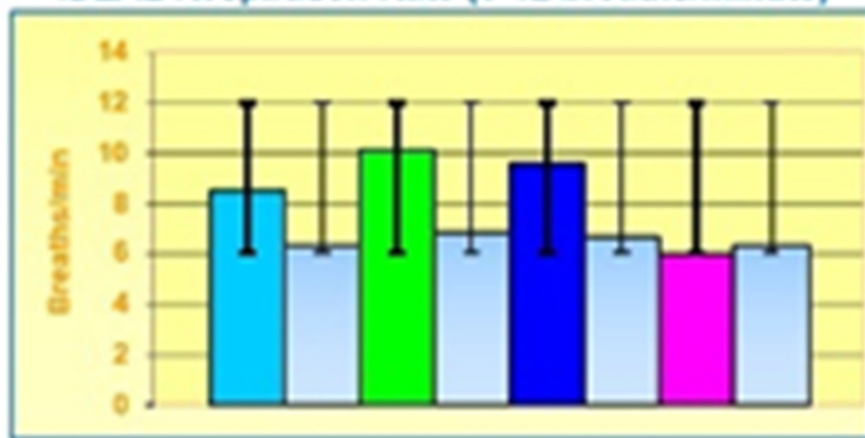


4. Dynamic Respiration Rate

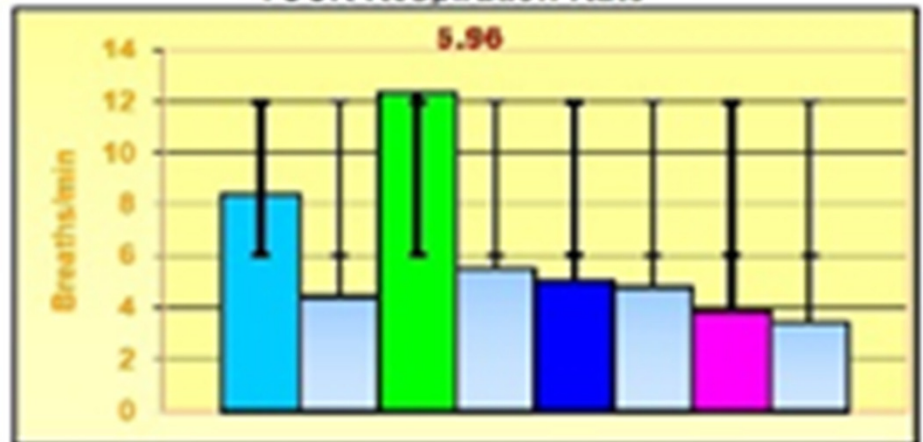
4. Dynamic Respiration Rate

Respiration Rate

IDEAL Respiration Rate (6-12 breaths/minute)



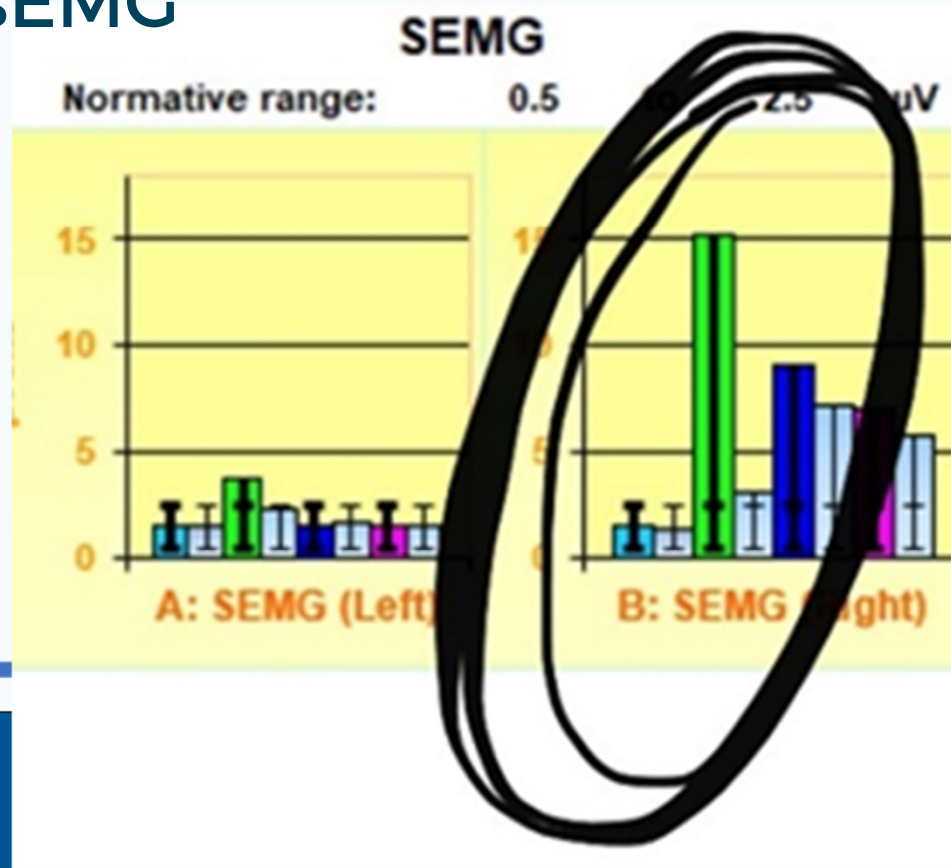
YOUR Respiration Rate



Dynamic sEMG

Muscle tension. Everyone knows your muscles should tense up during stress and should relax when the stress goes away. Question is do they? In this test we place the leads on each trap. The reason for this is the trapezius muscle is one of the tensest muscles when a person is under stress. In times when the brain perceives a stress it automatically raises the shoulders to try to help protect the neck and head areas.

5. Dynamic sEMG



Dynamic Hand Temperature

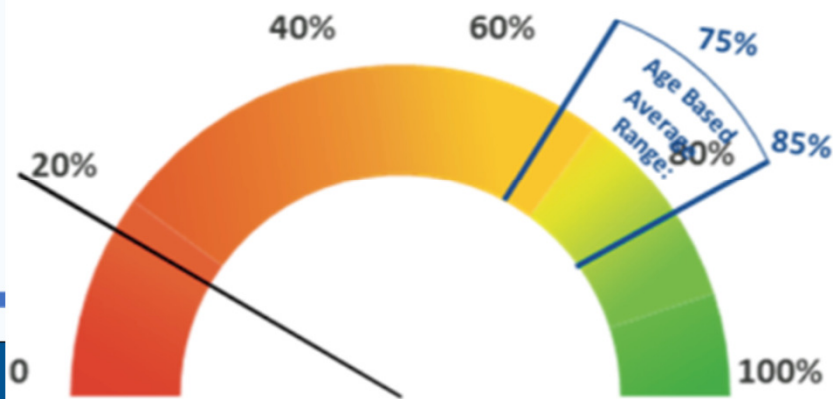
This lead measures hand temperature. When your brain moves into survival mode it will redirect blood flow to your vital organs and big muscles. This means less blood will flow to your extremities, in this case your fingers. This means your hand temperature will drop. Once the stress goes away the blood will now return to your fingers and hand temperature will go back up.

6. Dynamic Hand Temperature

Temperature Resilience Index

16.67%

NI

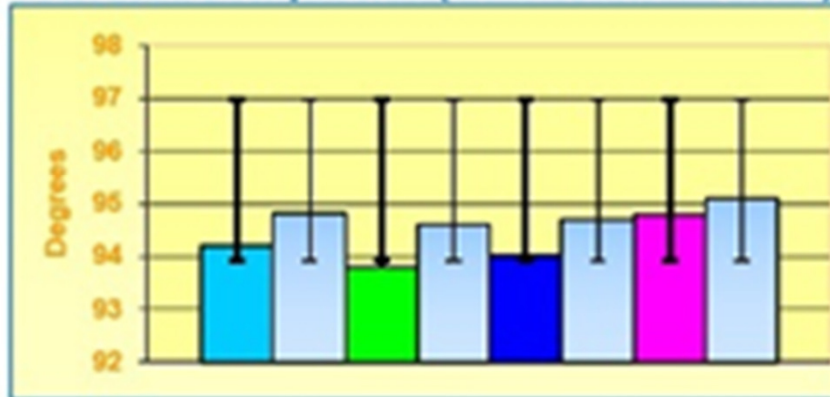


Temperature Resilience Index

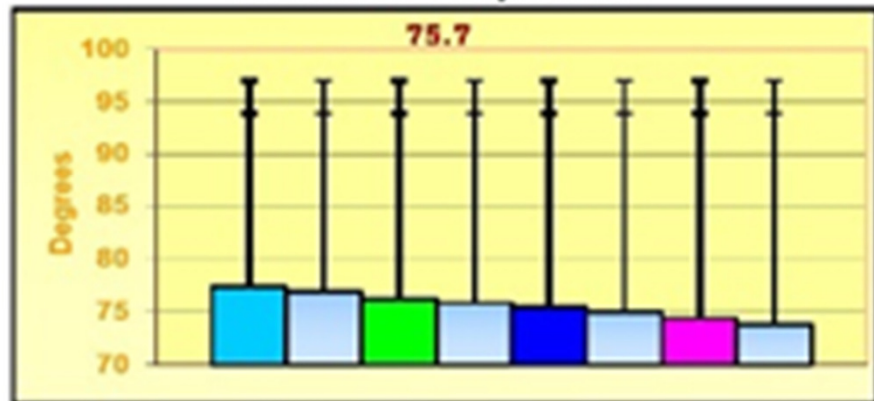
6. Dynamic Hand Temperature

Hand Temperature

IDEAL Hand Temperature (94°-97°F/34.4° – 36.1°C)



YOUR Hand Temperature



Dynamic Skin Conductance (GSR)

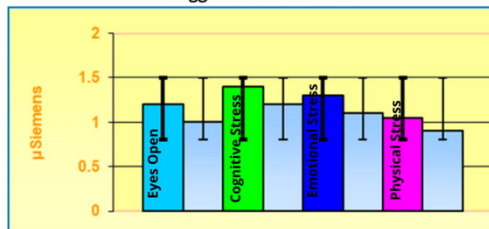
This is the measure of moisture on the skin and is a very sensitive indicator of the adaptability of the brain and nervous system when it comes to stress. When a person is under stress they should produce more moisture on the skin. This allows for gripping to be able to survive an emergency situation. When the stress is gone the skin should become a little dryer.

Stress Response Evaluation Report

Skin Conductance

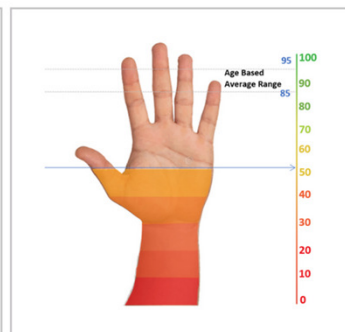
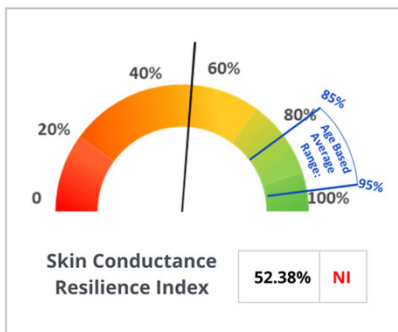
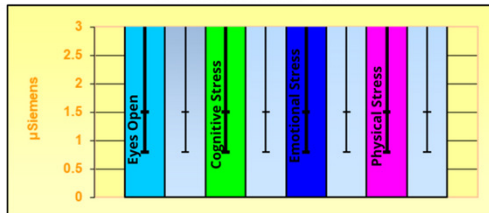
IDEAL Skin Conductance

Normal skin conductance is 0.8 to 1.5. Readings below 0.5 (dry) suggest chronic stress.



YOUR Skin Conductance

Skin Conductance: 6.6

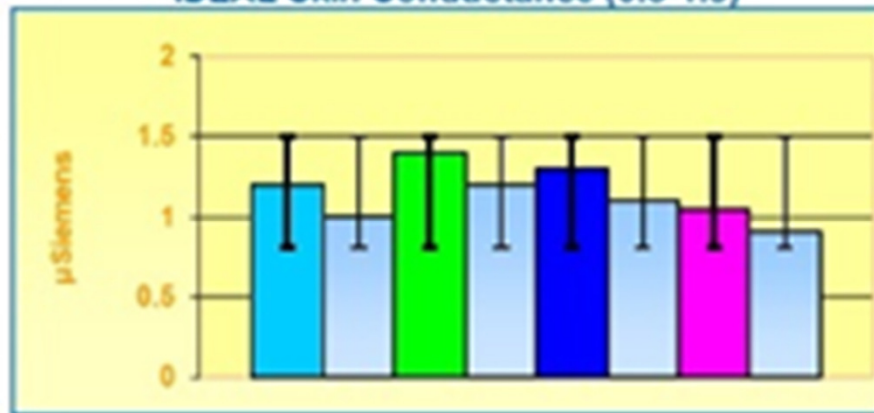


7. Dynamic Skin Conductance

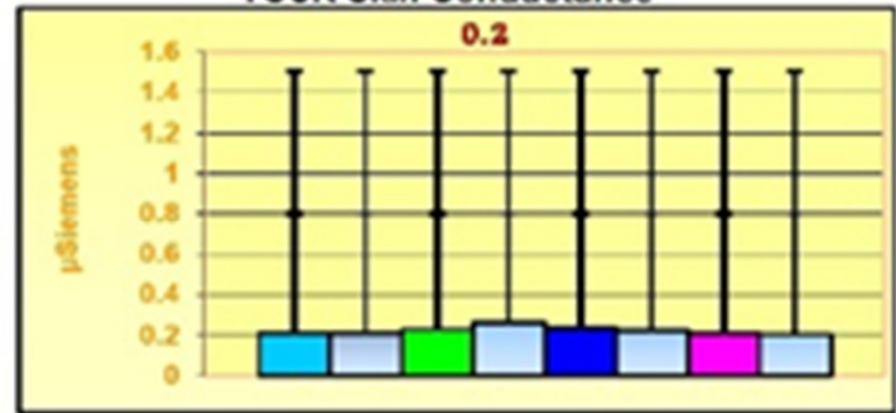
7. Dynamic Skin Conductance (GSR)

Skin Conductance

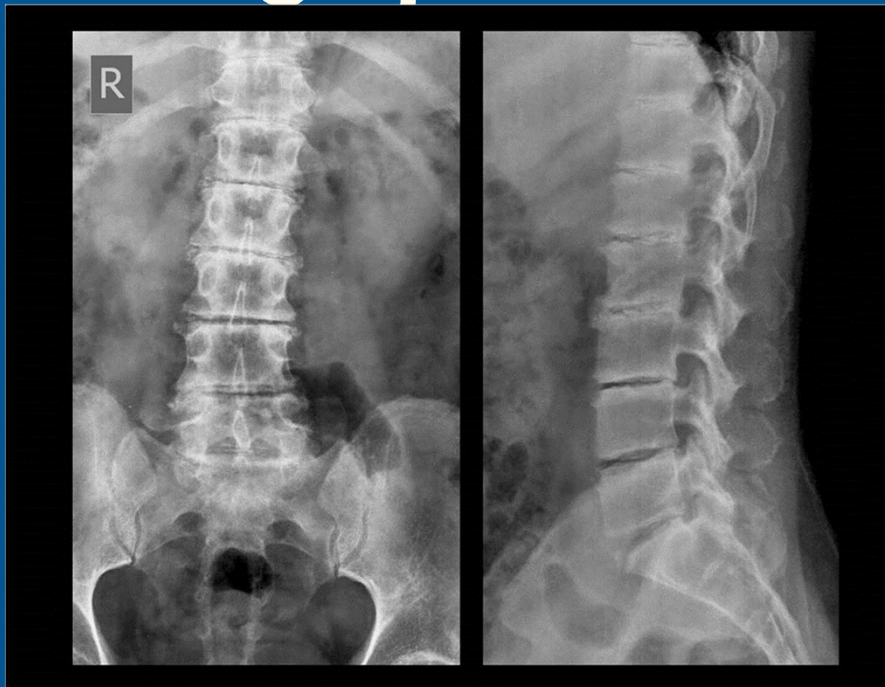
IDEAL Skin Conductance (0.8-1.5)



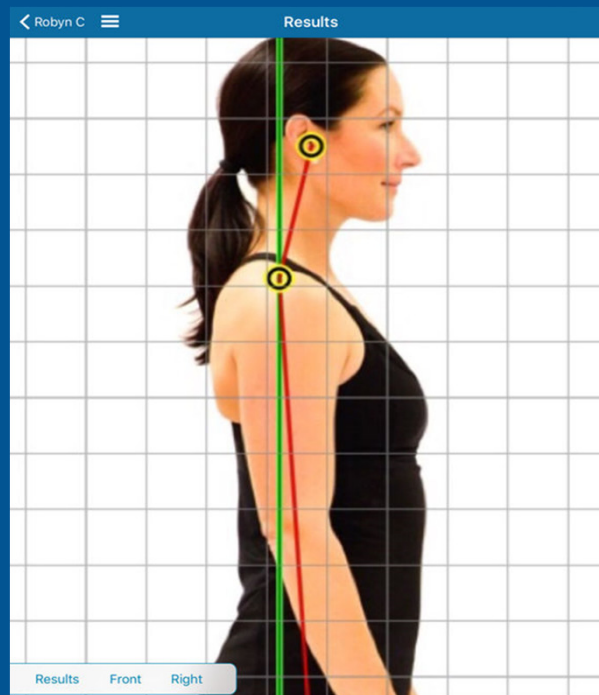
YOUR Skin Conductance



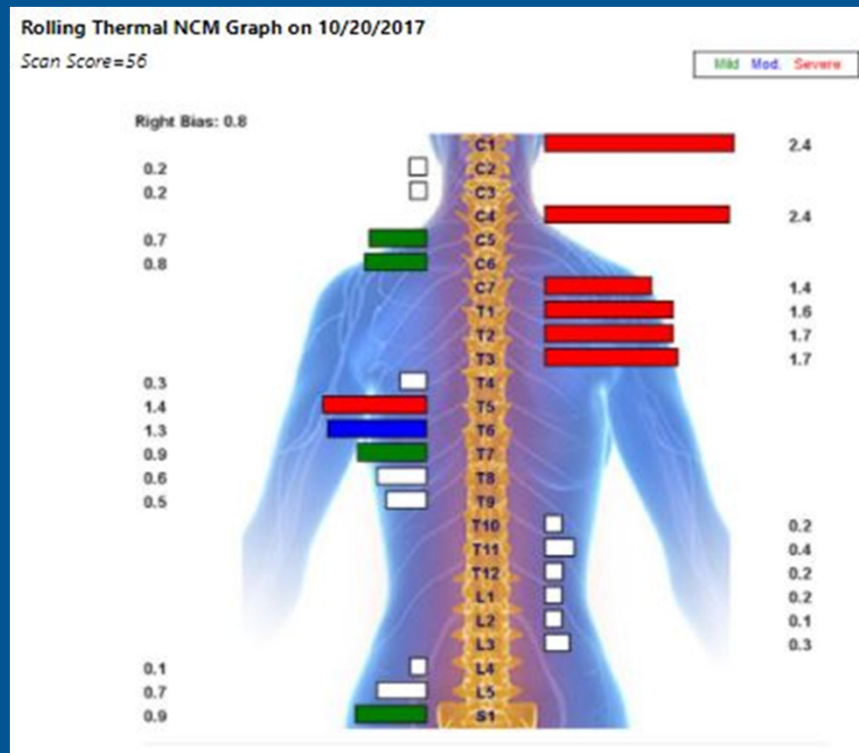
**Does X-Ray measure Allostatics?
Did something upstream cause
this?**



**Does posture measure Allostasis?
Did something upstream cause
this?**



Does rolling thermal measure Allostasis? Did something upstream cause this?



Step 3

Now we know HOW the brain is adapting to and recovering from stress leading to me to develop **The CORRECT Care Plan Based On Each Patients Specific Brain And Nervous System Patterns To Reverse Stressed Brain Syndrome and then Track the Progress**

4 Types

Overaroused/Underaroused

Unstable/Exhausted

(Harvard 2005)

Determines:

- 1) Type and Intensity of Adjustment**
- 2) Frequency**
- 3) Length of Care Plan (min 6 months)**
- 4) Brain Based Therapy**
- 5) Lifestyle changes**

THE TYPE OF ADJUSTMENT DETERMINES MOVEMENT OF BRAIN WAVE PATTERNS.

- Some adjustments increase beta and decrease theta.
- Some adjustments increase theta and decrease beta.



As I was doing some research for a training video, I came across this definition of Beta Waves.

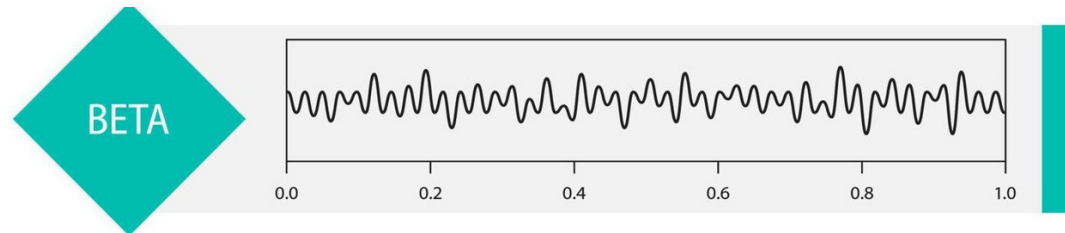
PLEASE PLEASE PLEASE understand that a chiropractic adjustment can either increase beta waves or decrease beta waves based on the type of chiropractic adjustment that is given! We have proven this over and over again by measuring brain waves in REAL time during an adjustment by using the NeuroInfiniti in an open session.



Beta Waves

Beta waves are high-frequency, low-amplitude brain waves that are commonly observed in an awoken state. They are involved in conscious thought and logical thinking and tend to have a stimulating effect. Having the right amount of beta waves allows us to focus. Prominence of this wave causes anxiety, high arousal, an inability to relax, and stress, whereas its suppression can lead to ADHD, daydreaming, depression, and poor cognition. In optimal conditions beta waves help with conscious focus, memory, and problem solving.


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Think about this next time you give a chiropractic adjustment?

**Do I know what is going on with this person's brain waves
AND am I performing the right type of adjustment that will
move these brain waves in the right direction?**





**First and most important in that plan is
the: CHIROPRACTIC ADJUSTMENT!
MUST be the correct type of adjustment based on
their brain type!
VERY IMPORTANT!**



Second: Brain Based Therapy In Office You choose.

- Vagus nerve stimulator
- Brain Wave Entrainment
- Biofeedback
- Neurofeedback
- Specific Brain Based Physical Exercise
- Balance Work
- Table Tennis
- More...



Third: Lifestyle changes

All Under Your Direction

- Specific exercise suited to her brain type! NOT high intensity.
- Calming exercise that teaches her to breath properly and also stretch: Yoga and QiGong
- Postural corrective exercise: Neck/Chest/Upper Back
- Mindset Training : “ Get her OUT of her head”
- Reduce chemical stress by changing her diet
- Water Intake
- Sleep patterns
- Supplements (Lq Mg, Vit D, Ash) Your Choice If Any



Fourth: Re-evaluate Using Measurable Objective Findings

- 6 Weeks Neuro Dynamic HRV which measures HRV, HR, RR, SC and Temp All Under Stress And Recovery
- 3/6 Months Another Full Brain Based Assessment
- Regularly Measure Pulse Ox, Balance, Agility, More
- Make Changes As Needed

Results For Alice!

Within 6 months,

- Memory Much Improved
- Anxiety gone
- Blood pressure normal
- Depression gone
- Joint pain diminished
- Heaviness of head gone

Ted says to me: Thank YOU I feel like I have my wife back!

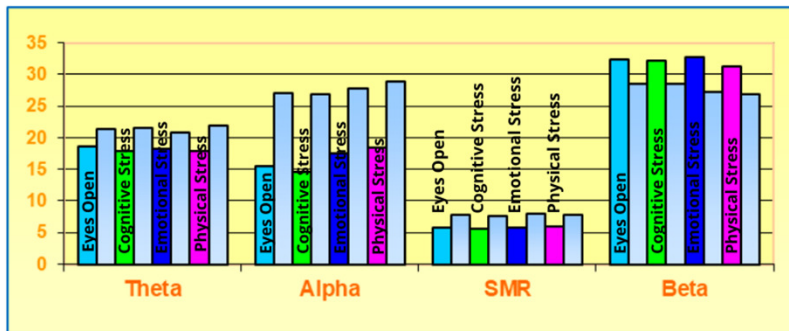


STRESS RESPONSE EVALUATION REPORT

Early Onset Parkinson's (race care driver)

EEG Percentage of Frequency

IDEAL EEG Percentage of Frequency

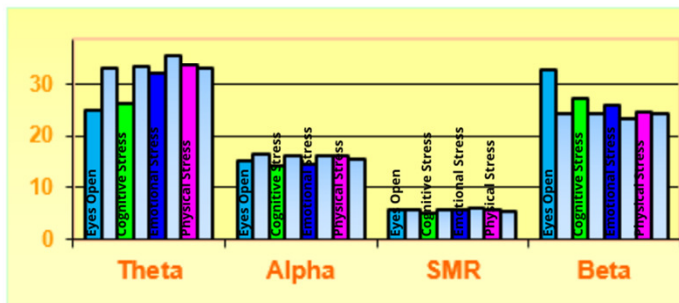


- 20% **Theta**: Light Sleep - Growth - Repair
- 22% **Alpha**: Focus - Learning - Meditation
- 7% **SMR**: Posture - Balance - Readiness
- 30% **Beta**: Busy Brain - High Energy

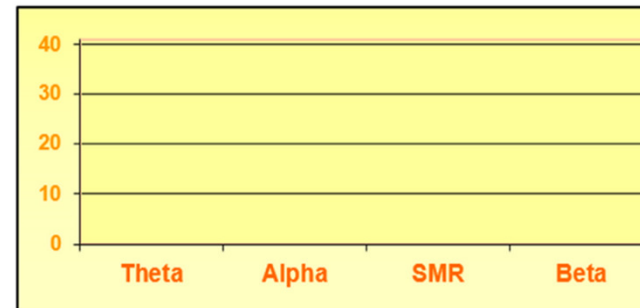
Indicates state of being: Alert=Beta / Asleep=Theta
SMR & Beta = defensive; Alpha & Theta = healing

YOUR EEG % of Frequency: Left Hemisphere

Theta: 31.63% Alpha:15.60% SMR: 5.57% Beta: 25.90%

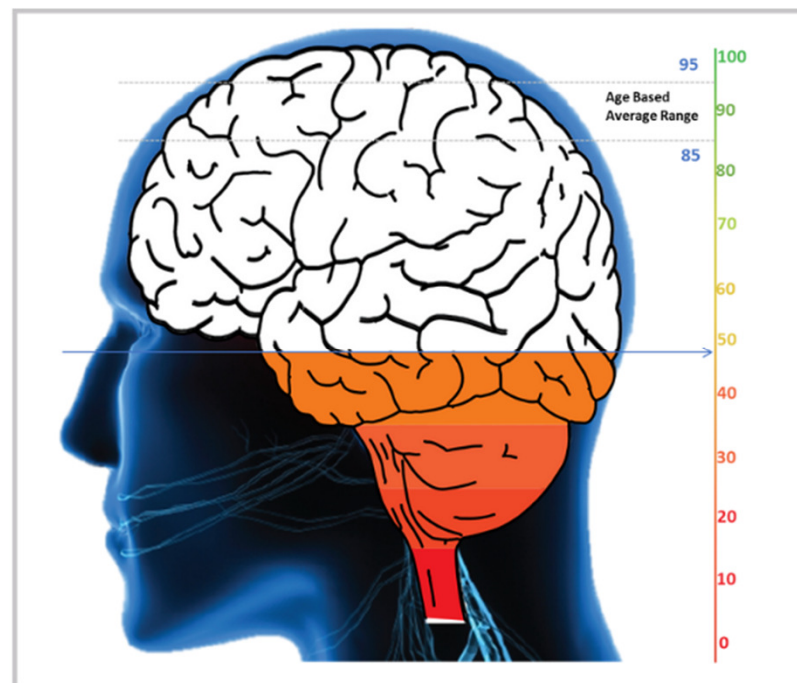
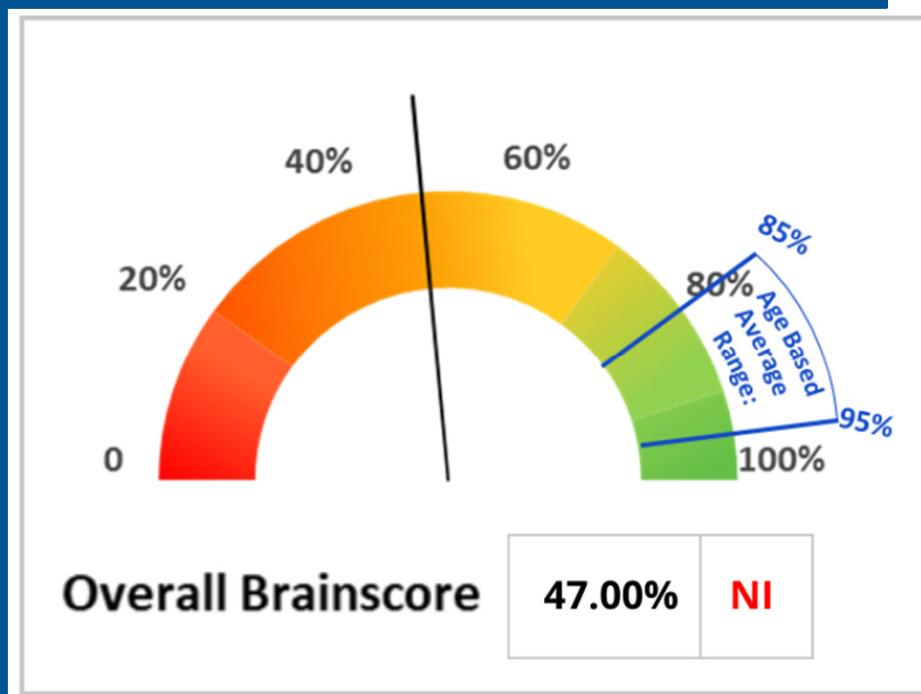


YOUR EEG % of Frequency: Right Hemisphere



Early Onset Parkinson's (race care driver)

EEG Percentage of Frequency

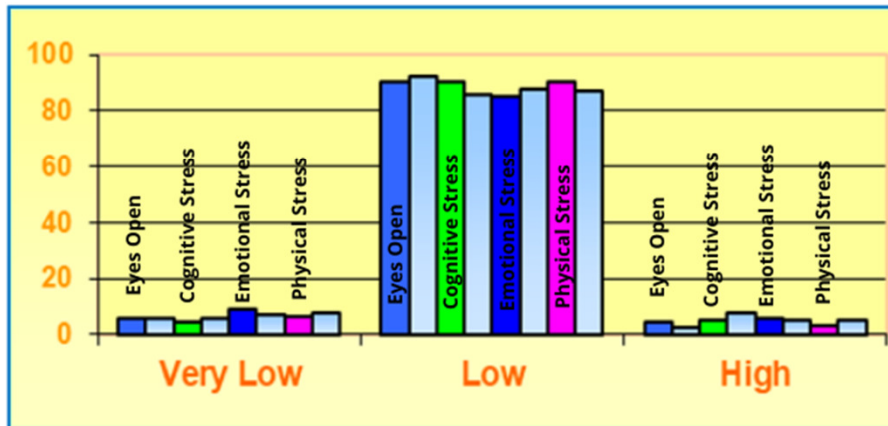


STRESS RESPONSE EVALUATION REPORT

Early Onset Parkinson's (race care driver)

Heart Rate Variability (HRV)

IDEAL HRV

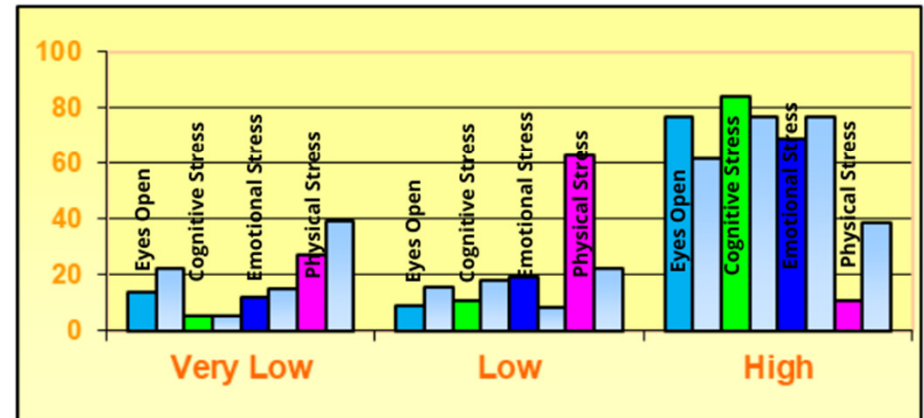


YOUR HRV

Very Low: 17.42

Low: 20.89

High: 61.69



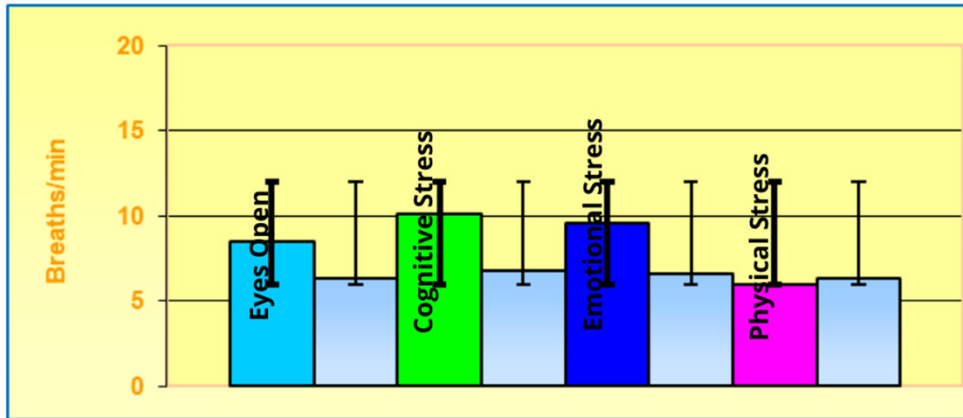
STRESS RESPONSE EVALUATION REPORT

Early Onset Parkinson's (race care driver)

Respiration Rate

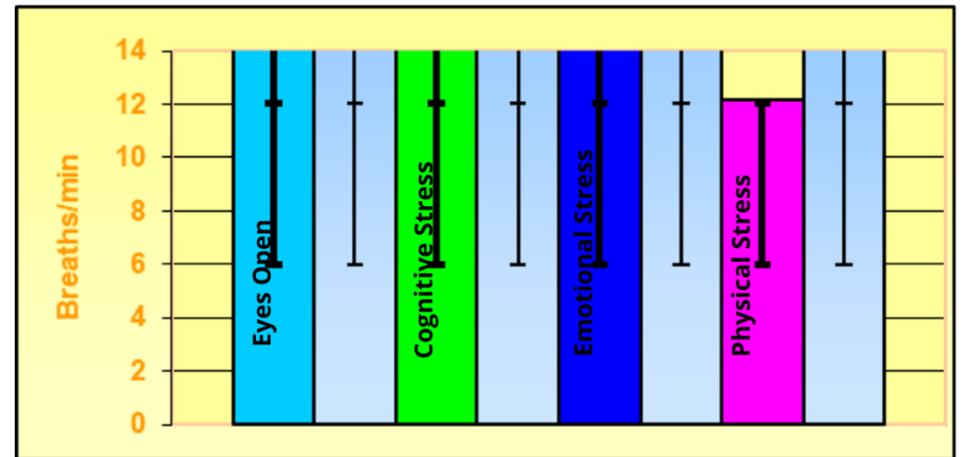
IDEAL Respiration Rate

Normal respiration rate is 6 to 12 breaths a minute.



YOUR Respiration Rate

Respiration Rate 16.24

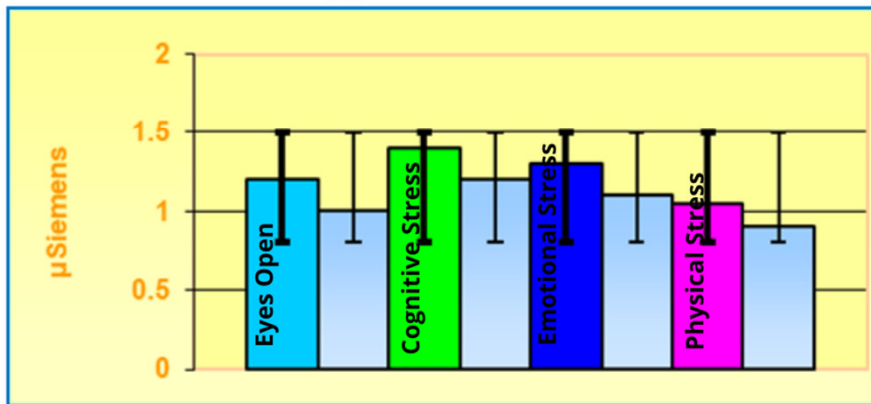


STRESS RESPONSE EVALUATION REPORT

Early Onset Parkinson's (race care driver)
Skin Conductance

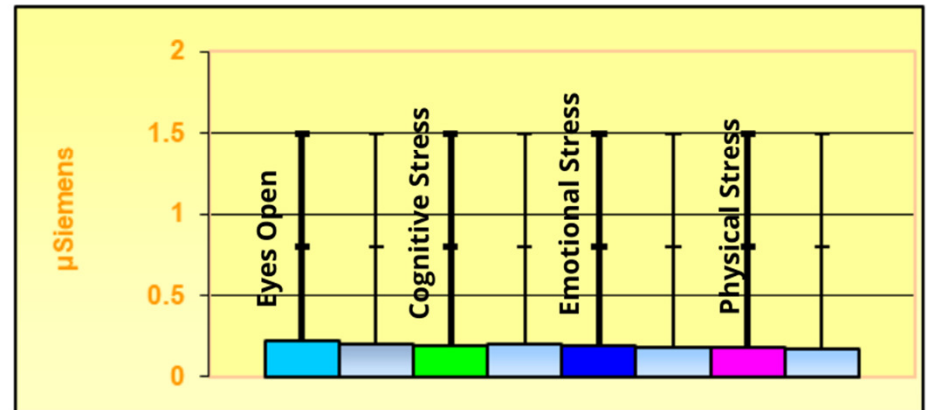
IDEAL Skin Conductance

Normal skin conductance is 0.8 to 1.5. Readings below 0.5 (dry) suggest chronic stress.



YOUR Skin Conductance

Skin Conductance: 0.2



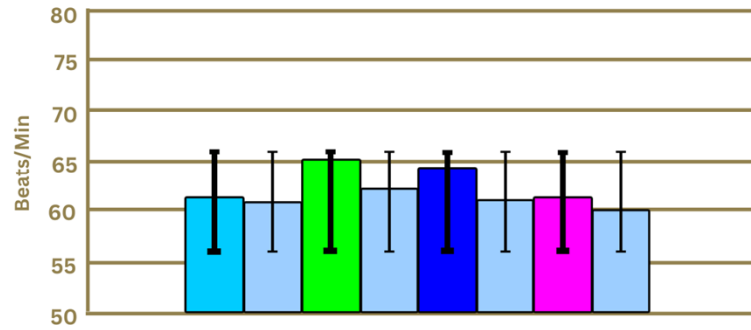


Stress Response Evaluation Report

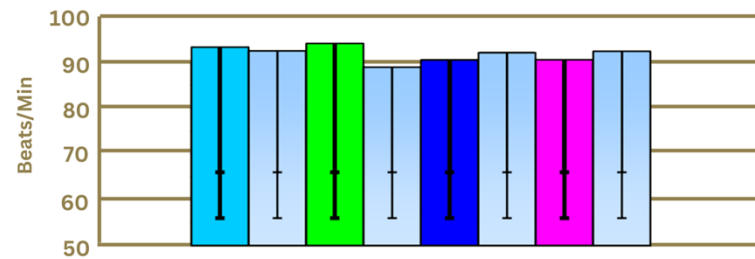
Heart Rate

Came In For Back Pain BUT Heart Attack High Risk!

IDEAL HR 56 - 66 BPM



YOUR Heart Rate 91.8 BPM



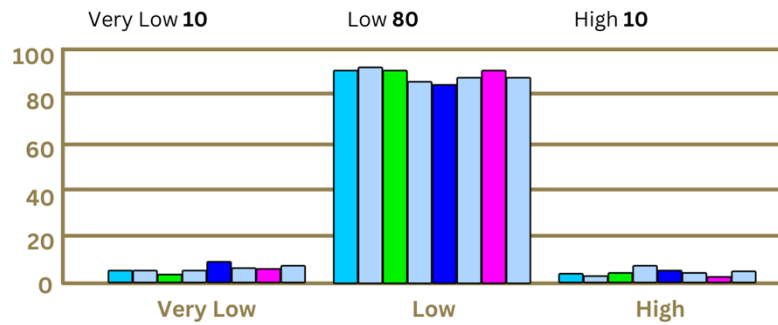


Stress Response Evaluation Report

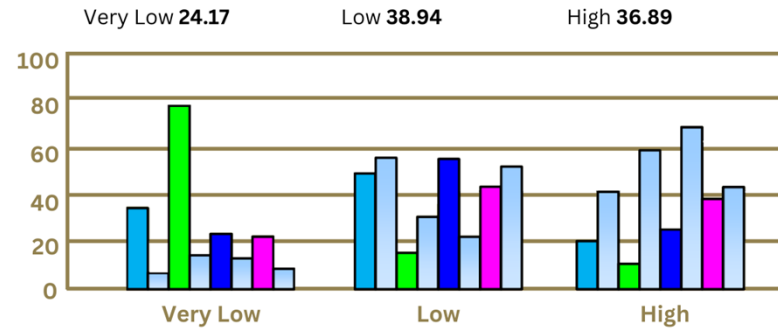
Heart Rate Variability

Came In For Back Pain BUT Heart Attack High Risk!

IDEAL HRV

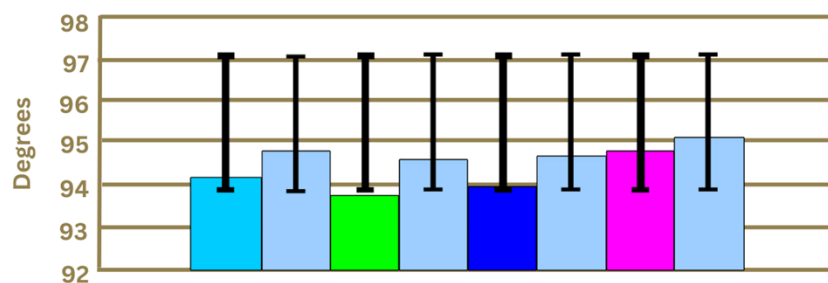


YOUR HRV

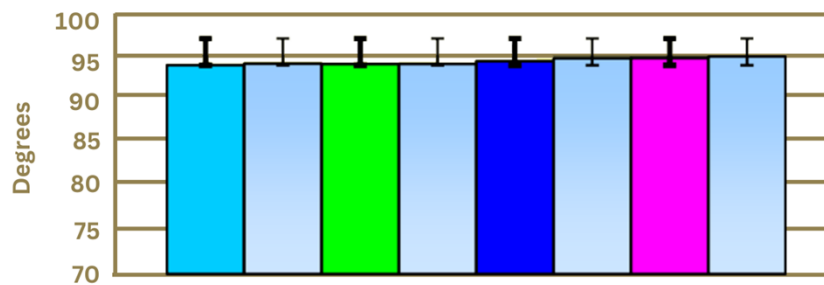


Came In For Back Pain BUT Heart Attack High Risk!

IDEAL Hand Temperature
(94° to 97 °F / 34.4° - 36.1°C)

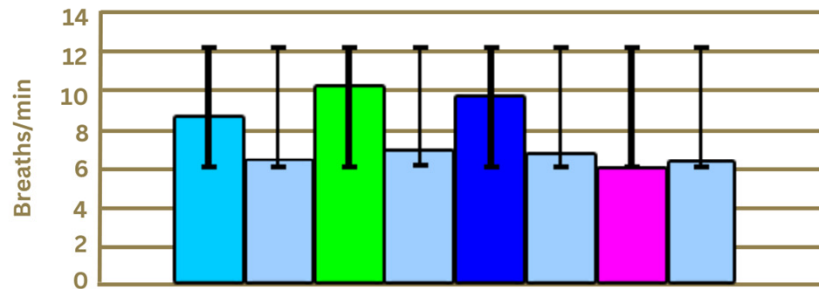


YOUR Hand Temperature 94.4 °F

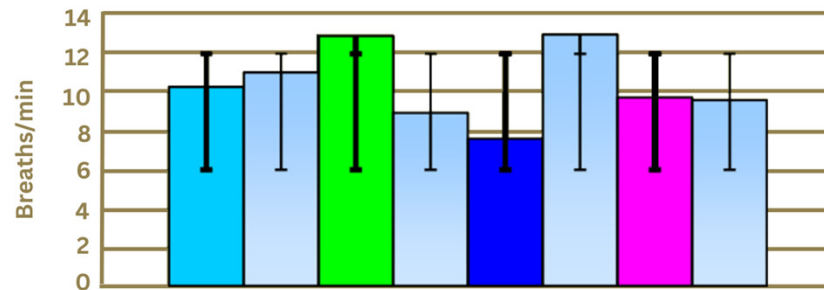


Came In For Back Pain BUT Heart Attack High Risk!

**IDEAL Respiration Rate
(6 to 12 breaths a minute)**

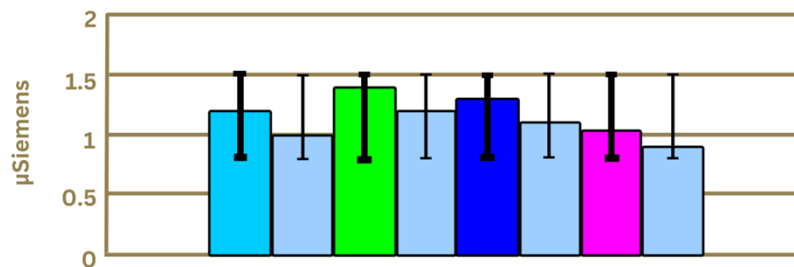


YOUR Respiration Rate 10.4 br/min

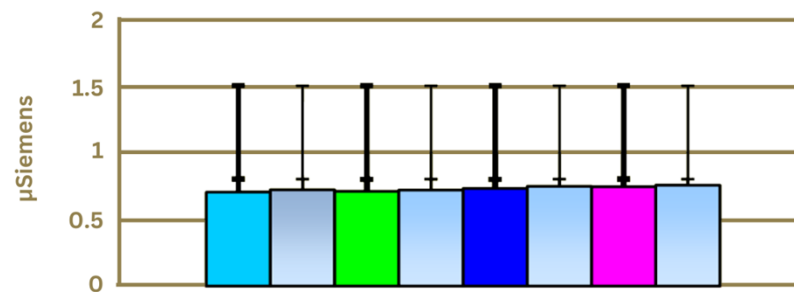


Came In For Back Pain BUT Heart Attack High Risk!

IDEAL Skin Conductance (0.8 - 1.5)

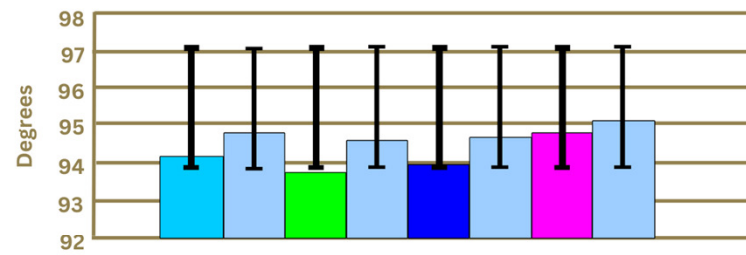


YOUR Skin Conductance 1.6

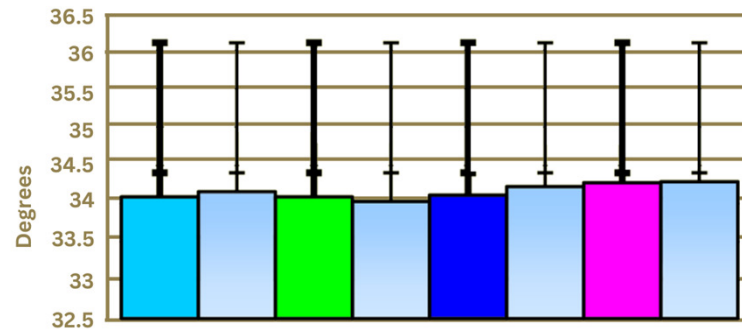


Refused Care and Died of A Heart Attack A Few Years Later

IDEAL Hand Temperature
(94° to 97 °F / 34.4° – 36.1°C)

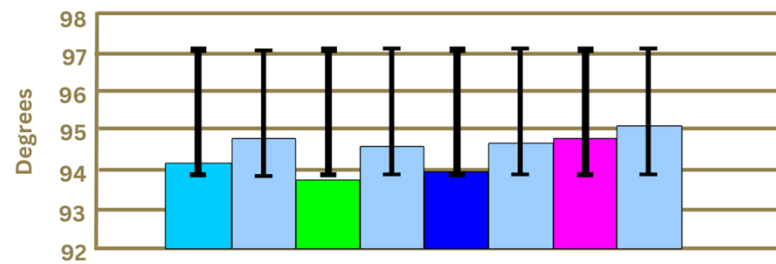


YOUR Hand Temperature 34°C

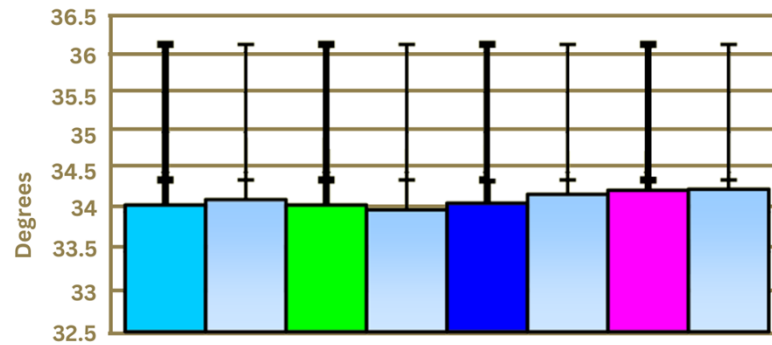


Refused Care and Died of A Heart Attack A Few Years Later

IDEAL Hand Temperature
(94° to 97 °F / 34.4° – 36.1°C)



YOUR Hand Temperature 34°C



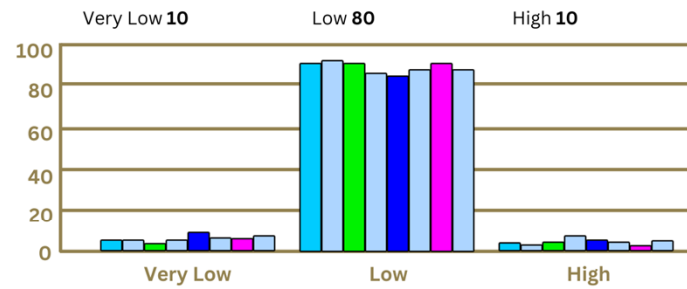


Stress Response Evaluation Report

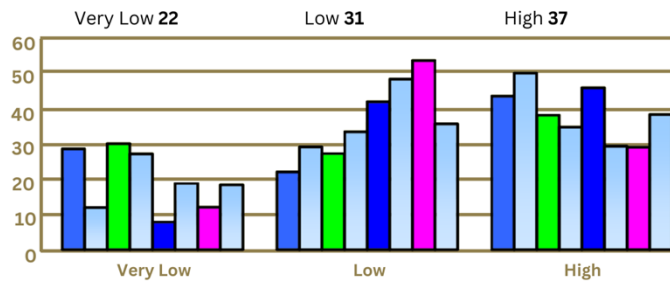
Heart Rate Variability

Refused Care and Died of A Heart Attack A Few Years Later

IDEAL HRV



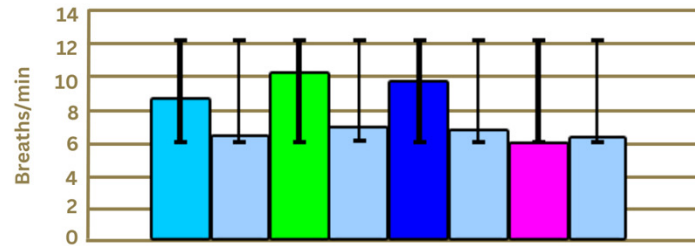
YOUR HRV



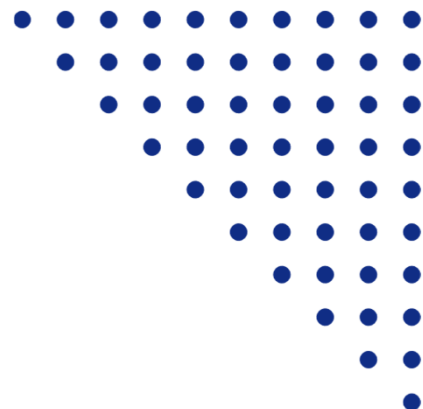
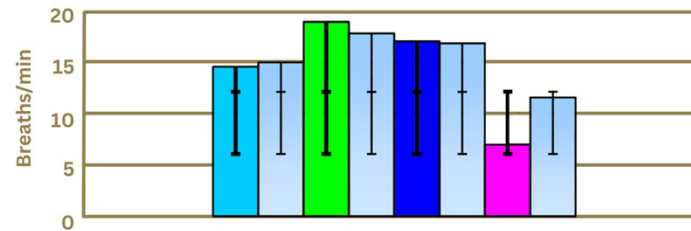


Refused Care and Died of A Heart Attack A Few Years Later

IDEAL Respiration Rate
(6 to 12 breaths a minute)



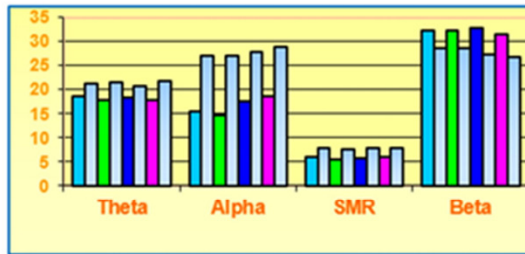
YOUR Respiration Rate 17 br/min



High Blood Pressure

EEG Percentage of Frequency

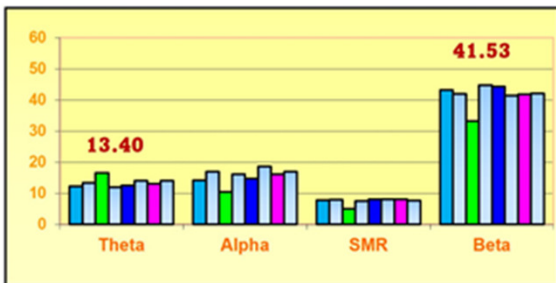
IDEAL EEG Percentage of Frequency



- 20% **Theta**: Light Sleep - Growth - Repair
- 22% **Alpha**: Focus - Learning - Meditation
- 7% **SMR**: Posture - Balance - Readiness
- 30% **Beta**: Busy Brain - High Energy

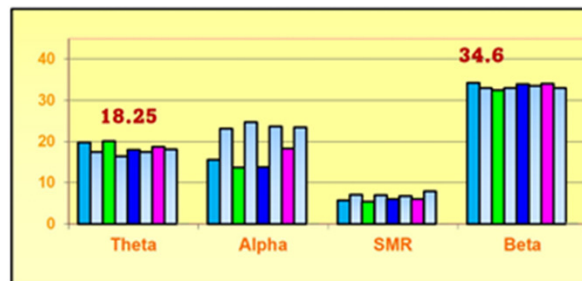
Indicates state of being: Alert=Beta / Asleep=Theta
SMR & Beta = defensive; Alpha & Theta = healing

YOUR EEG % of Frequency: Left Hemisphere



PRE

YOUR EEG % of Frequency: Left Hemisphere



POST

And here are some before and afters.

This gentleman suffered from high blood pressure before and was off his medication after. He also went from almost getting divorced to an amazing relationship with his wife thanks to no more anger issues.

Care Plan

Type of adjustment

Frequency of adjustment

Post Adjustment Care

Supplements (adaptogens, gut health etc)

Lifestyle Changes (sleep, exercise, breathing)

Diet

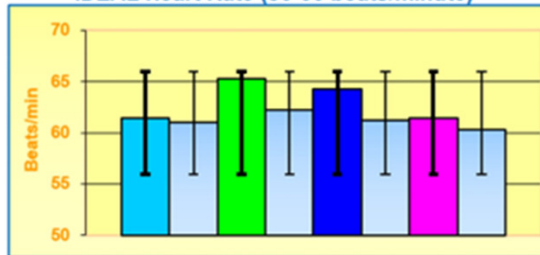
Thought training



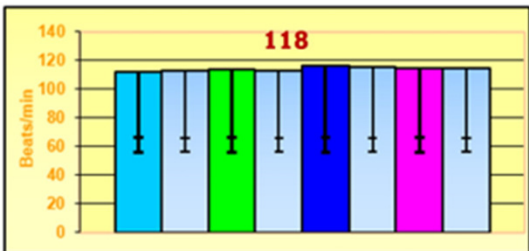
Stress Response Evaluation Report

Heart Rate

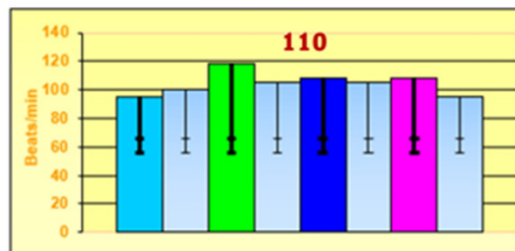
IDEAL Heart Rate (56-66 beats/minute)



PRE



POST - 2 Weeks later



Here is a woman who was told she had 6 months to live due to stage 4 lung cancer. See her average heart rate prior. Also flat lined. 2 weeks later average heart rate dropped and adaptability coming back.

Care Plan

Type of adjustment

Frequency of adjustment

Post Adjustment Care

Supplements

Lifestyle Changes (sleep, exercise, breathing)

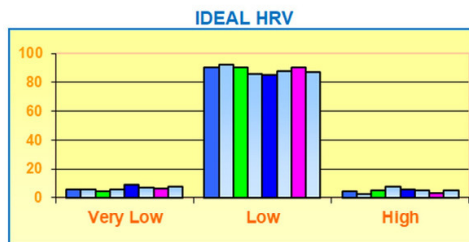
Diet

Thought training

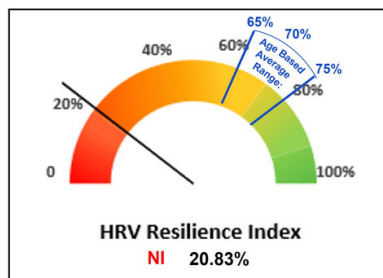
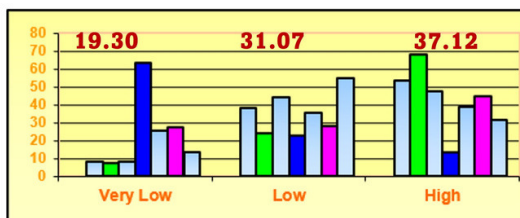


Stress Response Evaluation Report

HRV



Your HRV

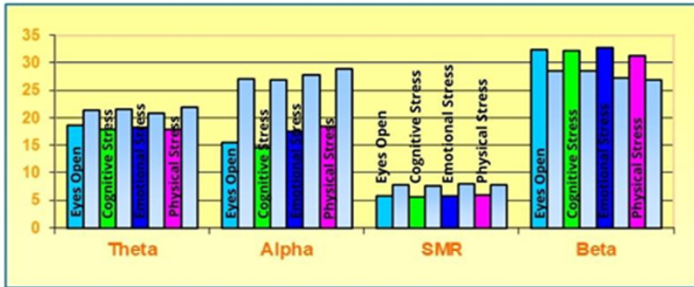


Here is a 52 year old male with with testosterone issues and ED before...totally gone after.

Stress Response Evaluation Report

EEG Percentage of Frequency

IDEAL EEG Percentage of Frequency

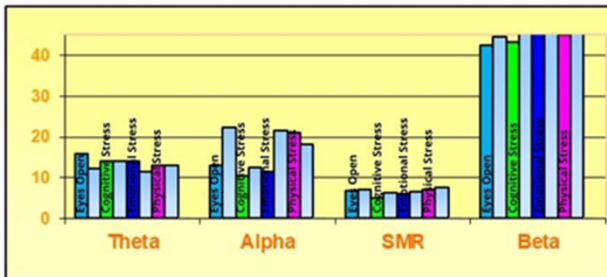


- 20% **Theta**: Light Sleep - Growth - Repair
- 22% **Alpha**: Focus - Learning - Meditation
- 7% **SMR**: Posture - Balance - Readiness
- 30% **Beta**: Busy Brain - High Energy

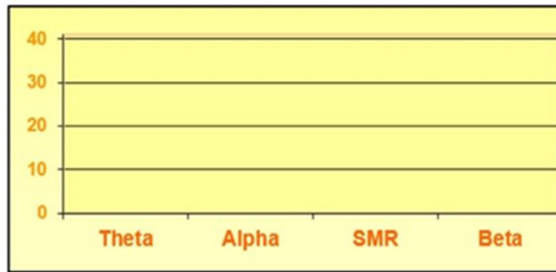
Indicates state of being: Alert=Beta / Asleep=Theta
SMR & Beta = defensive; Alpha & Theta = healing

YOUR EEG % of Frequency: Left Hemisphere

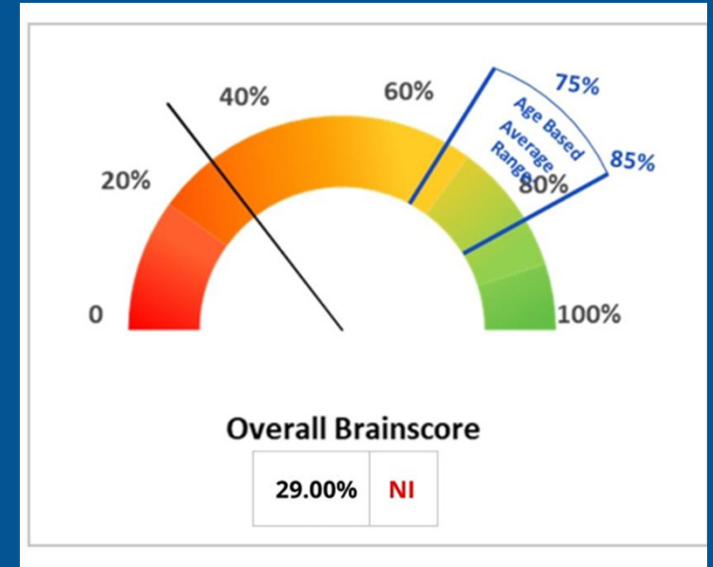
Theta: 13.45% Alpha: 16.37% SMR: 6.53% Beta: 45.00%



YOUR EEG % of Frequency: Right Hemisphere



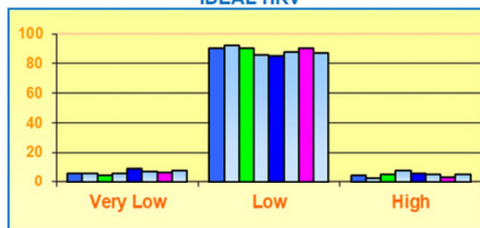
29 year old female personal trainer. Looks healthy but suffers from severe anxiety.



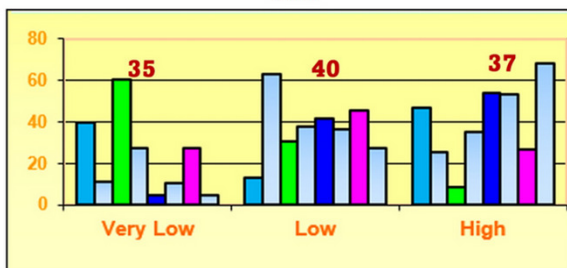
Practicing Chiropractor Who Had An Almost Perfect Relaxed State Static HRV

HRV

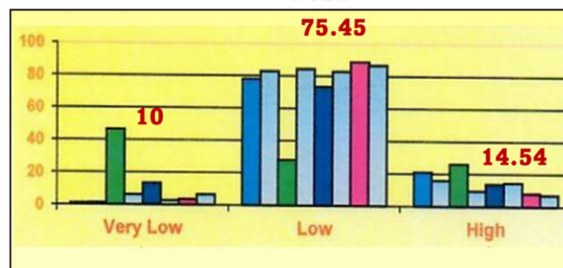
IDEAL HRV



PRE



POST



Practicing Chiropractor Who had an almost Perfect Relaxed State Static HRV

Care Plan

Type of adjustment

Frequency of adjustment

Post Adjustment Care

Supplements

Lifestyle Changes (sleep, exercise, breathing)

Diet

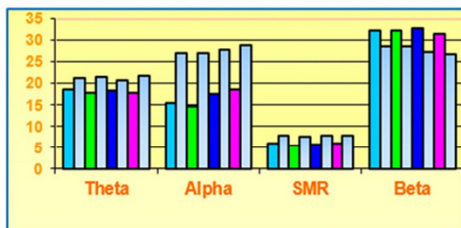
Thought training



Stress Response Evaluation Report

EEG Percentage of Frequency

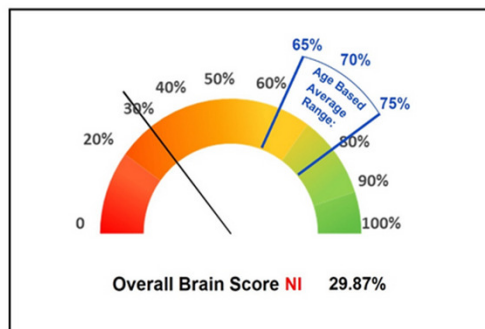
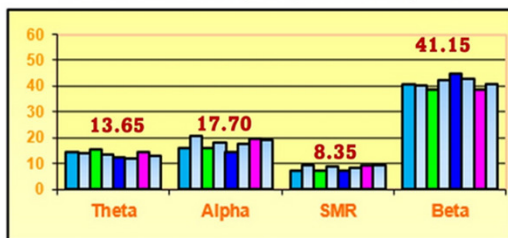
IDEAL EEG Percentage of Frequency



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YOUR EEG % of Frequency: Left Hemisphere

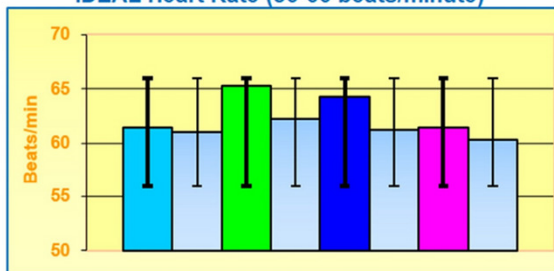


Business Owner
 52 YO Female
 came in for
 neck pain.

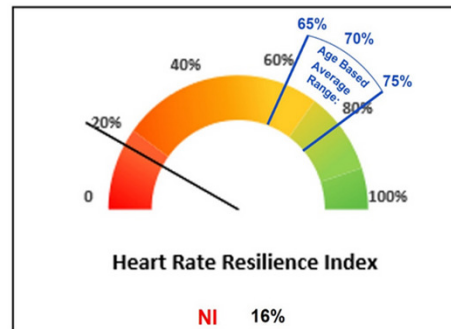
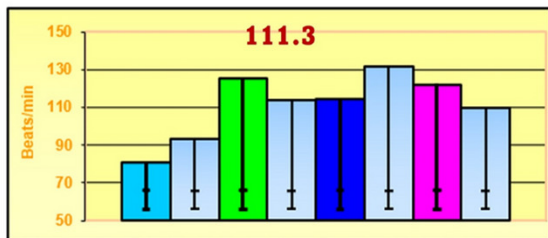
Stress Response Evaluation Report

Heart Rate

IDEAL Heart Rate (56-66 beats/minute)



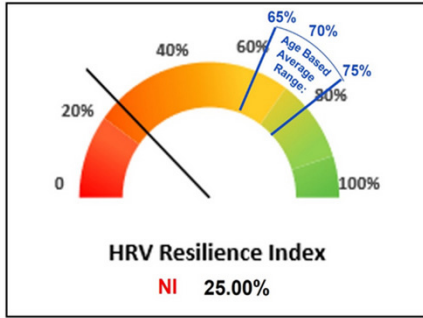
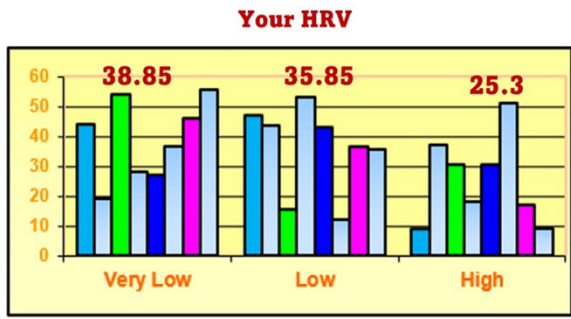
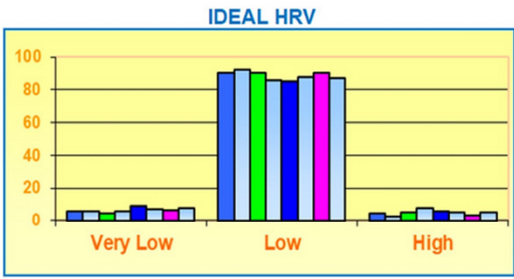
Your Heart Rate



Business Owner
52 YO Female
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neck pain.

Stress Response Evaluation Report

HRV

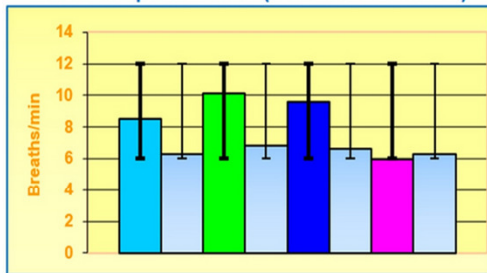


Business Owner
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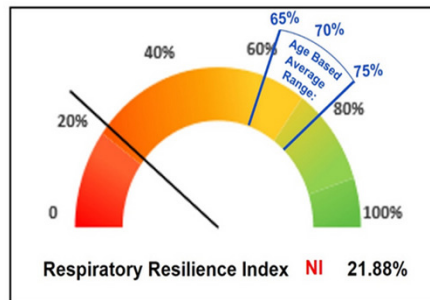
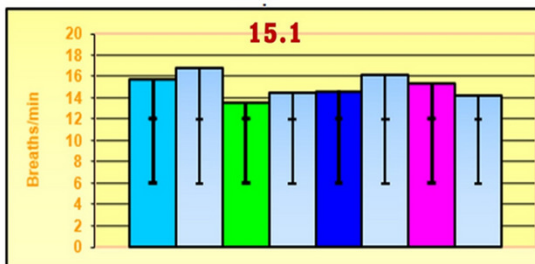
Stress Response Evaluation Report

Respiration Rate

IDEAL Respiration Rate (6-12 breaths/minute)



Your Respiration Rate

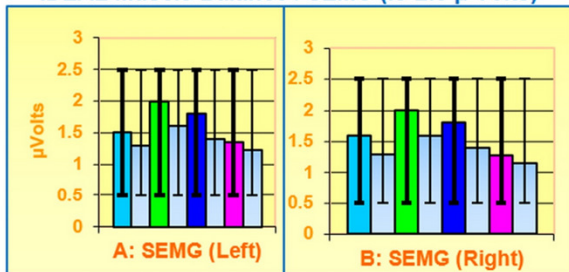


Business Owner
52 YO Female
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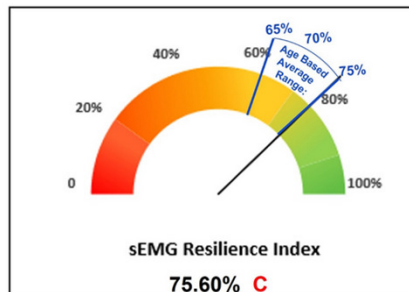
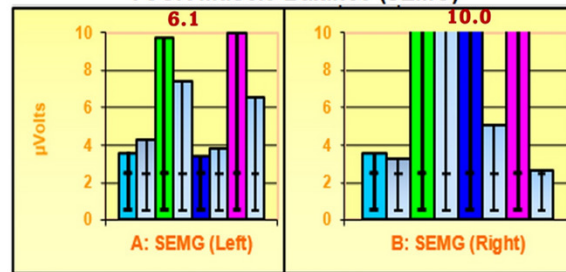
Stress Response Evaluation Report

Muscle Balance (sEMG)

IDEAL Muscle Balance / sEMG (.5-2.5 μ -volts)



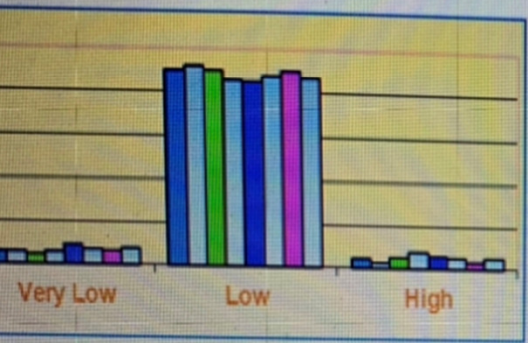
YOUR Muscle Balance (sEMG)



Business Owner
52 YO Female
came in for
neck pain.

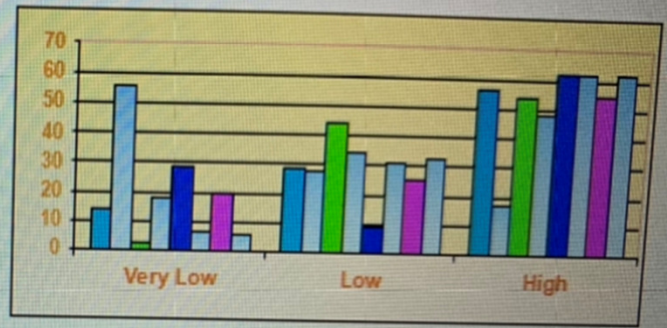
ng for high bars in the center column of the HRV graph. Ideally there should be low readings in the left (very l
 h) groups. High activity in the right (high) group suggests stress challenges, while high activity in the left (ver
 suggests a heart dysfunction.

IDEAL HRV



YOUR HRV

V. Low 19 Low 29.06 High 52.13

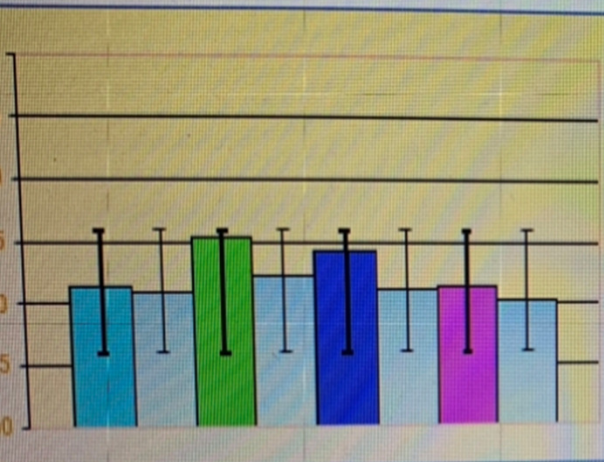


HRV look like the ideal? Yes No—Client has altered brain activity

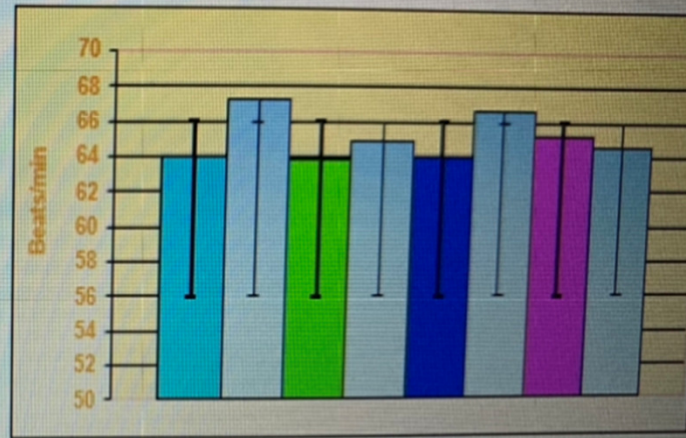
Chiropractor 1
 year later had a
 stroke!

How quickly it can return to normal. Heart rate should, like all the other responses in this test, vary between the very ability. Lack of this ability to adapt is an indicator of a loss of ideal neurological function. Ideal rates should

IDEAL Heart Rate



YOUR Heart Rate
Heart Rate 65.0



rate look like the ideal?

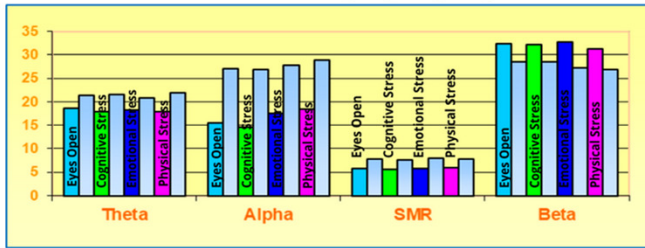
Yes

No—Client has altered brain activity

Chiropractor 1
year later had a
stroke!

EEG Percentage of Frequency

IDEAL EEG Percentage of Frequency



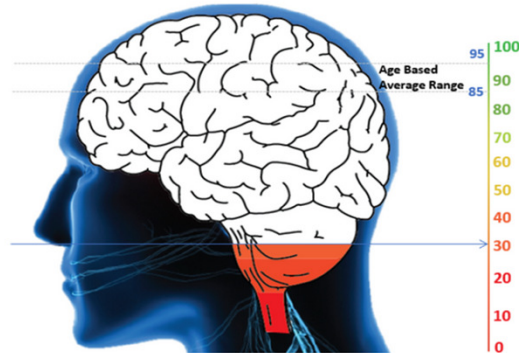
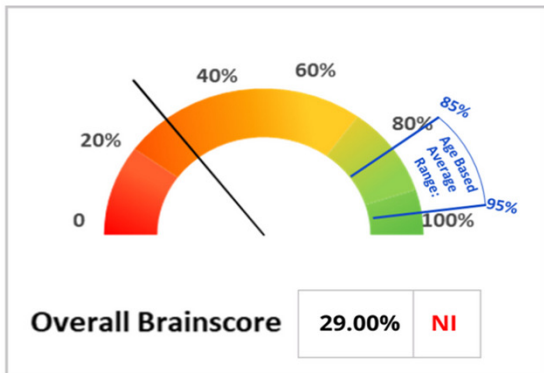
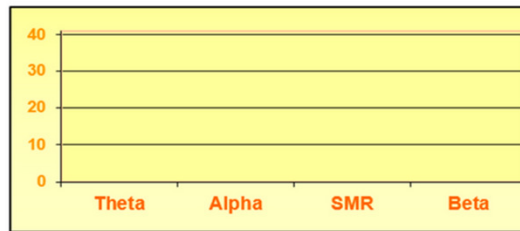
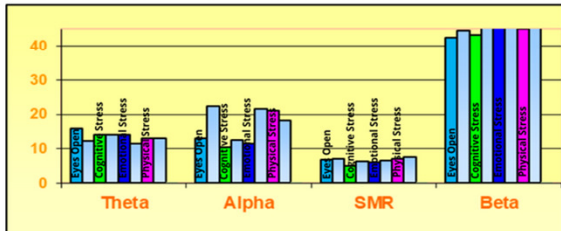
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YOUR EEG % of Frequency: Left Hemisphere

YOUR EEG % of Frequency: Right Hemisphere

Theta: 13.45% Alpha: 16.37% SMR: 6.53% Beta: 45.00%

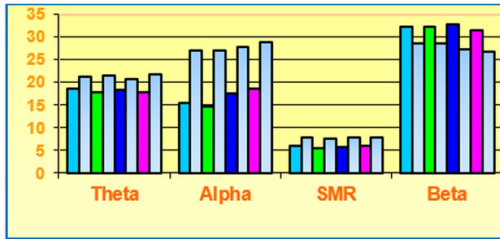


Pregnant Mom

Stress Response Evaluation Report

EEG Percentage of Frequency

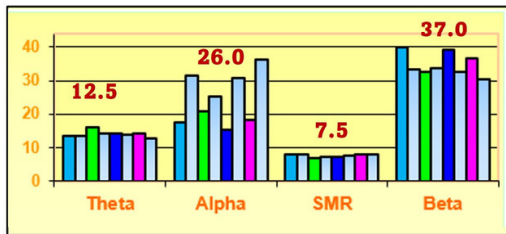
IDEAL EEG Percentage of Frequency



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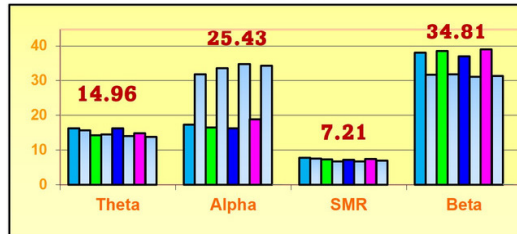
Indicates state of being: Alert=Beta / Asleep=Theta
 SMR & Beta = defensive; Alpha & Theta = healing

YOUR EEG % of Frequency: Left Hemisphere



PRE

YOUR EEG % of Frequency: Left Hemisphere



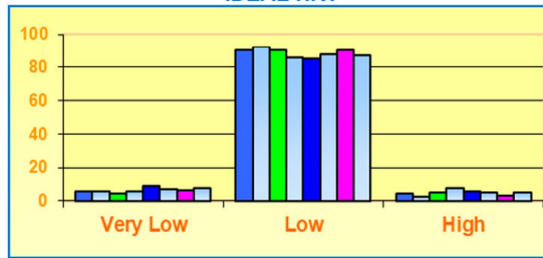
POST

My Own SRE

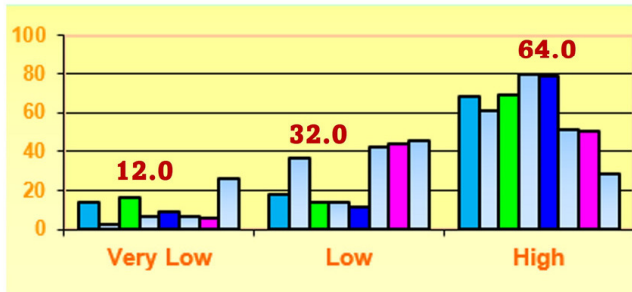
Stress Response Evaluation Report

HRV

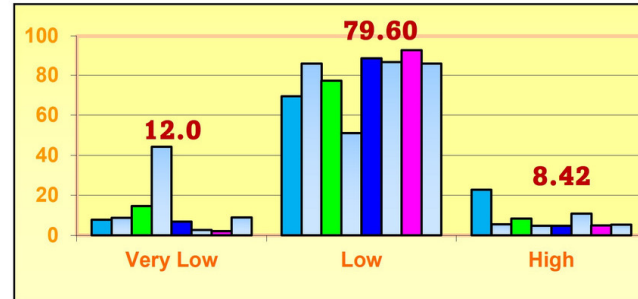
IDEAL HRV



PRE



POST

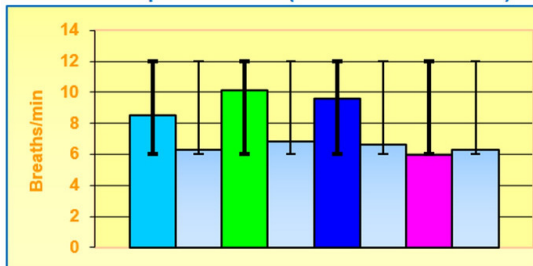


My Own SRE

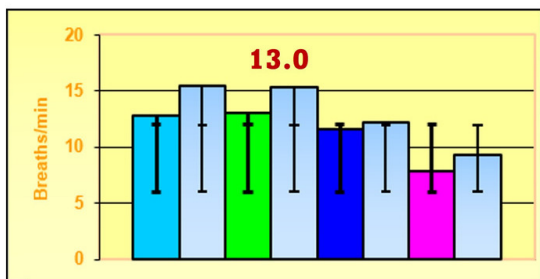
Stress Response Evaluation Report

Respiration Rate

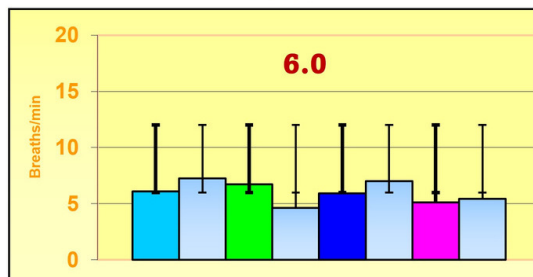
IDEAL Respiration Rate (6-12 breaths/minute)



PRE



POST

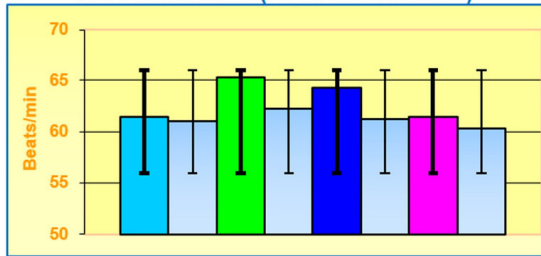


My Own SRE

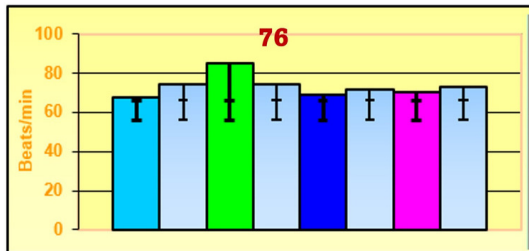
Stress Response Evaluation Report

Heart Rate

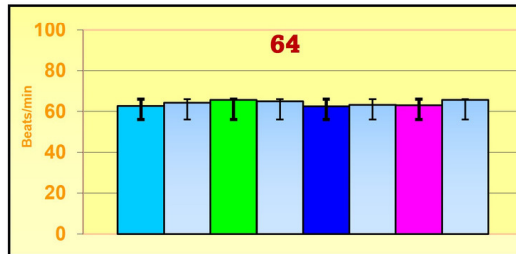
IDEAL Heart Rate (56-66 beats/minute)



PRE



POST



My Own SRE

58 Year Old Chiropractor

Resting Heart Rate of 58 BPM

Blood Pressure 124-72

No medications

Exercised regularly

Rolling Thermal was considered good

Static HRV Excellent

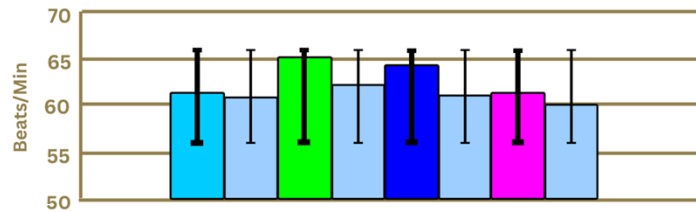




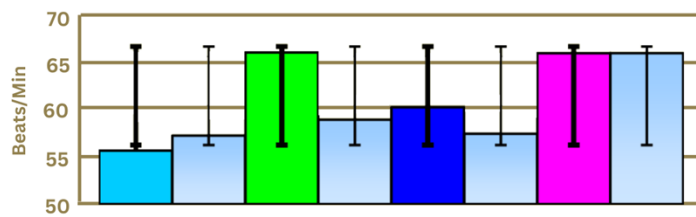
Stress Response Evaluation Report Heart Rate

58 yo Chiropractor Refused Care Died 1 Year Later

IDEAL HR 56 - 66 b/min



YOUR Heart Rate 60.5 b/min



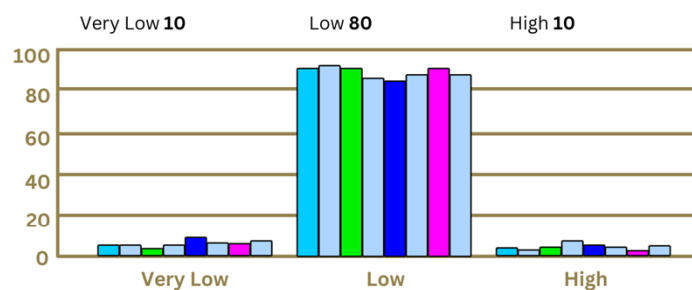
58 Year Old Chiropractor



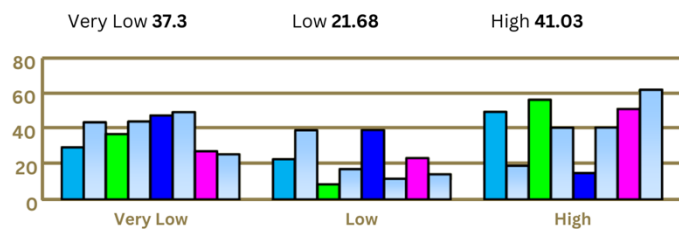
Stress Response Evaluation Report Heart Rate Variability

58 yo Chiropractor Refused Care Died 1 Year Later

IDEAL HRV



YOUR HRV



58 Year Old
Chiropractor

58 Year Old Chiropractor

My recommendations to him

Low Force Tonal Adjustments

Adaptogens

NO Exercise that increase heart rate

His response: I am fine! I am healthy. I am all good!

8 months later I saw him at an event. Again he said all good.



58 Year Old Chiropractor

3 months later

11 months since I gave him his recommendations following his SRE

He died of a heart attack in a middle of a high intensity workout!



Dementia Reversal: Retired chiropractor...text from his wife.

< 1

Dr. Steele, I just wanted to give you a quick update on what I have seen in Bobby the past couple of weeks. I hope it is ok to send this via text. If you prefer email, let me know. Sorry, he had to cancel last week. We had an emergency with our dog. I am seeing some positive steps for Bobby the past week to 10 days. He took the initiative to call a friend for lunch last week, and they are going to lunch again tomorrow, I believe. We went to our church Care Group Sunday evening, and he was very open with the group and let them know what he is dealing with and how he is getting help and asked for prayer. I have not seen him so engaged in conversation the entire meeting in a long time. He also scheduled a dental appt without me reminding him. He is really consistent with his list now. I think he doesn't feel like it is quite so overwhelming, plus I am not having to ask him if he has done the things on his list. All of this is very encouraging to me, and I thought I would share what it looks like on this end before your meeting on Friday. Thank you always for your help. Love,

Step 4.

Once we can get their brain and nervous system to begin to adapt and recover they are not in a position to get into alignment with INNATE!

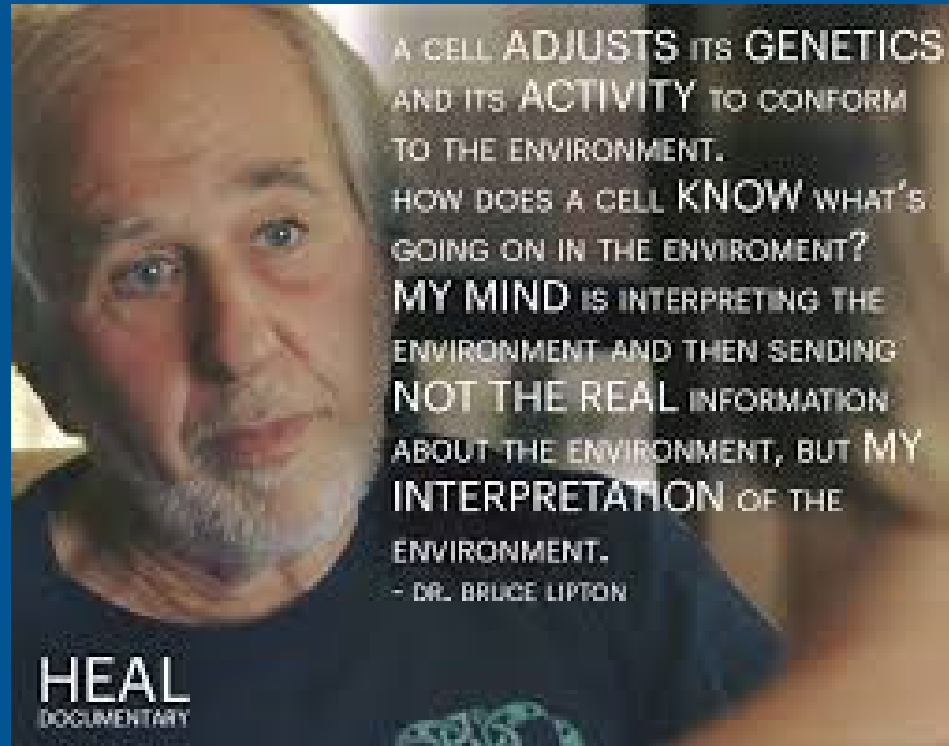
Step 4.

This is the point where they become **AWARE** of their environment and their response to circumstances of their life. They **CANNOT** do this if they are stuck in survival mode!

Step 4.

This is the TRUE interference that they can now be aware of and be able to change it as it happens in real time!

This is when CONSCIOUSNESS CHANGES!



A CELL ADJUSTS ITS GENETICS AND ITS ACTIVITY TO CONFORM TO THE ENVIRONMENT.

HOW DOES A CELL KNOW WHAT'S GOING ON IN THE ENVIRONMENT?

MY MIND IS INTERPRETING THE ENVIRONMENT AND THEN SENDING NOT THE REAL INFORMATION ABOUT THE ENVIRONMENT, BUT MY INTERPRETATION OF THE ENVIRONMENT.

- DR. BRUCE LIPTON

HEAL
DOCUMENTARY

Step 4.

Interpretation of the environment is based on the state of your nervous system! If stuck in survival you will see the environment from a fear/ego/primal state but if you can move your nervous system into a state of thrival you will now see the environment from a God, innate, flow, spirit, power state.

AND THIS...

**IS THE POWER OF BRAIN BASED
CHIROPRACTIC!**

What do you want to be?

A pain doctor?

A spine doctor?

A musculoskeletal doctor?

**Or a Brain Doctor who changes
lives by improving brain
function allowing changes in
states of consciousness!**



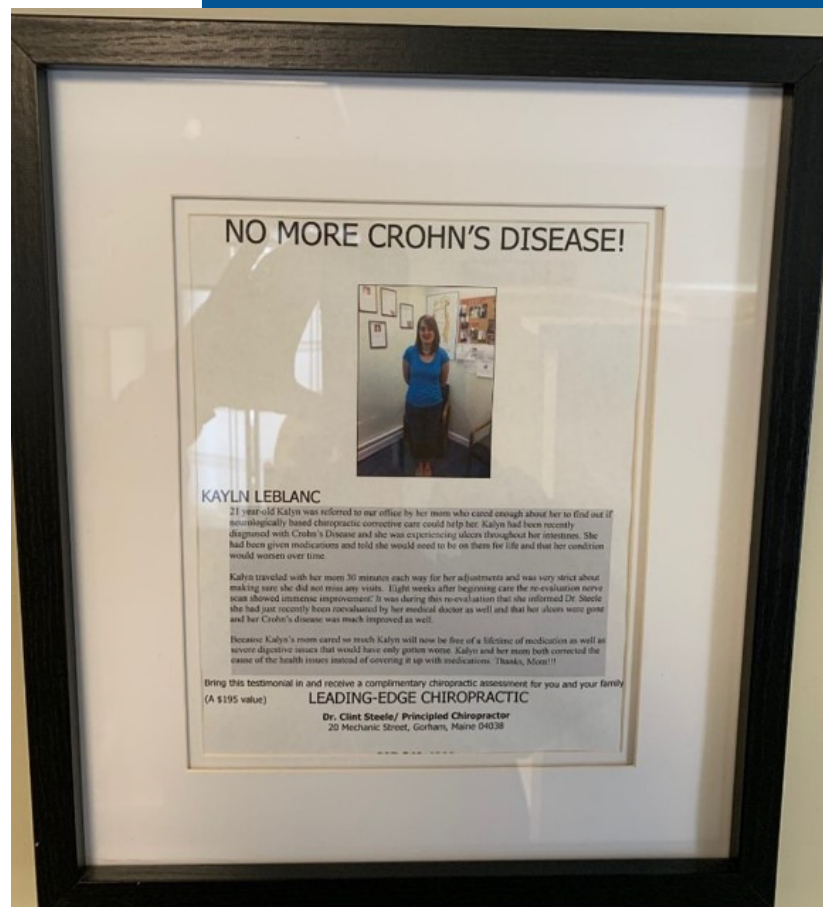


**IT IS TIME FOR US AS A PROFESSION TO RAISE
THE BAR AND TAKE OUR RIGHTFUL PLACE!**

Are You In?

**It is time to
SAVE MORE LIVES!**

Final Note:



Join Us For FREE On FACEBOOK

We provide tons of value in our private doctor's only
group

Called The Pain to Brain Practice Solutions



BRAIN BASED HEALTH SOLUTIONS

Improving Lives By Improving Brains



**Schedule a call
with me.**



THANK YOU SO MUCH!

Keep up the great work Docs and let's keep
SAVING MORE LIVES!



BRAIN BASED HEALTH SOLUTIONS

Improving Lives By Improving Brains

Dr. Clint & Tina Steele
Co-Founders, TRUCHIRO
207-240-4908
info@truchiro.org
www.brainbasedhs.com

