

Addressing Neurological Conditions: A Combined Approach of Chiropractic Care and Brainwave Optimization

September 2024
Travers City, MI



Patrick K. Porter, Ph.D.

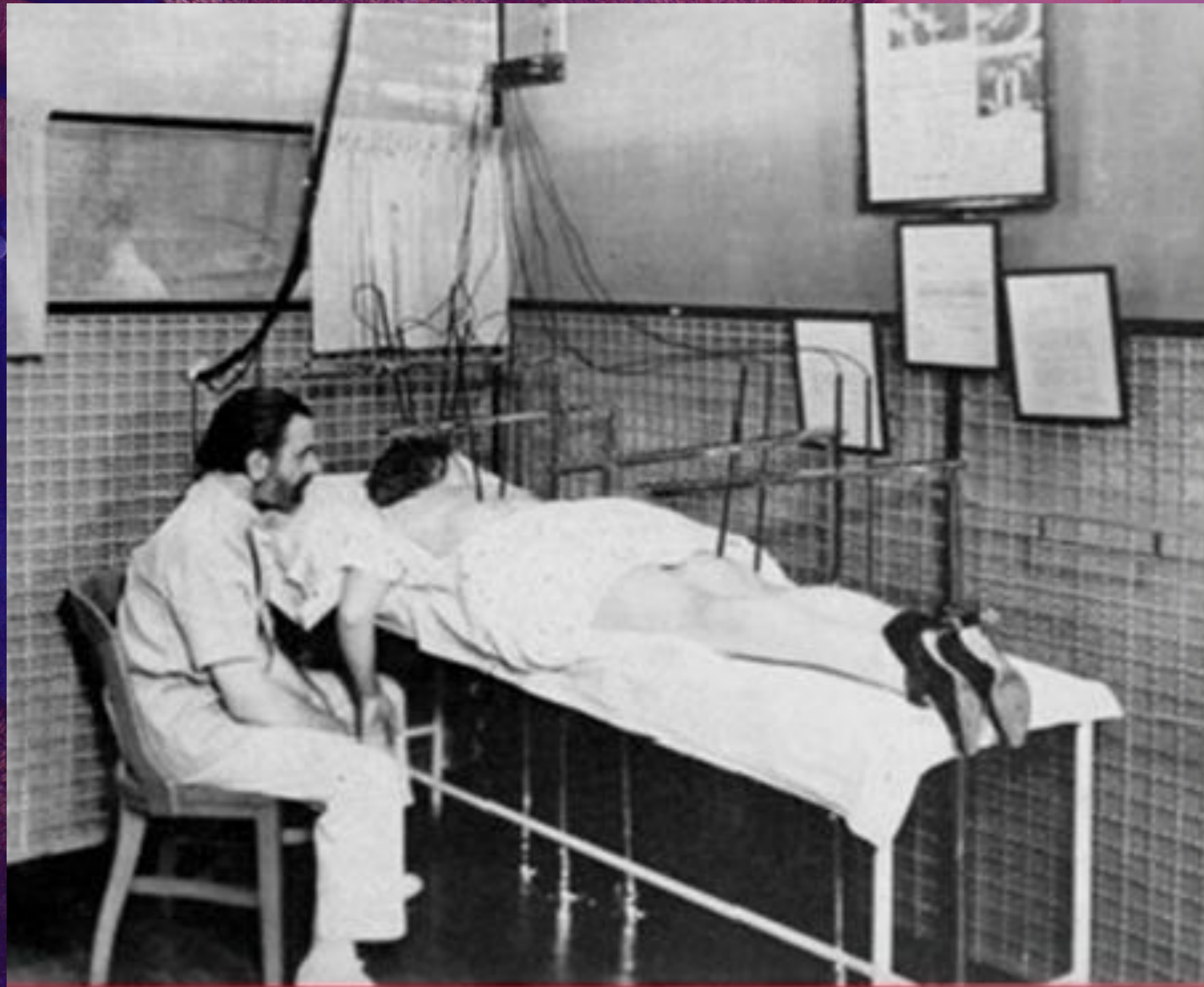
The National Institutes of Health (NIH) has adopted the term "biofield" in 1994..

This term is used to define the complex, dynamic energy and information fields that extend and permeate inside and outside the human body.



B.J. Palmer, developer of the chiropractic profession built the: Electroencephaloneuromyogram

The electroencephaloneuromyogram was a machine that was used in the B.J. Palmer Chiropractic Clinic around the 1940's. It was used before and after an adjustment to prove correct spinal analysis and its correction.

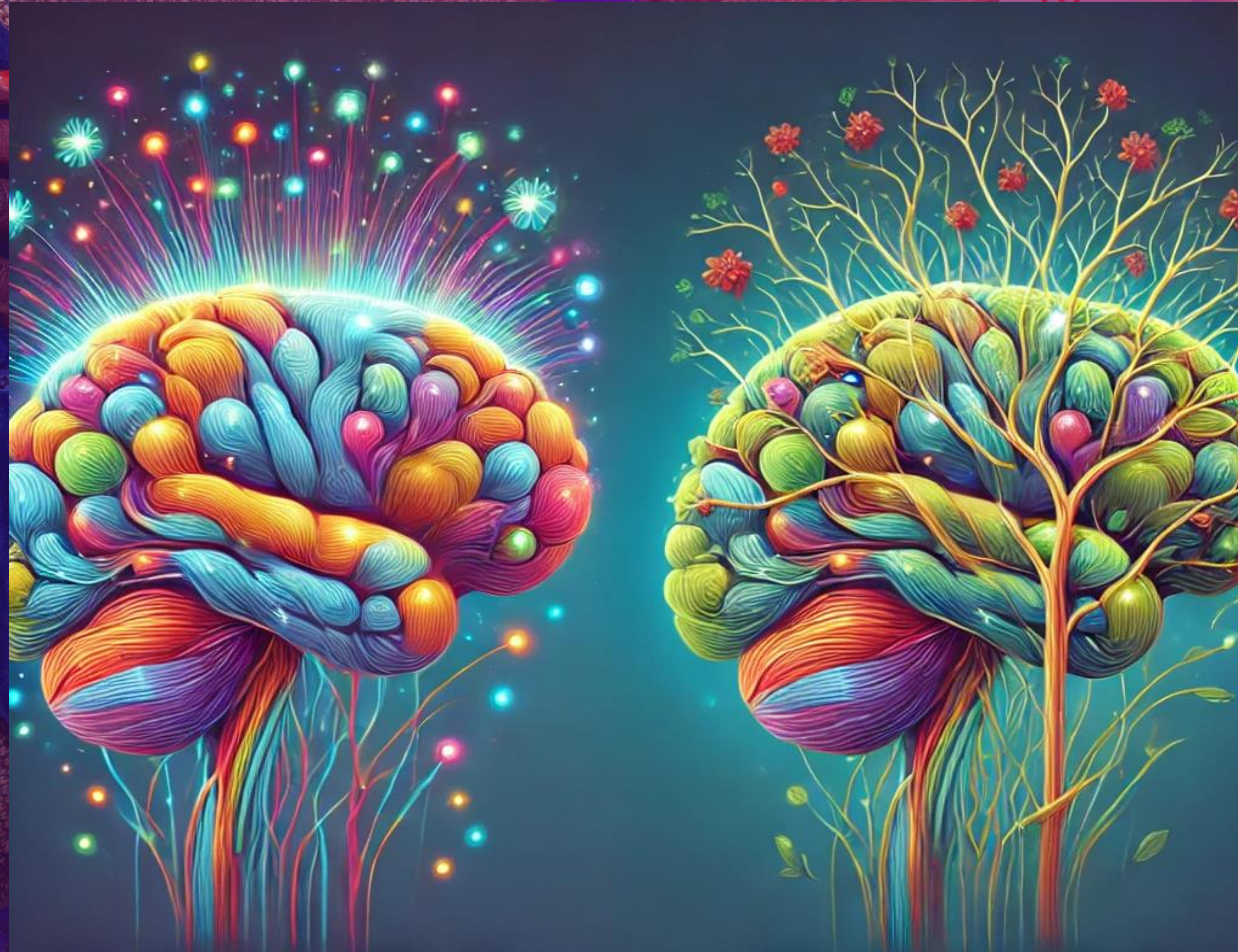


Mechanisms of Recovery

- Thoughts
- Trauma
- Toxins



What is Recovery?



Neural Plasticity

Neural Pruning

- Brain Rewiring
- The Role of Neurogenesis
- Neurochemical Change During Recovery

The Most Dangerous Epidemic

- All forms of stress are in reality *brain stress*.
- Prolonged brain stress causes a sympathetic-parasympathetic imbalance, creating a neurological cascade of events, which puts us in **Sympathetic Survival Syndrome**.
- More than 2 billion people worldwide are now suffering from brain-based health challenges.



The NEED for a Brain-Based Approach

- Stress is the most pervasive malady of our time and has been called the “silent killer.”
- Up to 90% of all illness is related to stress (National Institutes of Health)
- Stress may not be felt as “stress.” Rather, it goes straight to the body, affecting its weakest points.

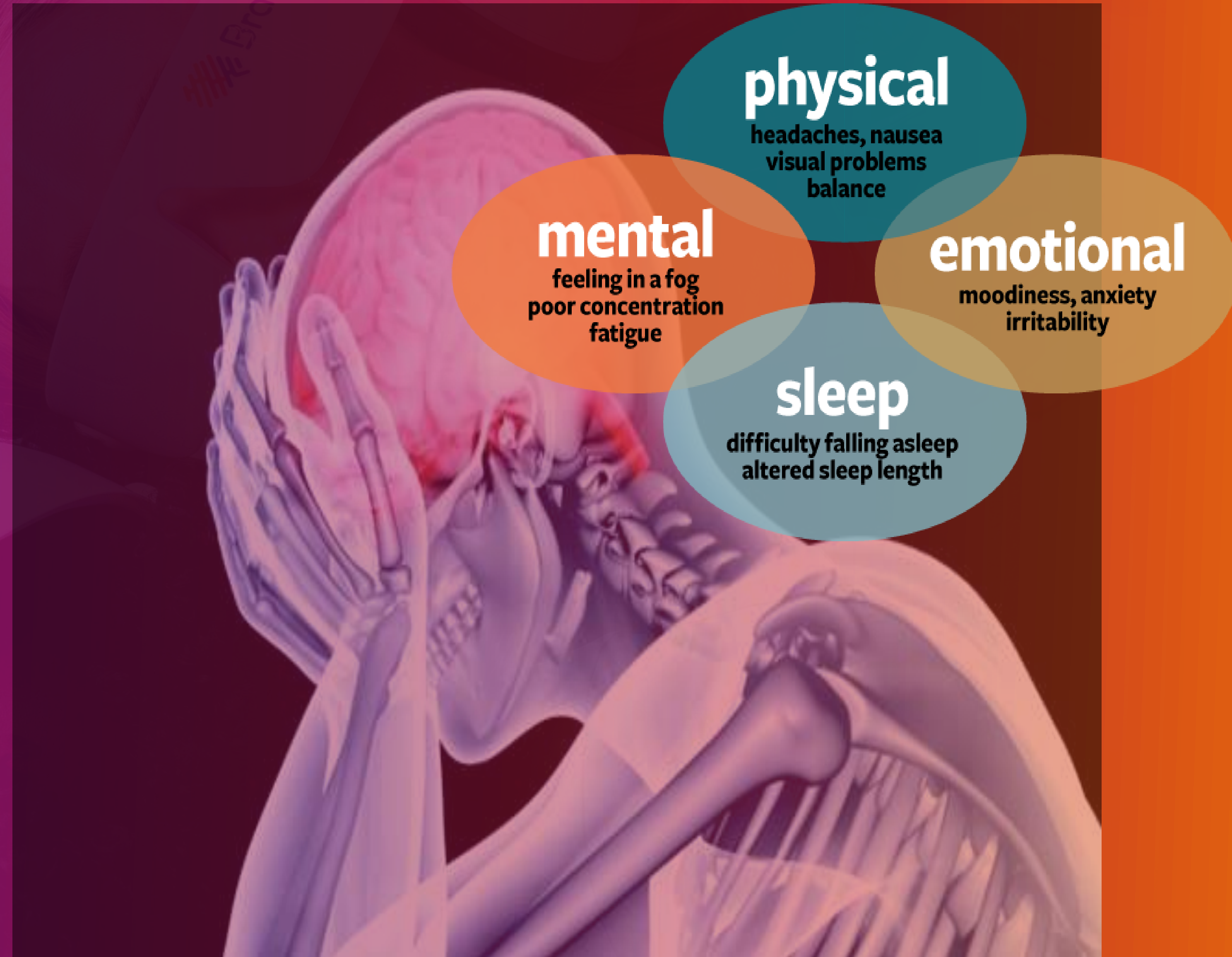


What is a Concussion?

A blow to the head (in contact sports)

Severe shaking of the head (like when you fall down)

Coming to a rapid stop (like in a car accident).



The Toxic Effect of a Concussion?

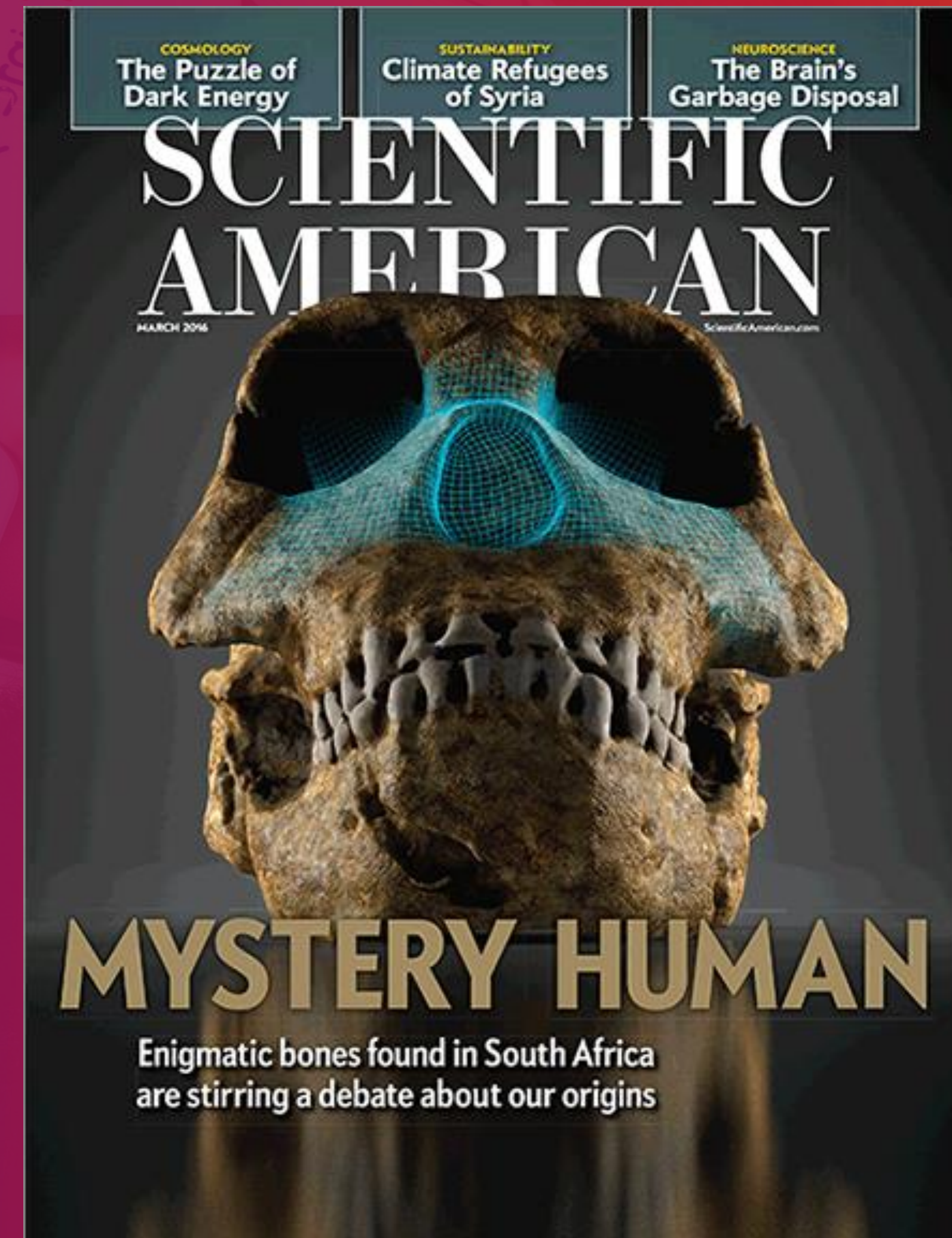
Left unaddressed, **toxins** can build up and damage the **brain**, causing symptoms such as personality changes, memory loss, inability to focus, physical tics, fatigue, seizures and depression.



The Effects of Concussion on Sleep?

AN INTERNAL
PLUMBING
SYSTEM RIDS
THE BRAIN OF
TOXIC WASTES.

SLEEP IS WHEN
THIS CLEANUP
RITUAL OCCURS



March 2016, Scientific American Page 45

How is Your Brain Coping?

- Too much *fight-or-flight* activity without corresponding rest and relaxation is what distress is all about.
- The 21st Century is fast becoming the century of *Super-Stress*
- Thus, the need for a **brain-based solution**



Four Primary Brainwave Frequencies

Gamma = Enlighten Mind

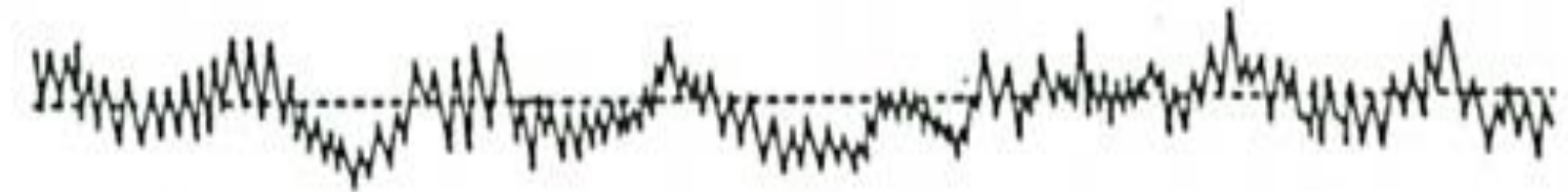
BETA = Re-ACT-ionary

ALPHA = Intuitive

THETA = Inventive

DELTA = Other-than-Conscious

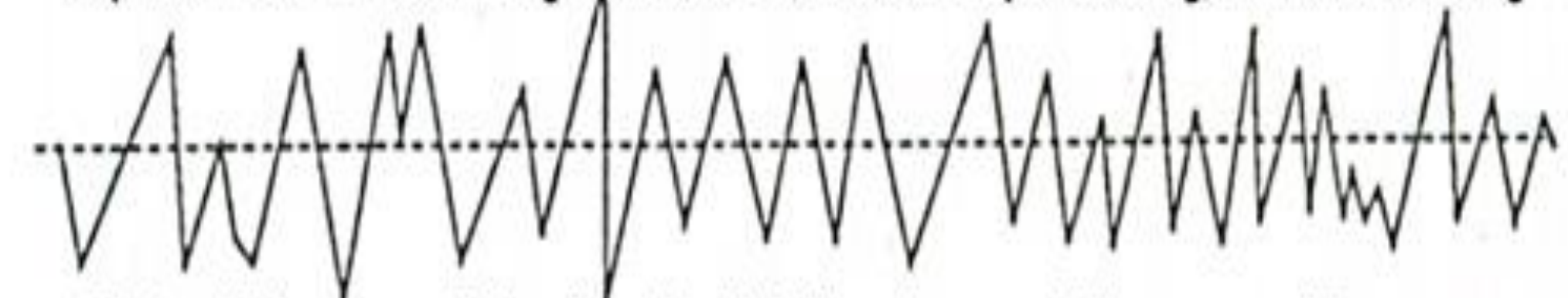
Brainwave Patterns



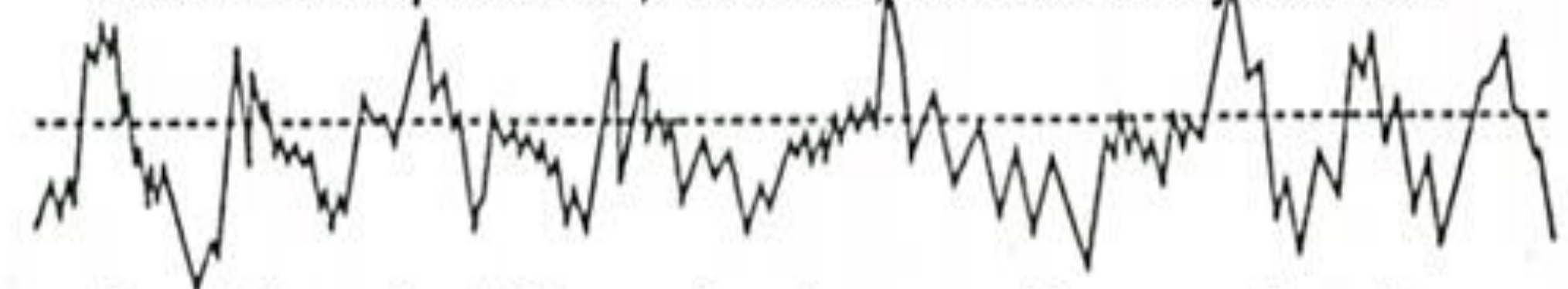
Beta: 13hz Normal State of Alertness, Stress and Anxiety



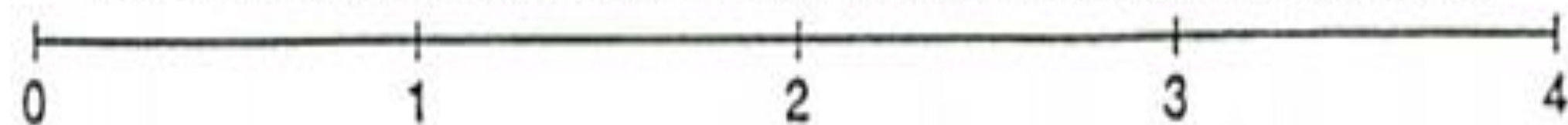
Alpha: 8 - 12 hz State of Light Relaxation, State of Superlearning, Positive Thinking



Theta: 4-7 hz Deep Relaxation, Mediatation, Increased Memory and Focus

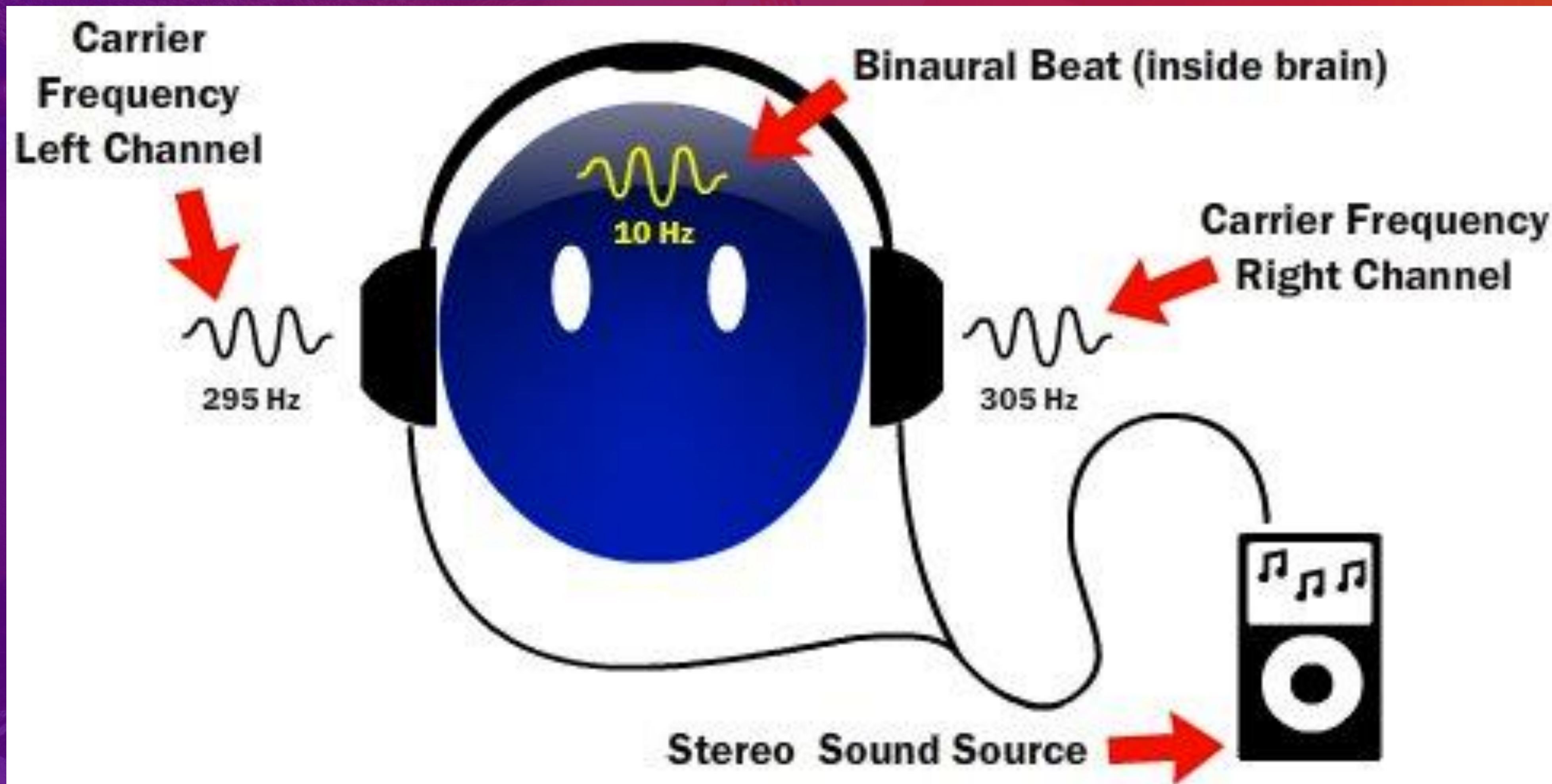


Deep Sleep, Lucid Dreaming, Increased Immune Functions



Seconds

Concussion & Sound Therapy



Isochronic Tones



Emits sound at regular intervals

The Intensity of the sound goes from 0-100 and back again and is evenly spaced

The effect is a strong cortical response in the brain

Light Therapy

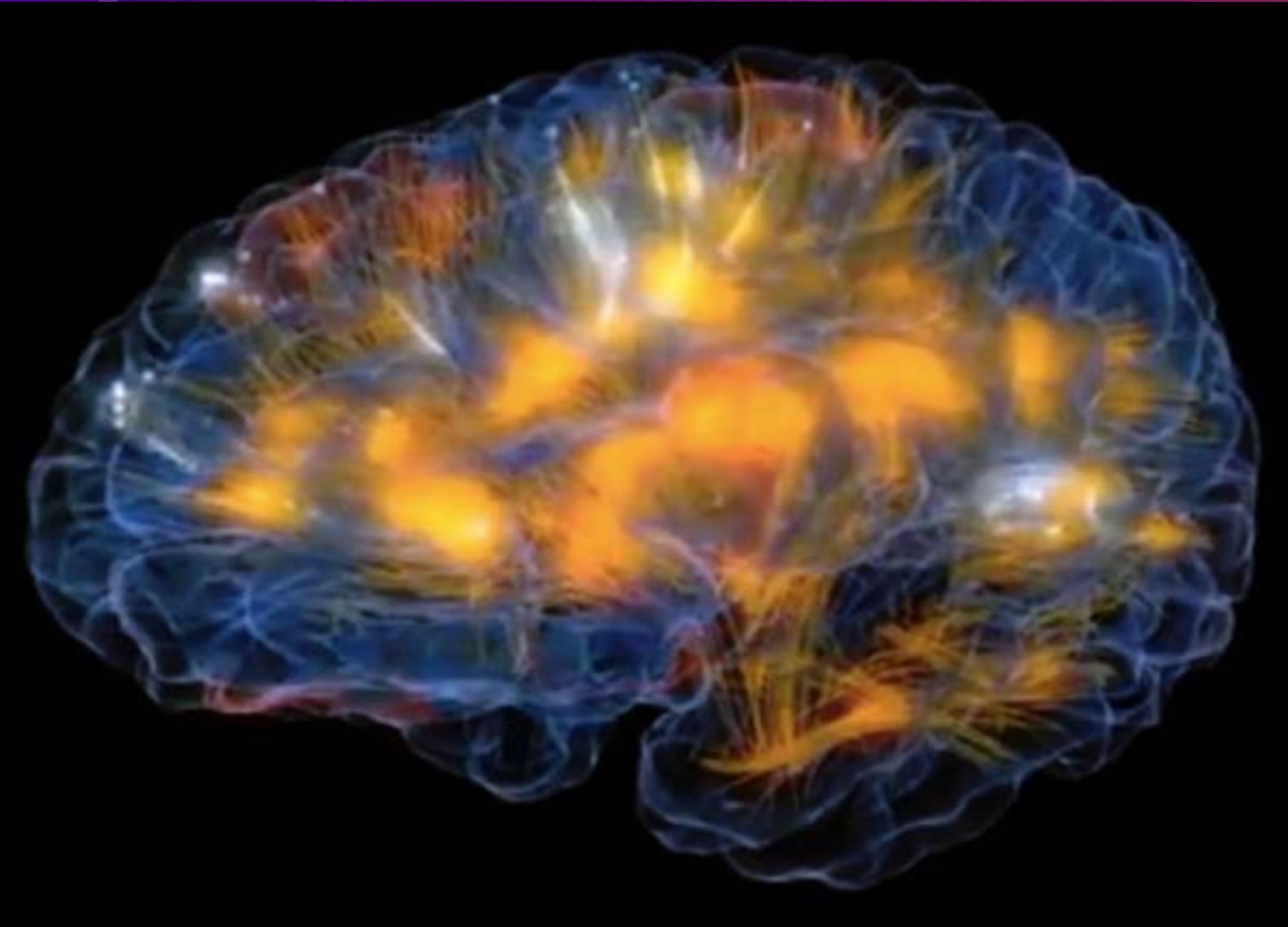
Triggers Nitric Oxide

Turns on Adenosine

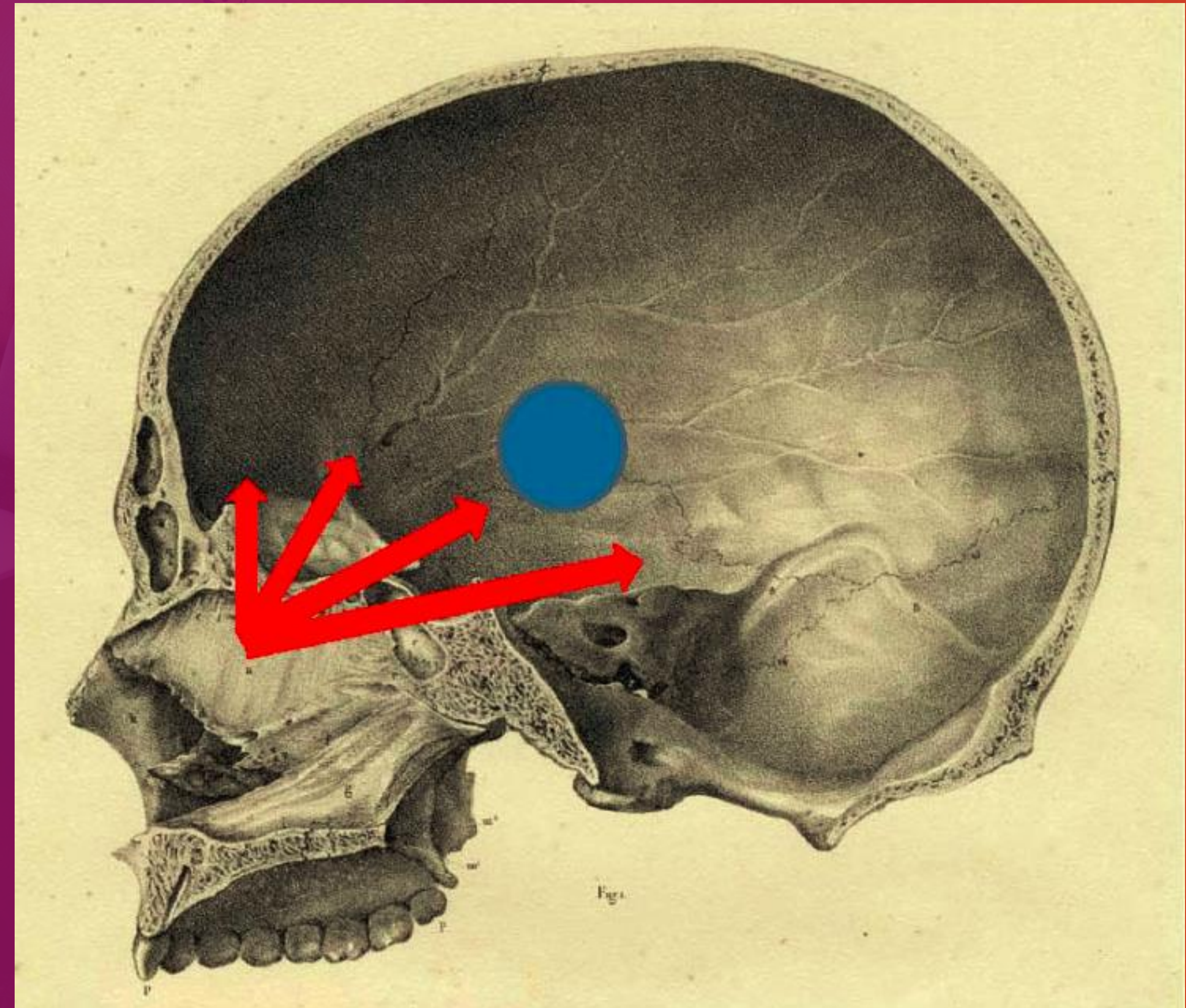
Triphosphate (ATP) production

**Vasodilation- Increase blood
flow to the area**

**Angiogenesis - the process by
which new blood vessels form
from pre-existing vessels**



Intranasal Light Therapy



Infrared Light Pad



Why Light in the Ears?



In 1951, Dr. Paul Nogier discovered modern auriculotherapy

Based on his identifying 7 Nogier frequencies

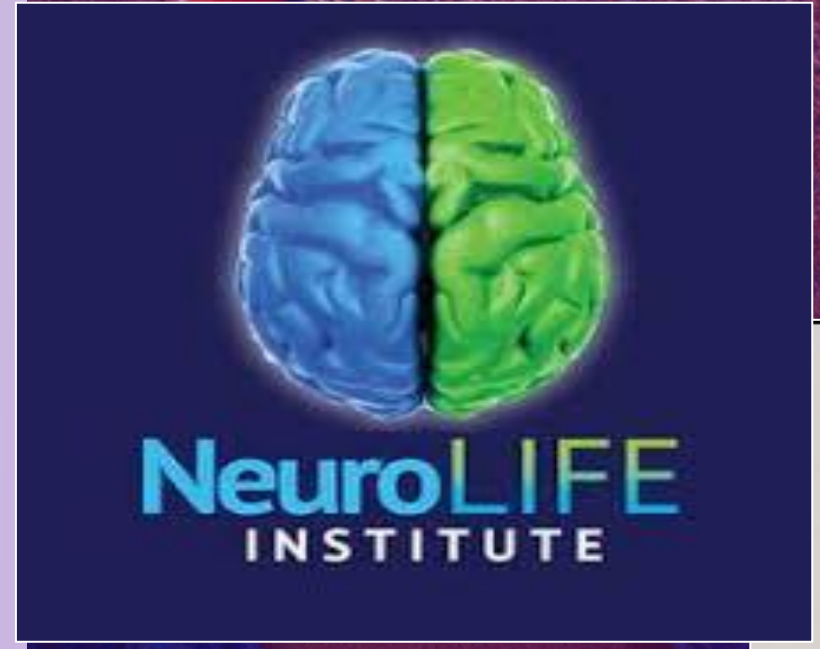
Emits relaxation frequencies using light
Trigger points in the ears are related to organs and systems of the body

The response is a strong sympathetic relaxation response.





<https://braintap.com/braintap-science/>



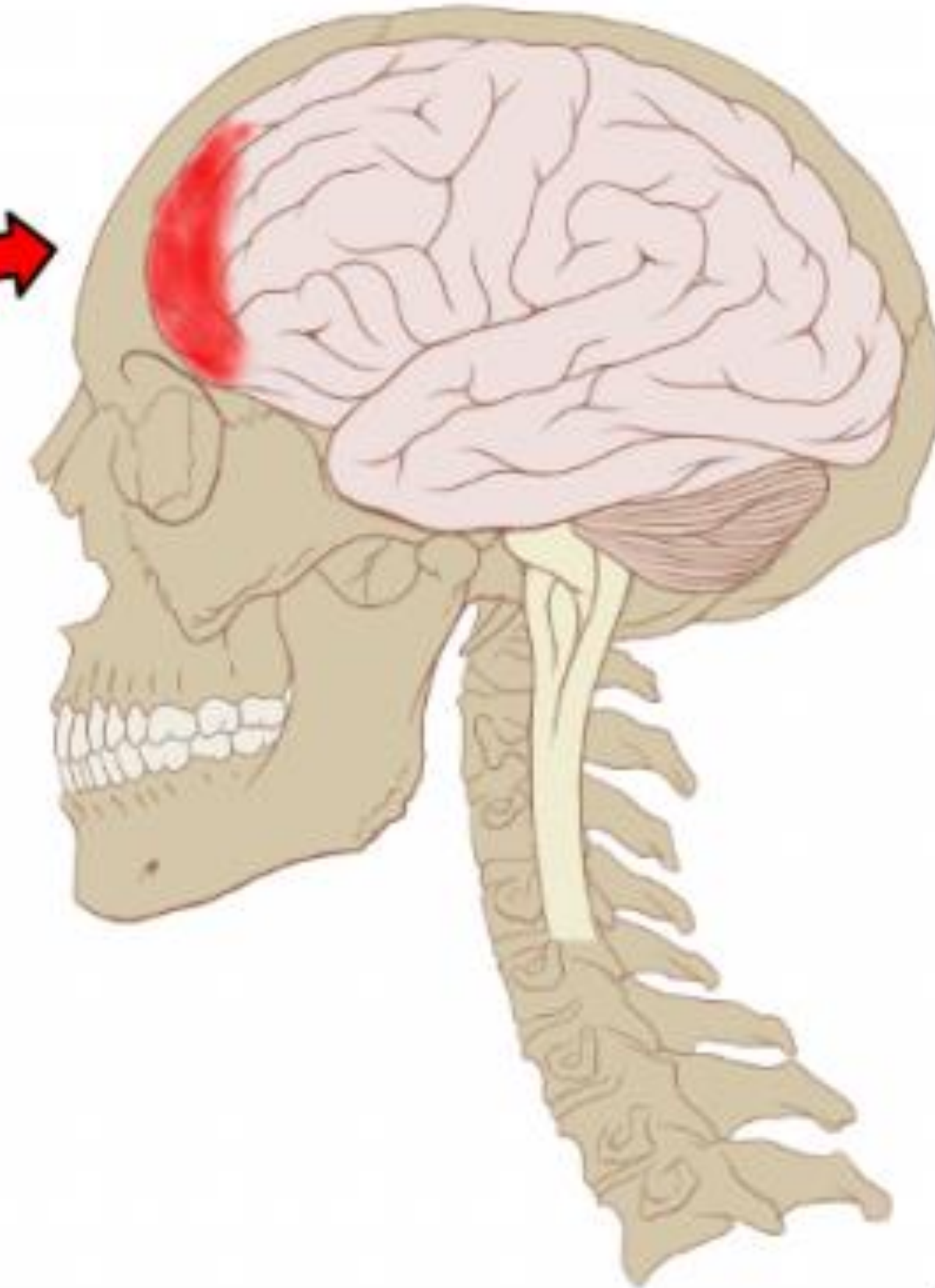
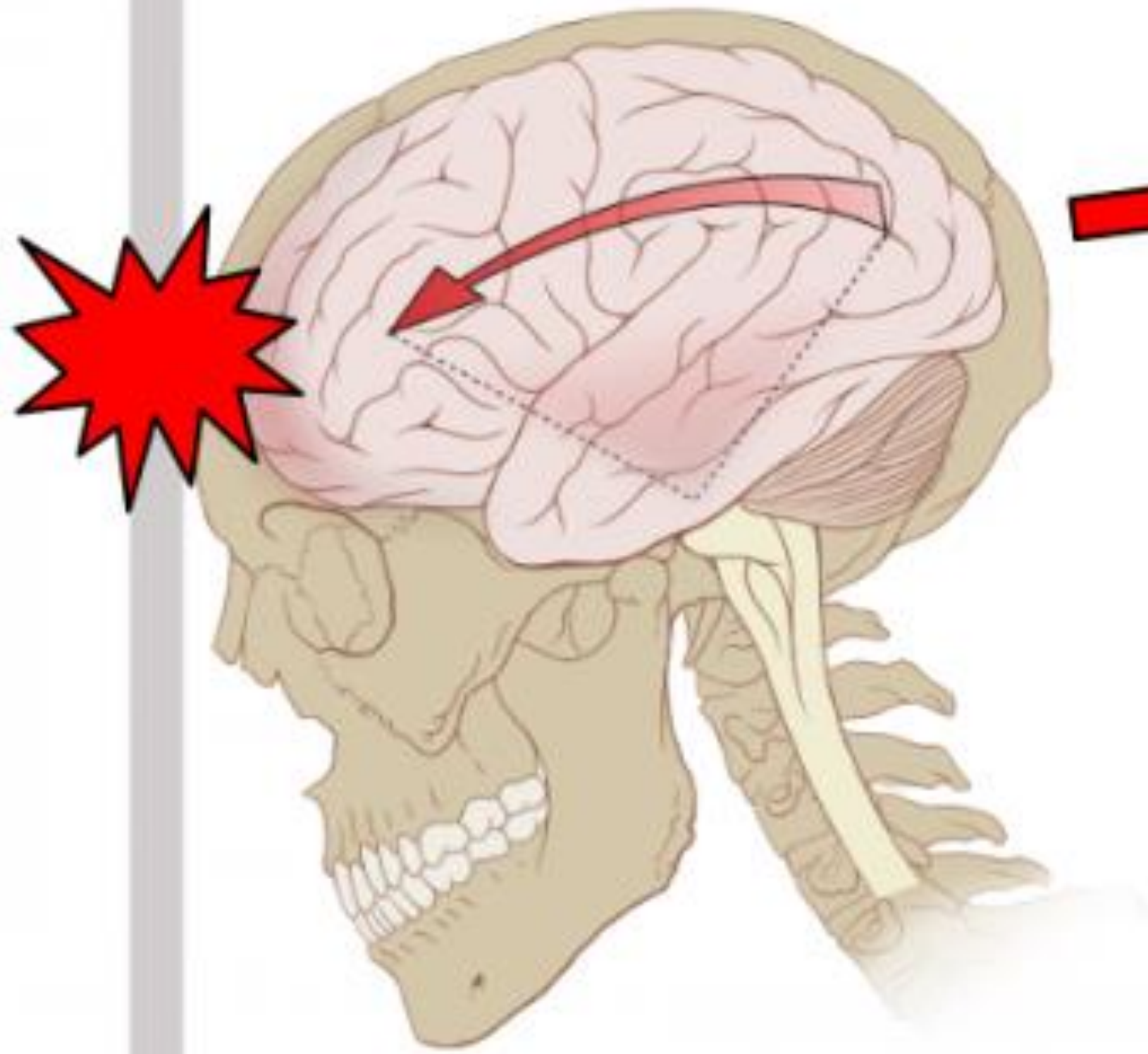
Seven Signs of Concussion

1. Headache or “pressure” in head.
2. Nausea or vomiting.
3. Balance problems or dizziness, or double or blurry vision.
4. Bothered by light or noise.
5. Feeling sluggish, hazy, foggy, or groggy.
6. Confusion, or concentration or memory problems.
7. Just not “feeling right,” or “feeling down”.



Concussion: A traumatic brain injury that changes the way your brain functions.

This can lead to bruising and swelling of the brain, tearing of blood vessels and injury to nerves, causing the concussion.



The brain is made up of soft tissue and is protected by blood and spinal fluid. When the skull is jolted too fast or is impacted by something, the brain shifts and hits against the skull.

Most concussions are mild and can be treated with appropriate care. But left untreated, it can be deadly.



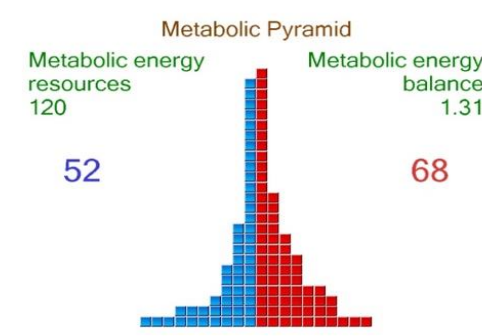
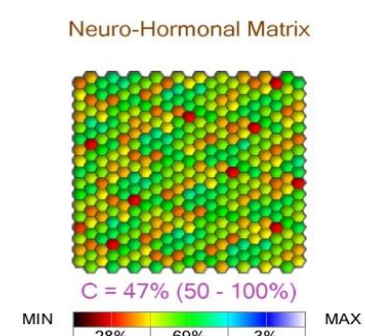
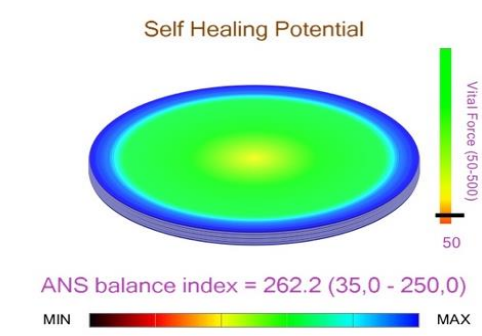
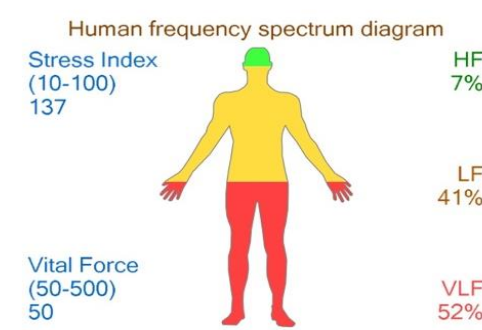
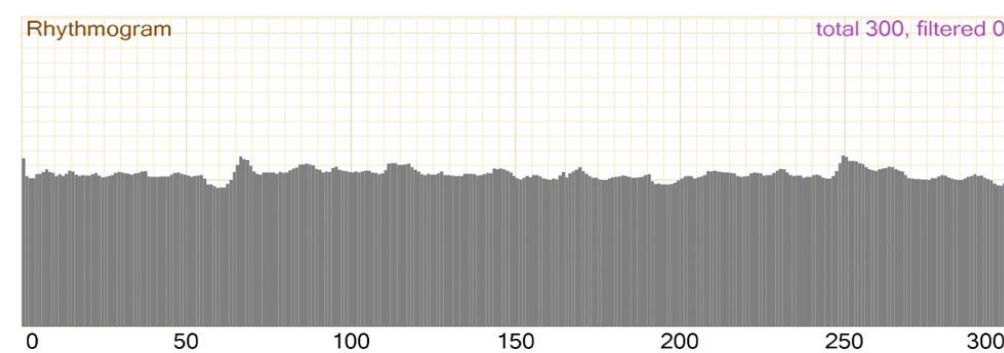
Example of a brain that has been injured due to *stroke/head injury*.

Most of the tissue is recoverable but *because of inflammation* there is poor circulation and that part of the brain does not heal and repair

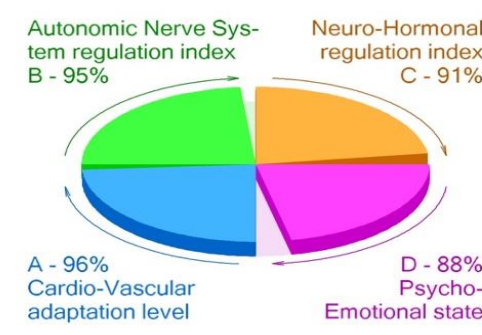
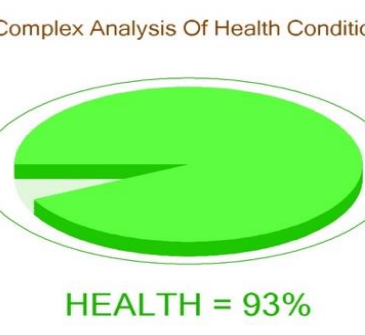
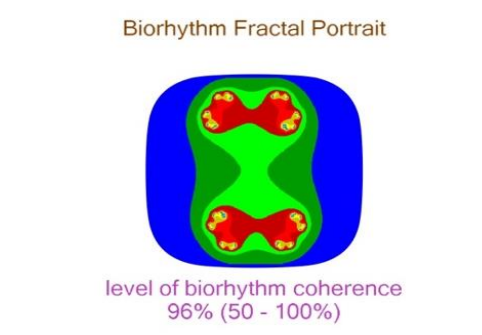
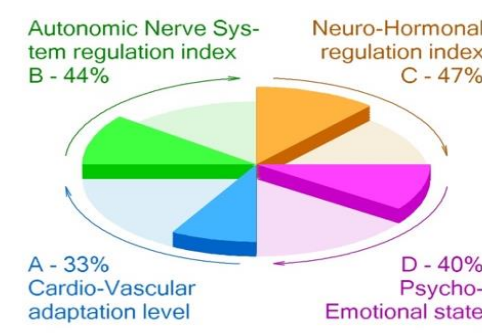
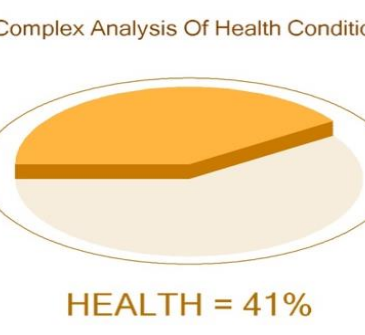
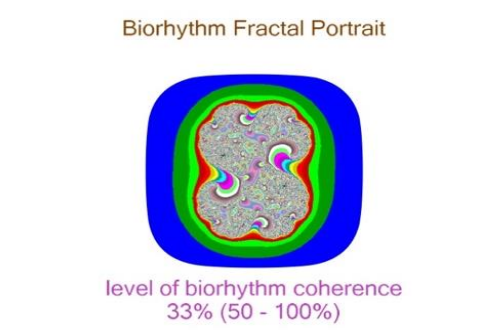
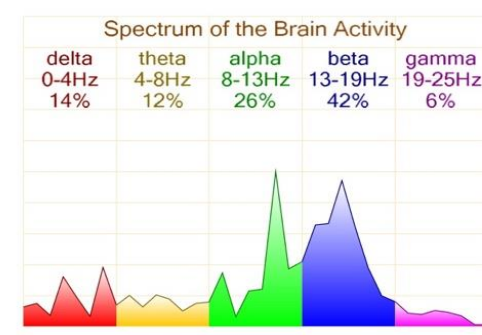
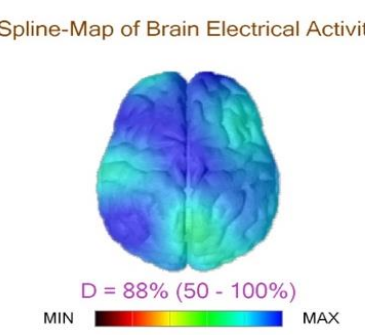
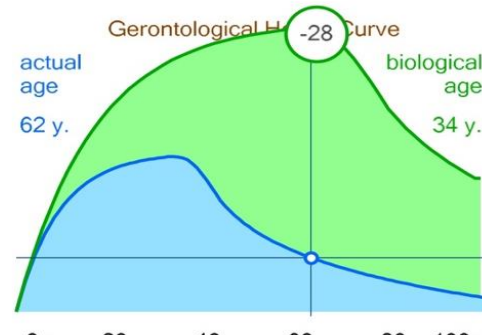
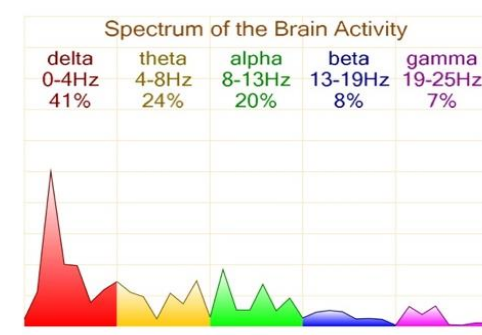
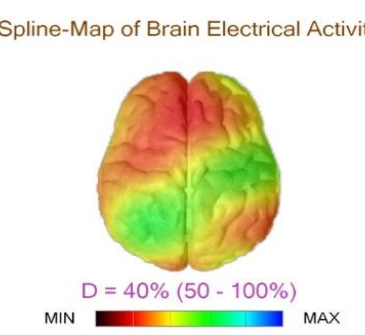
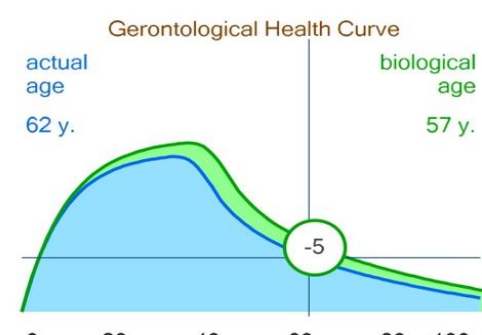
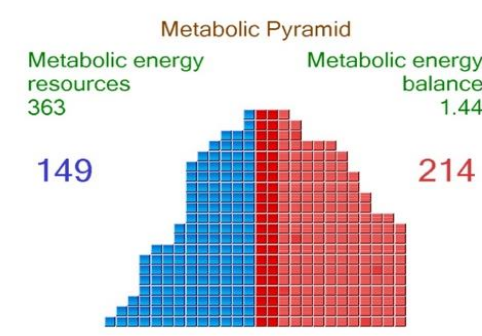
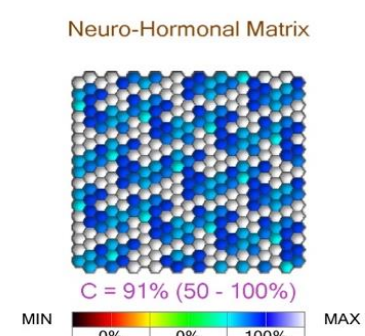
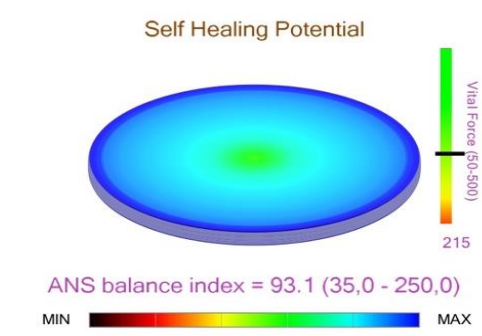
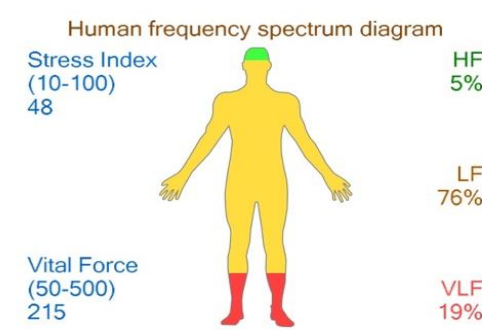
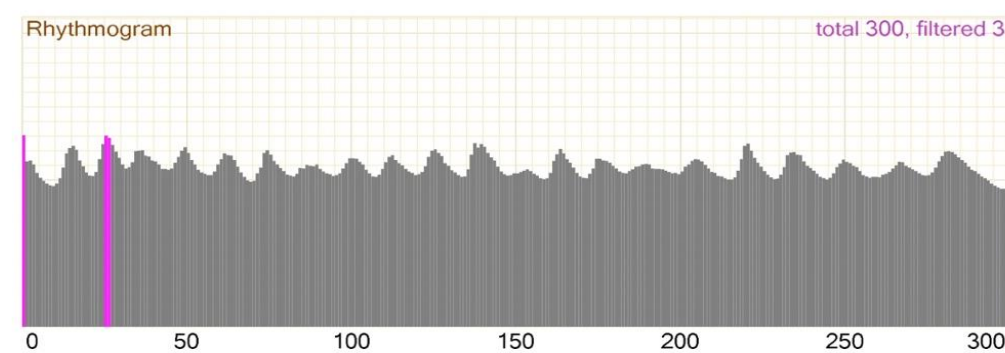
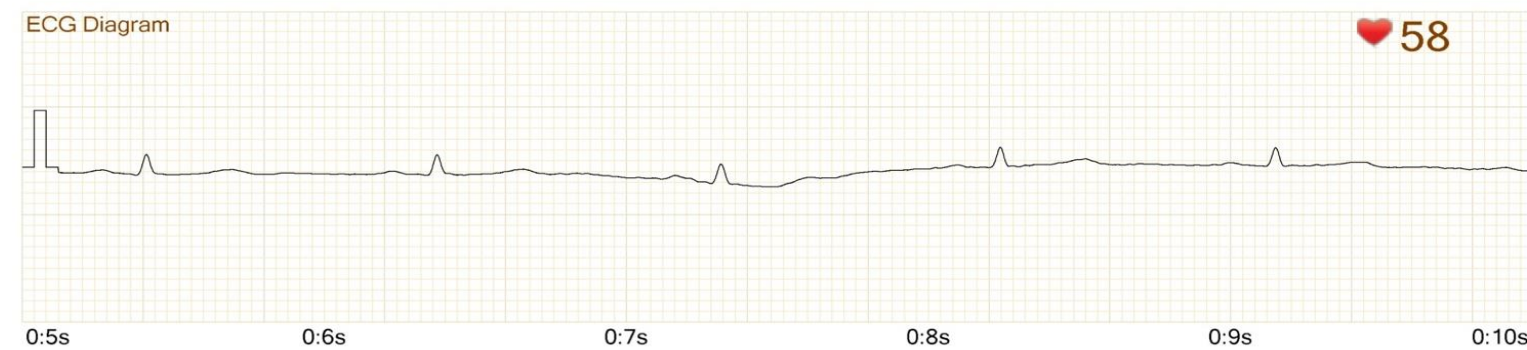
When we produce energy directly at the source (mitochondria) regardless of the restricted circulation we are able to kick start the recovery

Are you Testing or Guessing?

Sunday, May 11, 2014 3:34:25 PM



Sunday, May 11, 2014 4:19:41 PM



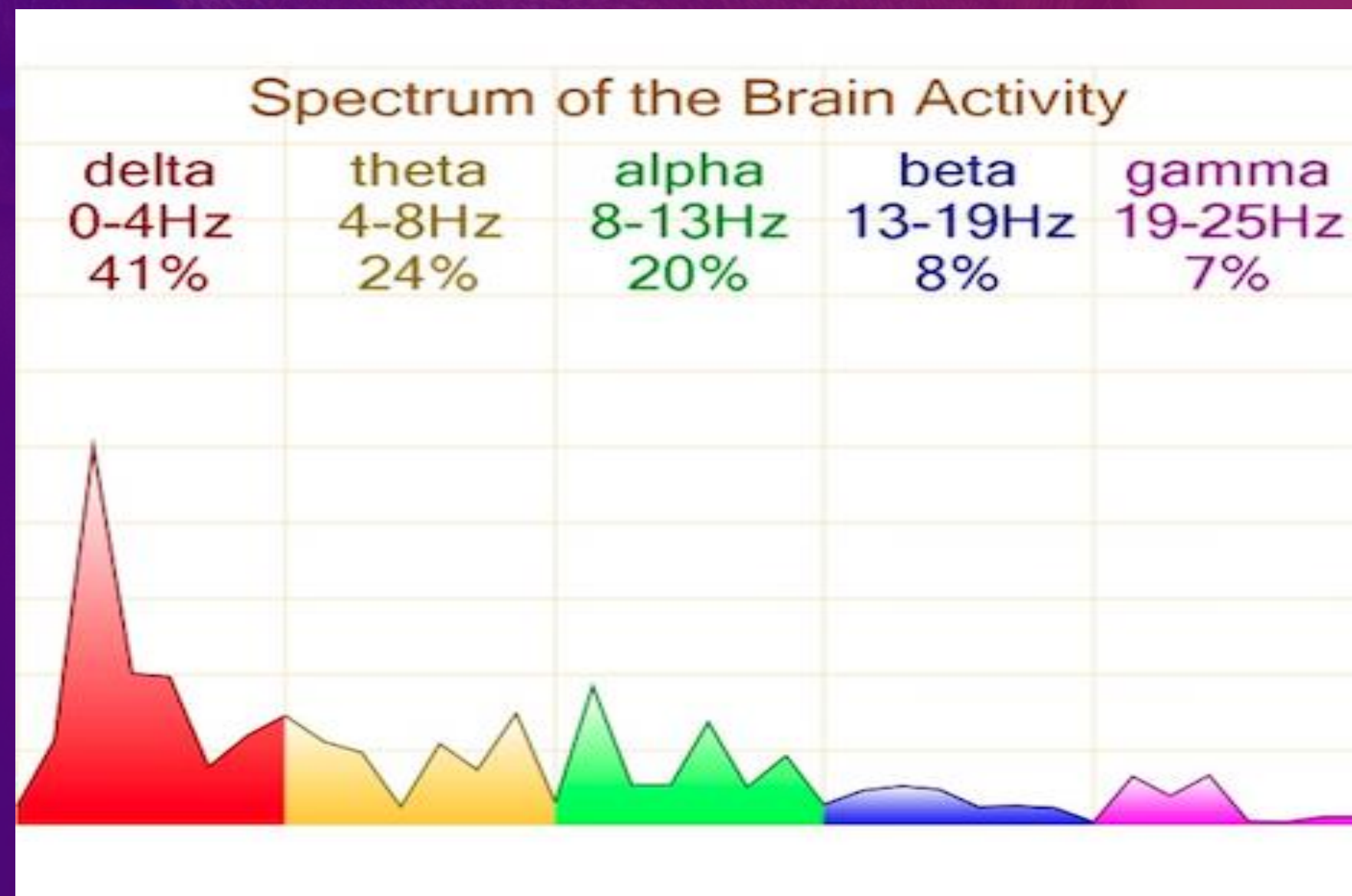
Survive



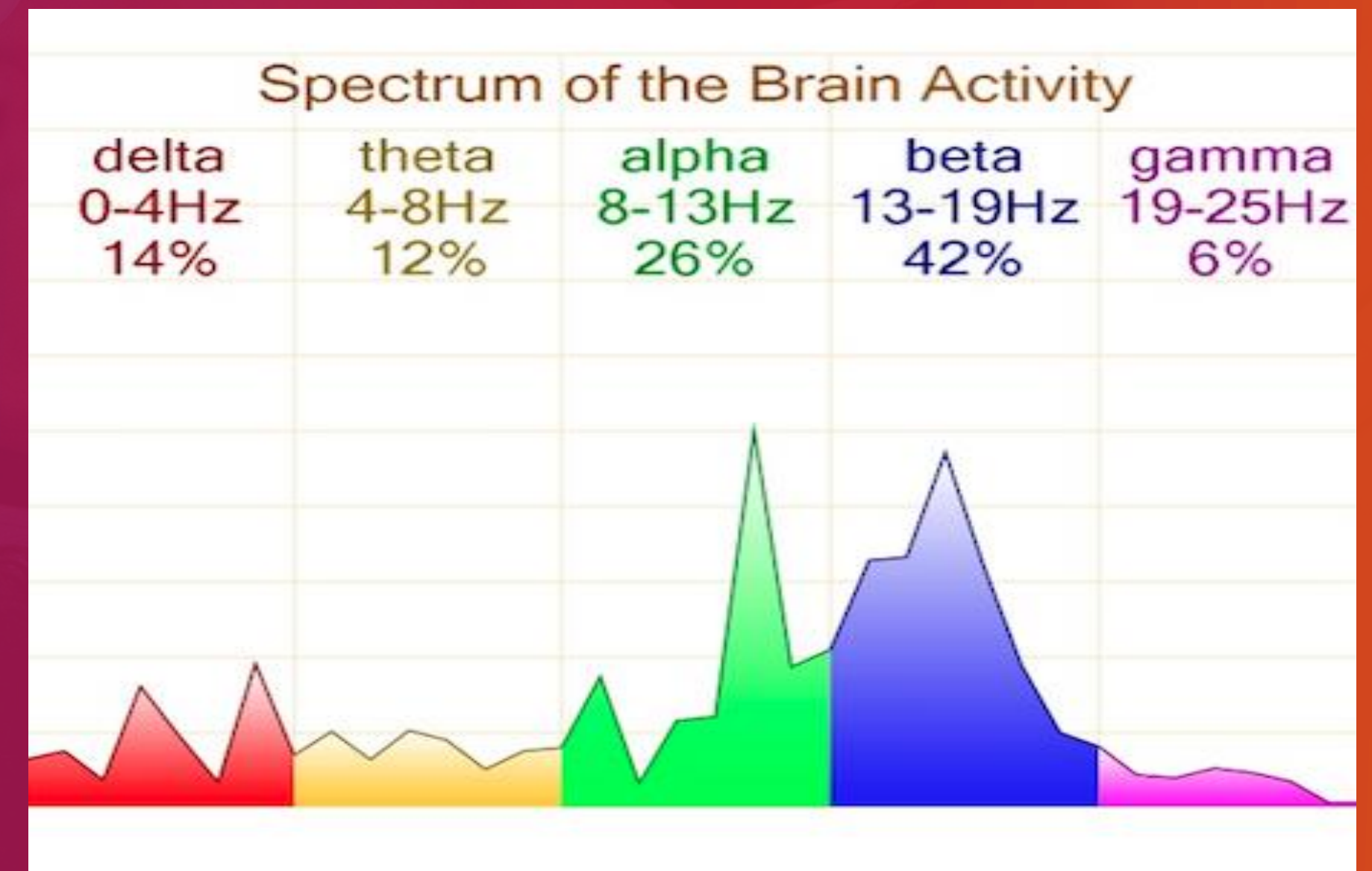
Thrive



Brain Stress



Before

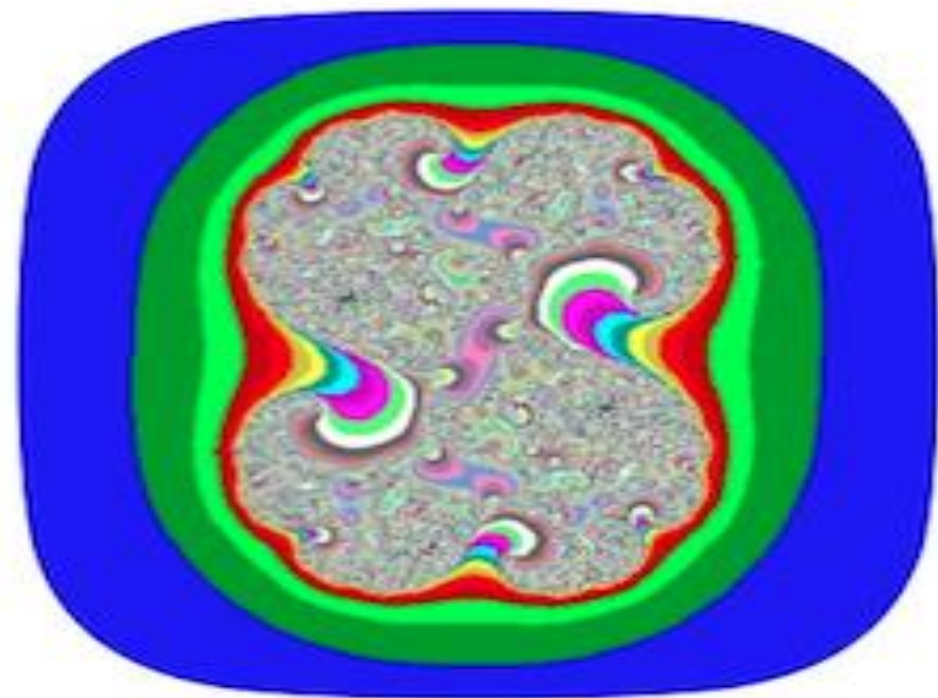


After



HRV

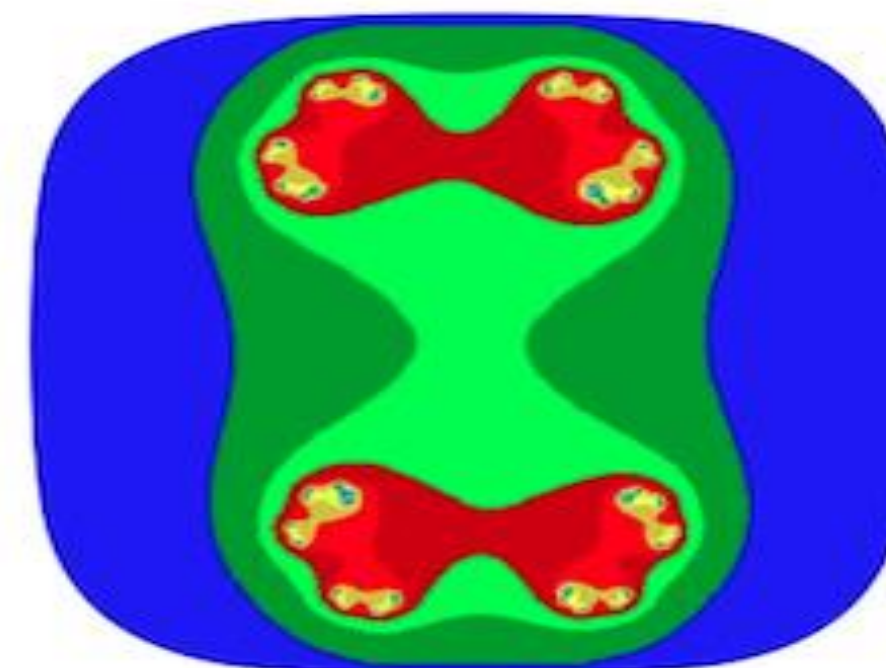
Biorhythm Fractal Portrait



level of biorhythm coherence
33% (50 - 100%)

Before

Biorhythm Fractal Portrait



level of biorhythm coherence
96% (50 - 100%)

After

Brain States

Sleeping

Resting

Inventive

Intuitive

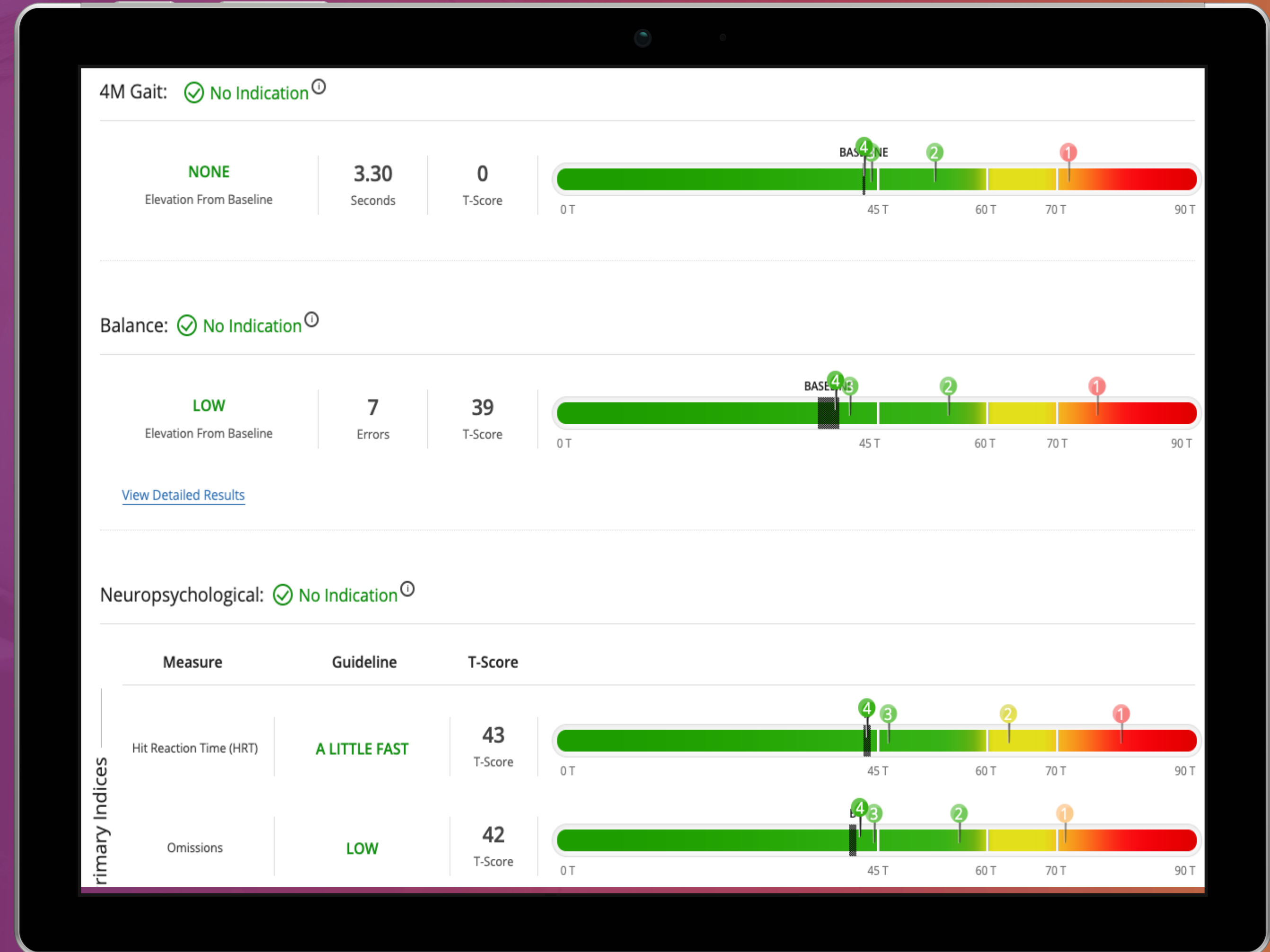
Reactive



SPORTGAIT BRAIN PHYSICAL™

A Smarter Clinical Assessment

- ✓ Clinical Decision Support, HIPAA-Compliant
- ✓ Meets Zurich-Berlin Global Consensus Guidelines
- ✓ Built on Large-scale Normative Data (Patients ages 5 to 85)
- ✓ Gait, Balance, Cognitive, Vestibular-Ocular-Motor Assessments
- ✓ Works with all Revenue Models- Cash Pay & Insurance Pay
- ✓ Facilitates Quantifiable Information for Medical Provider's Return-to-Activity Decisions



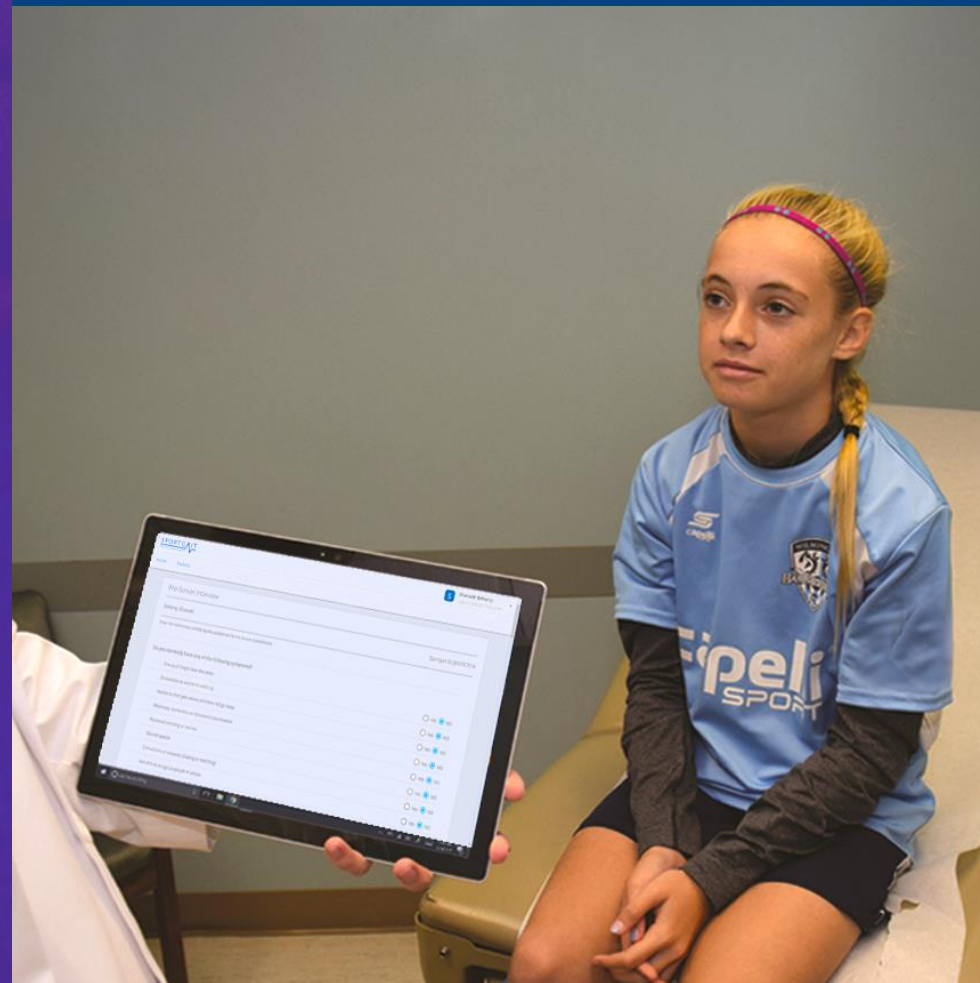
Julia Mills, Medical Sales
jmills@sportgait.com
919.594.7382

Julia Mills, Medical Sales
jmills@sportgait.com
919.594.7382

SPORTGAIT BRAIN PHYSICAL™

Standardized on the Microsoft Surface Tablet

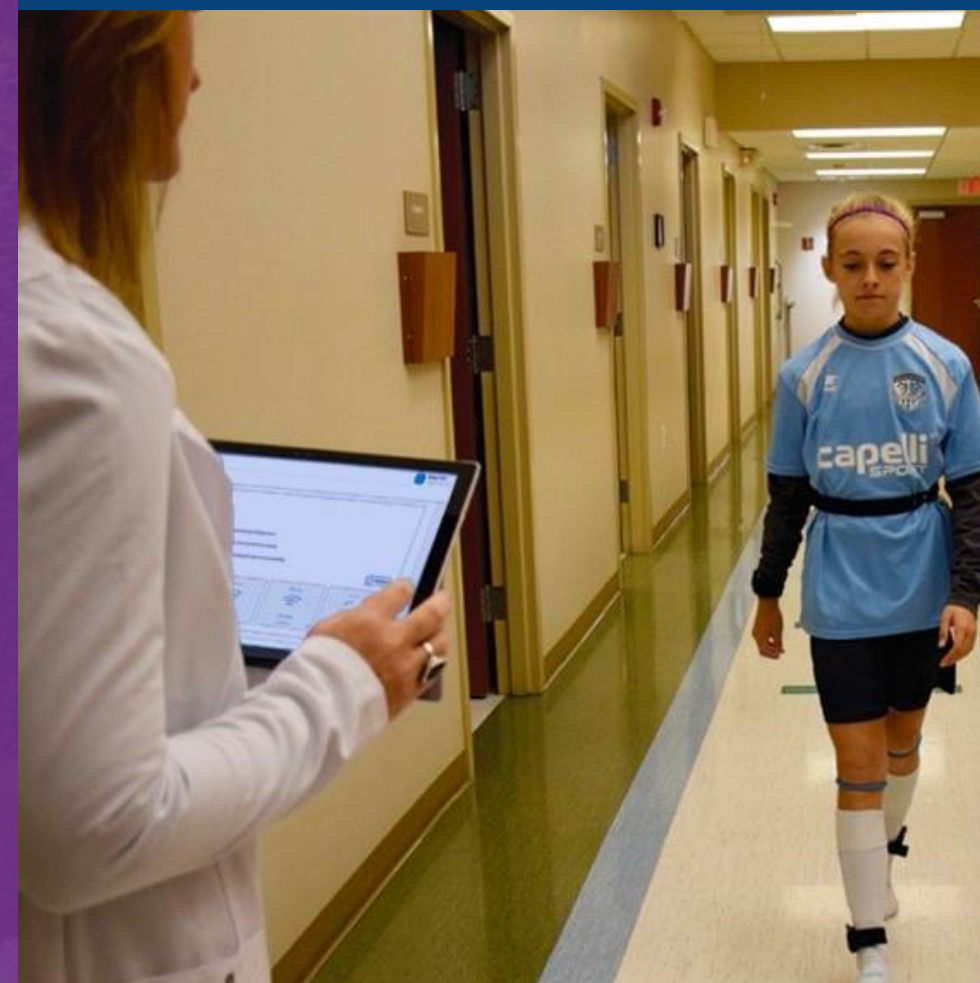
PRESCREEN



Prescreen

Records CDC signs & symptoms, and medical history

GAIT ANALYSIS



Gait Observation Analysis

Qualitative analysis to address issues regarding smoothness of a patient's gait

NIH 4-Meter Gait

Measures dynamic postural stability and sway, specifically locomotion

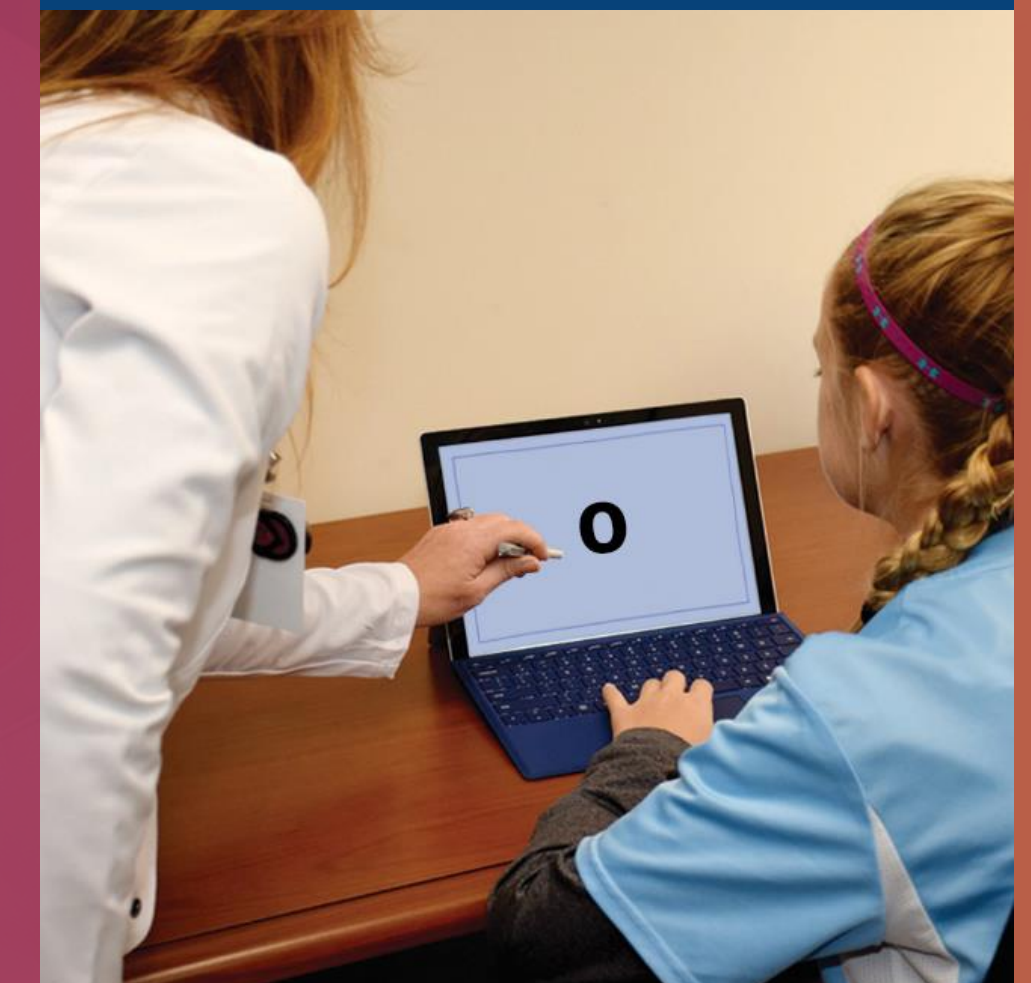
BALANCE



UNC Balance Error Scoring System (BESS)

Measures static postural stability and sway

NEUROCOGNITIVE TEST

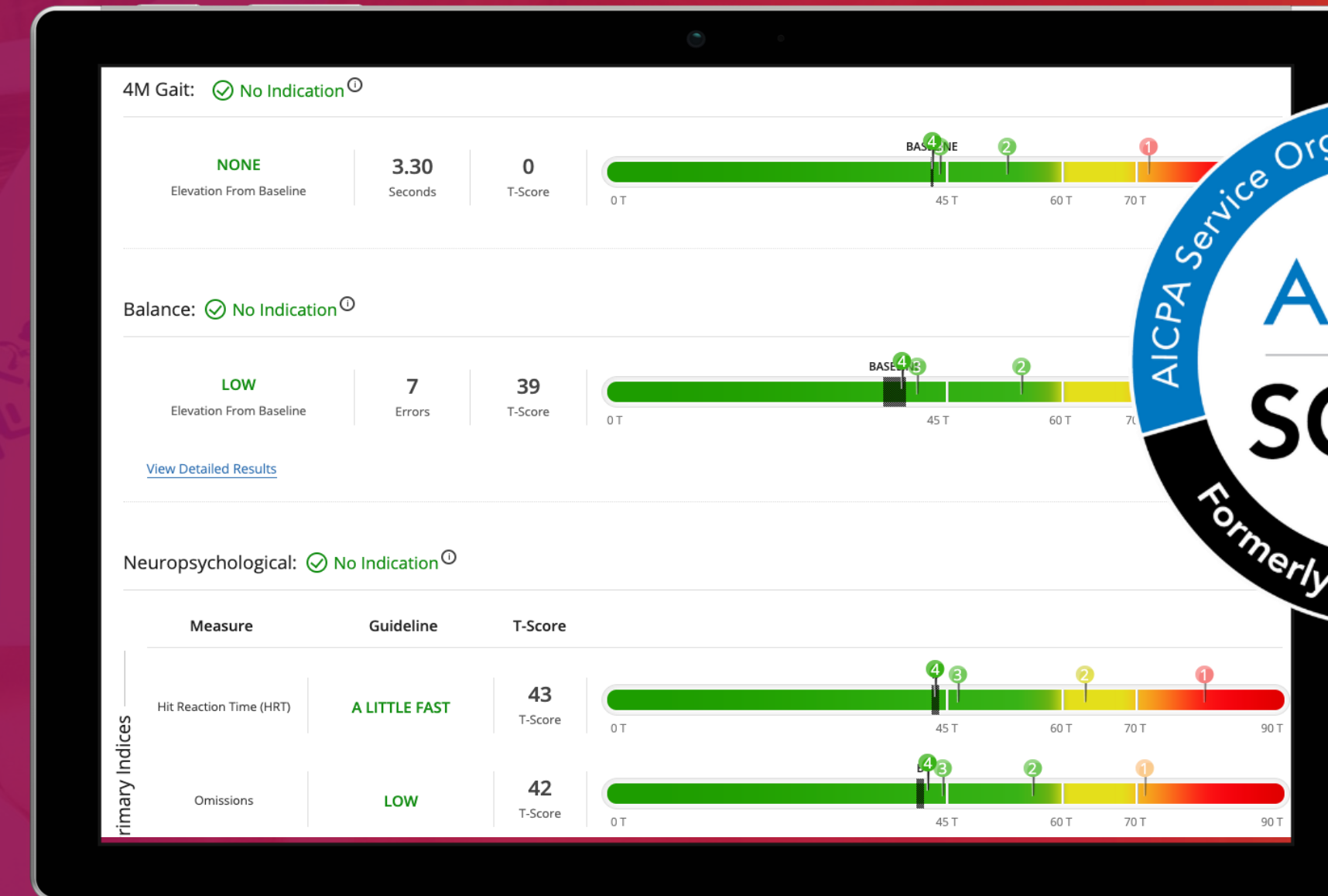


Conner's Continuous Performance Test

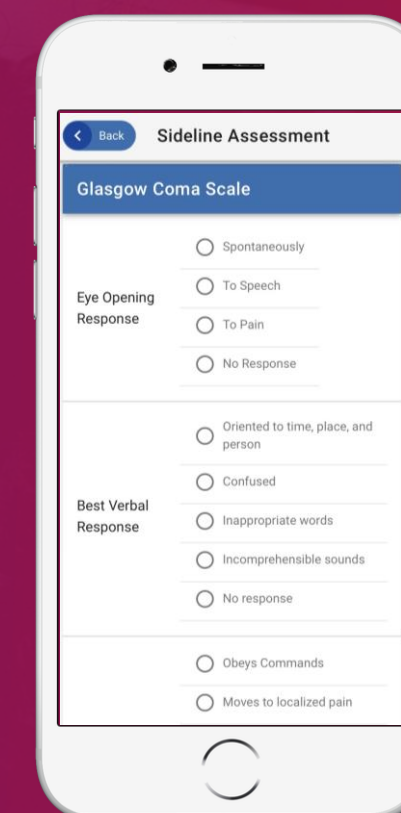
Measures attention, distractibility, processing speed, and variability in attention

CONNECTING CLINICIANS TO COMMUNITY & SPORTS TEAMS

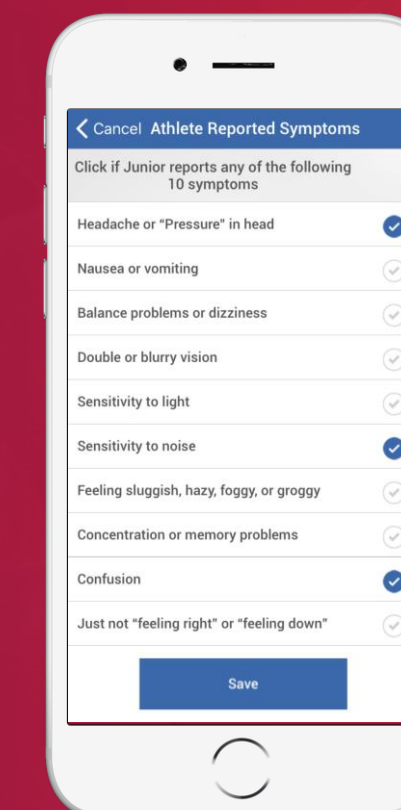
- ✓ Mobile App includes 'Find a Provider' feature, Referring Mobile App Users to SportGait Clinics
- ✓ Cybersecure, Integrated System
- ✓ Sports Organizations and Schools use SportGait Mobile Screener App for:
 - Concussion Education
 - Compliance
 - CDC Symptom Checker
 - Concussion Assessments
 - Log an Injury & COVID Wellness
- ✓ Many State Sports Associations across U.S. are Adopting SportGait as their Preferred Concussion Platform



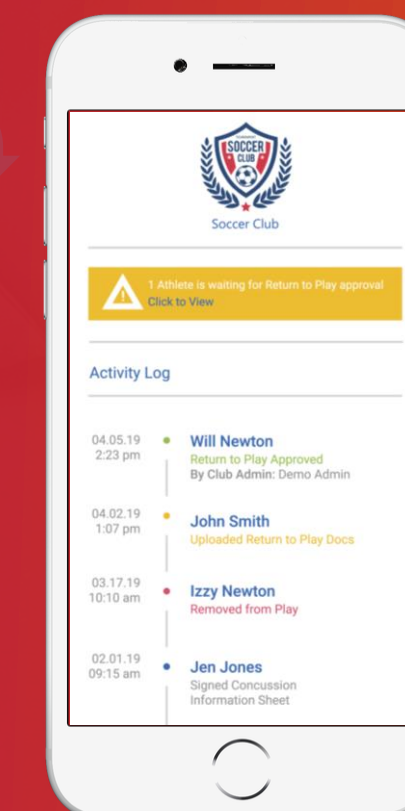
MEDICAL



ATHLETIC TRAINER



PARENT



SPORTS ORGANIZATION

RESEARCH: FUTURE PROOFING SPORTGAIT PLATFORM

For more information contact:

Julia Mills, Medical Sales

jmills@sportgait.com

919.594.7382

Dedicated Multi-University & Clinic
Concussion Research Consortium



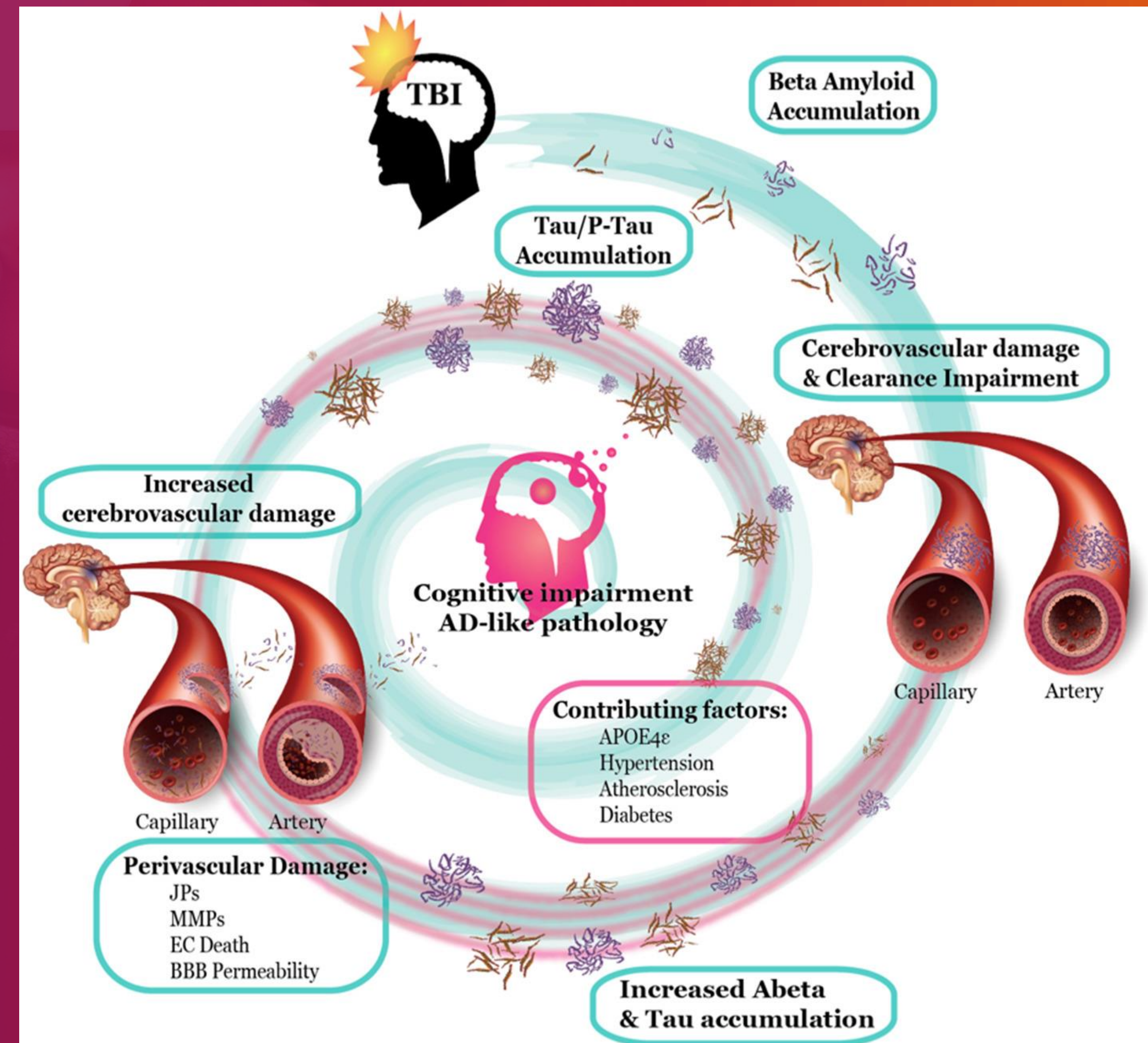
Unified Research Reaching
75,000 Subjects & Growing!

6 Peer-Reviewed
Publications with a Strong
Roadmap

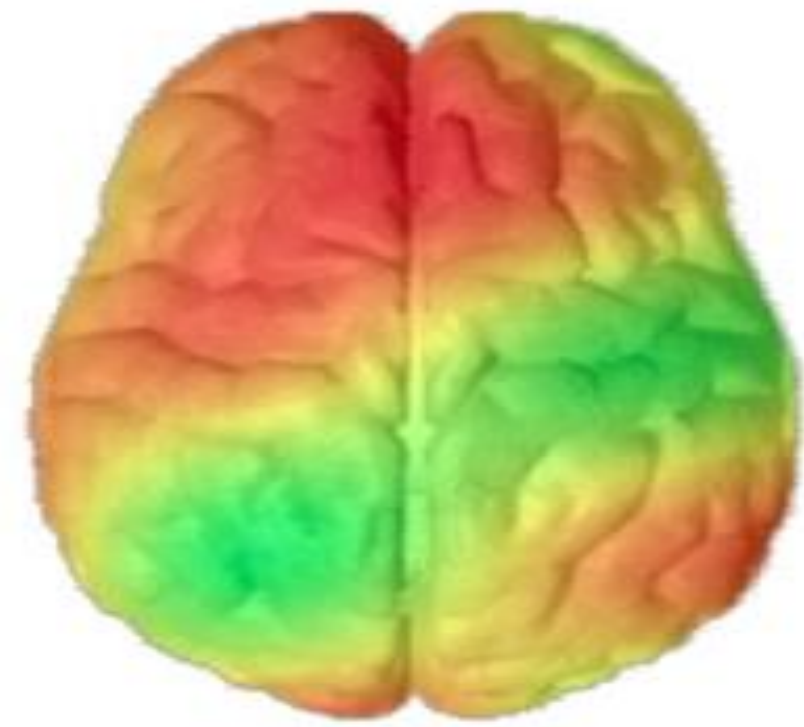


What Happens When You Experience Chronic Low-Level Stress

1. Autonomic imbalance/Sympathetic dominance
2. Hormone imbalance/deficiencies
3. Micronutrient deficiencies
4. Sticky blood/platelets
5. Glycocalyx/endothelial damage
6. Loss of tight junctions aka Leaky Gut/Microbiome change (If you have this you also have leaking brain)
7. Mitochondrial DNA damage



Spline-Map of Brain Electrical Activity



D = 40% (50 - 100%)

MIN  MAX

Before

Spline-Map of Brain Electrical Activity

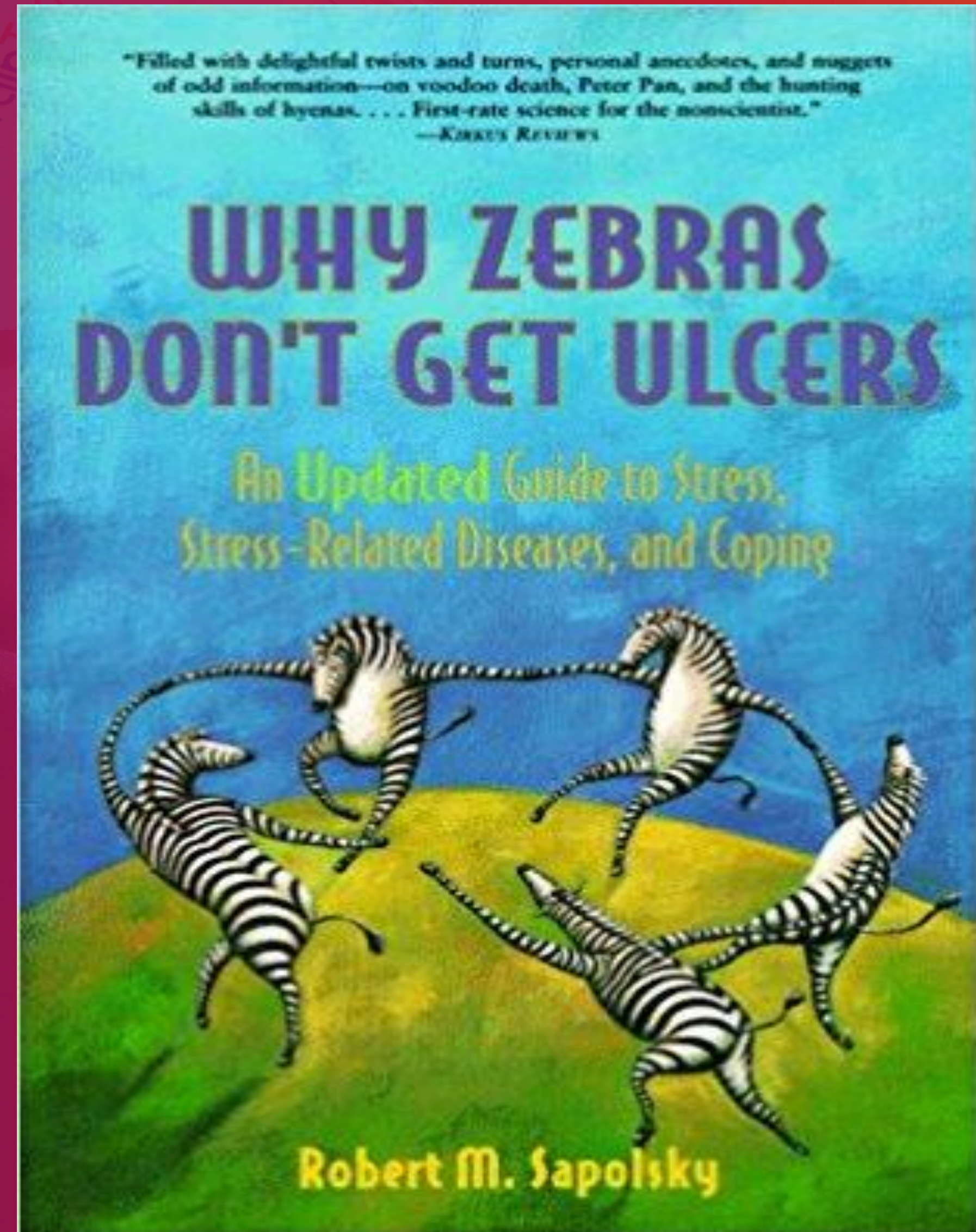


D = 88% (50 - 100%)

MIN  MAX

After

Situations
don't cause
STRESS





















Effect of a single Audio-Visual Brain Entrainment session on Heart Rate Variability: a clinical trial with 100 adult volunteers

Michael Porter¹, Patrick Porter^{1,2}, Afonso Inoue Shiguemi Salgado¹ and Francisco J Cidral-Filho¹

¹ Integrative Physical Therapy Residency - Salgado Institute of Integrative Health, Londrina, PR - Brazil.

² Quantum University, Honolulu, HI - USA.



Contact: pporter@braintap.com

OBJECTIVE

The objective of this study was to investigate the effect of the Audio-Visual Brain Entrainment (ABE) on Heart Rate Variability.

RESULTS

ABE significantly (1) increased Heart Rate Variability: HRV Index (A low HRV is associated with an increased risk of cardiovascular disease - $p < 0.001$, 21.8%) and RRNN (RR normal-to-normal intervals; a marker of overall HRV activity - $p < 0.001$, 6.8%); (2) increased Parasympathetic activity markers: RMSSD (Root Mean Square of the Successive RR interval Differences - $p < 0.0001$, 32.2%), NN50 (The number of pairs of successive NN (R-R) intervals that differ by more than 50 ms - $p < 0.0001$, 50.6%), pNN50% (The proportion of NN50 divided by the total number of NN (R-R) intervals - $p < 0.001$, 51.6%), HFnu (High Frequency Band: index of modulation of the parasympathetic branch of the autonomic nervous system - $p < 0.0336$, 37.1%), and LFnu (Low Frequency Band: general indicator of aggregate modulation of both the sympathetic and parasympathetic branches of the Autonomic Nervous System - $p < 0.0048$, 45.1%); and (3) decreased Stress Index ($p < 0.001$, 38.4%) and Heart Rate ($p < 0.0001$, 6.2%).

METHODOLOGY

Sample size consisted of 100 adult volunteers (50 males and 50 females) with no hearing disabilities. ABE was delivered with a BrainTap headset (New Bern - NC - USA - Figure 1 - Panel B) in a 20-minute session. Session consists of Binaural beats at 18 to 0.5 HZ, Isochronic Tones at 18 to 0.5 HZ and visual Entrainment through light-emitting diode lights at 470 nanometers (nm) flickering at 18 to 0.5 HZ. Heart rate Variability (Dinamika HRV - Advanced Heart Rate Variability Test System, Moscow, Russia - Panel A) was assessed at baseline and after ABE session.



Figure 1 - A) HRV assessment. B) Audio-Visual Brain Entrainment with BrainTap headset.

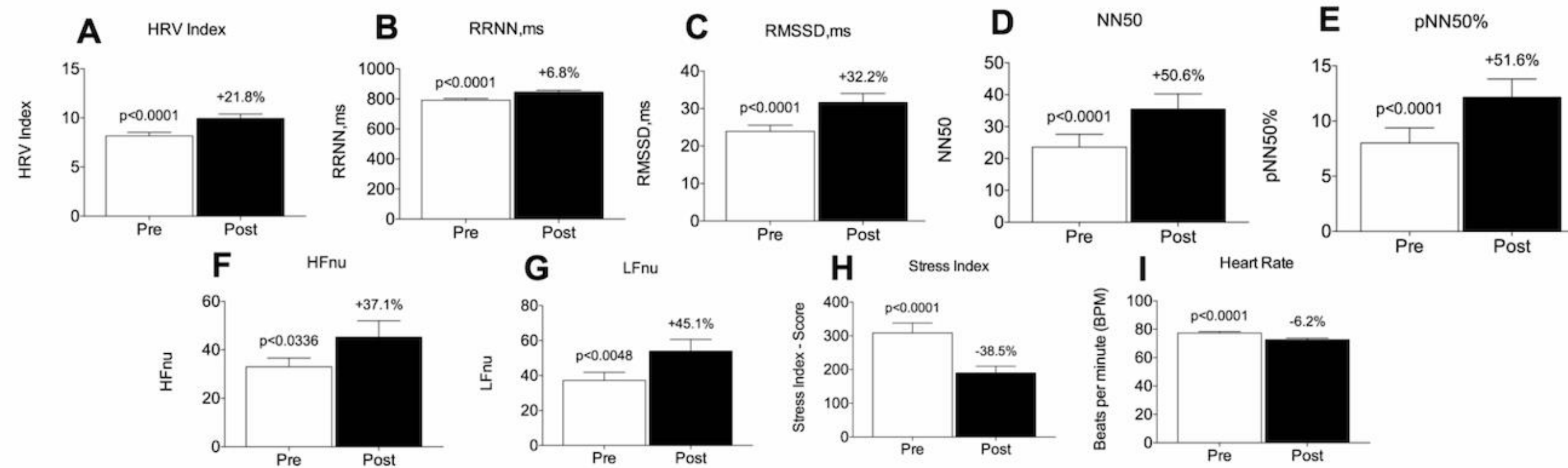


Figure 2 - Audio-Visual Brain Entrainment on Heart Rate Variability. A = HRV Index, B = RRNN, C = RMSSD; D = NN50; E = NN50%; F = HFnu; G = LFnu; H = Stress Index; I = Heart Rate. Data were expressed as mean \pm standard deviation (SD) n = 100 per group. Student's T-test was used.

ACKNOWLEDGMENT



CONCLUSIONS

A single Audio-Visual Brain Entrainment session with the BrainTap Headset significantly increased heart rate variability and parasympathetic activity, as well as decreased stress index and heart rate.



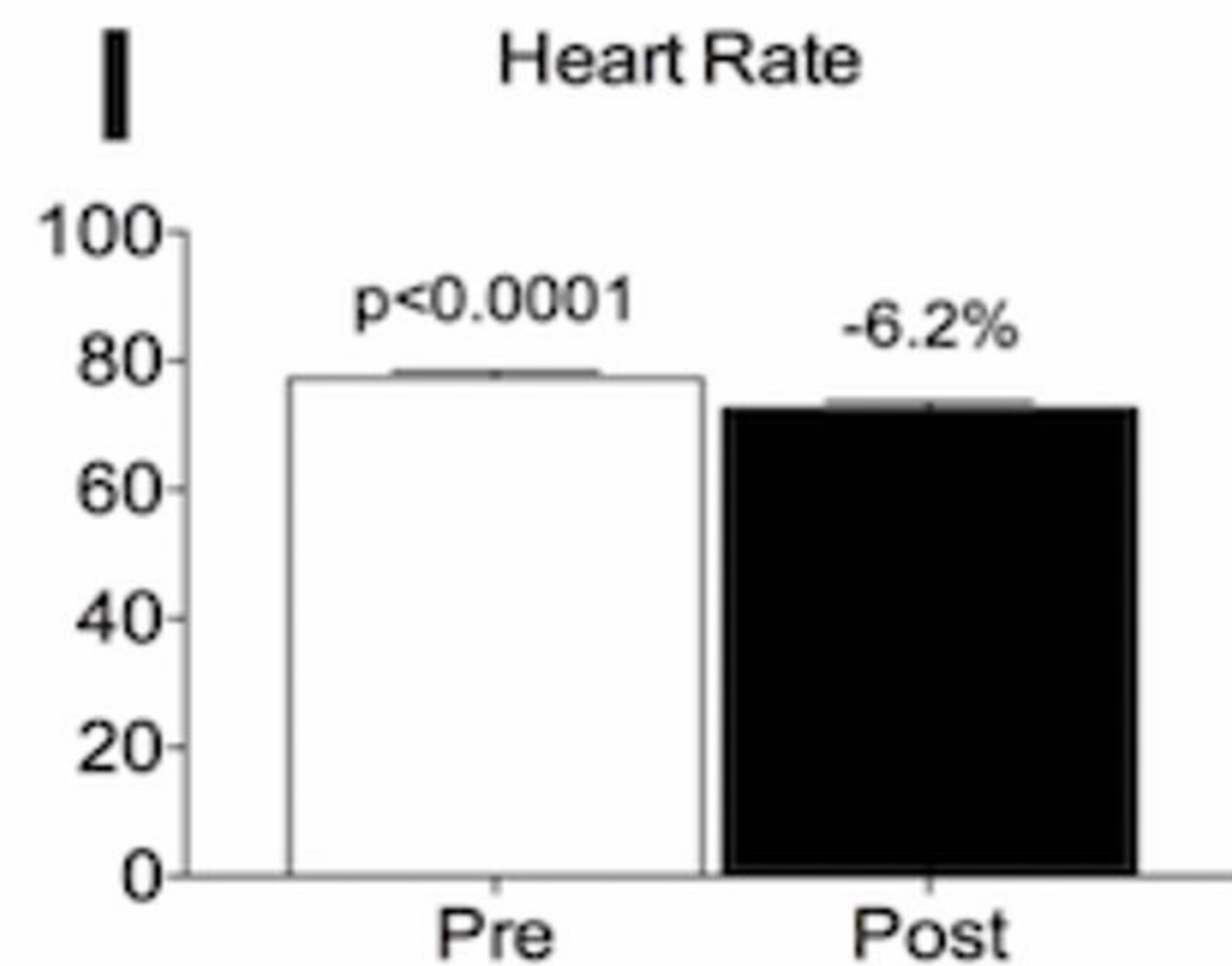
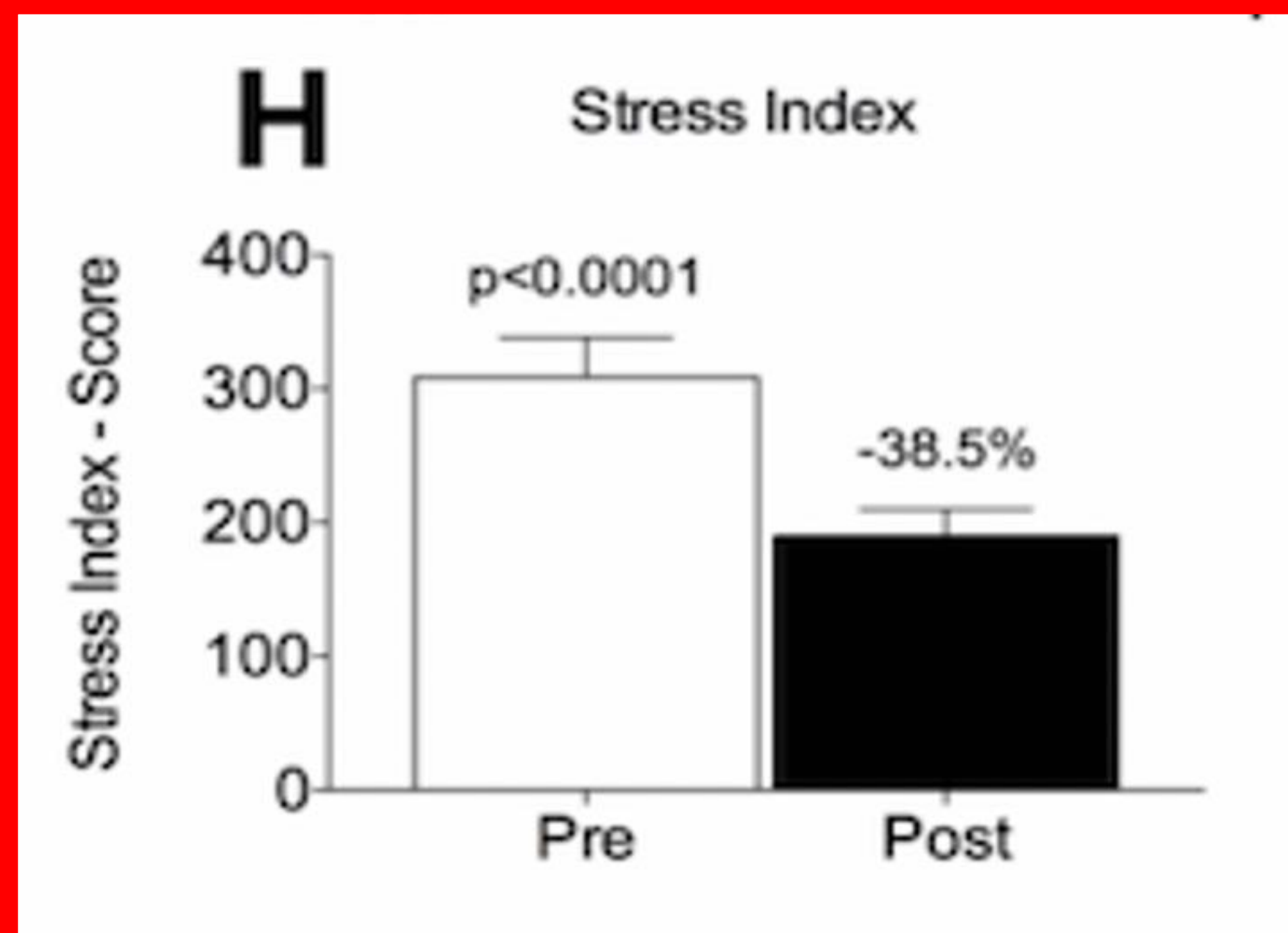
2020 International Congress on Integrative Medicine and Health

April 28 - May 1, 2020 | Cleveland, Ohio, USA

Academic Consortium for Integrative Medicine and Health

Transforming Health Care Through Collaboration

Effect of a single Audio-Visual Brain Entrainment session on Heart Rate Variability



Index, B = RMSSD, C = RMSSD, D = NN50, E = NN50%; F = HFnu; G = LFnu; H = Stress

Student's T-test was used.

CONCLUSIONS

The Neurological Epidemic

Why Fortify Your Adjustment?



- ✓ Thoughts
- ✓ Trauma
- ✓ Toxins
- ✓ Digital lifestyle
- ✓ Attention span



Sports Recovery in Professional Sports



Rest
Relax
& Reboot
after Periods
of Stress



Sporting Kansas City – Professional Soccer
National Training and Coaching Development Center

Donald Hebb

Created Hebb's Law of Learning, 1949

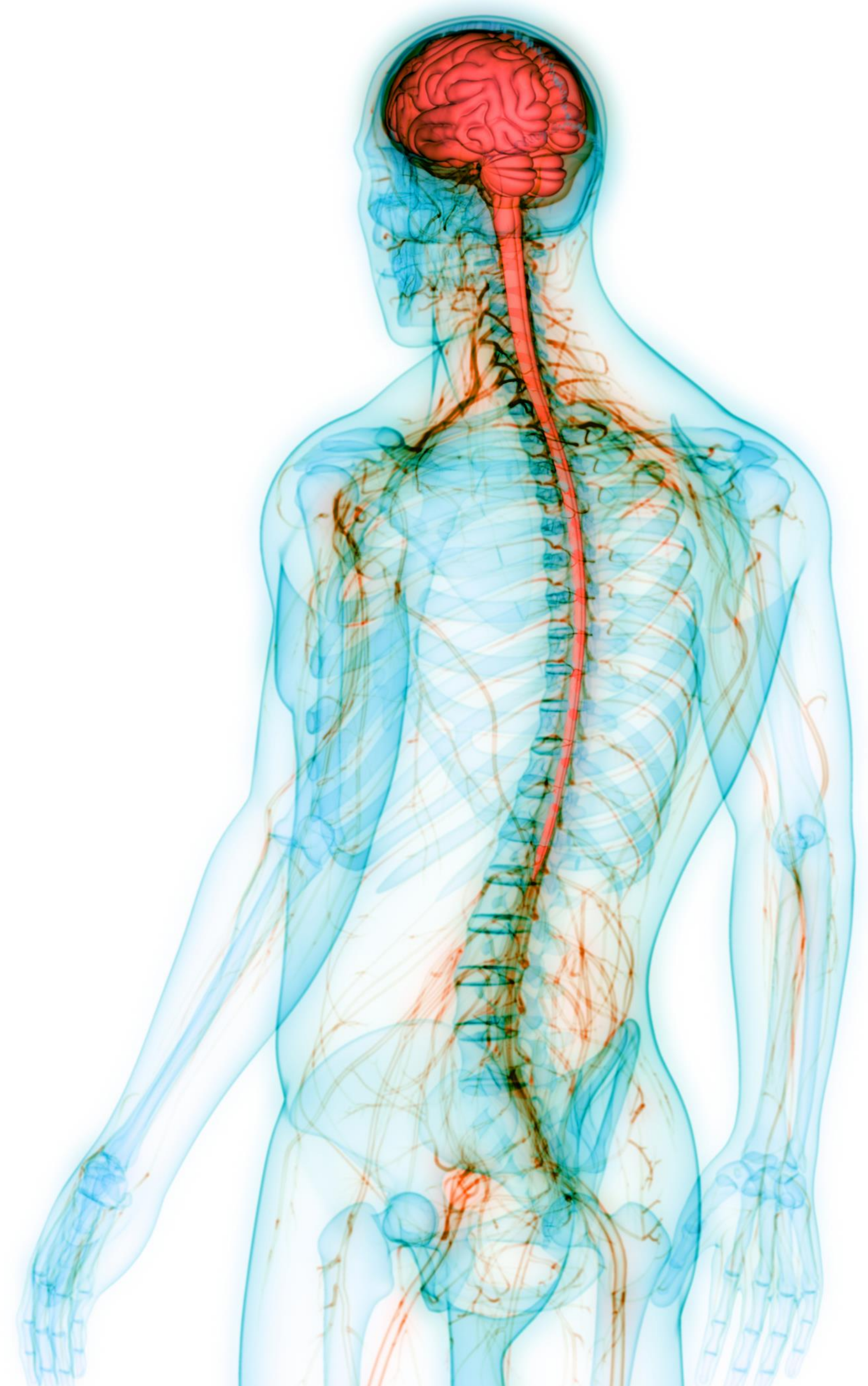
“Neurons that fire together, wire together. On the negative side of this, neurons that fire apart, wire apart. Effectively, this means that if you do not use it, you'll lose it!”



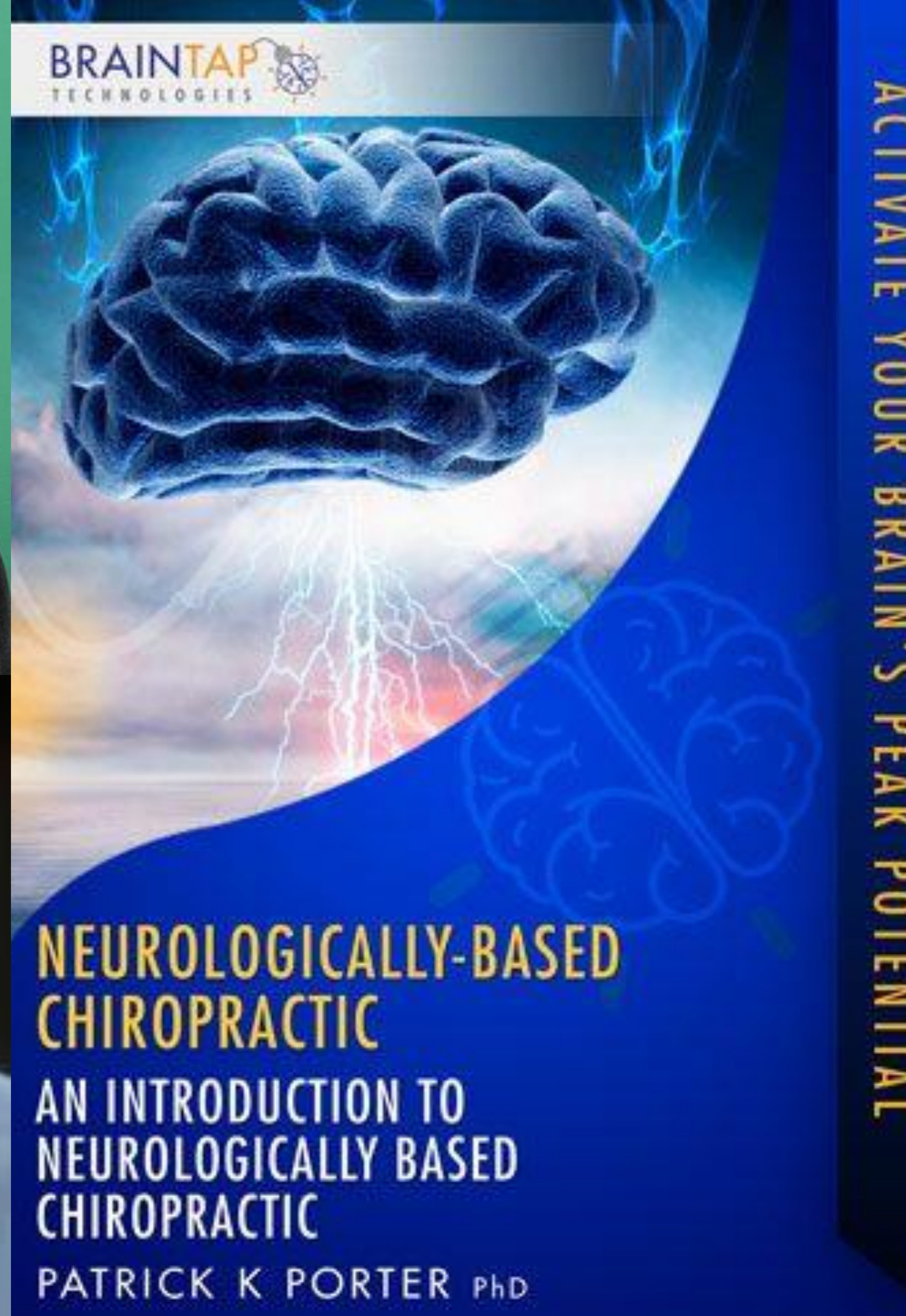


<https://www.instagram.com/bcrawforddc/>

70% of Your Nervous System is Above C1



3789+ Clinics
are using
BrainTap to
Educate their
Patients about
Chiropractic
Care and its
Benefits!



Fortifying with Retinal Flashing

“Frequency Following Response”



The Anti-Depressant Effects of Light Therapy

Light Therapy advantages
over antidepressant drugs:

1. low cost

2. minimal side-effects

3. fast onset of therapeutic

effect



April 2018, Volume 34, Issue 2, pp 359–
368 | The Antidepressant Effect of Light
Therapy from Retinal Projections

NBC Salt Lake City KSL TV

<https://www.ksl.com/article/46181795>

KSL.com

News

Sports

Brandview

TV

Radio

Live

New

Obituaries

Weather




Advertise with us



'I have never seen anything that works this well,' say experts about new addiction treatment

By Heather Simonsen, KSL TV | Posted - Oct 17th, 2017 @ 10:25pm

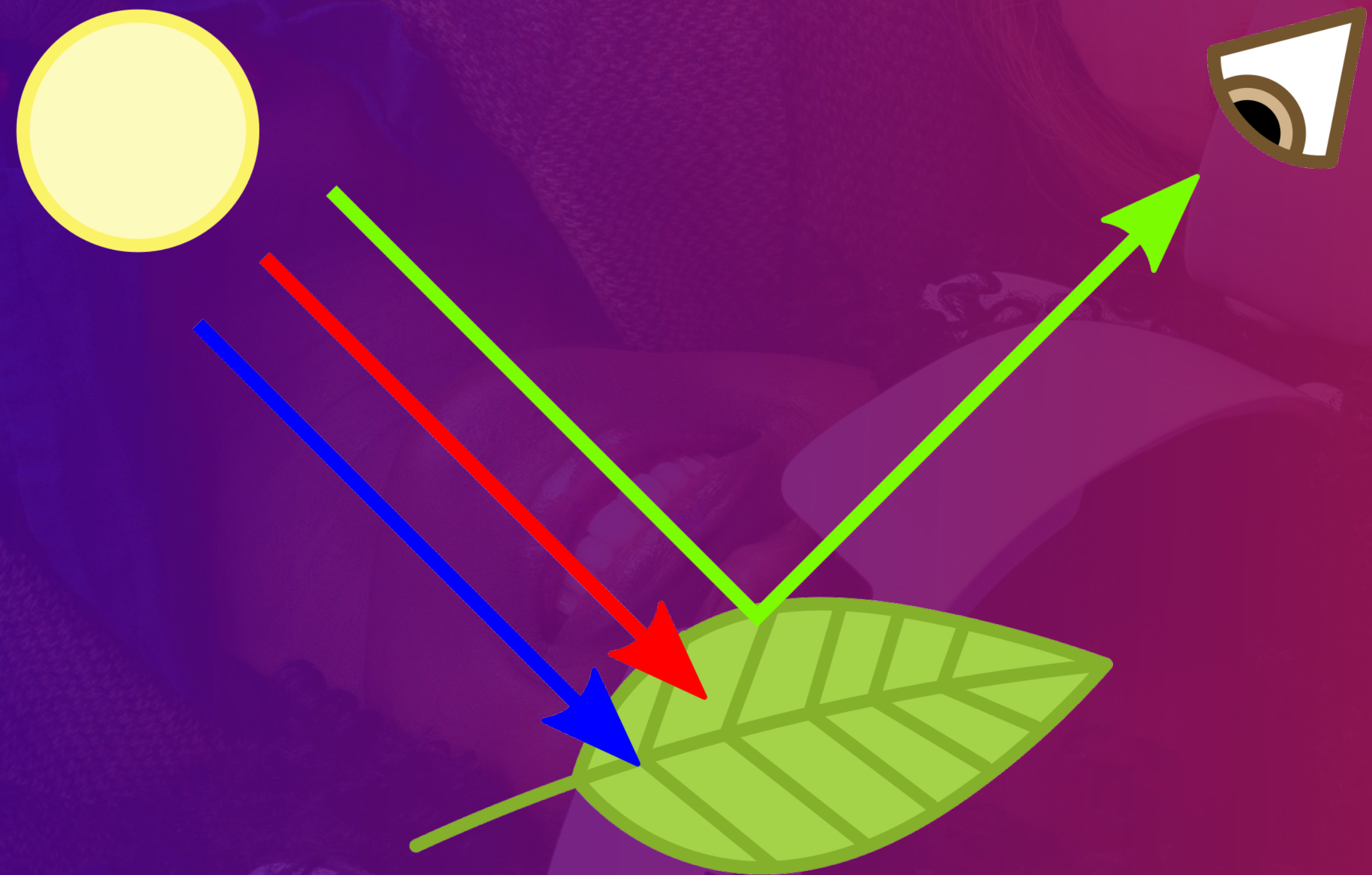
Why Brainwave Entrainment?



***"ehn - TRAIN - mint"* refers to the brain's electrical response to rhythmic sensory stimulation, such as pulses of sound or light.**

Chromophores: Your Are Light

There is an activation of transcription factors which get translocated to the nucleus and activate gene transcription. This leads to increased cell survival and wound healing.



- LED or Laser light is absorbed by chromophores in the cell, mitochondria in the case of visible red and blue light.
- This leads to an increase in adenosine triphosphate (ATP), reactive oxygen species (ROS), nitric oxide (NO), and intracellular calcium (iCa^{2+}).
- It's part of the molecule responsible for its color.
- Visible light that hits the chromophore can thus be absorbed by exciting an electron from its ground state into an excited state.
- Chromophores serve to capture light energy and are the chemistry that binds the energy at the cellular level when hit by light.

Human DNA

Junk-DNA as the major source of *ultra-weak light emission*, also called *biophotons*.



[Michel Kana, Ph.D Medium Writer in his article titled "6th Sense: Are We Communicating Using Invisible Light? Biophotons and DNA." Dec 27, 2018](#)

Human Genome Project ended in 2003:

- 1% of DNA sequences are translated into proteins (20,000 to 25,000 human genes).
- 99% of the genome has been qualified as Junk-DNA.
- September 2012 - scientists suggested that over 80% of the genome serves some biochemical purpose.
- Biophysicists demonstrated the vibrating behavior of the Junk-DNA as the major source of ultra-weak light emission, also called biophotons.

Mitochondrial Light

It is not our genes but rather the epigenetic expression of those genes that determines our health, and the environment plays a critical role.



Changing our diets is a good start, but it is equally important to change the toxic environment in which we live to achieve optimal health

Why light, water and magnetism are necessary to achieve our genetic potential.

Environment trumps the food we eat, because sunlight affects hormones.

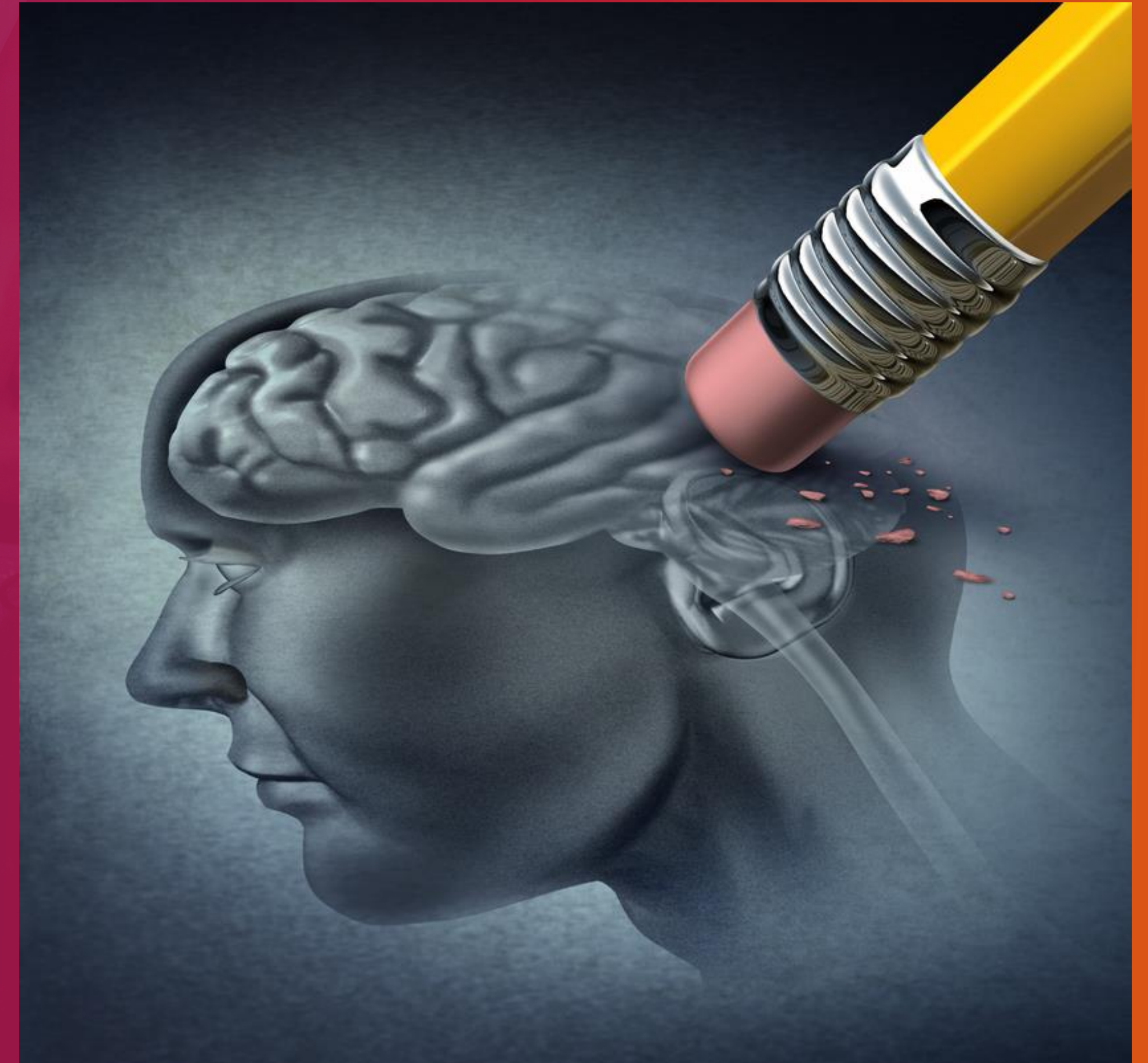
EMFs and a lack of connection to the earth are currently destroying our health.

The Magical 20 Minutes post-Adjustment



What is happening during Dementia or Alzheimer's?

- Dementia is a state of rapid neuron death exceeding the body's ability to maintain, repair, and duplicate new neurons.
- A state where neuron apoptosis (death) is rapidly exceeding neurogenesis.
- Alzheimer's (associated with abeta amyloid plaques and Tau Proteins) accounts for 70% < age 71, 90 % age 71-90 of Dementia





Gamma Rhythms

An important series of studies from Dr. Tsai's group at MIT, reported that **40 Hz** pulsed blue light combined with auditory stimulation:

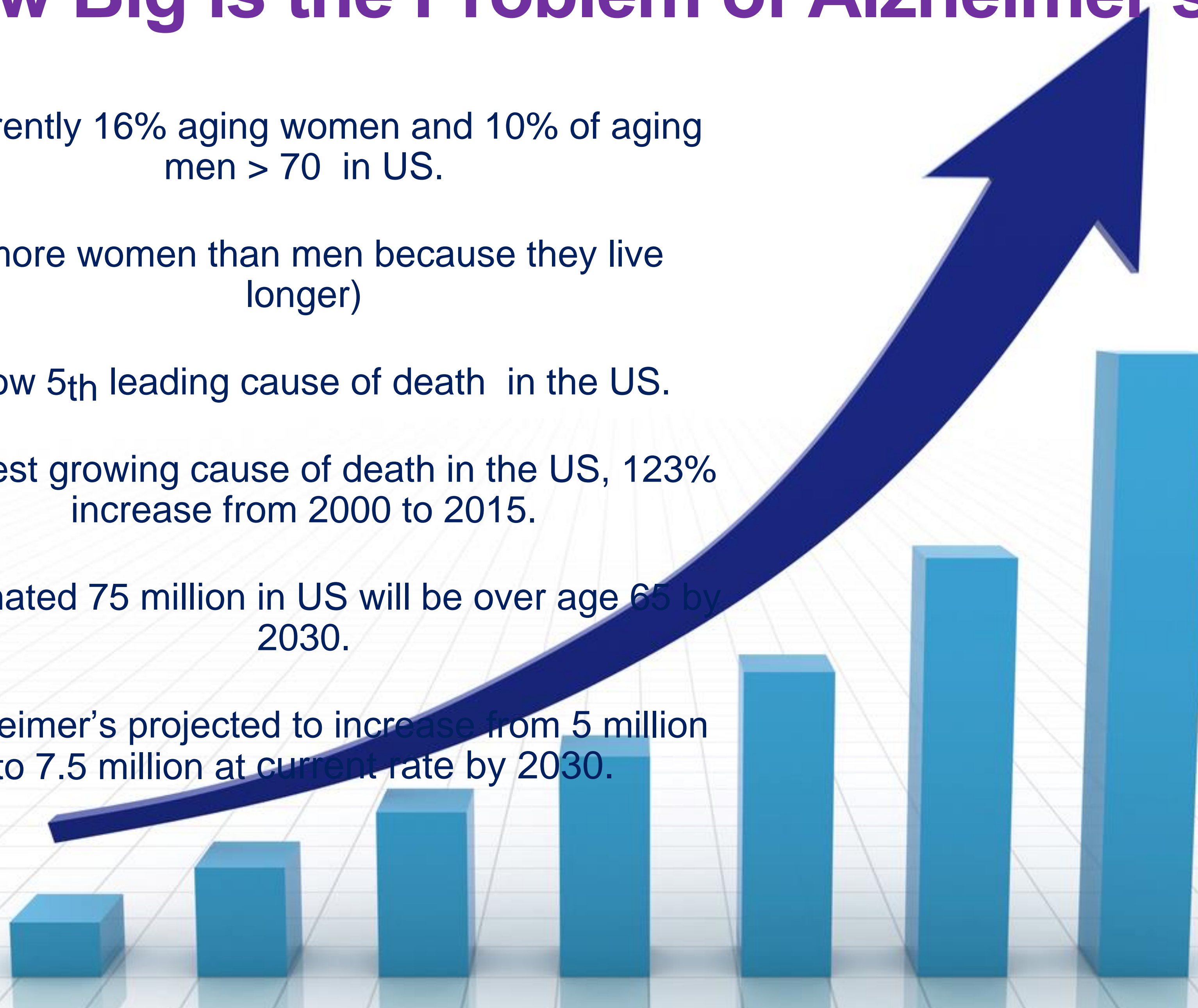
- Reduced the load of amyloid- β peptides in the brain in a mouse model of Alzheimer's Disease;
- Increased neuroprotection and synaptic function;
 - Improved cognitive performance.



Li-Huei Tsai, Ph.D.
Picower Institute for Learning
and Memory at MIT

How Big is the Problem of Alzheimer's in US

- Currently 16% aging women and 10% of aging men > 70 in US.
 - (more women than men because they live longer)
- Now 5th leading cause of death in the US.
- Fastest growing cause of death in the US, 123% increase from 2000 to 2015.
- Estimated 75 million in US will be over age 65 by 2030.
- Alzheimer's projected to increase from 5 million to 7.5 million at current rate by 2030.



Your Patents are too tired to Sleep!



S = SLEEP

- Sleeping less than 6 hours or more than 9 hours is associated with decreased longevity and cognitive loss.
- 80% of the patients we assess are not getting proper delta sleep.
- 60 million Americans on medications/nutraceuticals to help sleep.
- 5 separate sleep cycles of approximately 90 minutes each.
- Delta sleep is last cycle and usually occurs from hours 6- 7.5 approximately.
- Delta sleep takes short term information from hippocampus and transfers to long-term storage bilaterally – big to small and small to big, cleans metabolic waste in brain, no amyloid beta produced.

SAVING YOUR BRAIN



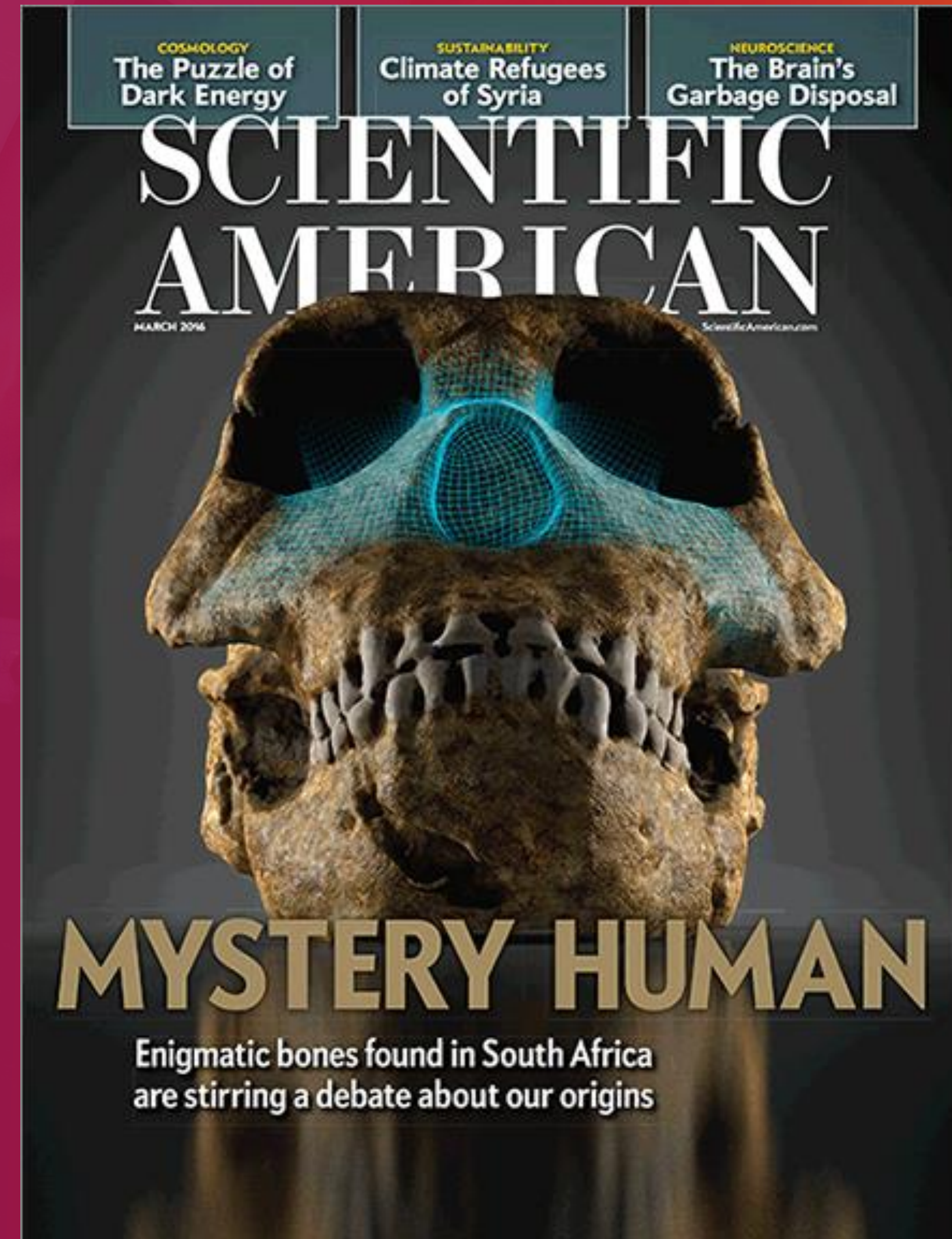
*Causes, Prevention, and Reversal
of Dementia/Alzheimer's*

DR. KELLY MILLER

Copyrighted Material

IMPROVING SLEEP

- Chiropractic/Acupuncture/BrainTap
- New Mattress
- Cervical pillows
- No blue light (computers) after dark - inhibits melatonin (or use blue light blocking glasses)
- Quiet, dark room
- EMF (Electromagnetic Frequency) reduction in room
- Melatonin, magnesium, L-theanine, B vitamins, glycine, 5-H-T-P, omega-3s

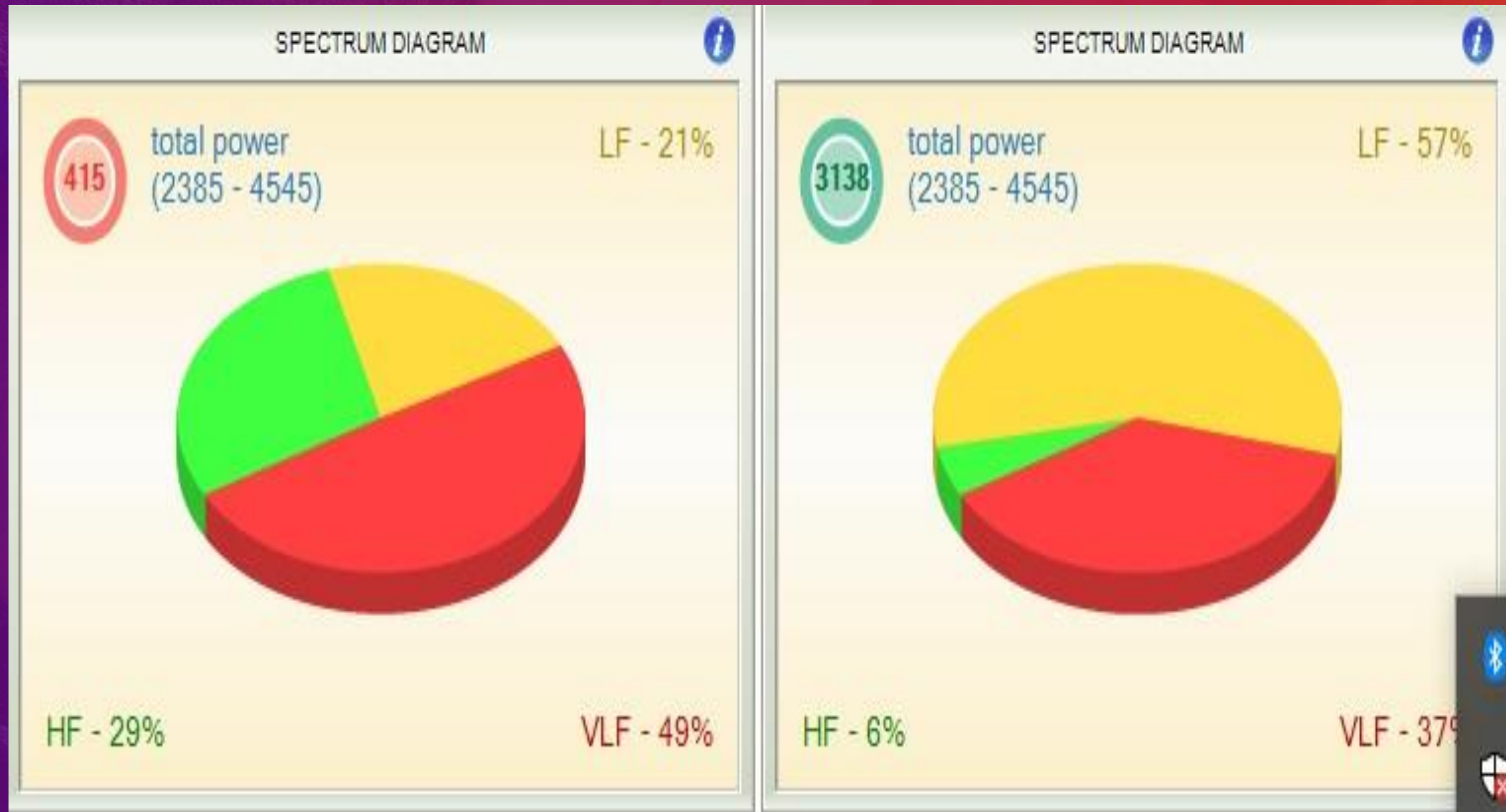


A = AUTONOMIC BALANCE

- All stressors cause a shift to the sympathetic (fight/flight)
- Sympathetic (fight/flight) = stress = inflammation = cortisol
- 80% + of people are in sympathetic (fight/flight) for prolonged periods of time
- Sympathetic response = tight muscles, increased respiration, heart rate, & blood pressure, decreased digestion & sleep
- You do not need to digest or sleep if you are running from a lion/tiger/bear (Oh my!)



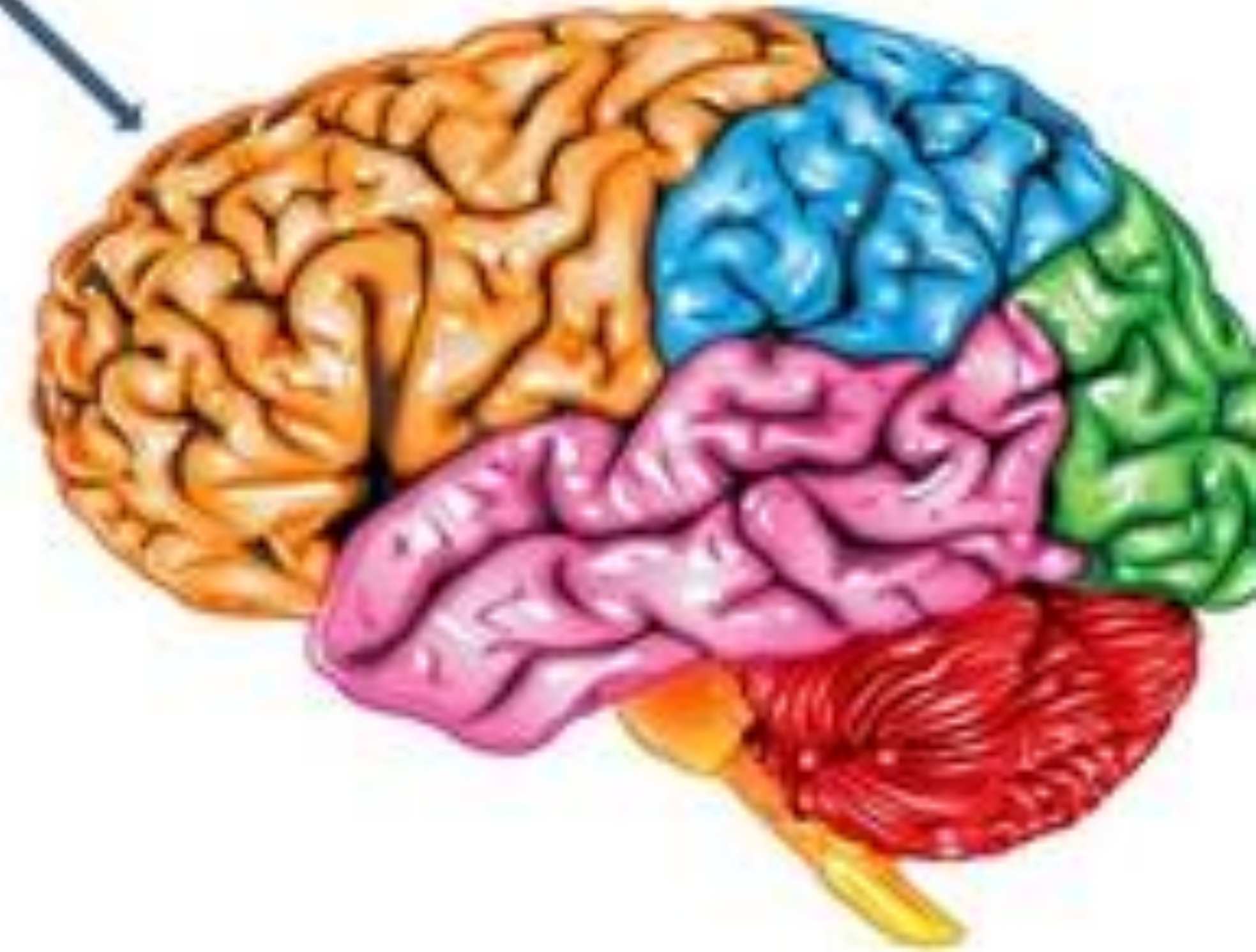
A = AUTONOMIC (IM)BALANCE



The frontal lobes create beta waves from neurons that produce dopamine.

- Controls the voltage – provides the power it needs to function
- Determines metabolism
- Affects the brain's ability to process information
- Can be both cognitive and physical

Frontal Lobe



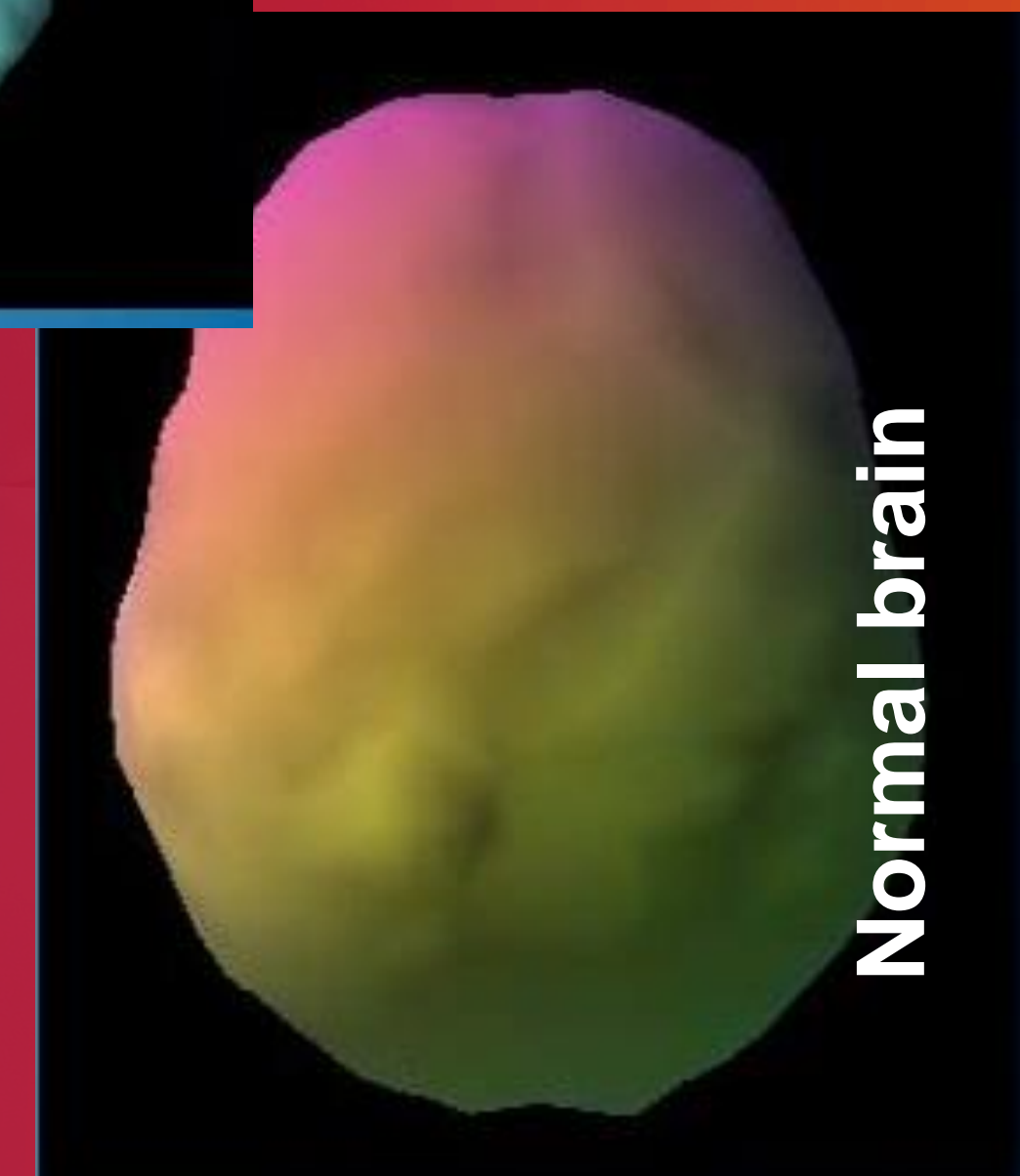
V = VITAMINS, MINERALS, & ANTI- OXIDANTS

- Vitamins A, C, D, E are all essential to brain functions
- Vitamins cannot work without minerals like magnesium, zinc, and selenium
- Melatonin, super oxide dismutase (SOD), catalase, and glutathione are the 4 most powerful endogenous antioxidants
- Brain is 80 % fat by dry weight = omega 3s, olive oil, coconut oil
 - Polyphenols from blueberries, grapes
- Club Moss (huperzine A), ginkgo biloba, ginseng, ashwaghandha, curcumin – reduce inflammation, arrest and reverse amyloid plaquing,



I = INFLAMMATION/INFECTION/IMMUNITY

- Autopsies 80-90 year olds who have amyloid and Tau protein tangles in brains suffer no cognitive decline because they have little or no neuro-inflammation
- The brain like the gut has its own microbiome.
- 70-80 % of immune system is in the gut
- Gut has the enteric nervous system = “gut feeling”
- Healthy brain = healthy brain bacteria
- Alzheimer’s brain has none; contains bacteria like found in dirt.
- 95% of neurotransmitter, serotonin, comes from the gut



Chronic and Acute Neuroexcitotoxicity

Brain and nerve cell loss, as seen in Autism, MS, Alzheimers and Parkinson's

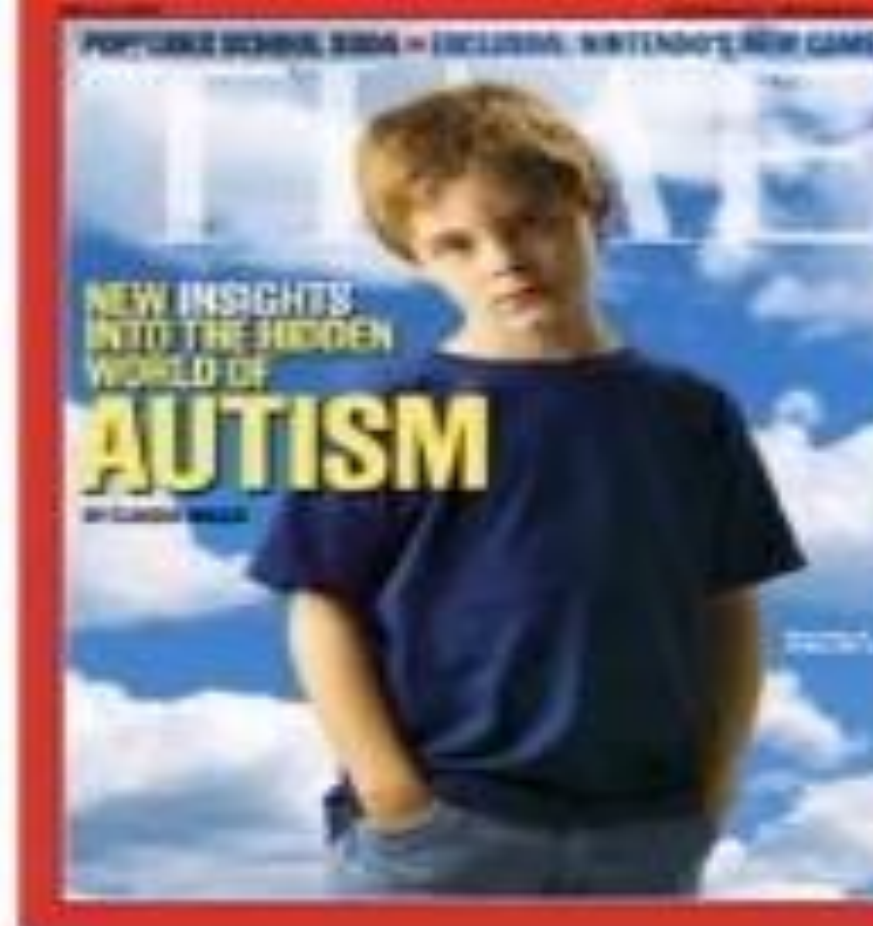
50-70% of MS patients test positive for infection.

80-100% of autistic children have abnormal yeast and bacterial loads.

Infections Found Include:

- Yeast
- Bacteria
- Viruses
- Parasites
- Lyme Disease and co-infections
- Mycoplasma

Infections need to be treated to stop persistent activation of microglia and nervous system damage.

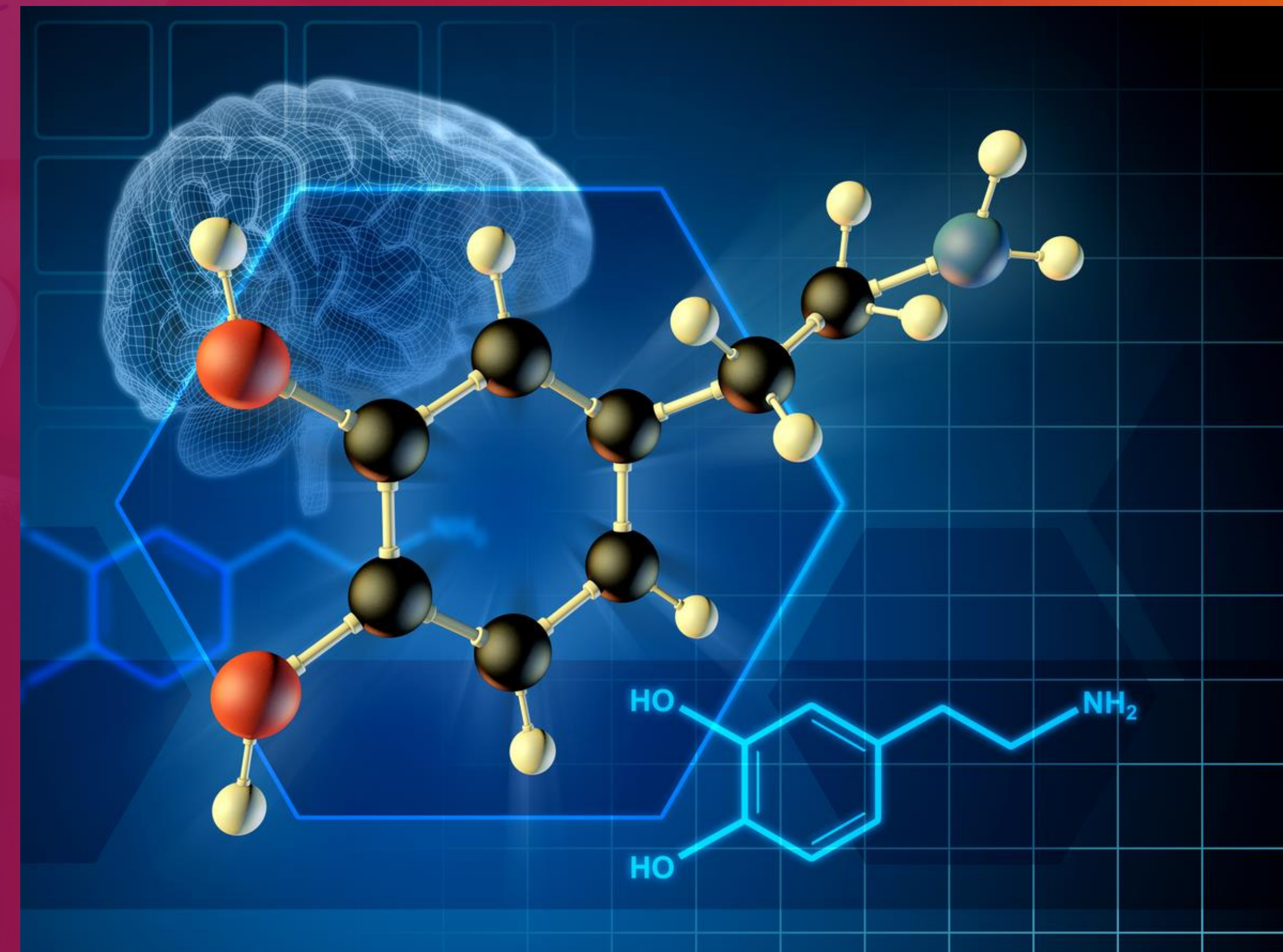


BRAIN ON FIRE



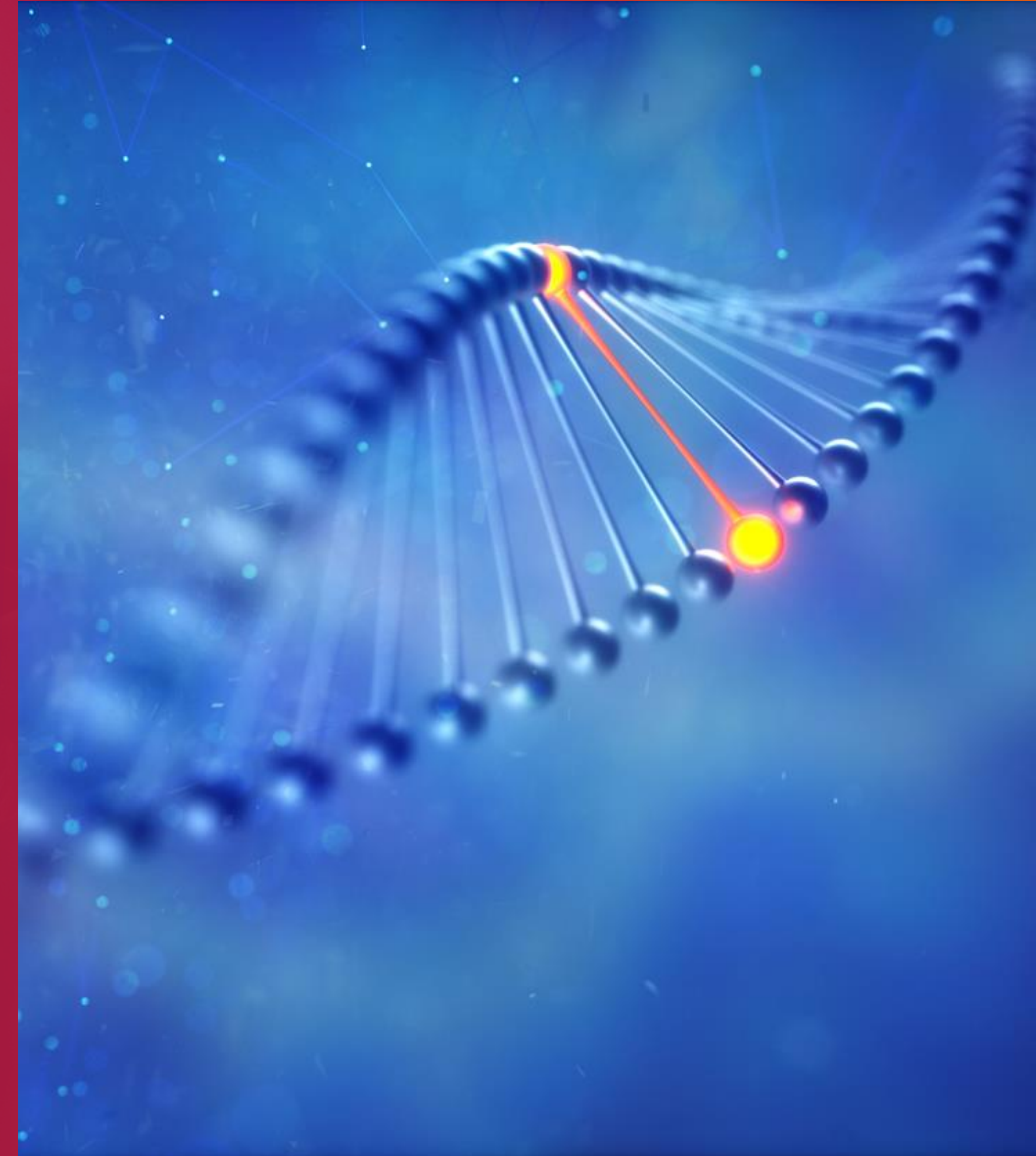
N = NEUROHORMONES

- Alzheimer's patients have markedly reduced neuro-hormone levels compared to others same age
- Pregnenolone is the hormone for memory
- Pregnenolone stimulates acetylcholine (processing speed)
- Acetylcholine stimulates growth hormone
- **Low thyroid doubles Alzheimer's risk** (80 % aging population hypothyroid)
- Testosterone and estrogen necessary for dopamine production in frontal lobes (executive decision making)
- **Optimum hormone levels = better brain function**



G = GENETIC VARIANTS

- ✓ The role of genetics and lifestyle in early-onset and late-onset Alzheimer's disease (EOAD and LOAD).
- ✓ Less than 1% of EOAD have the severe genetic variants.
Total EOAD is 5 %. Therefore, 80 % of the EOAD was due to lifestyle.
- ✓ 40-50% of LOAD have the APOE4 genetic variant
- ✓ Maintaining insulin sensitivity, regular exercise, and supplementation of niacin help reduce a negative epigenetic expression of the APOE4 gene



Y = YOUR LIFESTYLE, BELIEFS, AND THOUGHTS

- What you think is the most important factor in your health, well-being, and happiness and prevention of Alzheimer's.
- What you think dictates your decision making, belief system, and lifestyle
- Be careful about what you believe, think and say
- Present time consciousness. Live in the now. Love.
- Forgive the past and have faith in the future.
- There is always hope for a better future.



Negative Emotions

- Anger, fear, anxiousness about the past and future activates amyloid production
- The **less** the perception of **stress** the **less** risk for **Alzheimer's**
- The **higher** perception of **stress** the **greater** the risk for **Alzheimer's**
- **50 Million** Americans diagnosed with **Anxiety Disorder**



O = OBESITY/OXIDATIVE STRESS

- The **higher** the body fat the **more inflammation**
- The **higher** the body fat the **more oxidative stress**
- The **higher** the body fat the **smaller** the brain
- ADHD, Autism Spectrum, TBI, PTSD, Alzheimer's = **oxidative stress**
- Reducing obesity and oxidative stress are key to healthy brain



U = UNFRIENDLY ENVIRONMENT

- Heavy Metals like cobalt, mercury, and aluminum are found in the Alzheimer's brain
- Amyloid- β binds to heavy metals
- Pesticides like DDT and glyphosates linked to Alzheimer's
- PM2.5 (small particulates) cross blood brain barrier via olfactory nerve – sympathetic (fight/flight) response
- EMFs increase permeability of Blood Brain Barrier and increase Alzheimer's risk 4 -fold



Cleaning Up Your Environment

- Reduce EMFs – Routers, cell phone, blue tooth, WI-FI
- Do not drink bottled water –almost 50% is tap water. The cap breaks down putting plasticides in water- endocrine disruptors
 - Use reverse osmosis or **solid carbon block technology to clean water**
- Use **Active Pure Technology** for air filters – cleans PM2.5,kills 99% bacteria, virus, and **mold. Mold is a major problem. Survivingmold.com**
 - Eat organic sourced , non-GMO foods as much as possible
 - Avoid trans fats, aspartame, MSG, flu shots, vaccinations

R = READING

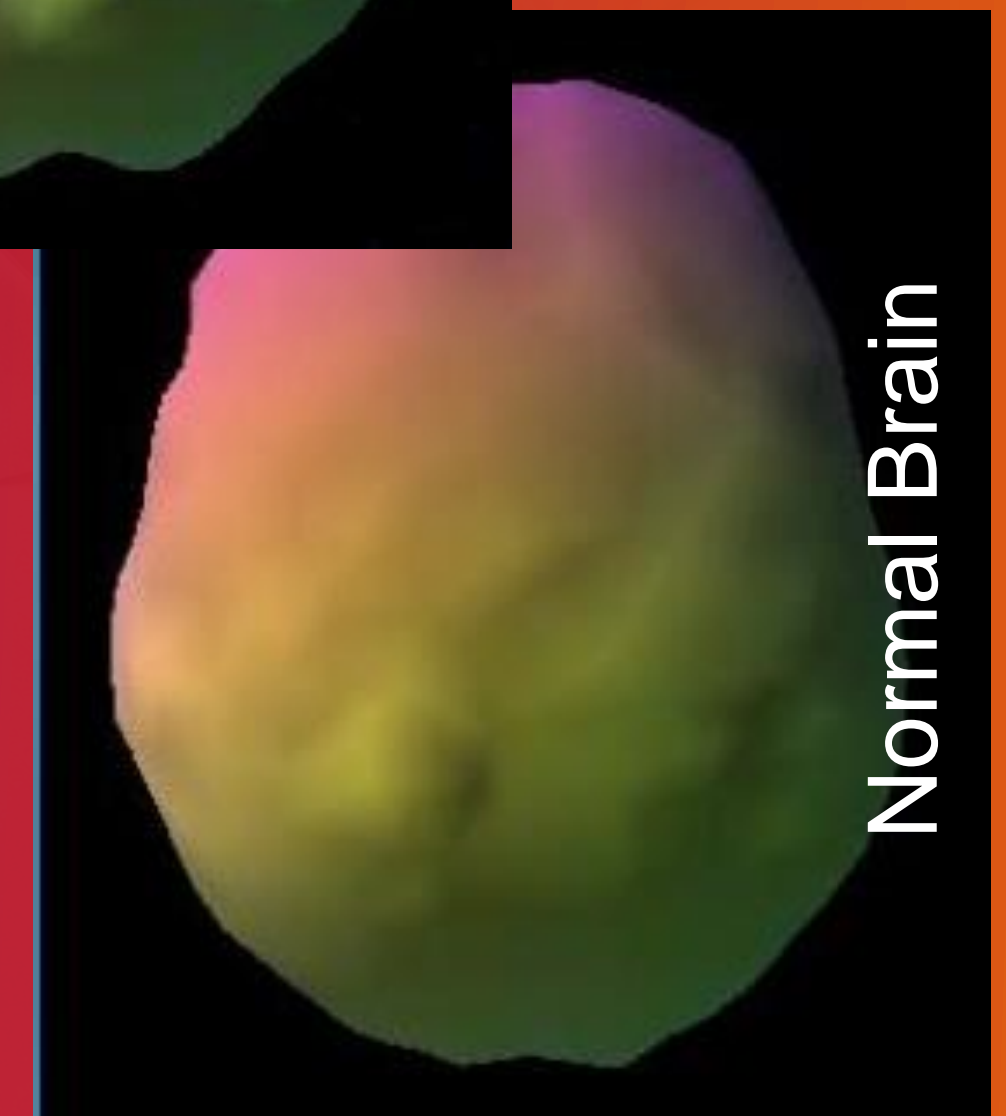
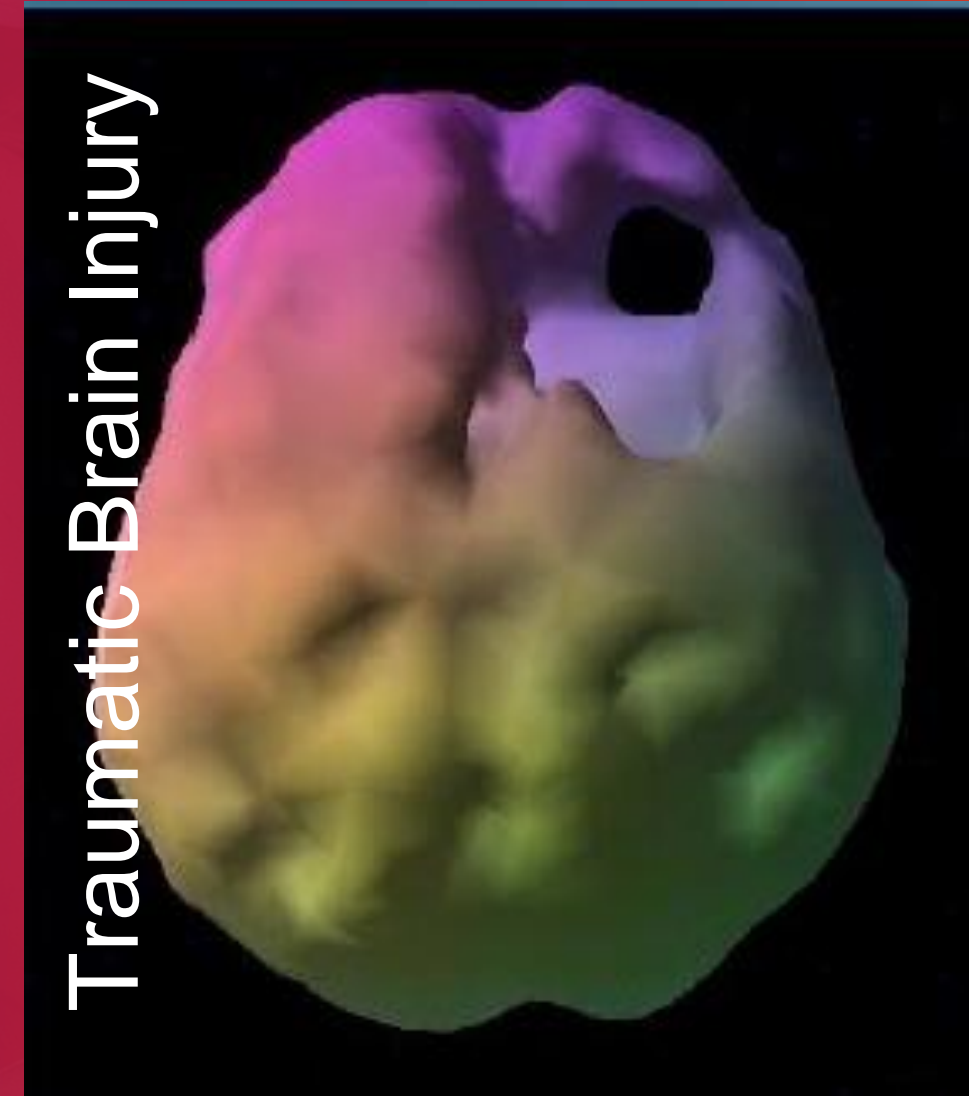
Become a life time learner

- Read something on paper daily about something you enjoy – golf, tennis, gardening, cars, health-related subjects
- Do cross word puzzles, math problems
- Faster processing brains are more resilient brains



B = BLOOD FLOW

- Brain uses 15 % of cardiac output
- Brain uses 20% of oxygen in body
- Brain uses 25% of the glucose
- Cardiovascular disease, type 2 diabetes & obesity reduce blood flow to brain
- PTSD, TBI , and Alzheimer's have reduced blood flow to brain via SPECT



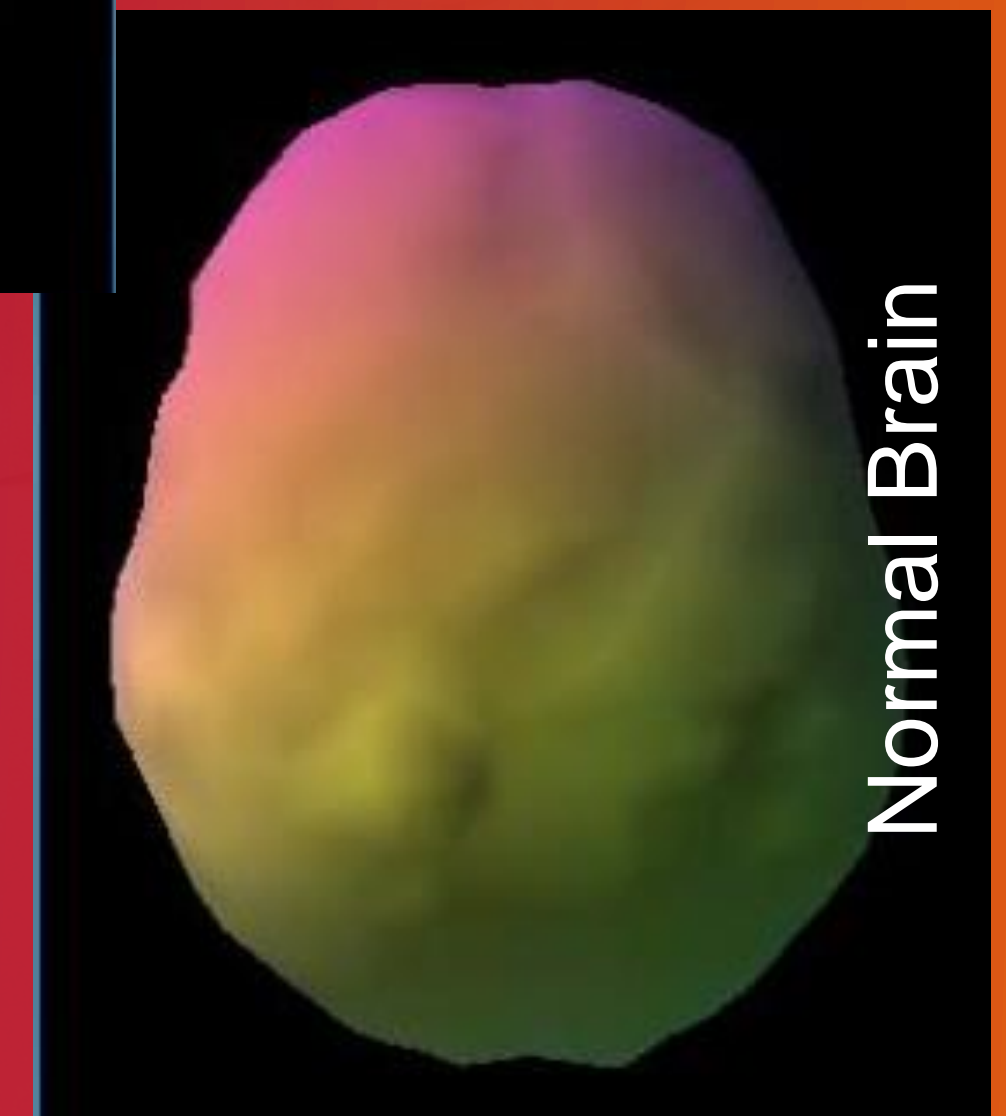
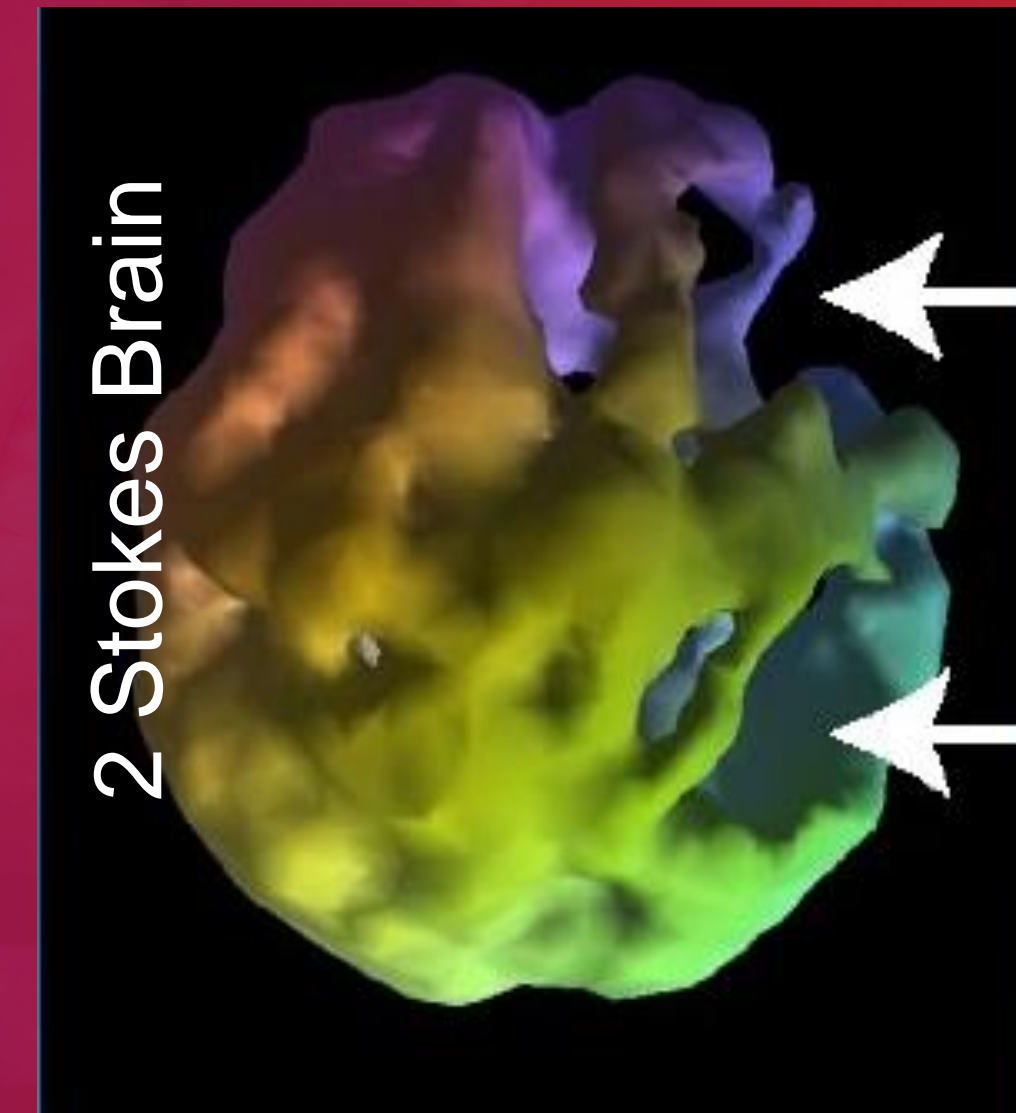
Top Ways to Improve Blood Flow to the Brain

- Exercise
- Nitric oxide enhancers
- Ginkgo biloba, vinpocetine
- Vitamins C, E, omega 3s
- PEMF
- Infra-red light therapy
- Audio-visual entrainment (BrainTap)
- Neurofeedback



R = REPETITIVE HEAD TRAUMA

- A single concussion doubles the risk of developing Alzheimer's
- A loss of consciousness coupled with the APOE4 gene variant increases risk 10-fold
- Must treat prophylactically to protect with nutraceuticals before and after
- High risk – bicyclists, football, rugby, hockey, soccer
- Can lead to chronic traumatic encephalopathy –similar symptoms PTSD
- Commonly causes HPT, HPA, HPG axis dysfunction over time and multiple hormone deficiencies
- Consider Canary Speech



A = ACTIVITY

- Numerous studies demonstrate **exercise reduces Alzheimer's risk**
- Regular **exercise increases blood flow to brain** - reduces Alzheimer's risk
- Exercise improves lean mass/fat ratio
- High intensity exercise of short duration increases growth hormone
- Exercise increases serotonin
- Exercise increases endorphins



I = INSULIN SENSITIVITY/RESISTANCE

- Insulin resistance, diabetes type 2, metabolic syndrome, obesity all increase risk for Alzheimer's
- Insulin resistance increases the abeta formation
- Insulin resistance increases blood sugars, AGES – advanced glycation end products. (Think burned sugar in a pan – Age spots)
- **Insulin sensitivity encourages the non-amyloidogenic pathway and reduces Alzheimer's risk**



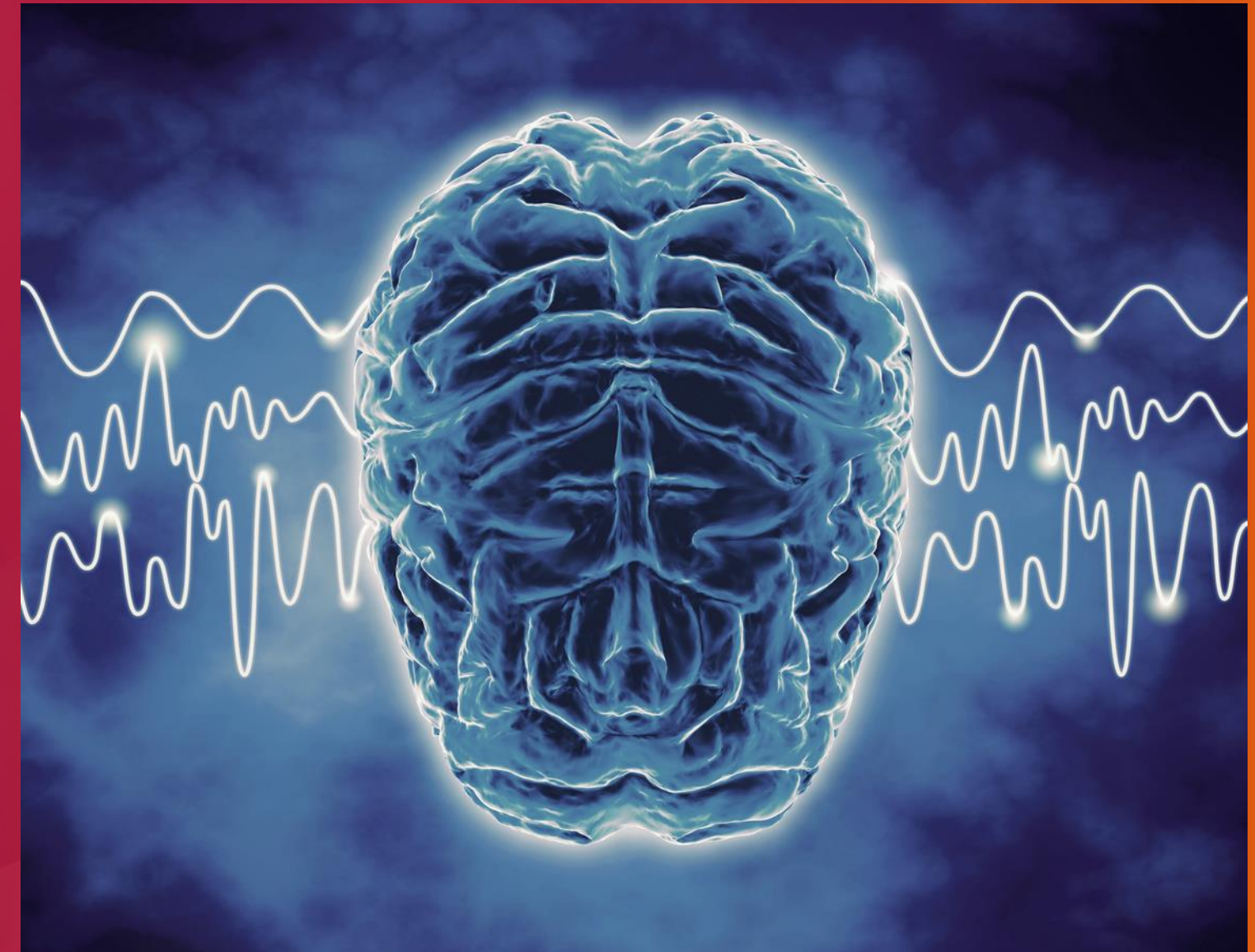
RESTORING INSULIN SENSITIVITY QUICKLY

- Exercise (especially weight lifting)
- Removing refined sugars (especially high fructose corn syrup)
- Supplementing cinnamon,
- Chromium
- Alpha lipoic acid
- L-carnitine
- Gymnema

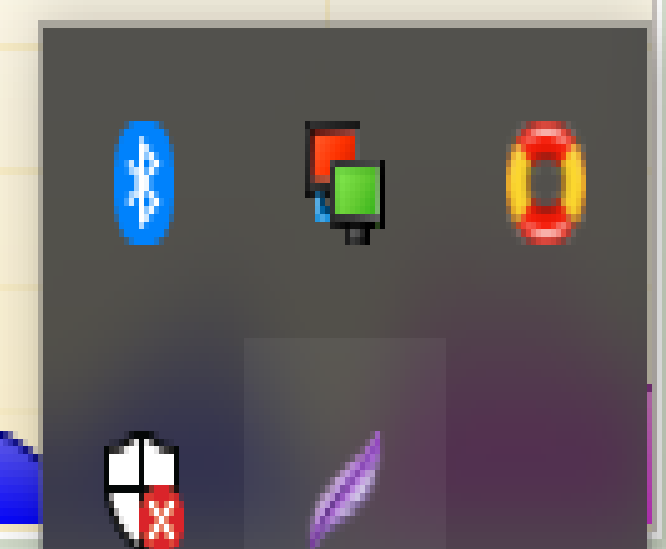
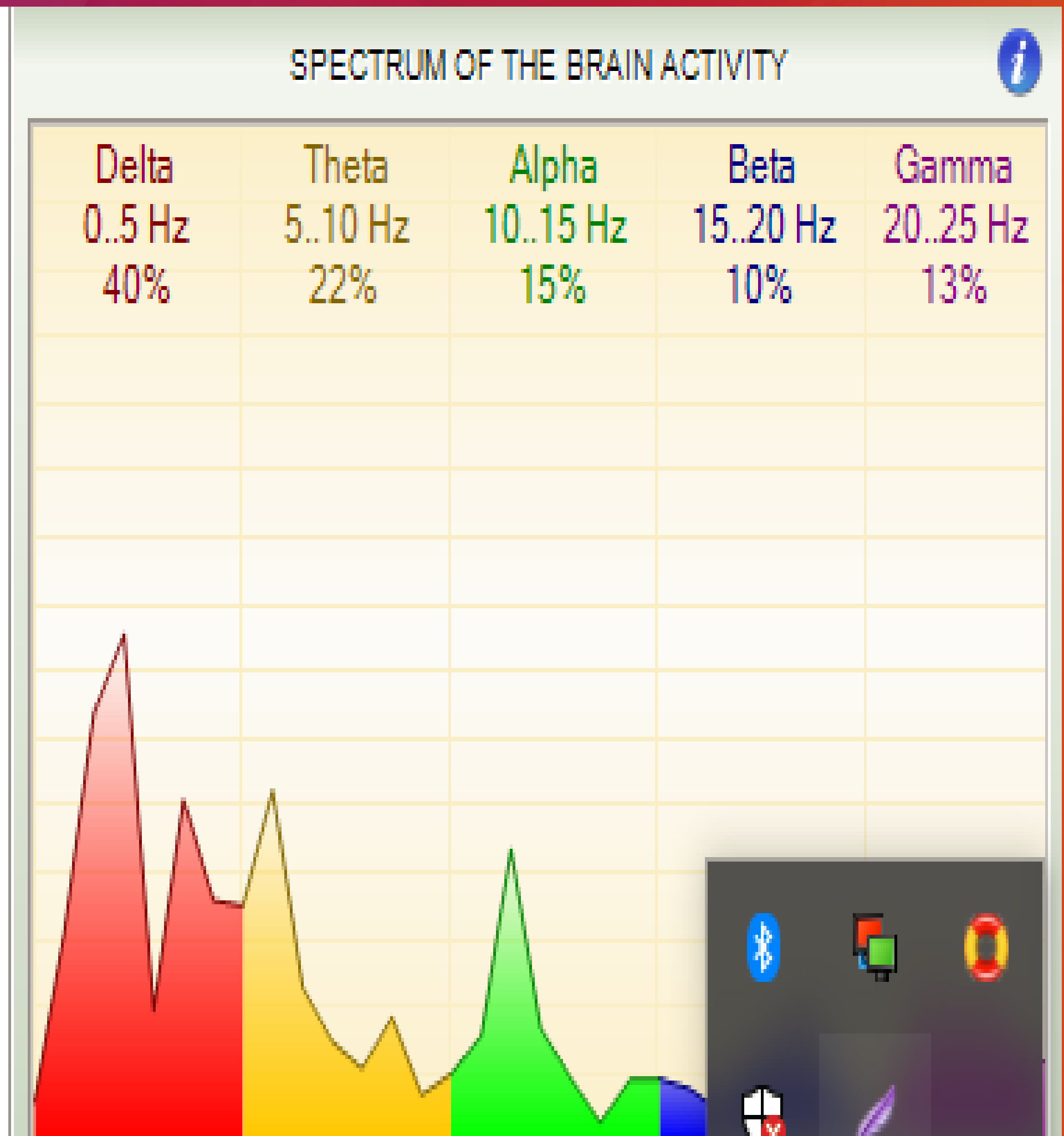
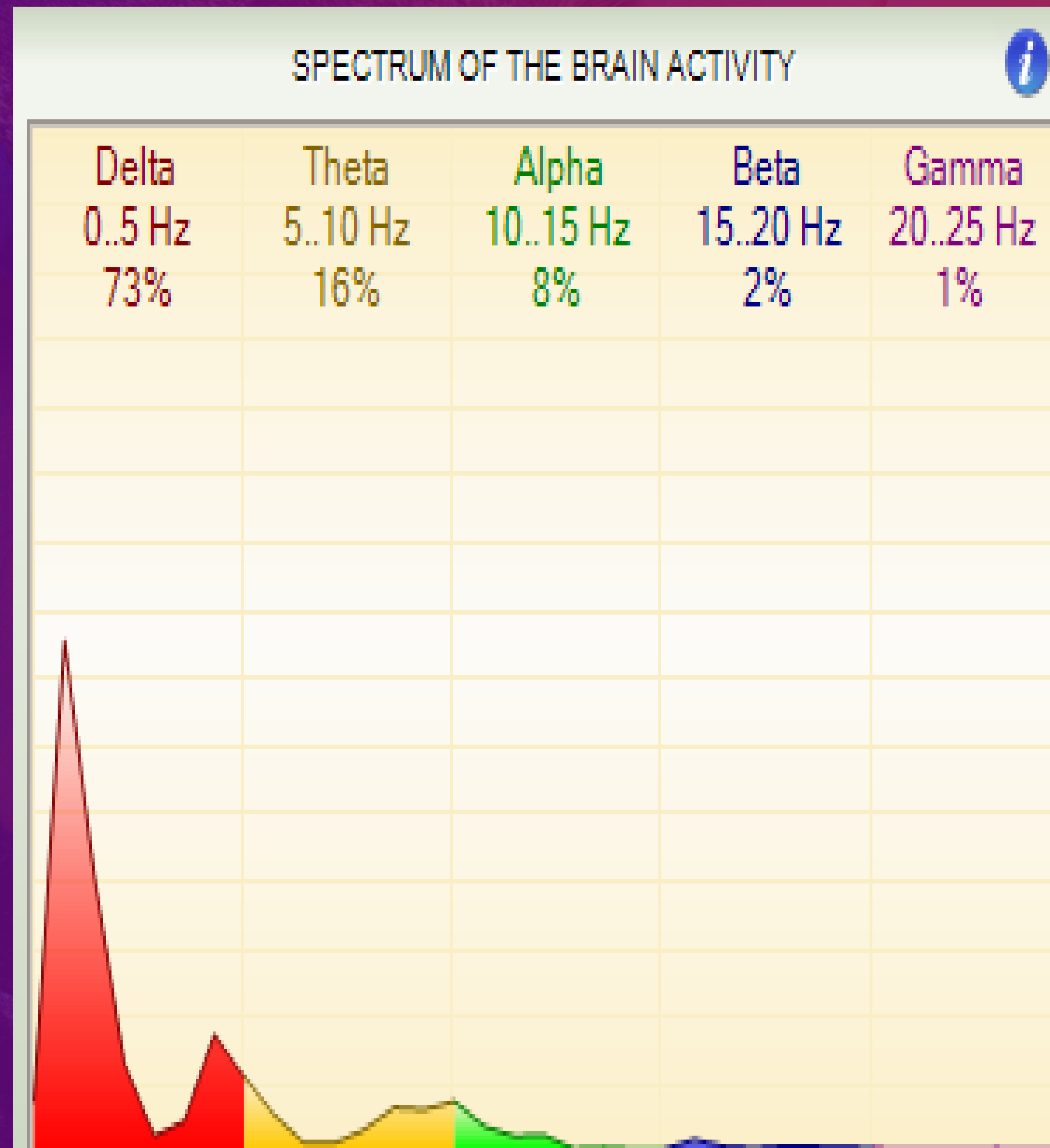


N = NEUROTRANSMITTERS

- **Dopamine** (frontal lobe) –stimulatory; producing beta waves is the **battery** of the brain –**deficient in Alzheimer's**
- **Acetylcholine** (temporal lobes) – stimulatory; producing alpha waves determines the **processing speed** of the brain – **deficient in Alzheimer's**
- Glutamate – increased w/ trauma, aspartame & MSG, distressed thinking
- GABA (parietal lobe) – inhibitory; produces theta waves
- Serotonin (occipital lobe) – inhibitory; produces delta waves



NEUROTRANSMITTERS REFLECTED IN BRAIN WAVES



DOUBLE THERAPIES-SONIX, & INFRA-RED HEAD HARNESS

Caroline M. Stites, MS, ND
CEO/Founder

VibraGenix LLC
1119 Columbia Park Trail
Richland, WA 99352
T 800-761-0511
C 509-521-4661

<https://calendly.com/caroline-464/30m>



SCAN ME

TRIPLE THERAPIES PEMF, HEAD HARNESS, SONIX





Therapeutic Change after 90 Days

39%
Change / Plasticity



Therapeutic Change after 90 Days

58%
Normalization



Top 4 - locations with highest change towards normalization



Change

60 Days > BrainTap EC 80 yr old Miner Cognitive Decline

47%
Change / Plasticity

% Change / Plasticity



% Reorganization



38%
Normalization

% Normalization



% Magnitude Locations



% Magnitude Locations



Top 4 - locations with highest change towards normalization



60 Days > BrainTap EO 82 yr old M cog decline

36%
Change / Plasticity



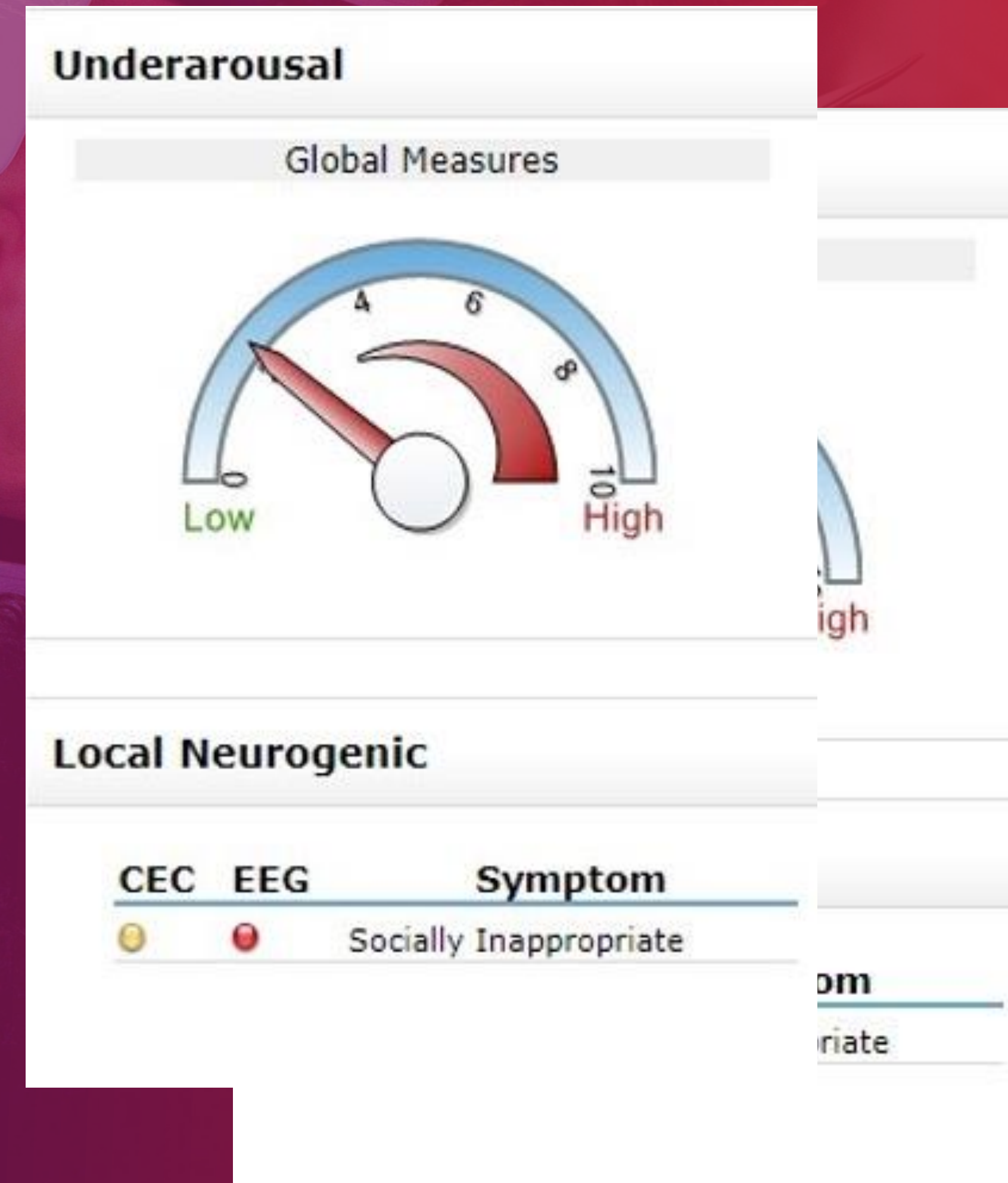
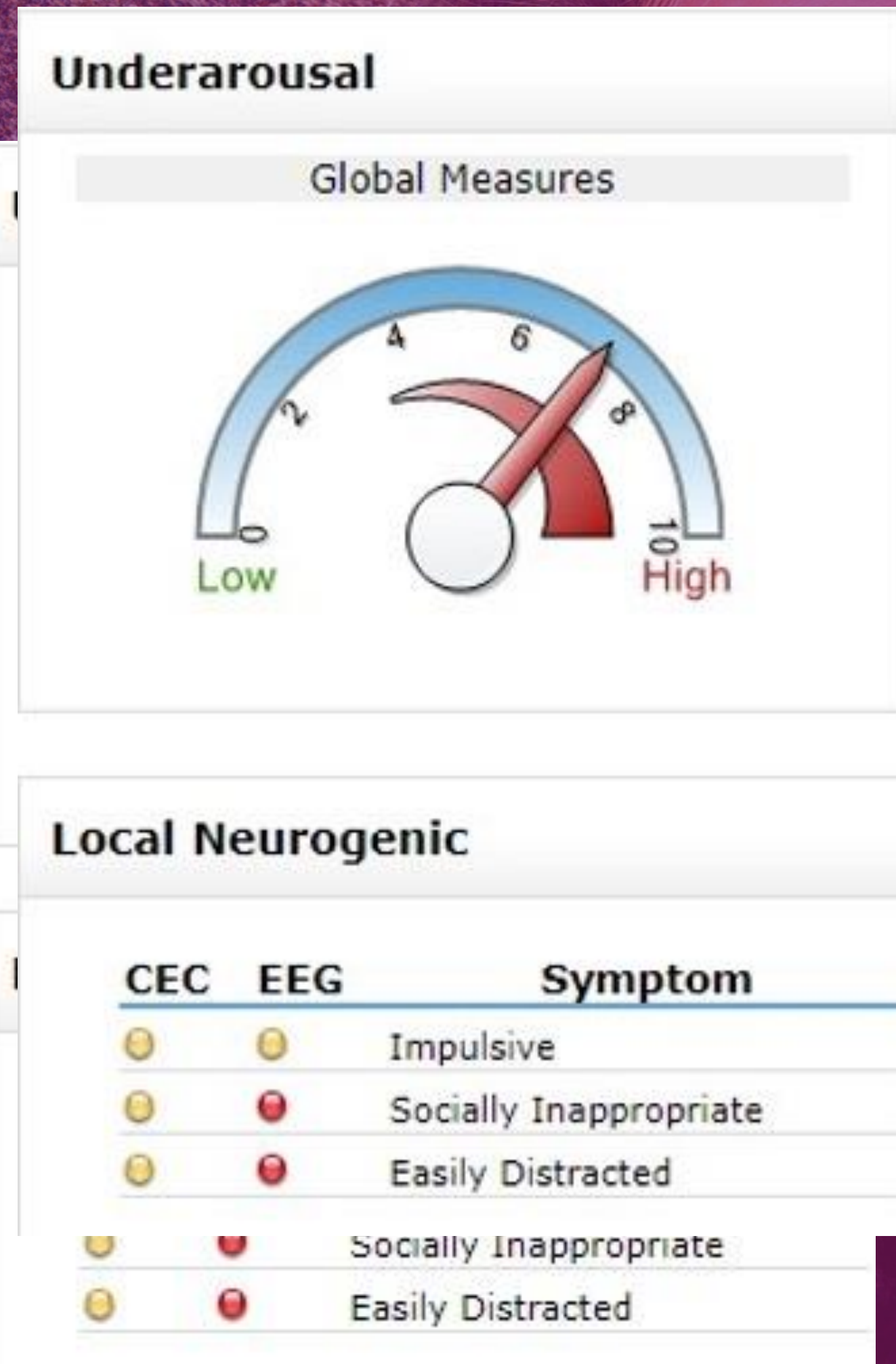
47%
Normalization



Top 4 - locations with highest change towards normalization



Before and After 60 Days 80 Yr Old Male



Before and After 60 Days 80 Yr Old Male

Memory Processing



CEC	EEG	Symptom
🟡	🟡	Declarative
🟢	🟡	Episodic
🟢	🟡	Procedural
🟢	🟢	Sequential
🟢	🟡	Short Term
🟢	🟡	Short Term (Digit Span)
🟢	🔴	Working
🟢	🟢	Socio-Emotional Decision Making

Memory Processing



CEC	EEG	Symptom
🟡	🟢	Declarative
🟢	🟢	Episodic
🟢	🟢	Procedural
🟢	🟡	Sequential
🟢	🟡	Short Term
🟢	🟢	Short Term (Digit Span)
🟢	🟢	Working
🟢	🟢	Socio-Emotional Decision Making

Before and After 60 Days 80 Yr Old Male

Verbal Processing



CEC EEG	Symptom
● ●	Dialogue Organization
● ●	Short Term Verbal
● ●	Tonal Inflection and Comprehension Difficulties
● ●	Tone Sequencing
● ●	Verbal Sequencing

Verbal Processing



CEC EEG	Symptom
● ●	Dialogue Organization
● ●	Short Term Verbal
● ●	Tonal Inflection and Comprehension Difficulties
● ●	Tone Sequencing
● ●	Verbal Sequencing

Before and After 60 Days 80 Yr Old Male

Visual Processing



	CEC	EEG	Symptom
CI	●	●	Event Sequencing
	●	●	Facial Decoding & Recognition
	●	●	Figure Memory
	●	●	Short Term Visual Memory
	●	●	Spatial Sequence
	●		
	●		

Visual Processing



CEC	EEG	Symptom
●	●	Event Sequencing
●	●	Facial Decoding & Recognition
●	●	Figure Memory
●	●	Short Term Visual Memory
●	●	Spatial Sequence

60 Days > Brain Tap 80 yr/old M cog decline

Aud. Working Memory

Baseline - Saturday, August 4, 2018



Most Recent - Wednesday, October 3, 2018



60 Days > Brain Tap 80 yr/old M cog decline

Attention

Baseline - Saturday, August 4, 2018

Paying Attention



95

[What is this?](#)

Not Paying Attention



5

[What is this?](#)

Impulsive



5

[What is this?](#)

Response Time (ms)



489.1

[What is this?](#)

Most Recent - Wednesday, October 3, 2018

Paying Attention



98

[What is this?](#)

Not Paying Attention



2

[What is this?](#)

Impulsive



10

[What is this?](#)

Response Time (ms)



496.55

[What is this?](#)

60 Days > Brain Tap 80 yr/old M cog decline

Aud. Short Term Memory

Baseline - Saturday, August 4, 2018



Most Recent - Wednesday, October 3, 2018



60 Days > Brain Tap 80 yr/old M cog decline

Filtering

Baseline - Sunday, August 5, 2018

Correct



20

[What is this?](#)

Incorrect



69

[What is this?](#)

Response Time (ms)



1207.5

[What is this?](#)

Most Recent - Wednesday, October 3, 2018

Correct



34

[What is this?](#)

Incorrect



25

[What is this?](#)

Response Time (ms)



1299.41

[What is this?](#)

60 Days > Brain Tap 80 yr/old M cog decline

Executive Function

Baseline - Sunday, August 5, 2018

Correct



39

[What is this?](#)

Incorrect



25

[What is this?](#)

Runs Achieved



2

[What is this?](#)

Perseverative Errors



14

[What is this?](#)

Most Recent - Wednesday, October 3, 2018

Correct



52

[What is this?](#)

Incorrect



12

[What is this?](#)

Runs Achieved



2

[What is this?](#)

Perseverative Errors



7

[What is this?](#)

ALZHEIMER'S BEFORE & AFTER HRV

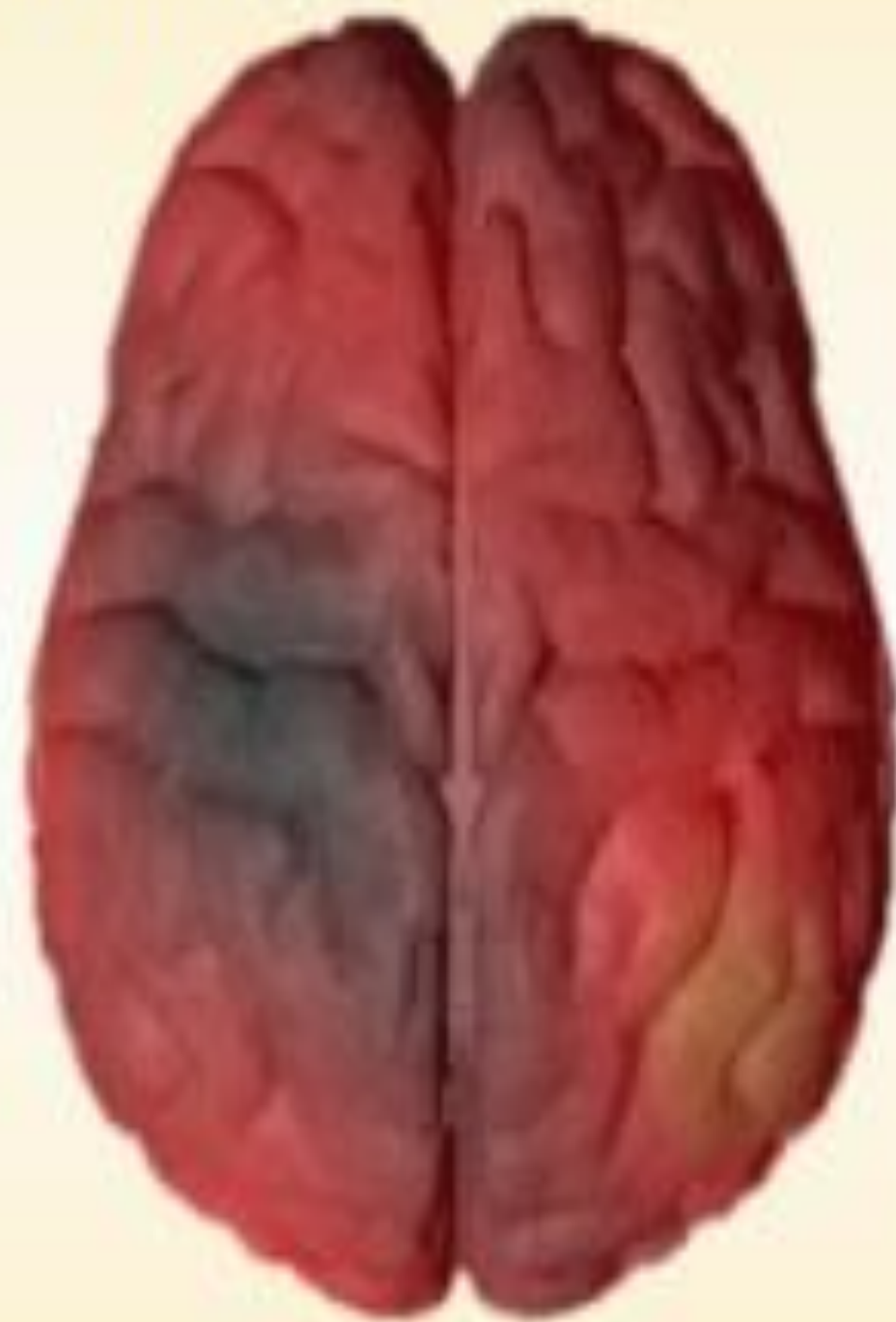
← Wednesday, March 21, 2018 3:07: →

← Wednesday, March 21, 2018 3:47: →

SPLINE-MAP OF ELECTRICAL ACTIVITY i

psychoemotional state index
(50 - 100%)

11

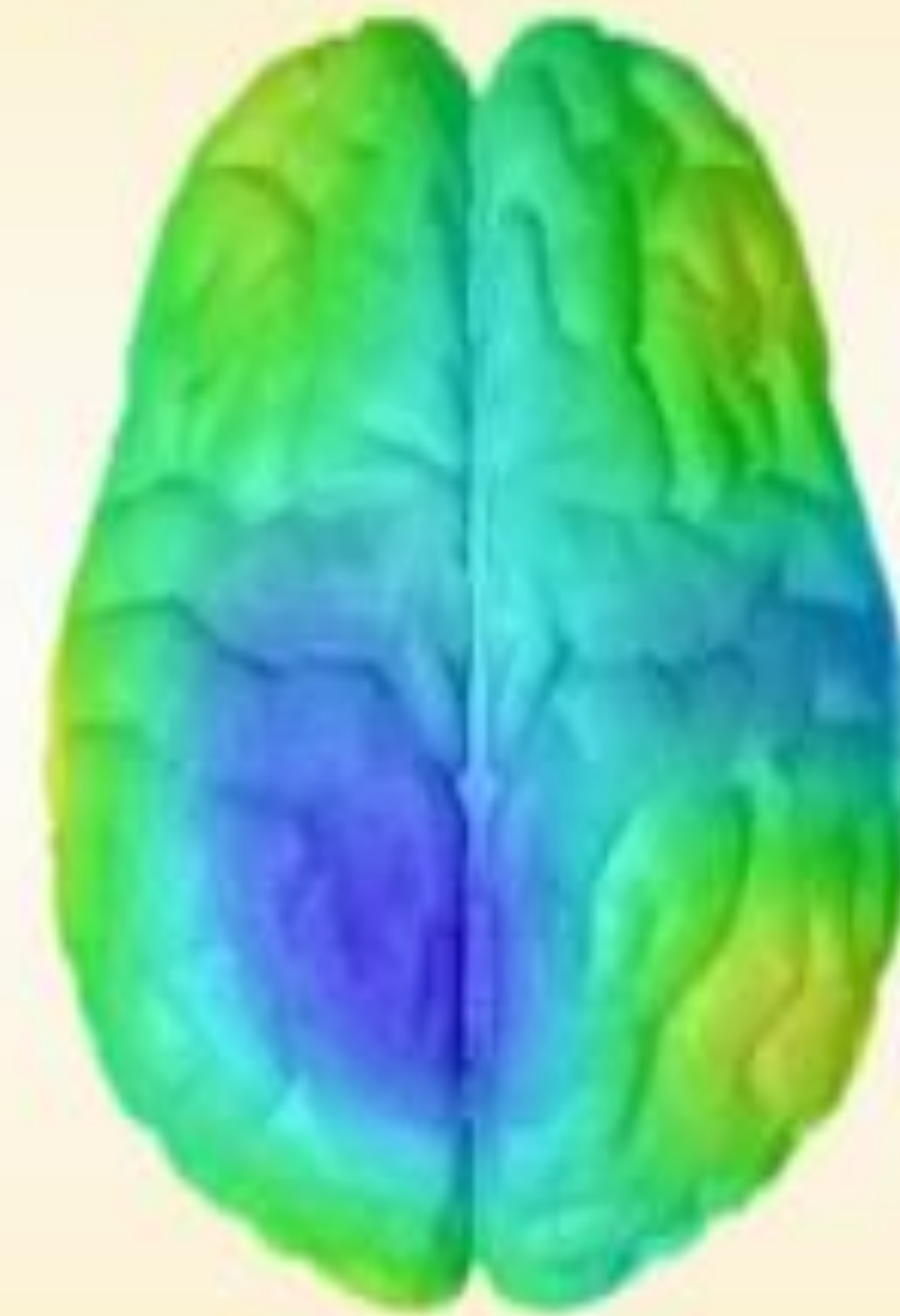


min  max

SPLINE-MAP OF ELECTRICAL ACTIVITY i

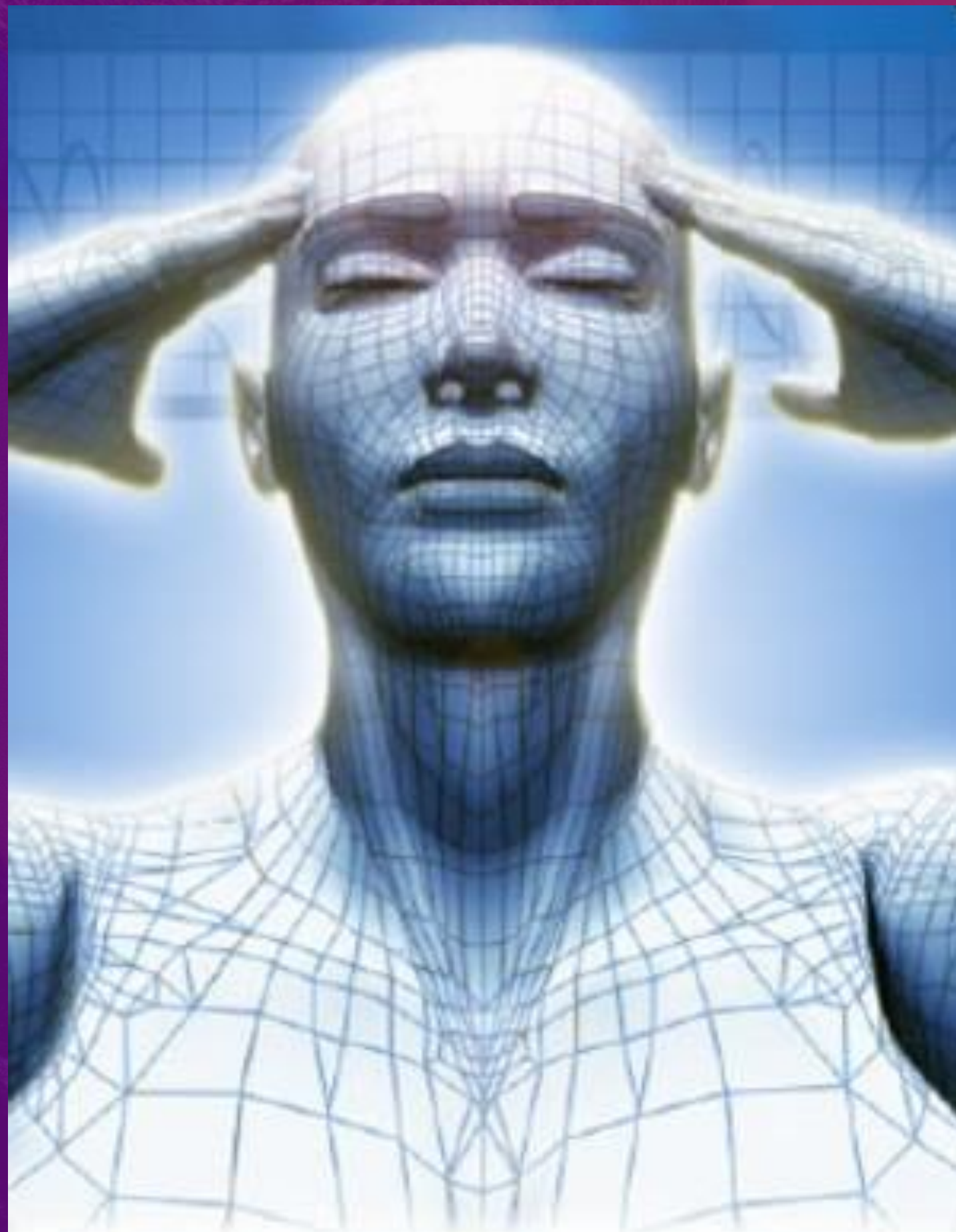
psychoemotional state index
(50 - 100%)

81



min  max

The Key to Activating the Brain's Pharmacy and Creating



NeuroPlasticity

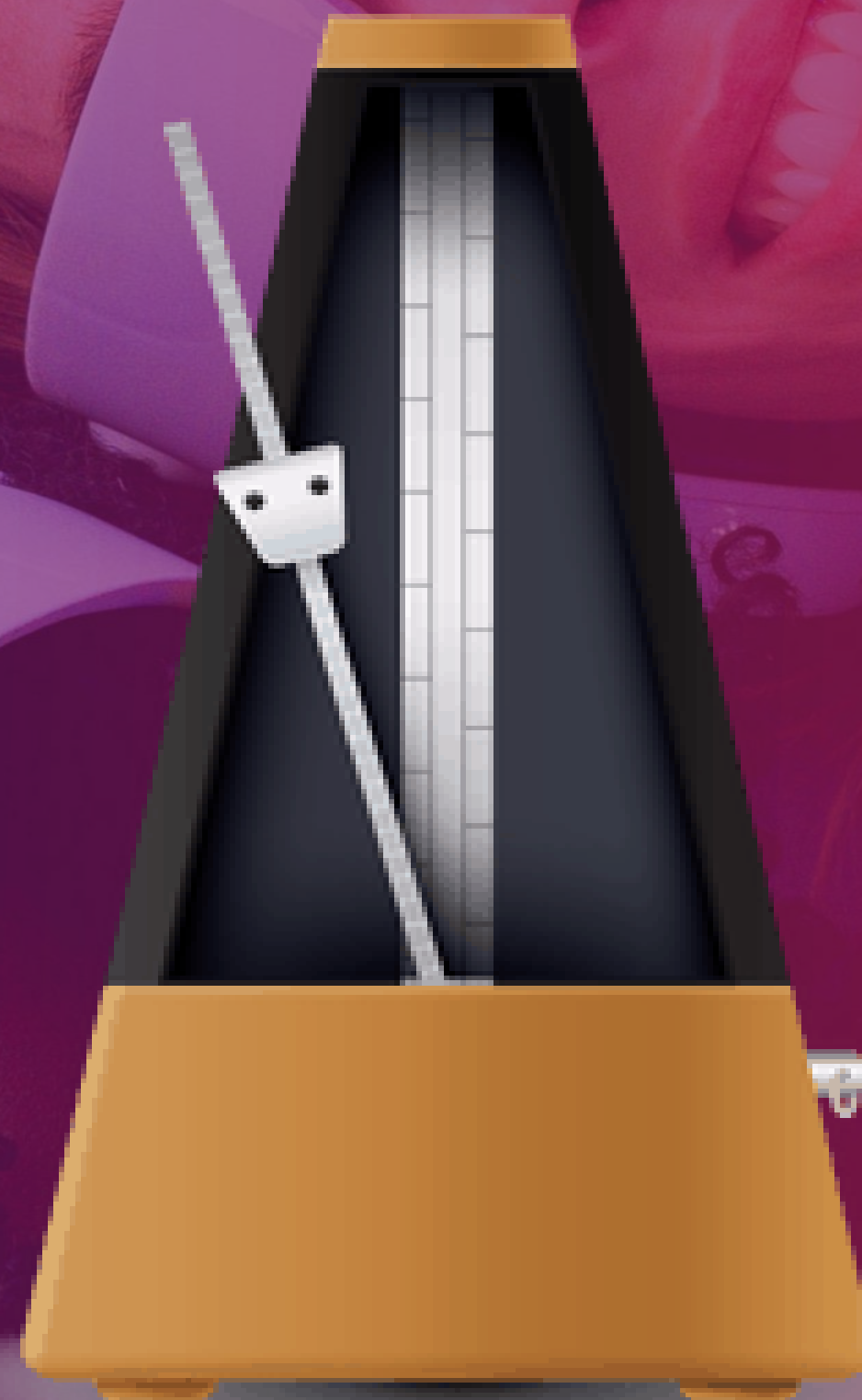
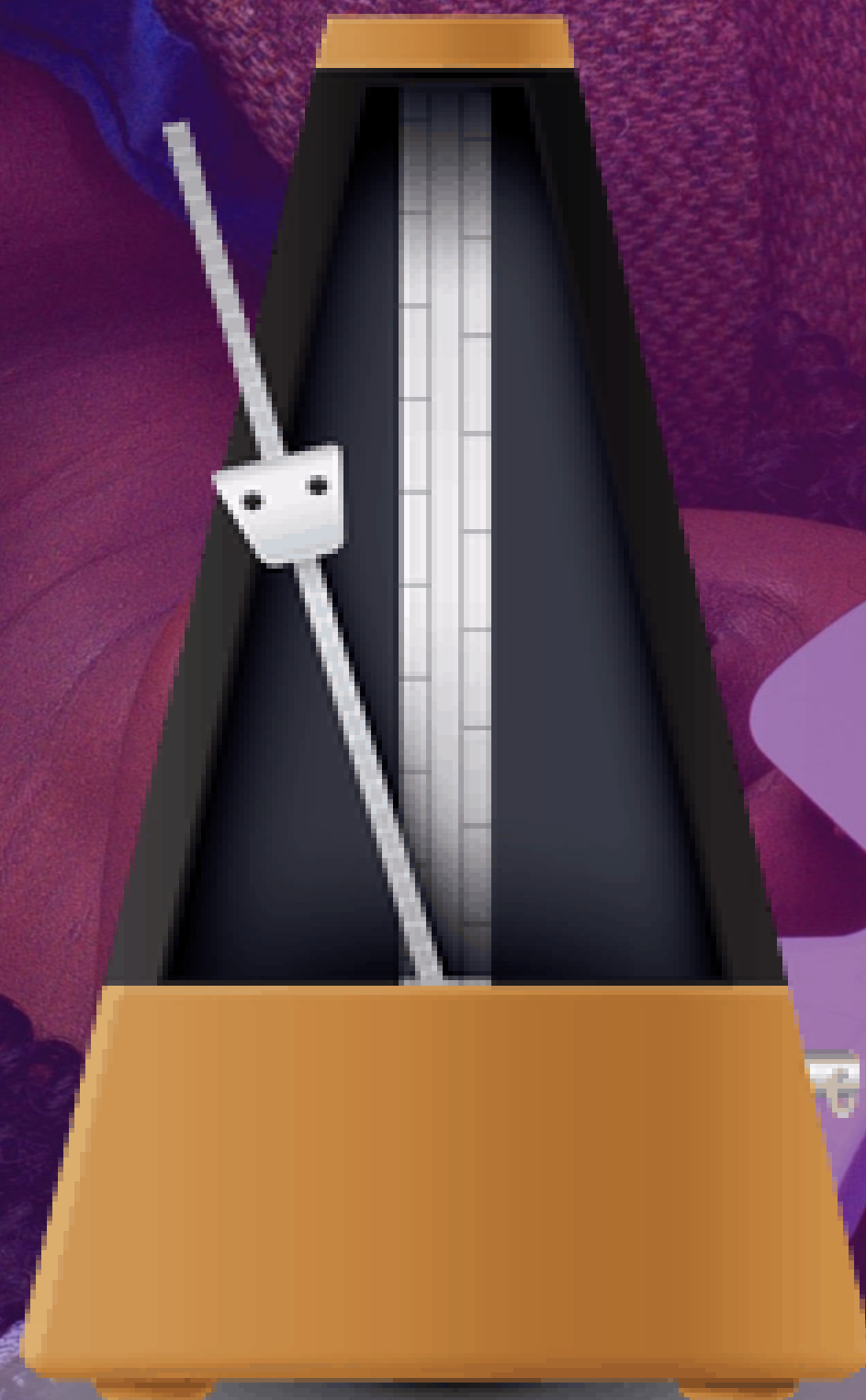
- ✓ Has to be novel
- ✓ Has to be fun
- ✓ Has to be different
- ✓ Has to be repeatable
(*The Power of "3"*)
- ✓ Has to be generalized
(*Future-pacing*)

Health is Frequency



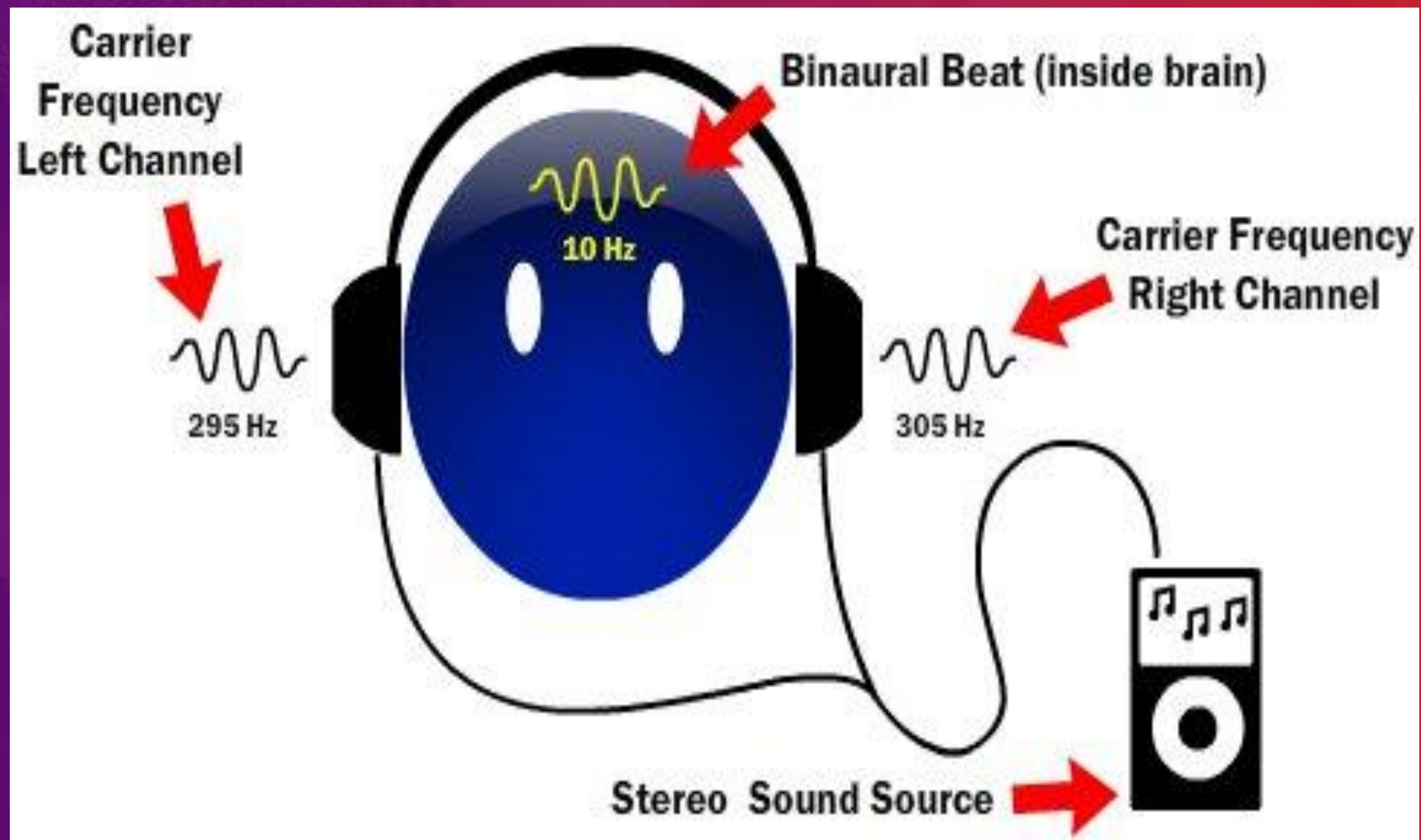
Every atom, molecule, or substance has its own unique oscillatory pattern, or vibration, which can be measured in electromagnetic wavelengths.

Metronome Synchronization

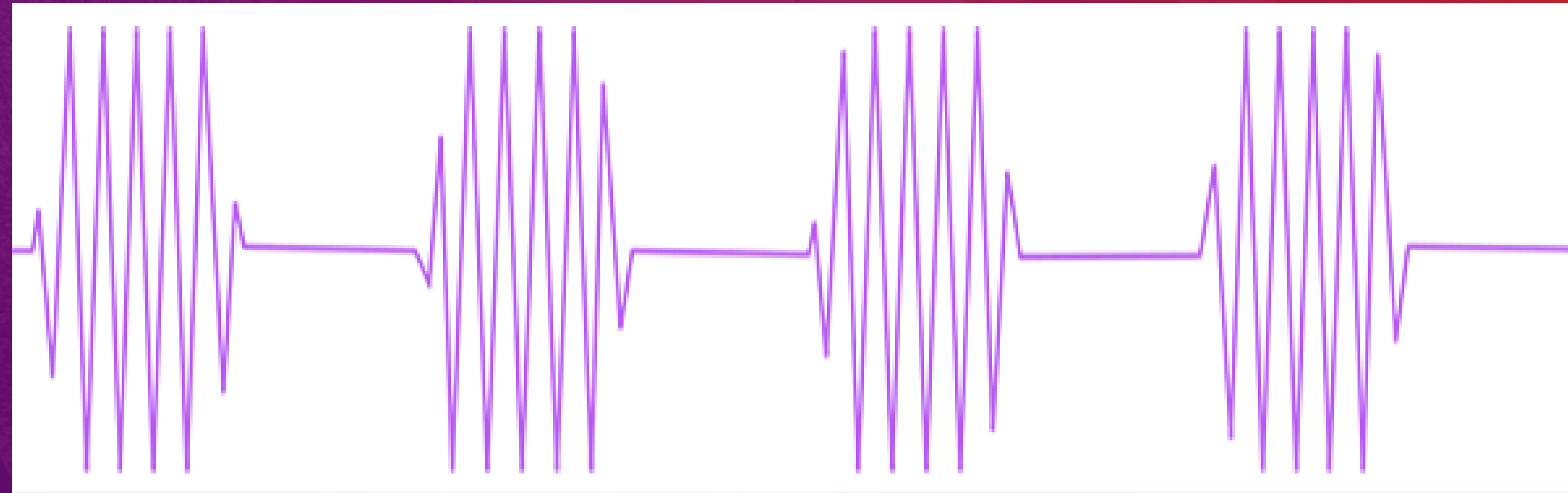


Binaural Beats

Binaural Beats & Binaural Tones

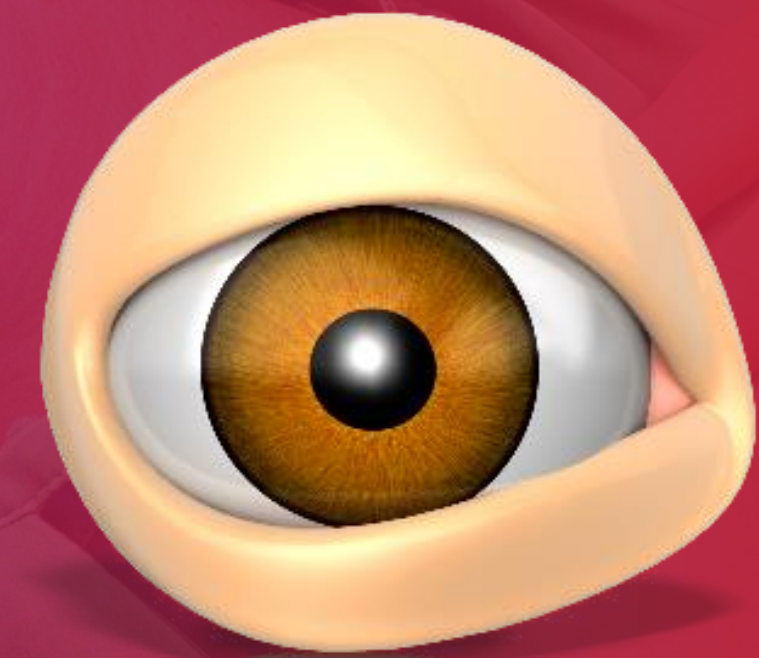


Isochronic Tones

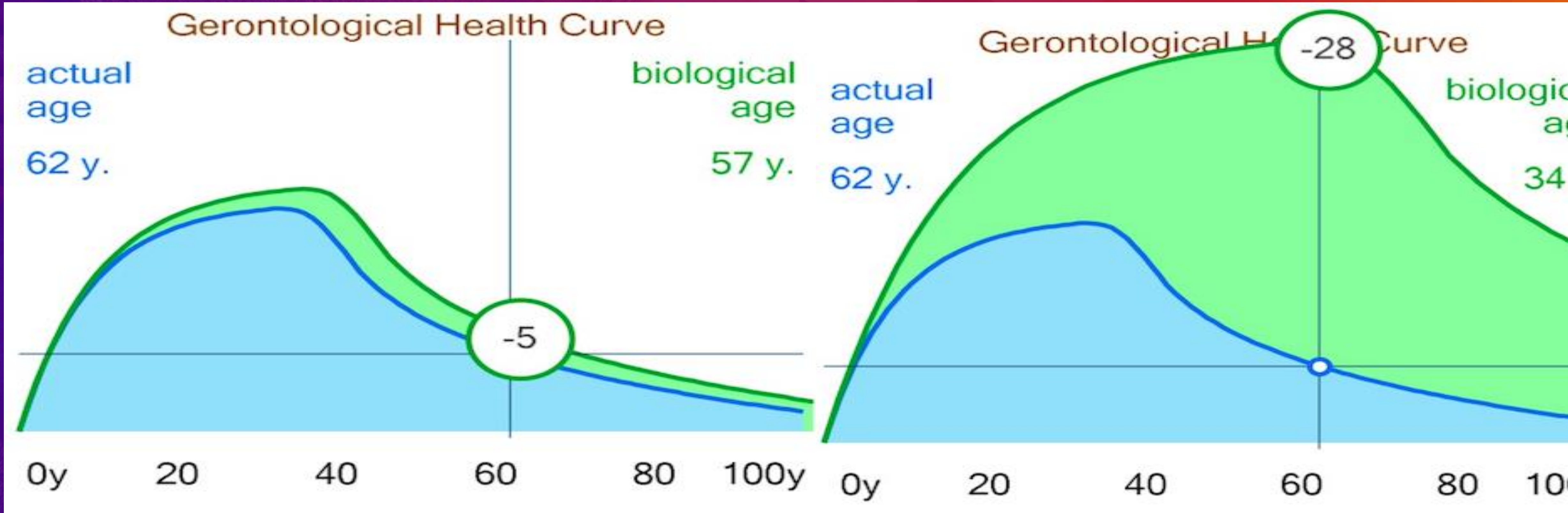


- ✓ **Emits sound at regular intervals**
- ✓ **The intensity of the sound goes from 0-100 and back again and is evenly spaced**
- ✓ **Create a strong cortical response in the brain**

Neuroplasticity with SENSORY STIMULATION



Through carefully selected and applied visual and auditory stimulation, along with prescribed therapy, we can improve balance, coordination, and cognition.



Before

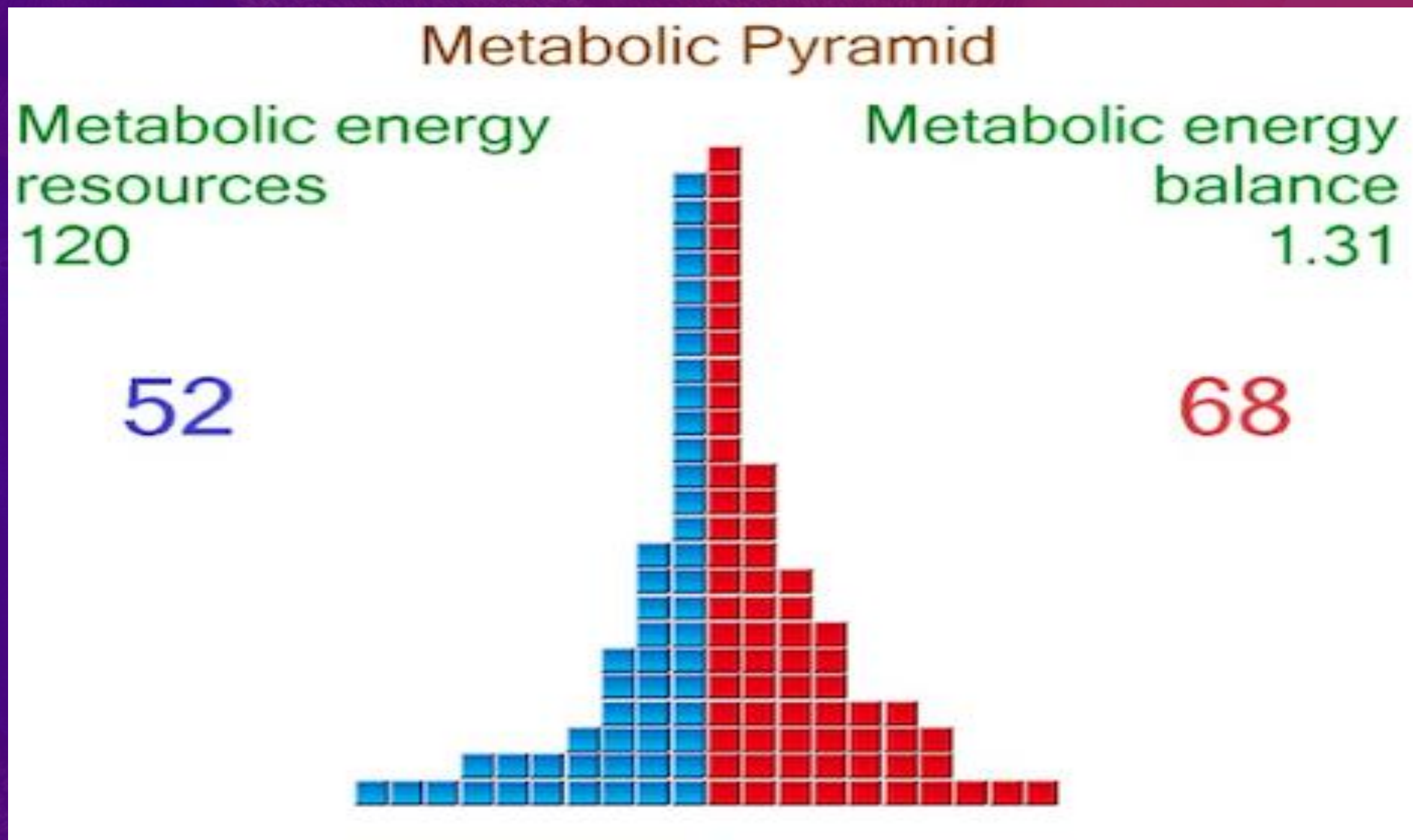
After

Photons increase the production of ATP

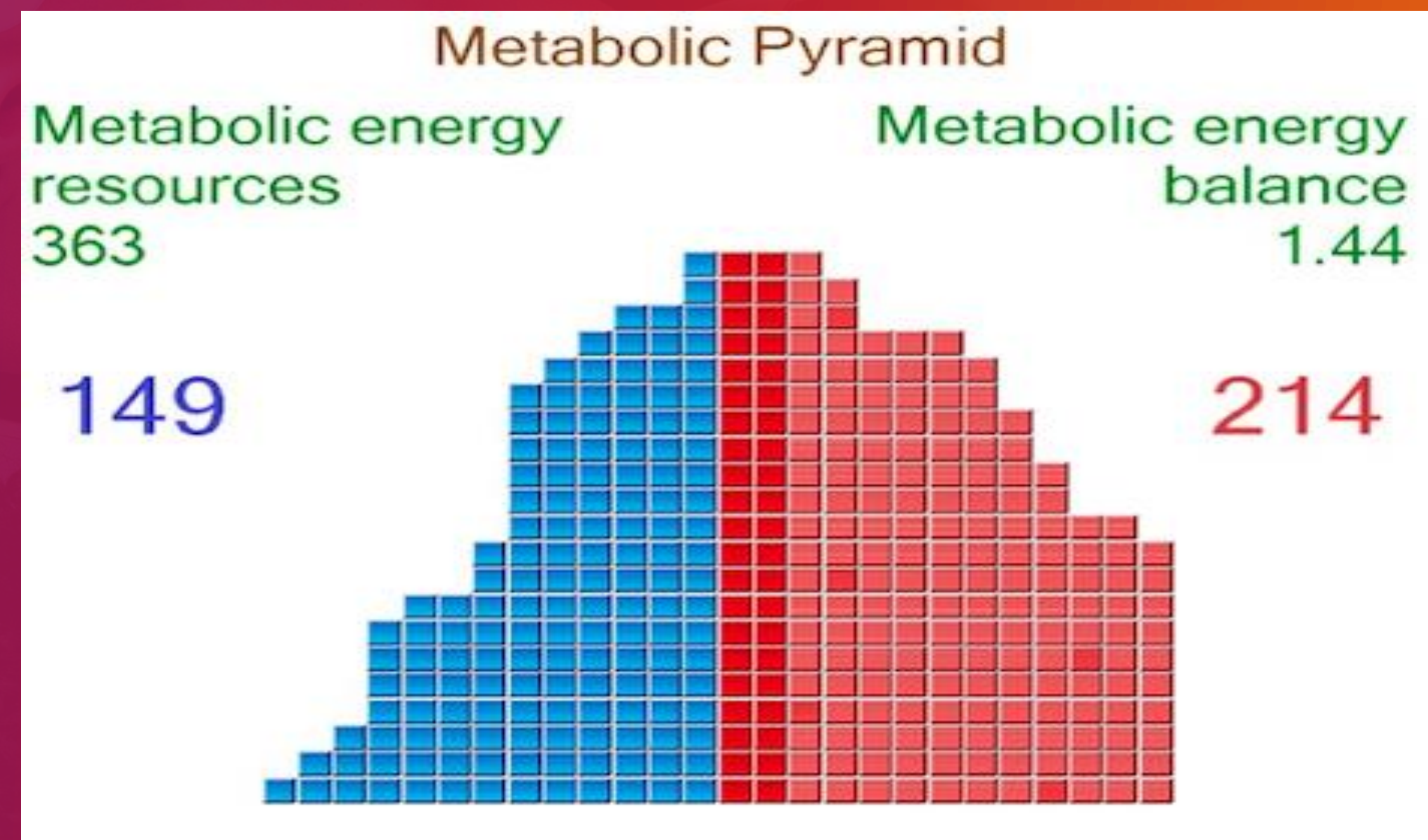


Cells use ATP energy to regenerate and grow

BrainTap

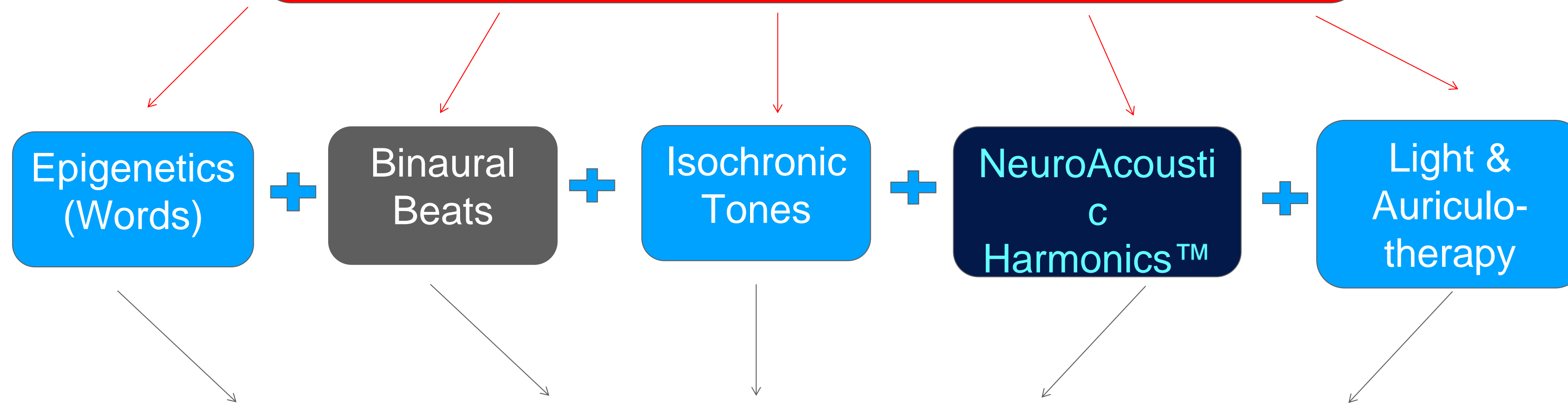


Before



After

Fortifying the Power of the Adjustment



Epigenetics
(Words)

+

Binaural
Beats

+

Isochronic
Tones

+

NeuroAcousti
c
Harmonics™

+

Light &
Auriculo-
therapy

Relaxation Response
*For Pleasure, Healing,
Achievement*

and LEARNING

Experts Who Recommend BrainTap



Dave Asprey
Biohacking Guru



Kathy Smith
Fitness Icon



122

Luke Storey
The Life Stylist Podcast

Who has BrainTap worked for?



Amelia Brodka
Professional Skateboarder



Shannon Elizabeth
Actress/Activist



Corey 'Overtime' Anderson
UFC Fighter

What's in the name?

LASER (light amplification by stimulated emission of radiation)

Low Level laser therapy
Low Intensive laser therapy
Low energy laser irradiation

LED (light-emitting diodes)
LEDT (light-emitting diodes therapy)

LOW LEVEL LIGHT THERAPY

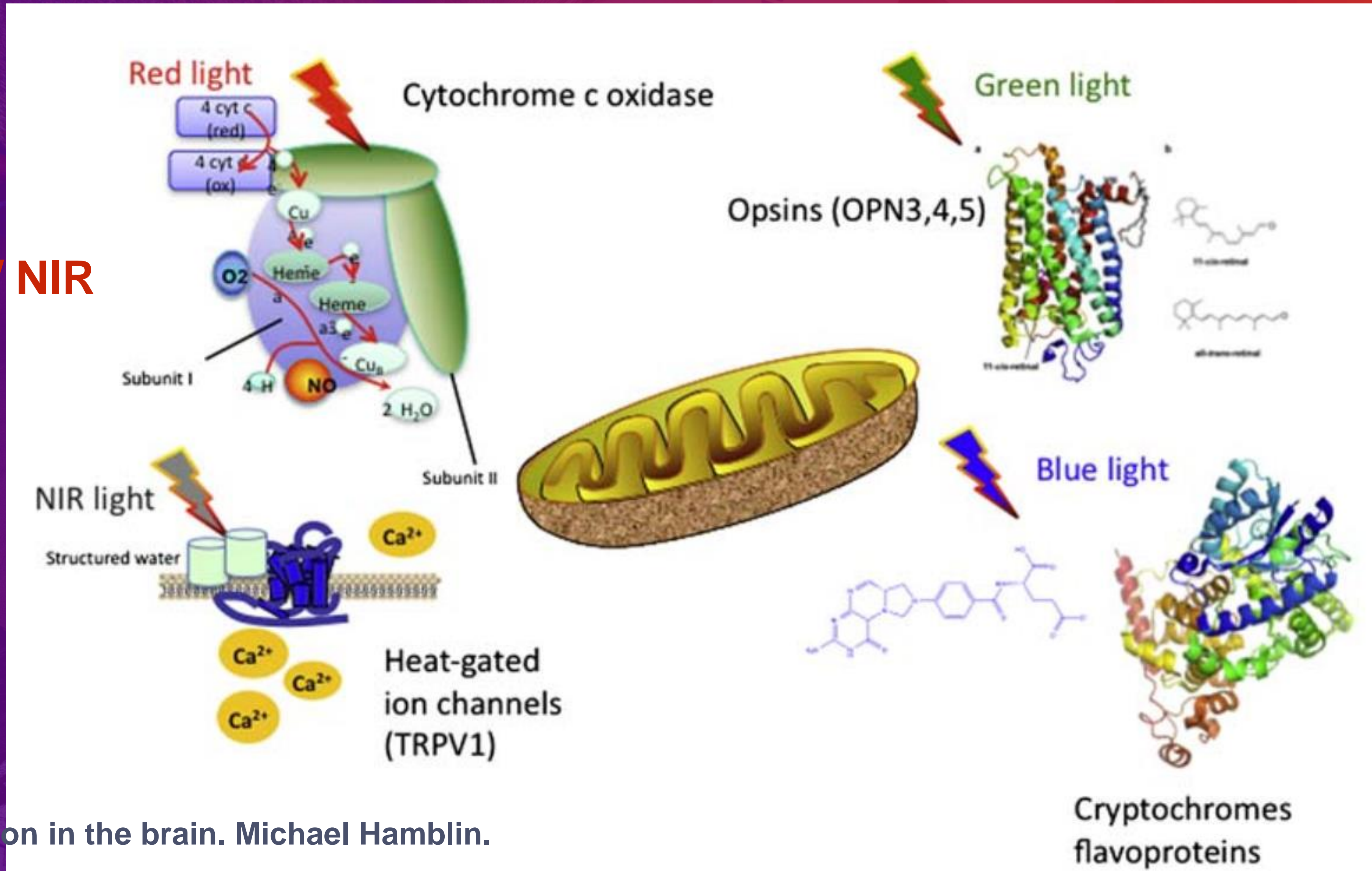
LLLP (LOW-LEVEL LIGHT PHOTOBIO-MODULATION)

PHOTOBIOSTIMULATION or PHOTOBIO-MODULATION



Photon-acceptors or photon-sensitive structures

RED / NIR



Chapter 34

Chapter 34

Cerebral blood flow in the elderly: impact of photobiomodulation

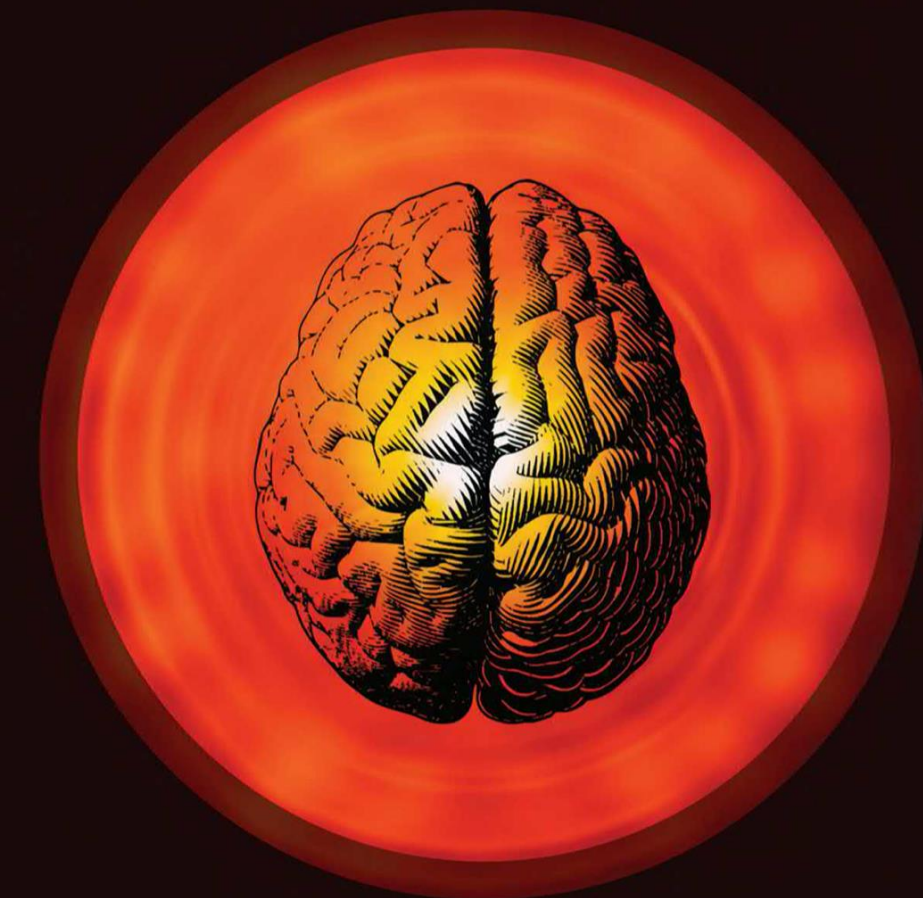
Afonso Shiguemi Inoue Salgado^{1,5}, Francisco José Cidral-Filho^{2,3}, Daniel Fernandes Martins^{2,3},
Ivo I. Kerppers⁴ and Rodolfo Borges Parreira^{1,5}

¹Salgado Institute of Integrative Health, Londrina, Brazil, ²Experimental Neuroscience Laboratory (LaNEx), University of Southern Santa Catarina, Palhocça, Santa Catarina, Brazil, ³Postgraduate Program in Health Sciences, University of Southern Santa Catarina, Santa Catarina, Brazil,

⁴Laboratory of Neuroanatomy and Neurophysiology, University of Centro-Oeste, Guarapuava, Brazil, ⁵Residency Program in Integrative Physical Therapy at UNIFIL University, Londrina, Brazil

Photobiomodulation in the Brain

Low-Level Laser (Light)
Therapy in Neurology and Neuroscience



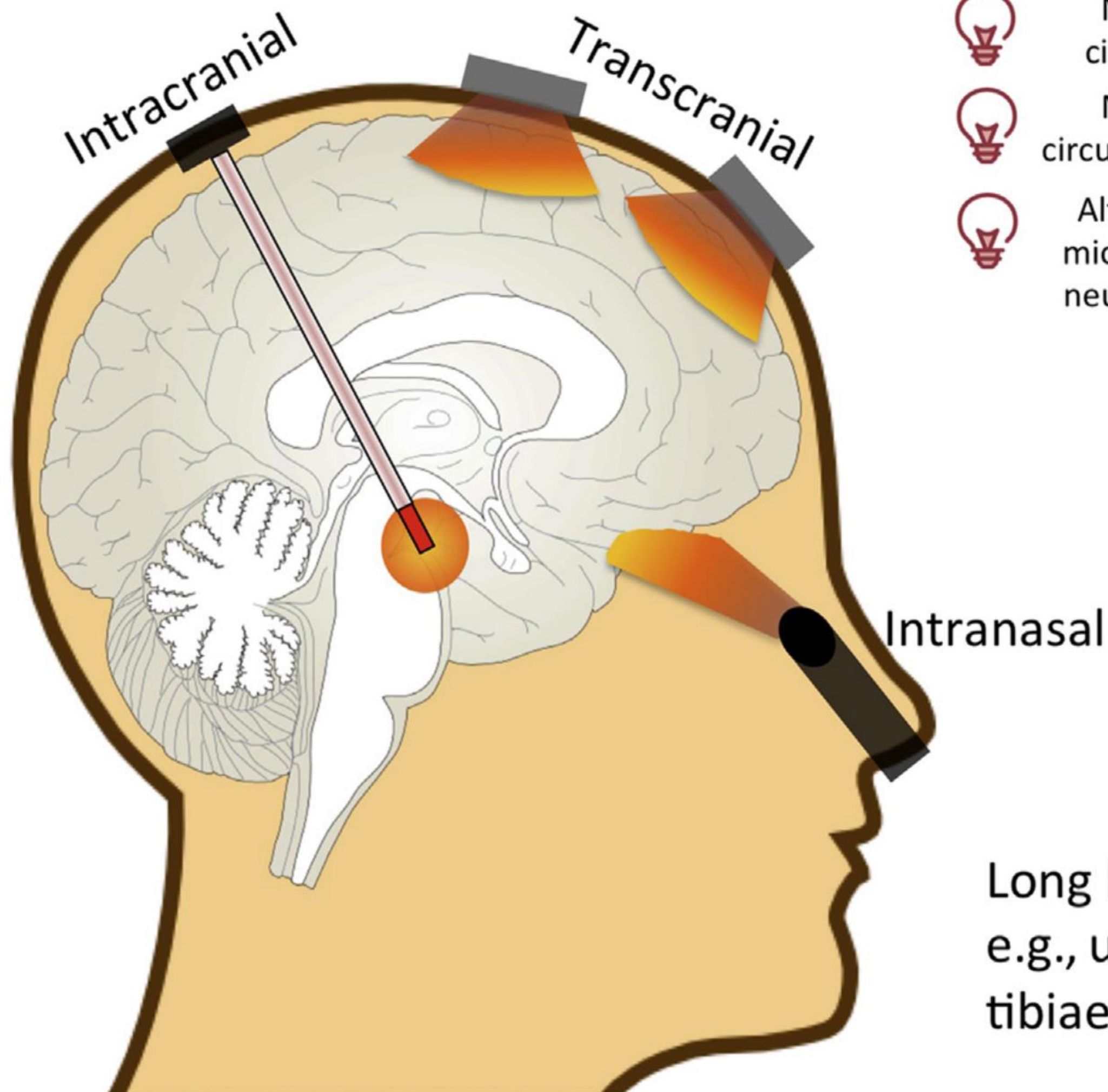
Edited by
Michael R. Hamblin and Ying-Ying Huang



HARVARD
UNIVERSITY

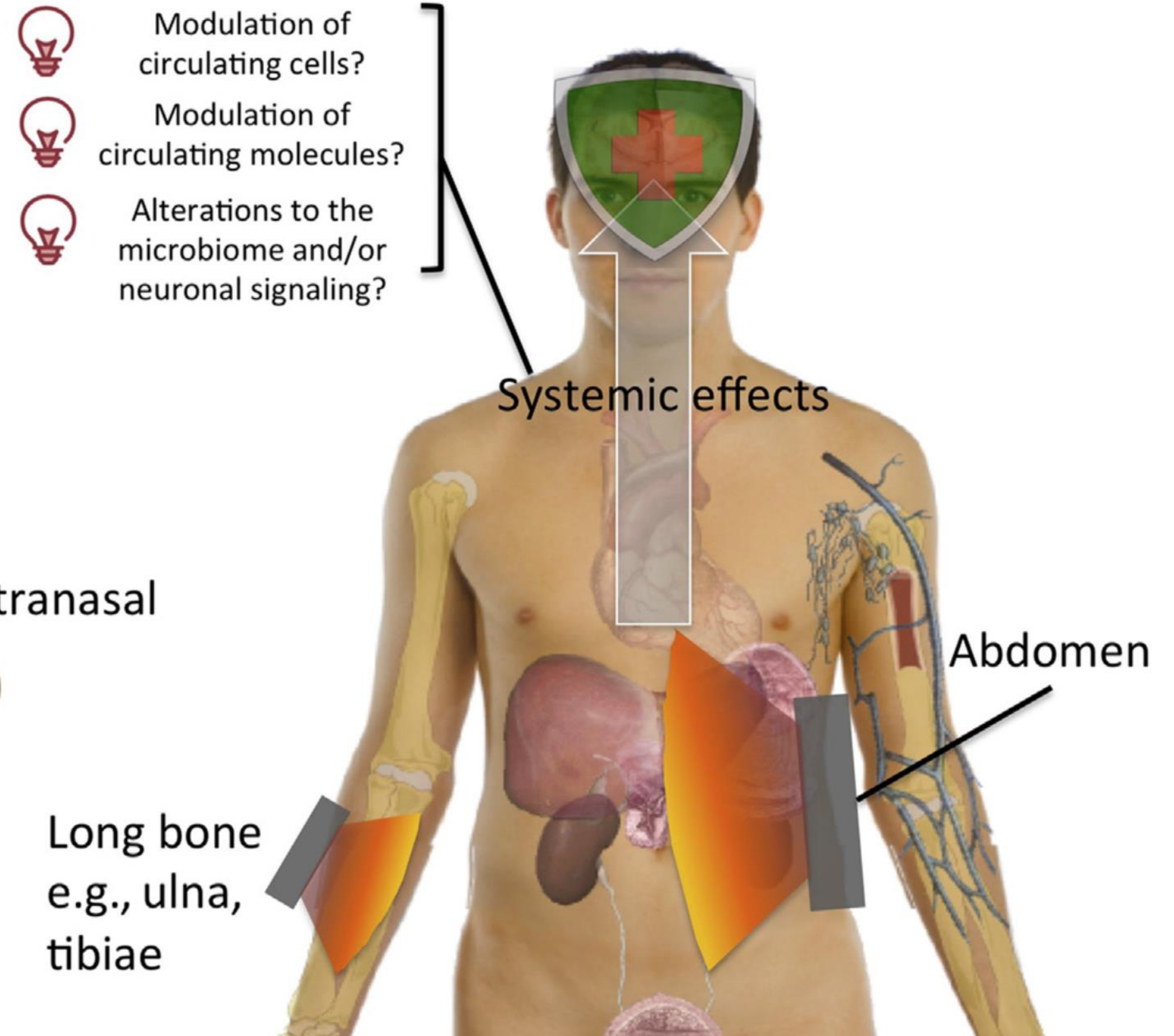
Direct photobiomodulation

Shining light directly onto the brain



Remote photobiomodulation

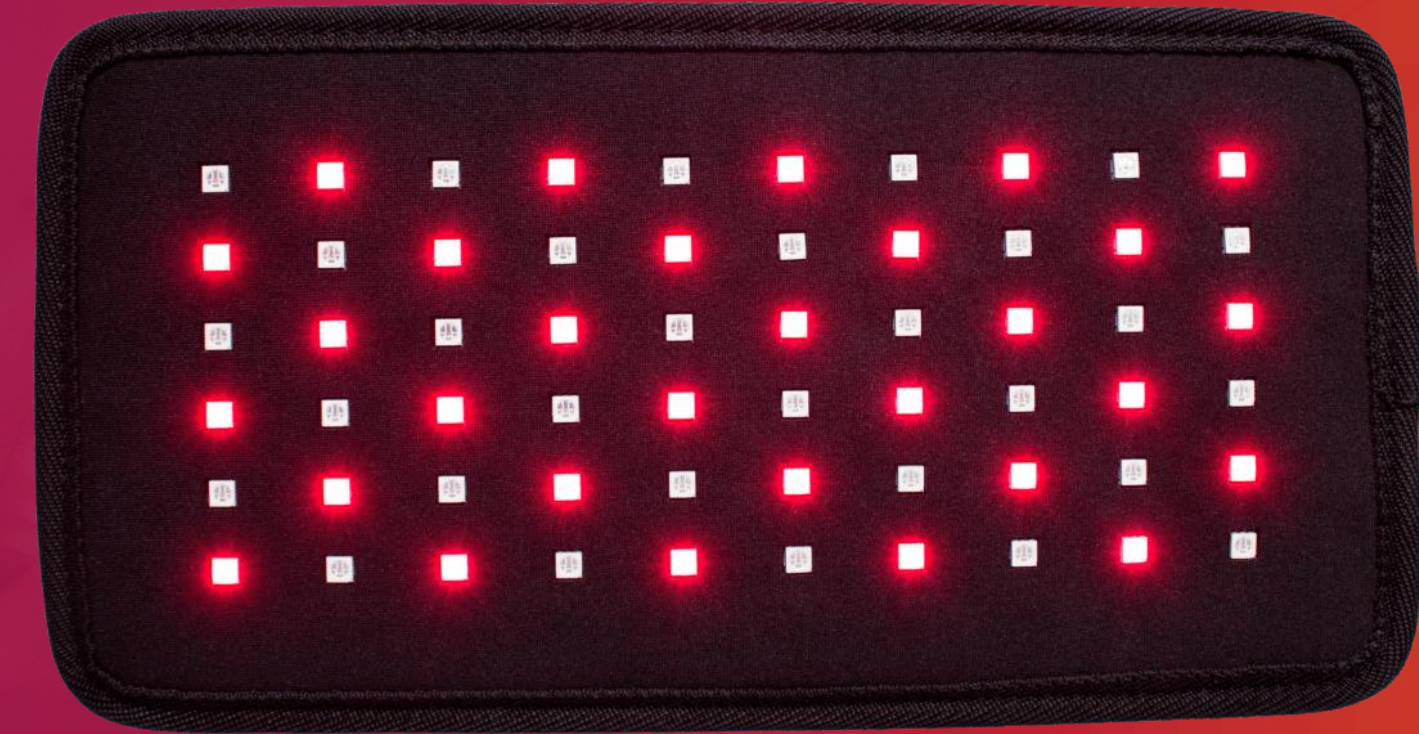
Targeting the body to protect the brain



Photobiomodulation Devices



Devices for Transcranial PBM



LED PADS and Sleeves for local applications

Publications - LLLT



National Library of Medicine
National Center for Biotechnology Information

Log in



Low level laser therapy



Search

[Advanced](#) [Create alert](#) [Create RSS](#)

[User Guide](#)

Save

Email

Send to

Sorted by: Best match

Display options

RESULTS BY YEAR

7,510 results



Publications - LLLT



National Library of Medicine
National Center for Biotechnology Information

Log in



photobiomodulation



Search

[Advanced](#) [Create alert](#) [Create RSS](#)

[User Guide](#)

Save

Email

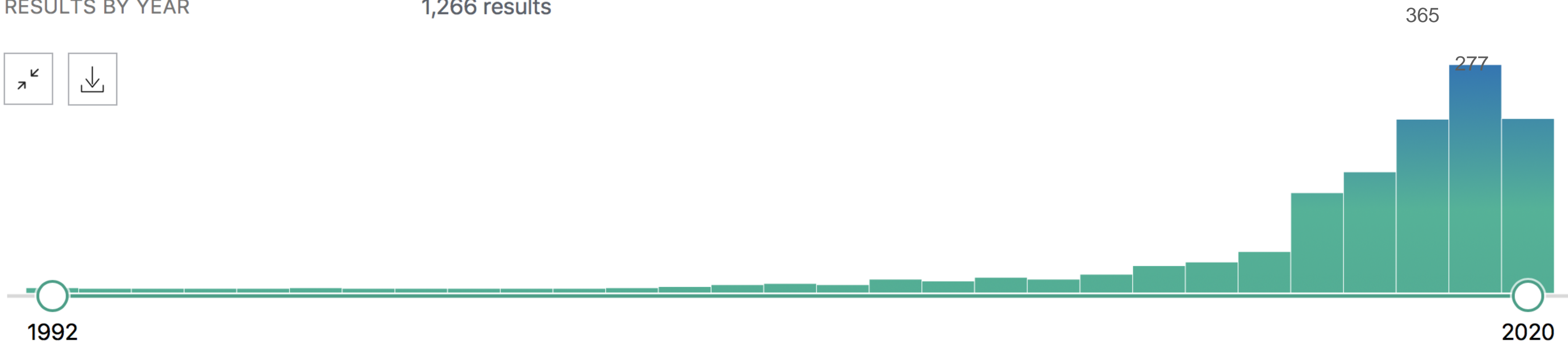
Send to

Sorted by: Best match

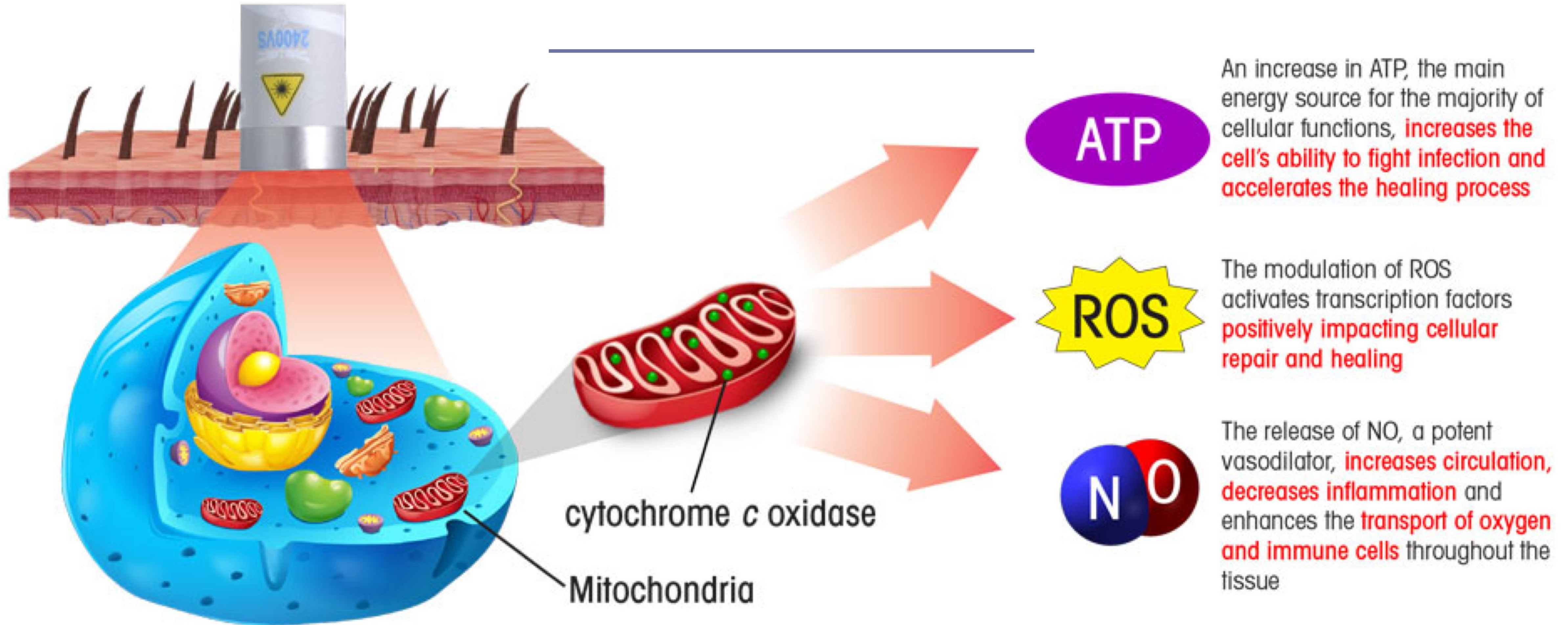
Display options

RESULTS BY YEAR

1,266 results



Mechanism

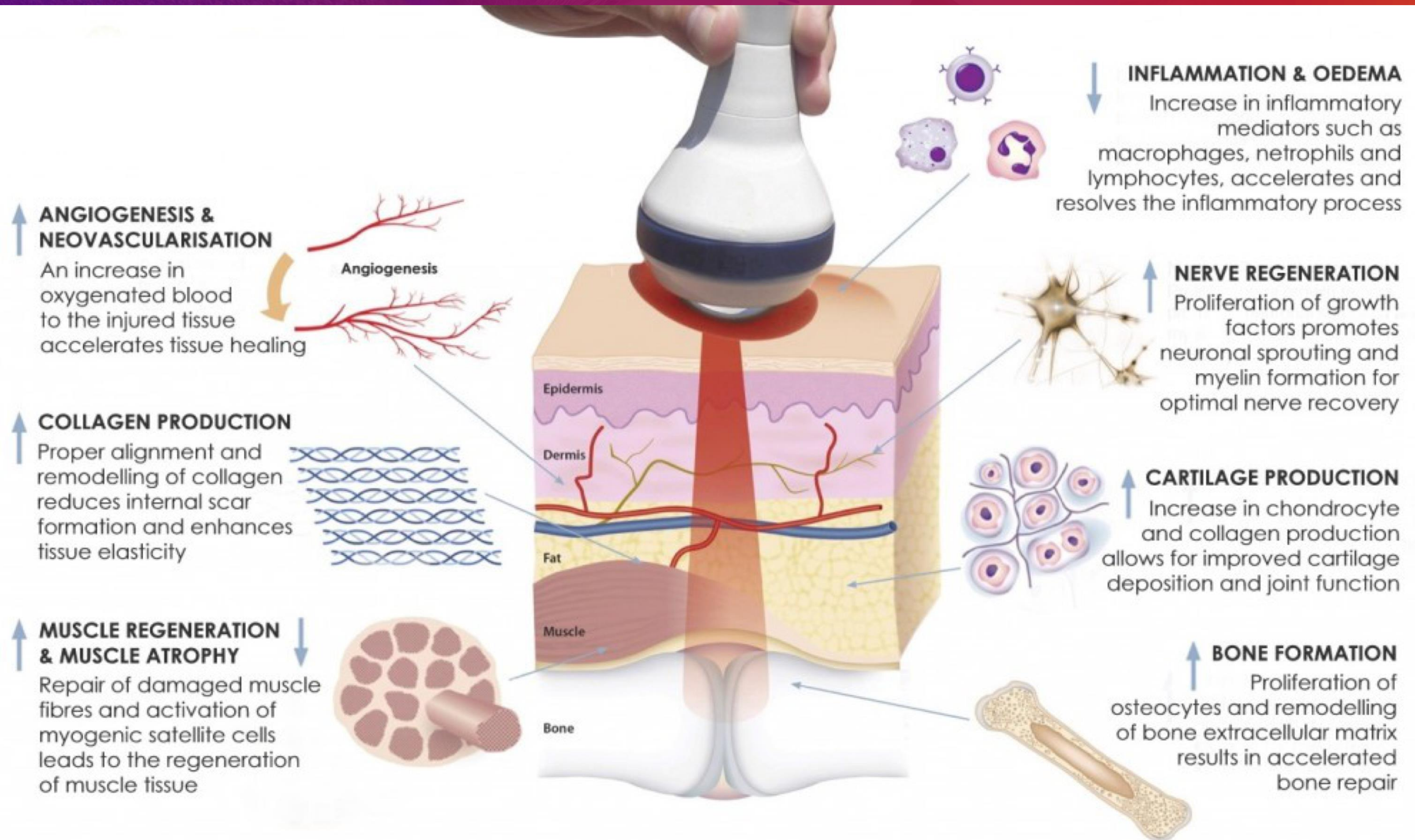


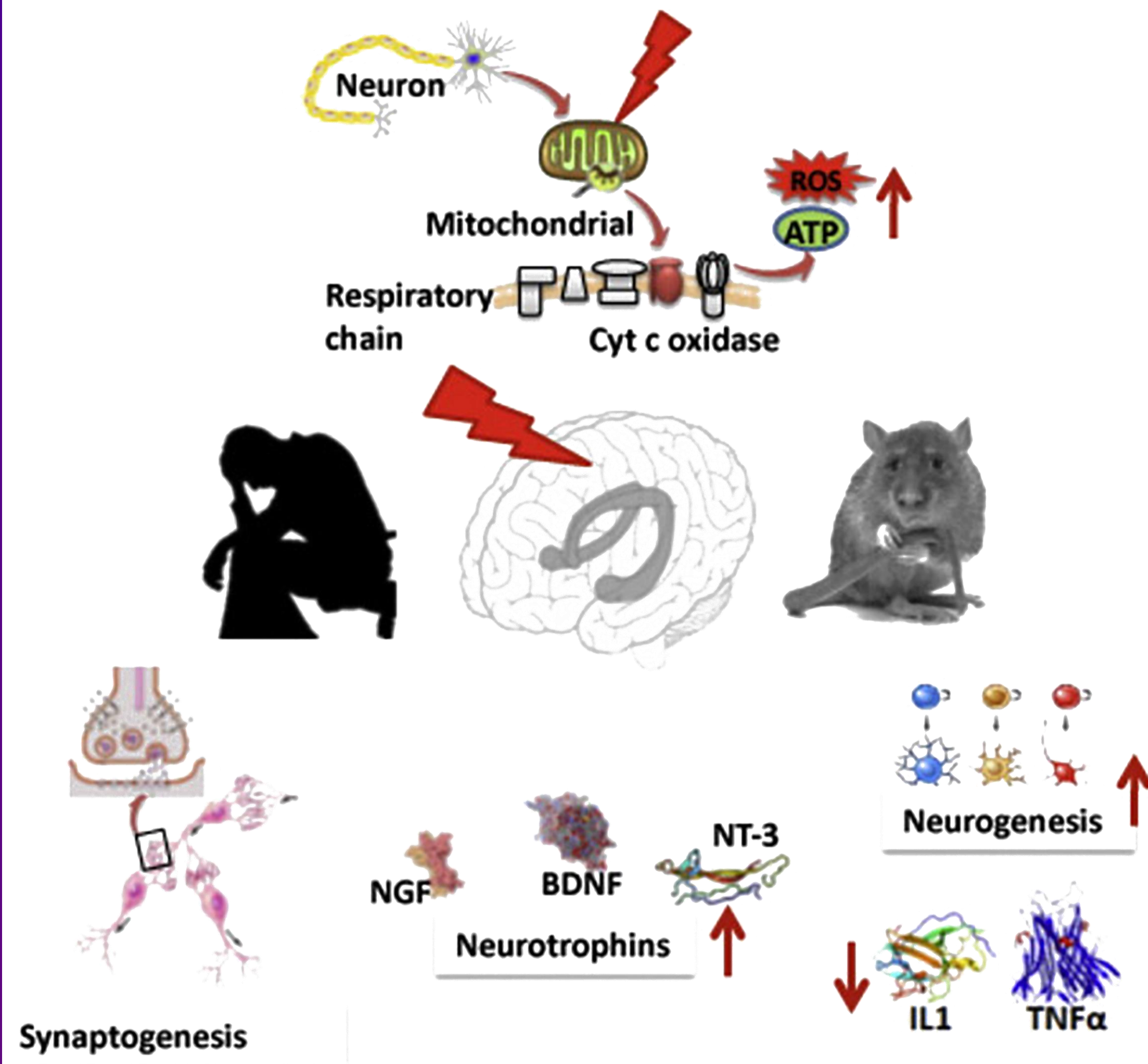
1 Laser light at a wavelength of 670nm, 808nm or 904nm is delivered to the tissue via a probe in **contact mode** with the surface of the skin.

2 The light enters the cell's mitochondria and is absorbed by the chromophores, including the protein cytochrome c oxidase (CCO) which then **increases its activity**.

3 As a result of this heightened activity, three molecules are affected: Adenosine Triphosphate (ATP), Reactive Oxygen Species (ROS) and Nitric Oxide (NO)

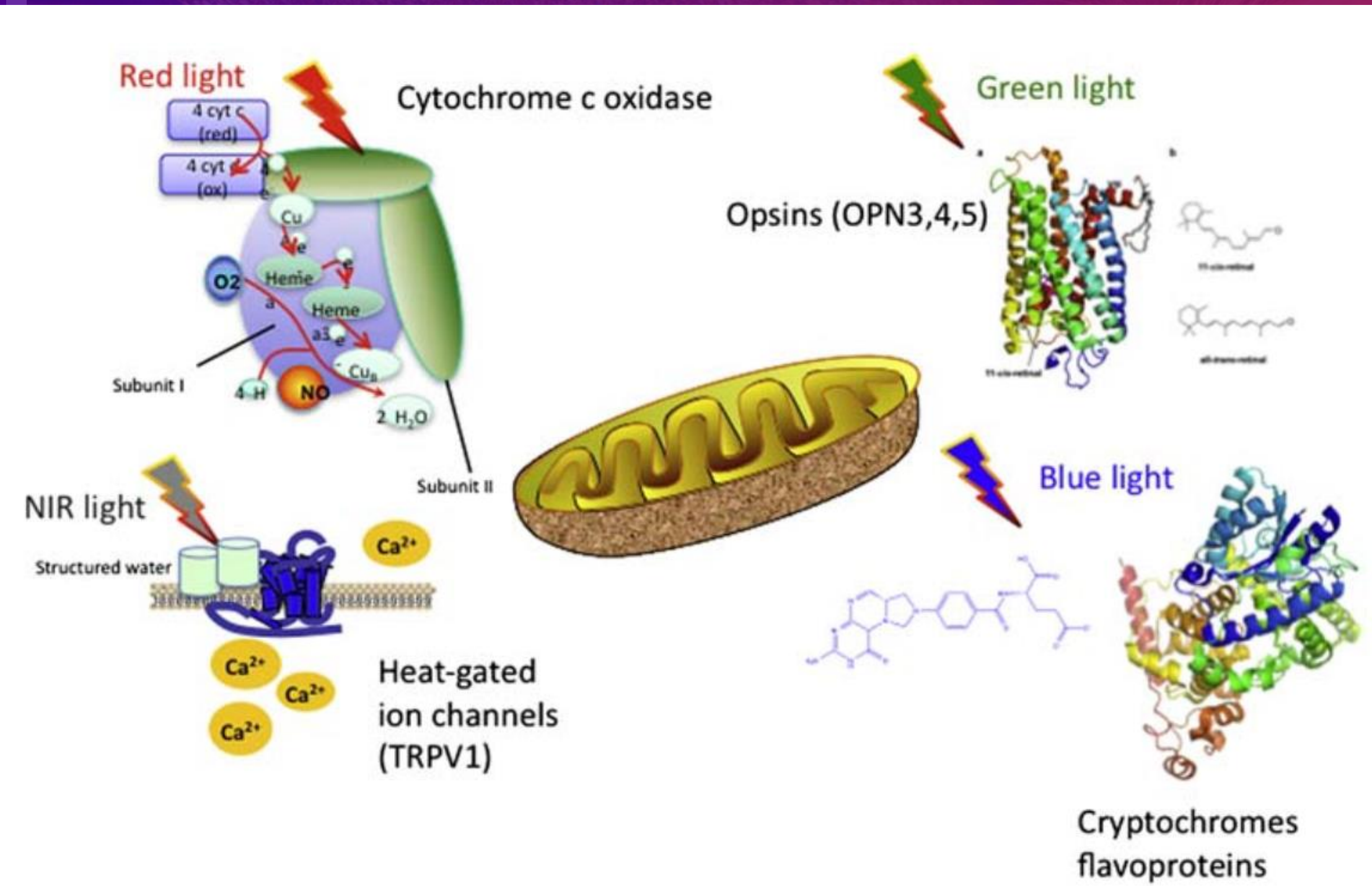
Mechanism



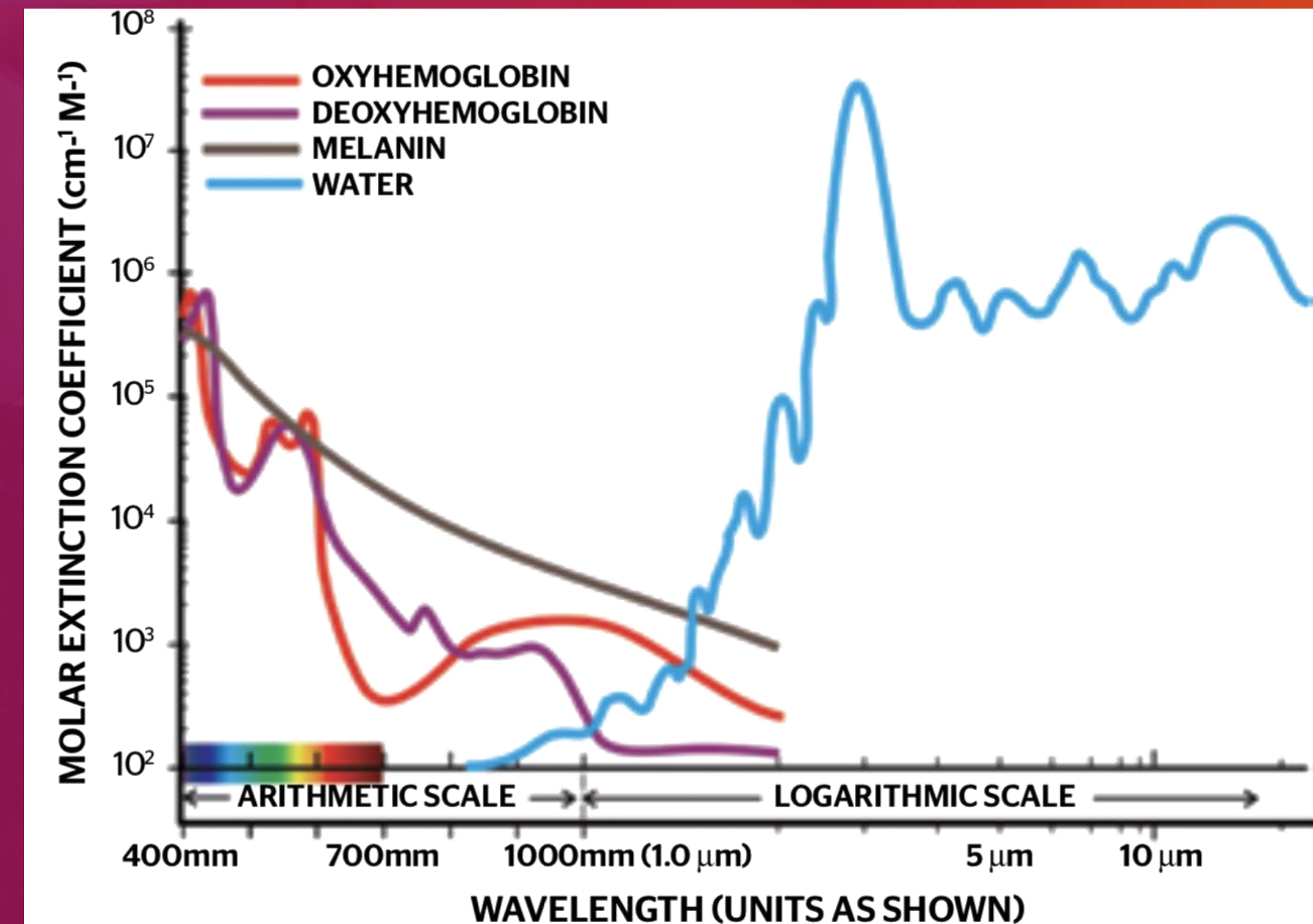


Pro-inflammatory cytokines and neuroinflammation are reduced. Neurotrophins such as brain-derived neurotrophic factor are upregulated, which in turn activates synaptogenesis (formation of new connections between existing neurons) and neurogenesis (formation of new neurons from neural stem cells).

Photomodulation: Absorption



Absorption spectra for biological chromophores



Without absorption, there can be no reaction.

Dose x Effect

A-B: Small dose: very little change in cellular activity.

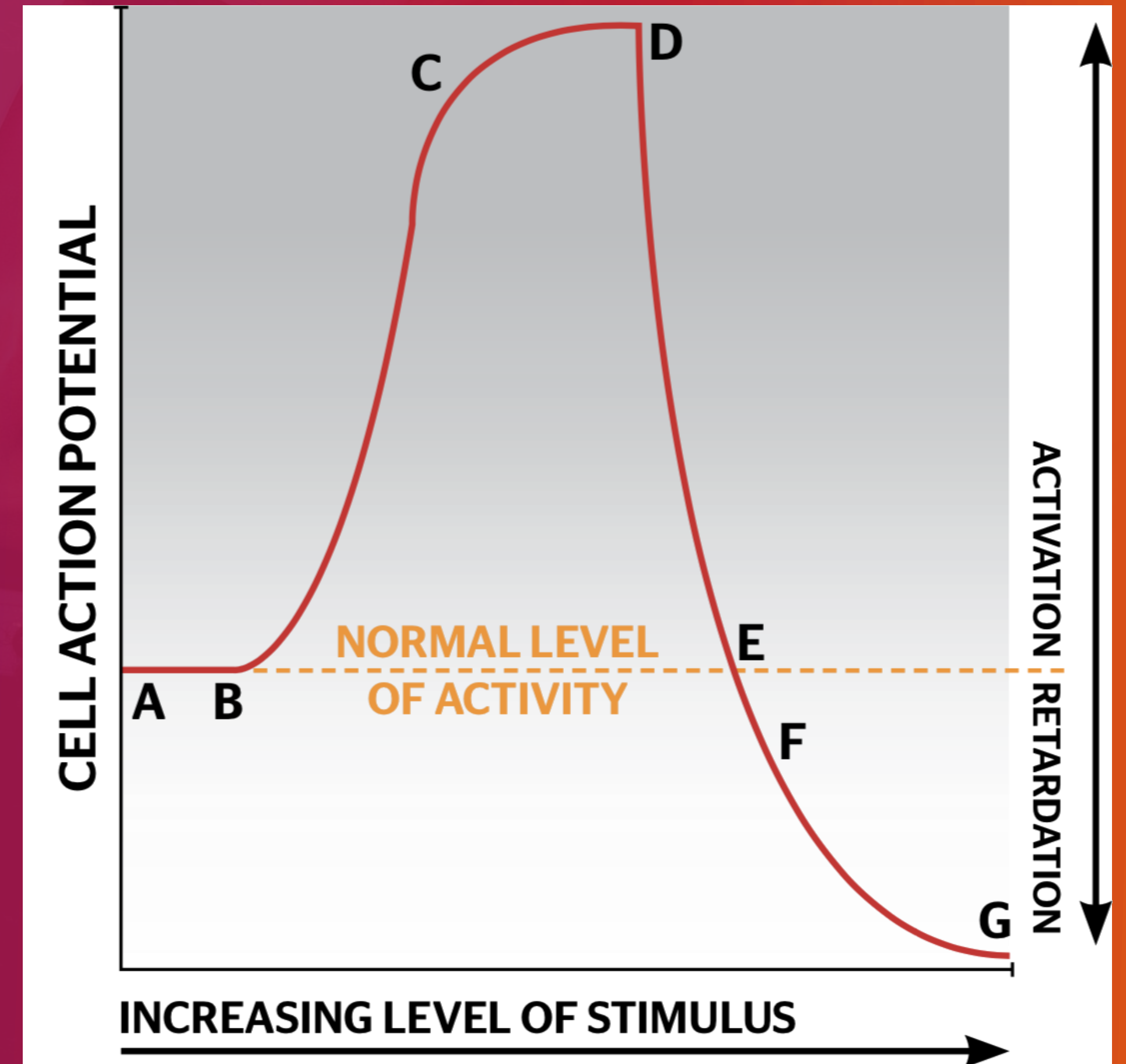
B-C: Increasing stimulus = Increasing cellular activity.

C-D: Plateau = maximum activity level.

D-E: Sharp drop in cellular activity = overstimulation.

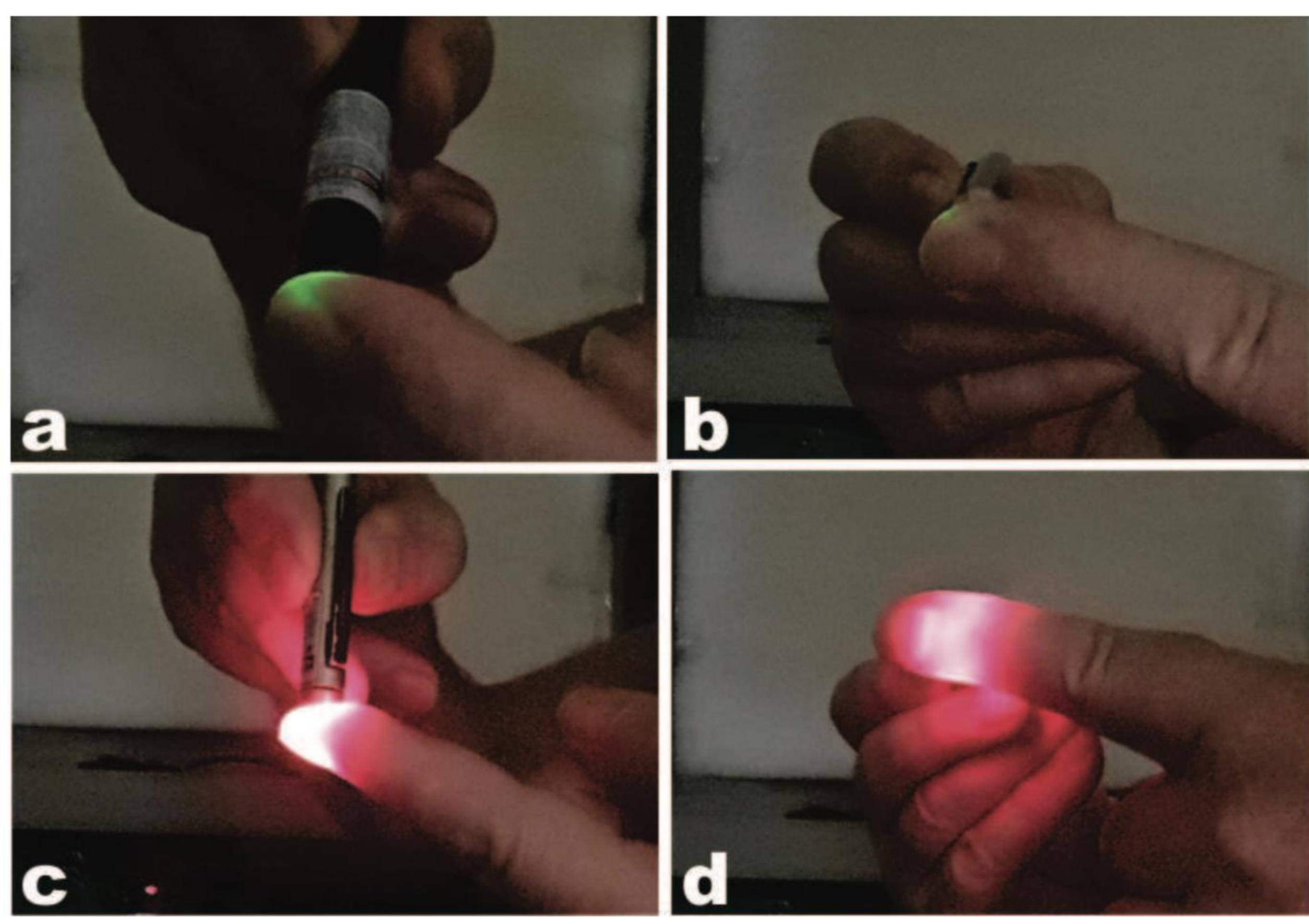
E-F: Cellular activity drops below normal levels = Cellular damage.

F-G: cellular death.

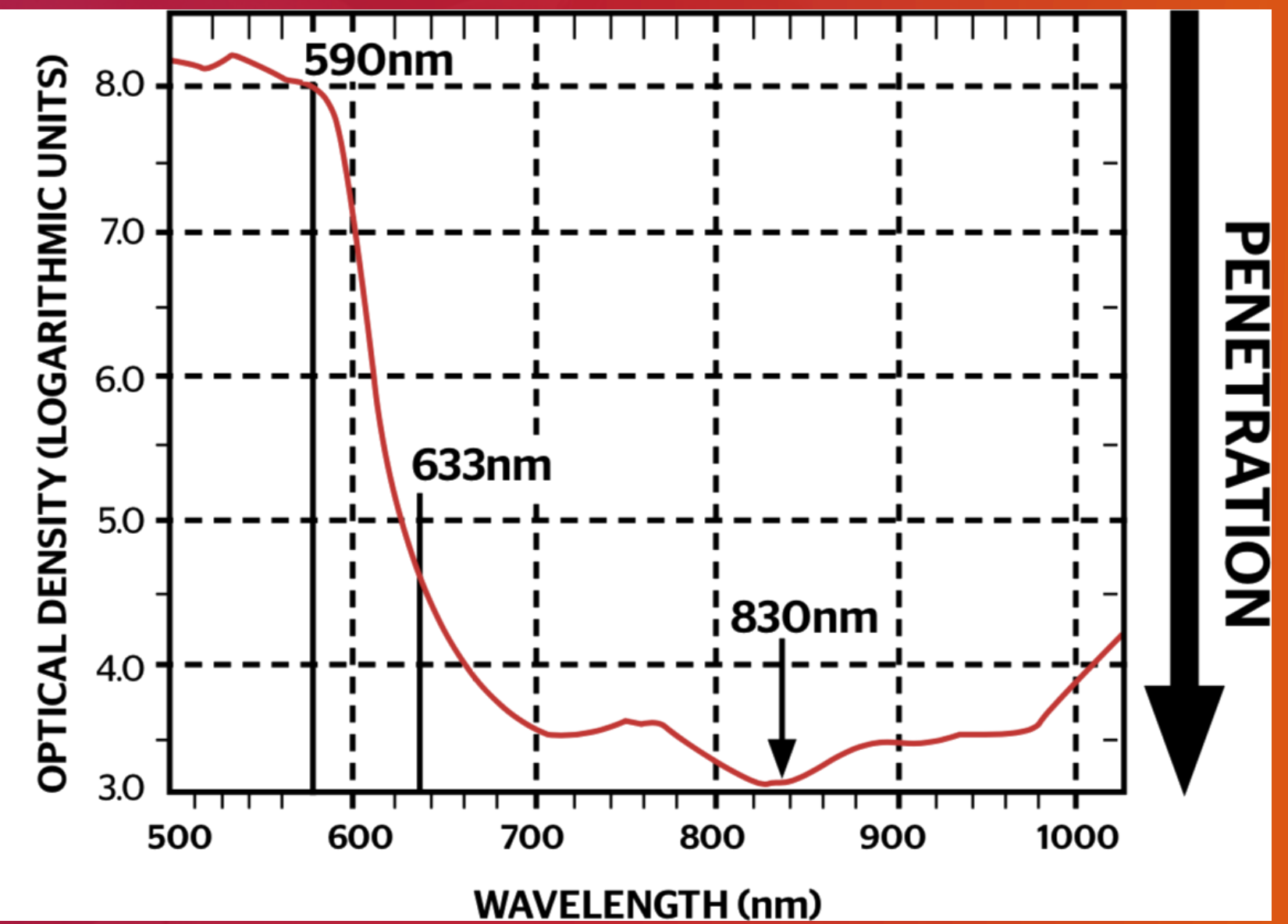


Schematic representation of Arndt-Schulz curve
(Adapted from Barolet, 2008)

Wavelength x Penetration

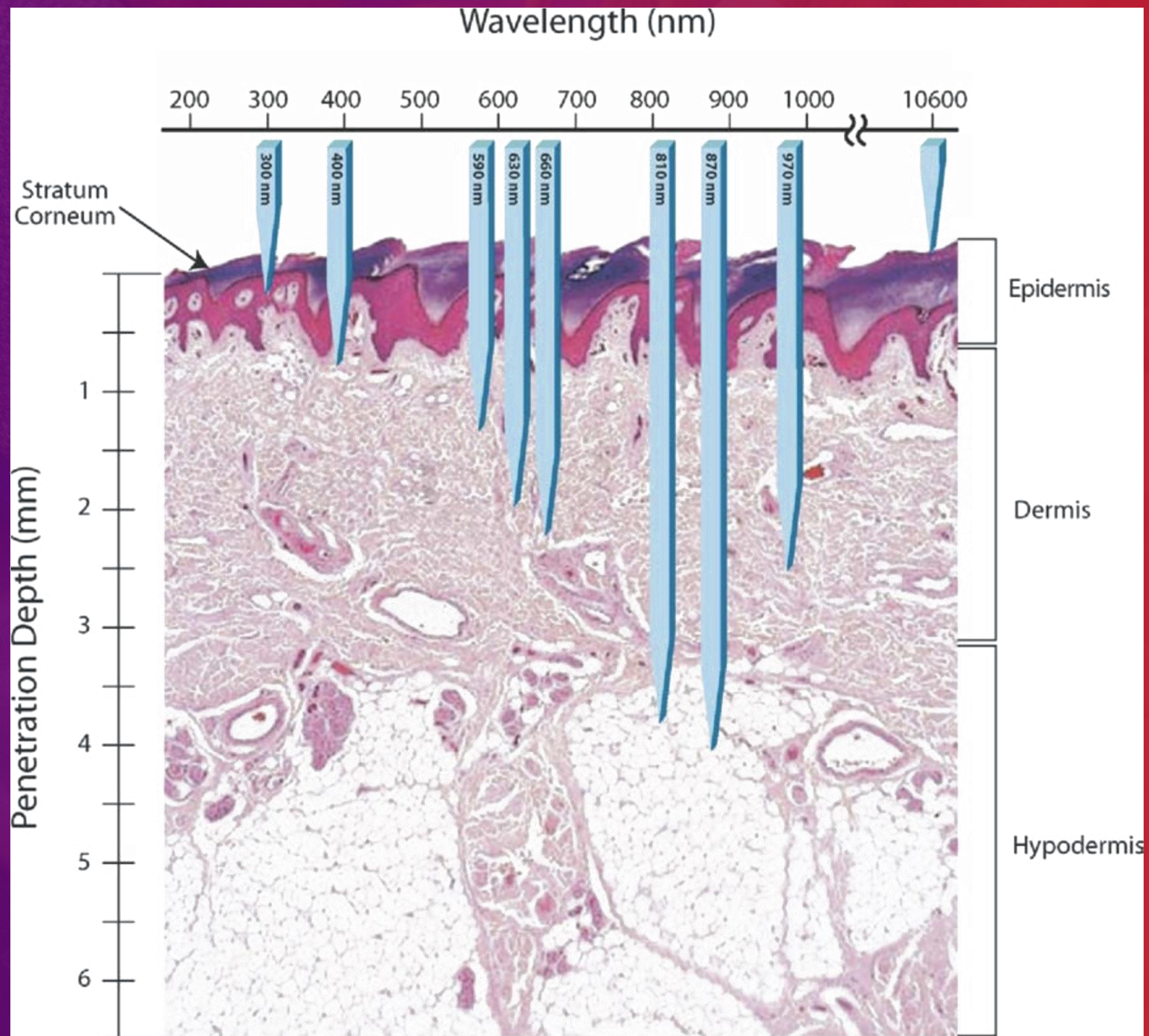


Penetration of broad waveband light through a human hand *in vivo*. Note that the optical density units are logarithmic. (Adapted from Reference 9)



(Calderhead & Tanaka, 2017)

Calderhead & Tanaka, 2017)



Effects of PBM in the Brain

Metabolism

Blood Flow

Neuroprotection

Oxidative Stress

Inflammation

Neurogenesis

Synaptogenesis

Stem Cells

Gamma Rhythms



Metabolism



Improved metabolic functioning through Increased intracellular ATP production is one the most strongly supported mechanisms of action.

Several pre-clinical studies have shown that the brain content of ATP is increased by tPBM.

Important: mitochondrial dysfunction, inadequate supplies of ATP, and oxidative stress are contributory factors in almost all forms of brain disease.

This has been reported for neurological conditions such as major depressive disorder, traumatic brain injury, Parkinson's, and Alzheimer's (Salehpour et al, 2017).

Blood Flow

One of the changes that is easiest to measure after tPBM, is the change in cerebral blood flow and oxygenation (Wang et al., 2016).

tPBM induces **vasodilation** promoting improved **circulation**, which in turn leads to improved **cerebral oxygenation** (Lee et al., 2017).

Lasers Med Sci. 2015 Jan;30(1):339-46. doi: 10.1007/s10103-014-1669-2. Epub 2014 Oct 3.

The effects of transcranial LED therapy (TCLT) on cerebral blood flow in the elderly women.

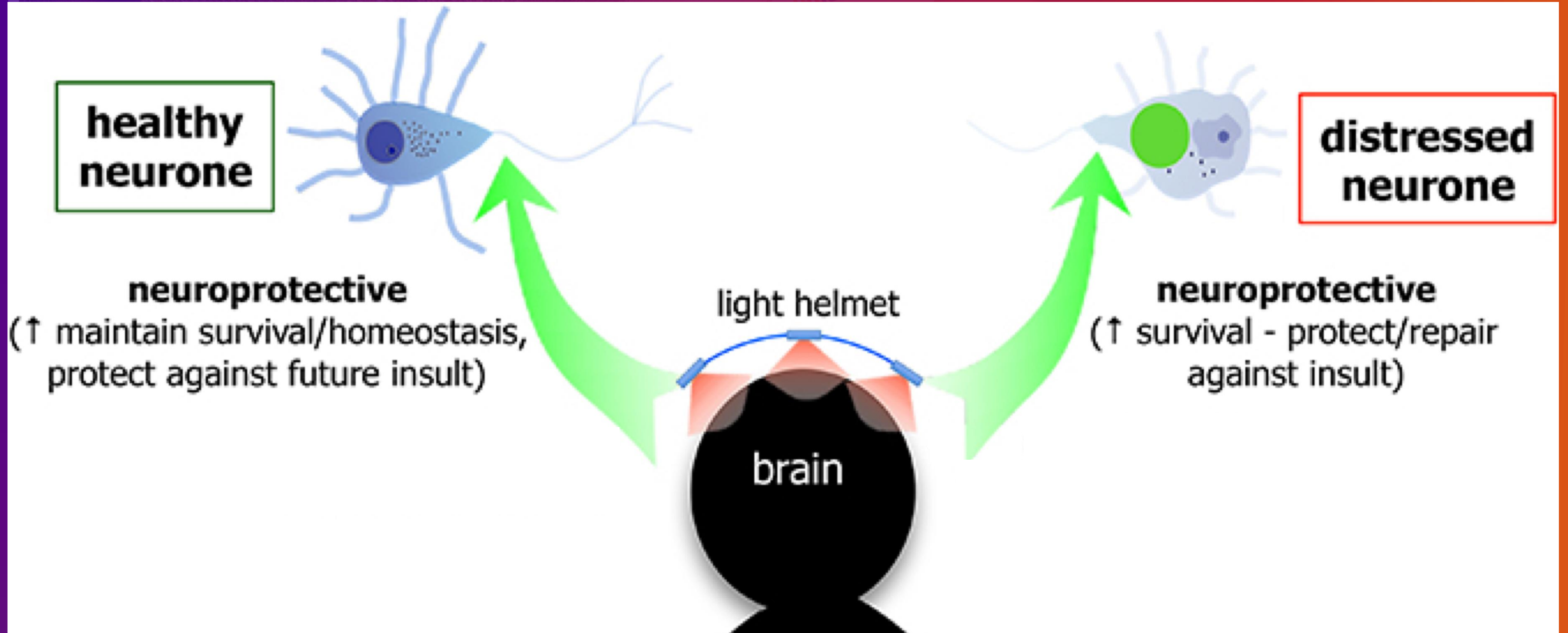
Salgado AS¹, Zângaro RA, Parreira RB, Kerppers II.



Neuroprotection

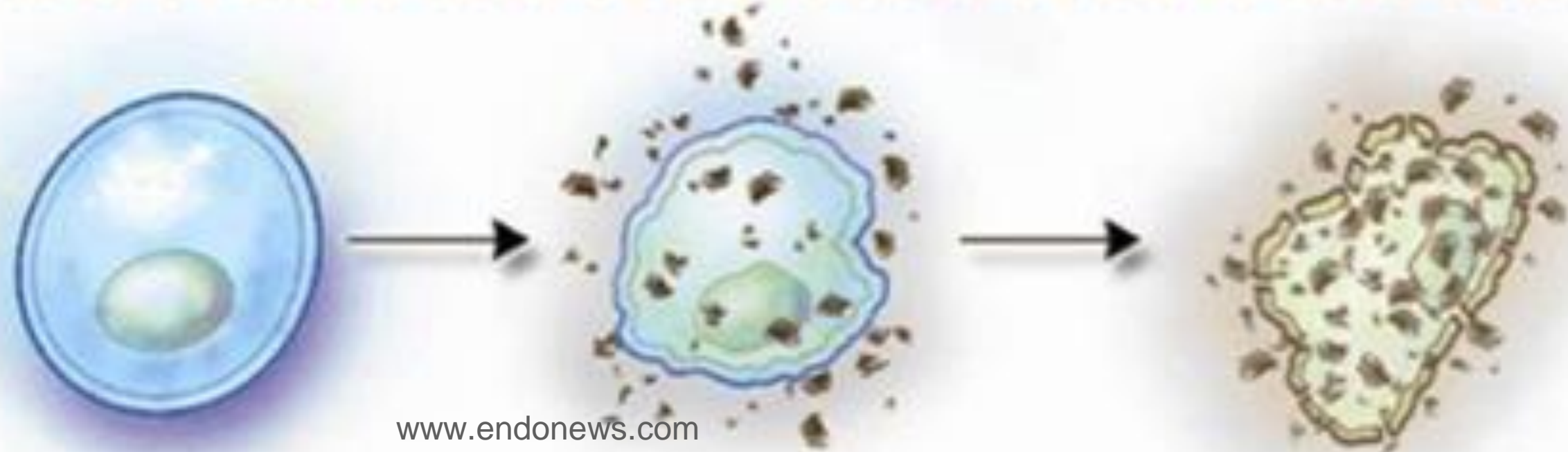
**Various studies support the use of tPBM for neuroprotection, essentially, to protect cells from damage, to promote their survival and longevity, and reverse apoptotic signaling processes.
(Liang et al., 2012).**

Neuroprotection



Oxidative Stress

These apples demonstrate how oxidative stress breaks down your cells, causing premature aging and disease.



Normal Cell

Cell Attacked by Free Radicals

Cell with Oxidative Stress

www.endonews.com

tPBM has marked antioxidant activities (decrease of oxidative stress markers as well increase of anti-oxidative enzymes)

Oxidative stress is linked to various neurological conditions, such as major depressive disorder, traumatic brain injury and Alzheimer's diseases.

(Roomruangwonget al., 2018; Rodríguez et al., 2014; Wu et al., 2014).

Inflammation

tPBM helps reduce inflammation through inhibition of the cyclo-oxygenase 2 (COX-2) enzyme and reduction of inflammatory cytokines (IL-1 and TnF-a), as well as stimulation of expression of anti-inflammatory cytokines (IL-10).

In comparative studies tPBM induced the same effect of anti-inflammatory drugs with no harmful side-effects.

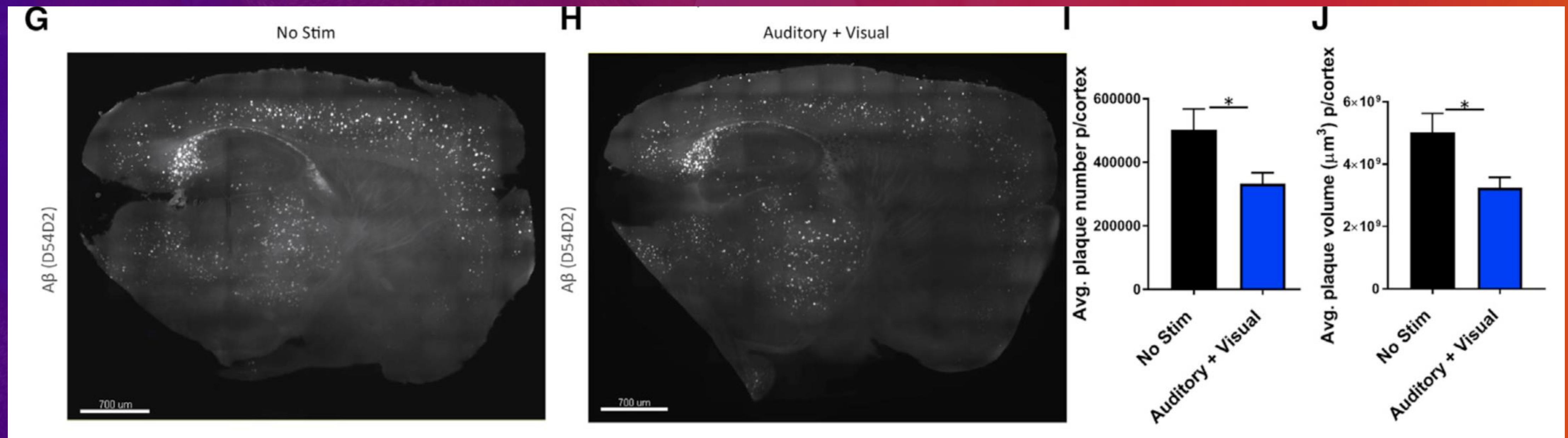
(Lim et al., 2017; yang et al., 2017)





Gamma Rhythms

Auditory + Visual Gamma stimulation in the hippocampus and auditory cortex **reduced Amyloid Levels** in animal models of Alzheimer's disease.



Cell

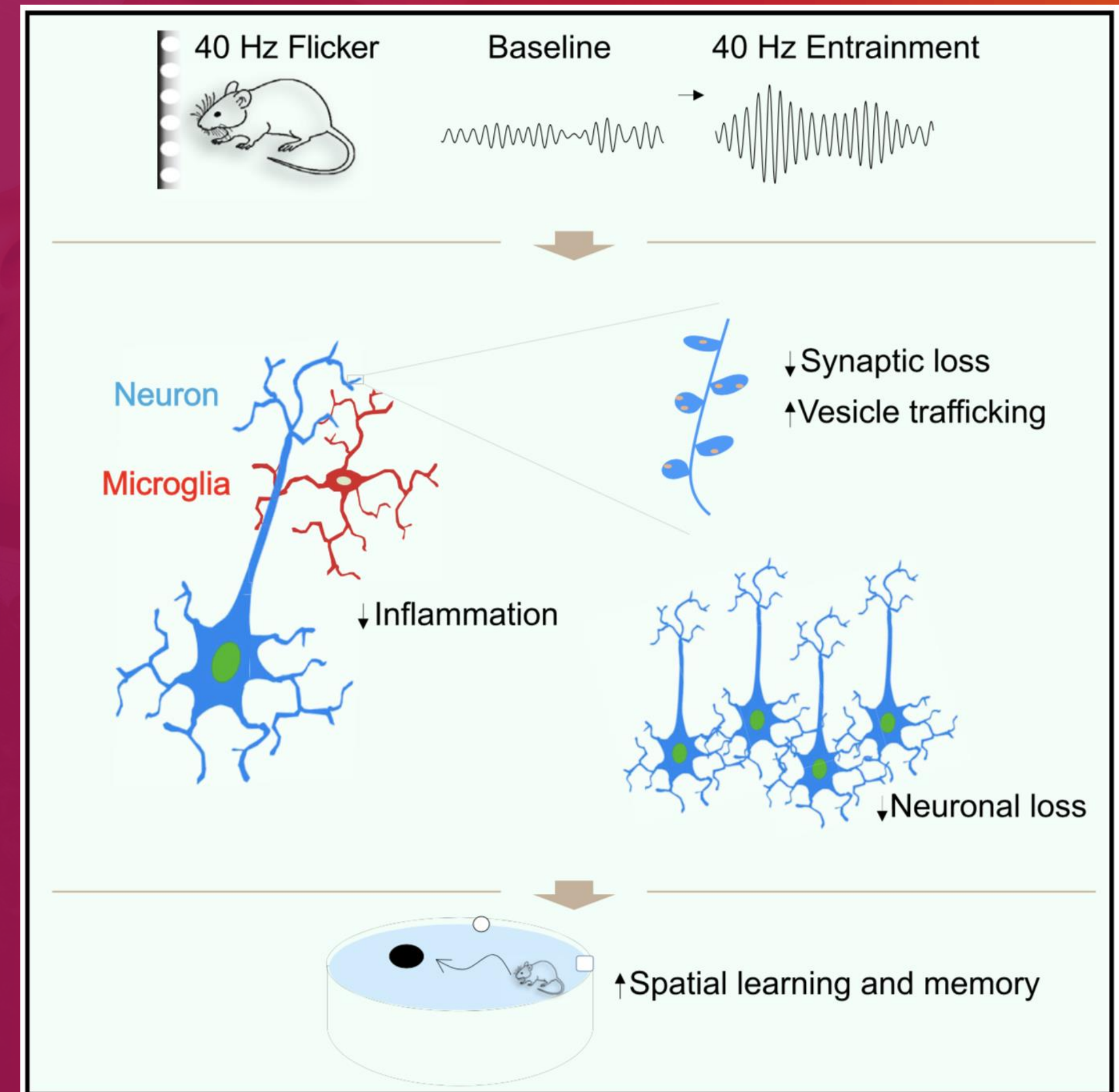
Multi-sensory Gamma Stimulation Ameliorates Alzheimer's-Associated Pathology and Improves Cognition

Article



Gamma Rhythms

- Reduced synaptic and neuronal loss across multiple brain regions;
- Improved spatial learning and memory.



Neuron

Article

Gamma Entrainment Binds Higher-Order Brain Regions and Offers Neuroprotection

Research



BrainTap®

Quartermaster Tax Management is a proactive tax management firm helping clients reduce their tax burden with no reduction to their standard of living.

Schedule a complimentary consultation with us and let us find out how much the IRS owes you.





Effect of a Single Audio-Visual Brain Entrainment Session on Heart Rate Variability

Effect of a single Audio-Visual Brain Entrainment session on Heart Rate Variability: a clinical trial with 100 adult volunteers

Michael Porter¹, Patrick Porter^{1,2}, Afonso Inoue Shiguemi Salgado¹ and Francisco J Cidral-Filho¹

¹ Integrative Physical Therapy Residency - Salgado Institute of Integrative Health, Londrina, PR - Brazil.
² Quantum University, Honolulu, HI - USA.



Contact: pporter@braintap.com

OBJECTIVE

The objective of this study was to investigate the effect of the Audio-Visual Brain Entrainment (ABE) on Heart Rate Variability.

RESULTS

ABE significantly (1) increased Heart Rate Variability: HRV Index (A low HRV is associated with an increased risk of cardiovascular disease - $p < 0.001$, 21.8%) and RRNN (RR normal-to-normal intervals; a marker of overall HRV activity - $p < 0.001$, 6.8%); (2) increased Parasympathetic activity markers: RMSSD (Root Mean Square of the Successive RR interval Differences - $p < 0.0001$, 32.2%), NN50 (The number of pairs of successive NN (R-R) intervals that differ by more than 50 ms - $p < 0.0001$, 50.6%), pNN50% (The proportion of NN50 divided by the total number of NN (R-R) intervals - $p < 0.001$, 51.6%), HFnu (High Frequency Band: index of modulation of the parasympathetic branch of the autonomic nervous system - $p < 0.0336$, 37.1%), and LFnu: (Low Frequency Band: general indicator of aggregate modulation of both the sympathetic and parasympathetic branches of the Autonomic Nervous System - $p < 0.0048$, 45.1%); and (3) decreased Stress Index ($p < 0.001$, 38.4%) and Heart Rate ($p < 0.0001$, 6.2%).

METHODOLOGY

Sample size consisted of 100 adult volunteers (50 males and 50 females) with no hearing disabilities. ABE was delivered with a BrainTap headset (New Bern - NC - USA - Figure 1 - Panel B) in a 20-minute session. Session consists of Binaural beats at 18 to 0.5 HZ, Isochronic Tones at 18 to 0.5 HZ and visual Entrainment through light-emitting diode lights at 470 nanometers (nm) flickering at 18 to 0.5 HZ. Heart rate Variability (Dinamika HRV - Advanced Heart Rate Variability Test System, Moscow, Russia - Panel A) was assessed at baseline and after ABE session.

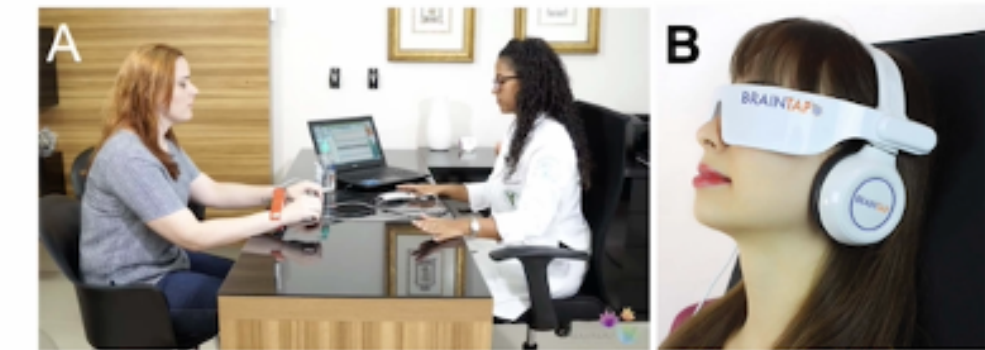


Figure 1 - A) HRV assessment. B) Audio-Visual Brain Entrainment with BrainTap headset.

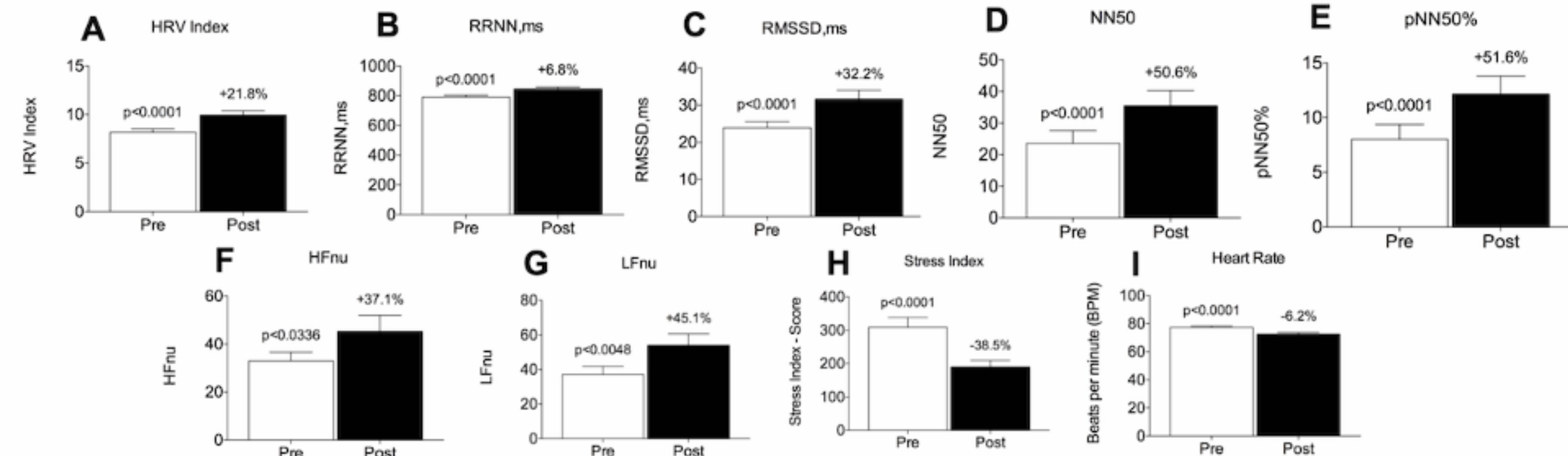
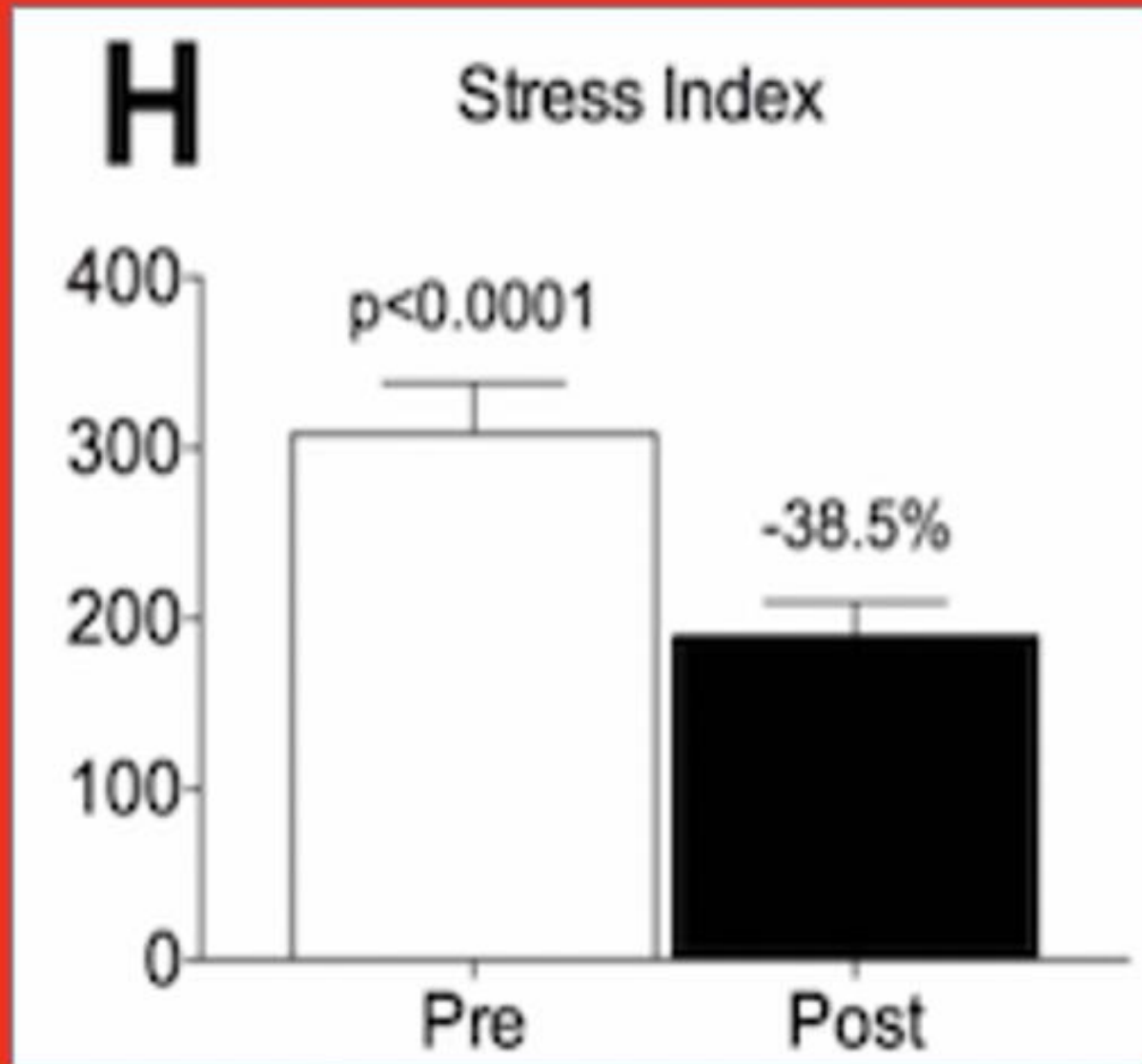


Figure 2 - Audio-Visual Brain Entrainment on Heart Rate Variability. A = HRV Index, B = RRNN, C = RMSSD; D = NN50; E = NN50%; F = HFnu; G = LFnu; H = Stress Index; I = Heart Rate. Data were expressed as mean \pm standard deviation (SD) n = 100 per group. Student's T-test was used.

ACKNOWLEDGMENT



CONCLUSIONS

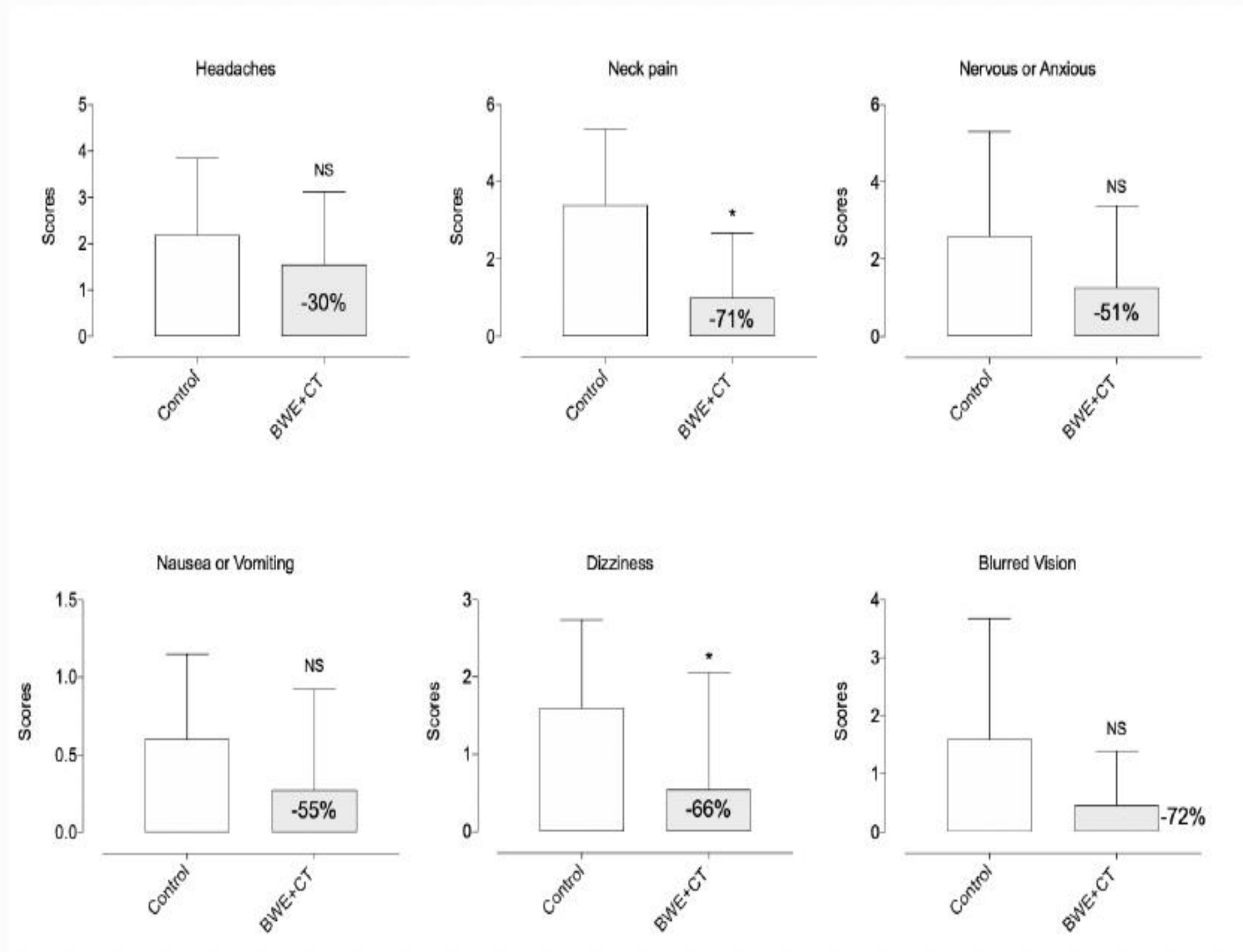
A single Audio-Visual Brain Entrainment session with the BrainTap Headset significantly increased heart rate variability and parasympathetic activity, as well as decreased stress index and heart rate.

Study #11. Study conducted by Dr. Arkfeld at the Gaylord High School in Gaylord, MI, United States. 2020-2021.

Concussion Treatment Protocol Utilizing Brainwave Entrainment with the BrainTap headset & Compression Therapy with the NormaTec Pulse 2.0.


Conclusion

The combination of Brainwave Entrainment (BWE) with the BrainTap headset and compression therapy (CT) with NormaTec Pulse 2.0 Legs device effectively reduced the **long-lasting or lingering symptoms of sports-related concussion.**



Peak Performance Research with

One 20 Minute Session a Day



6:29 Search LTE

Peak Performance Mindset Series

Series · 18 sessions, 6h 22m 24s

Julia Arndt is the founder of the Peak Performance Method Program, a unique model combining mindfulness, productivity and leadership tools to help you sustain your performance over time and avoid burnout. Join the accompanying program: www.peakperformancemethod.com

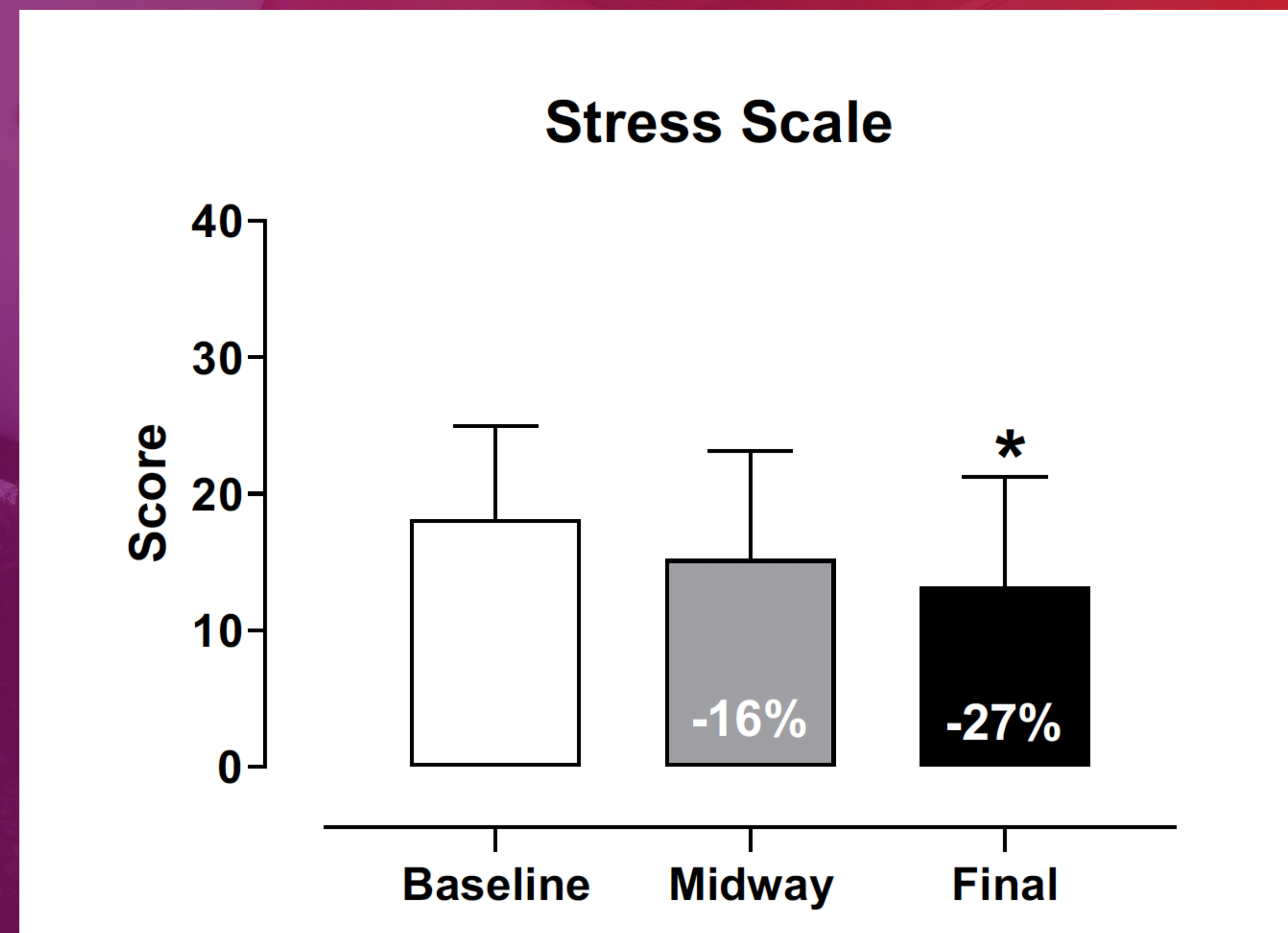
SV - Your Brain and Body's Response to Change
Session · 21m 55s

- Stress levels decreased by up to 45%
- Depression reduced by up to 71%
- Sleep quality improved by up to 48%
- 26% increase in performance
- **41% more positive mindset**

Effect of Brainwave Entrainment on Emotional and Physical Measures Pilot Study with College Students, Faculty, and Staff in Health Care Programs @ **Seminole College, Florida**



- ✓ **Stress down 27%**
- ✓ **Anxiety down 51%**
- ✓ **Tension down 41%**
- ✓ **Depression down 51%**
- ✓ **Anger down 51%**
- ✓ **Vigor up 24%**
- ✓ **Fatigue down 47%**
- ✓ **Confusion down 47%**
- ✓ **Mood Disturbance down 71%**
- ✓ **Sleep improved 58%**
- ✓ **Sleep duration up 30%**



PROJECTS WITH UNISUL



DR. DANIEL MARTINS

PT

PHD IN NEUROSCIENCE

HEAD OF THE LAB OF EXPERIMENTAL
NEUROSCIENCE - UNISUL - BRAZIL

PUBLISHED RESEARCHER IN THE AREAS OF
PHYSICAL THERAPY AND INTEGRATIVE MEDICINE



64+ A1 PUBLICATIONS



UNIVERSITY OF SOUTHERN SANTA CATARINA - BRAZIL

ANVISA NEWS!

6- Grant with the Brazilian Ministry of Science and Education. THE EFFECTS OF AUDIOVISUAL NEUROSTIMULATION ON PAIN, QUALITY OF LIFE, BRAIN ACTIVITY AND INFLAMMATORY BIOCHEMICAL MARKERS IN WOMEN WITH FIBROMYALGIA: A RANDOMIZED CLINICAL TRIAL

- The study was conducted with 120 participants.
- Outcomes: brainwave patterns (EEG), pain, Fibromyalgia-related questionnaire, QOL, cytokines and Neurotrophic factors (NTFs), which are a family of biomolecules – nearly all of which are peptides or small proteins – that support the growth, survival, and differentiation of both developing and mature neurons.

TIMELINE:

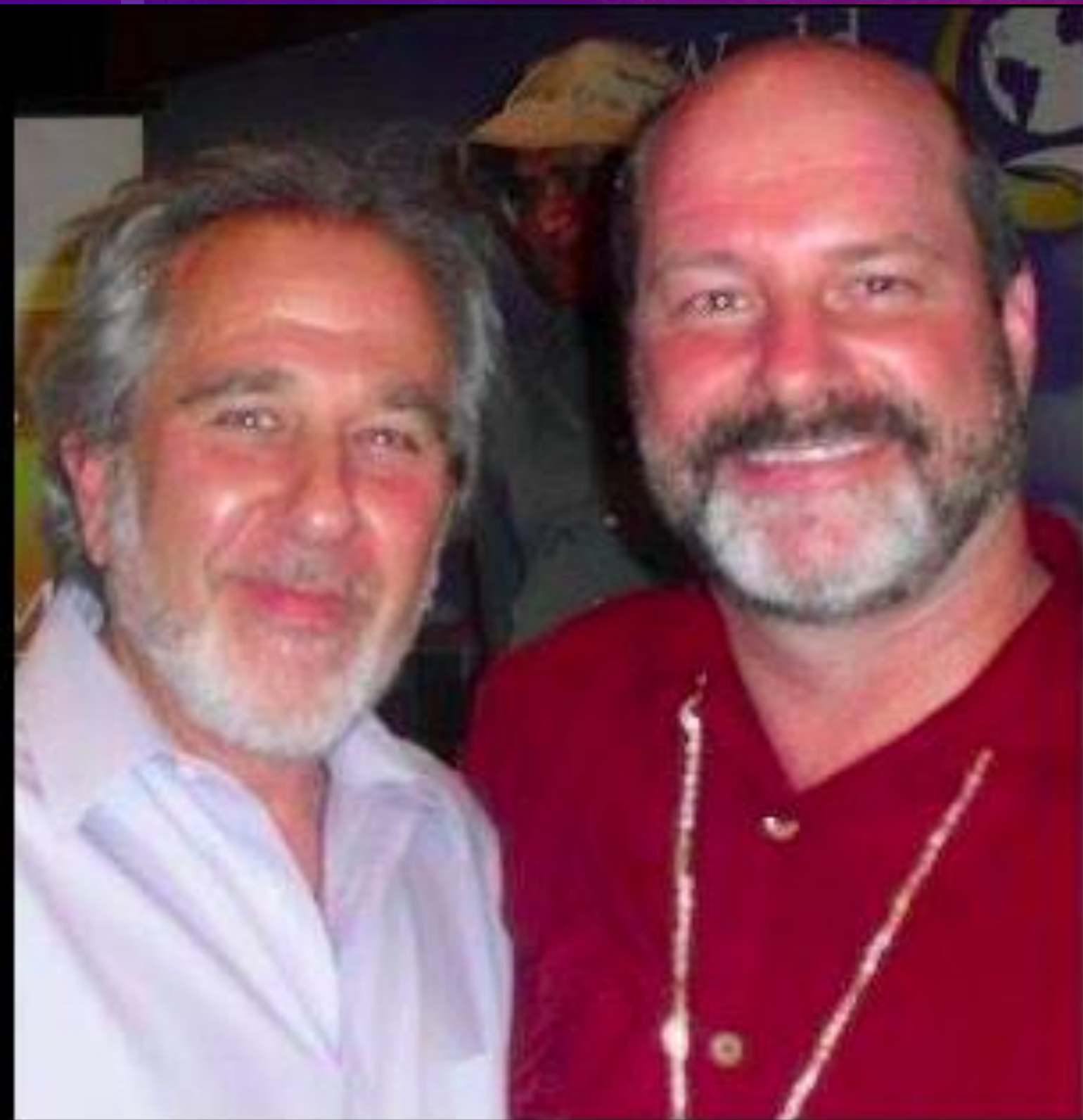
- Project design - concluded - 2019.
- Project approved by University IRB - 2020.
- Study to start JAN 2020 - got delayed due to COVID.
- **Expected to start - JAN 2021.**
- First reports expected - DEC 2021.

Scientific Production:

- PhD Thesis and 2 A1 scientific publications.



Epigenetics & Positive Mind Messages



Un-resourceful State (Lower Frequency)

Stress, fear, frustration, anxiety, anger

No access to resources

Reactionary state

Resourceful State (Higher Frequency)

Calm, focused, happy

Full access to resources

Good decision-making state

Light & Sound Technology

- Channels precise frequencies of light and sound into the brain
- The optic nerve picks up the light pulses, even with your eyes closed, while the pulsating audio frequencies synchronize the hemispheres of the brain
- Your body synchronizes with this pattern, creating the relaxation response



Guided Imagery Techniques: Learn how guided imagery can enhance the body's natural neural repair processes.

Visualizing Neural Repair

- ▶ **Neuroplasticity Enhancement:** Understand how visualization promotes neuroplasticity and supports neural reconnection.
- ▶ **Patient Engagement:** Discover methods to engage patients in active visualization to improve recovery outcomes.
- ▶ **Clinical Applications:** Explore the practical applications of guided imagery in clinical settings for concussion recovery.
- ▶ **Session Integration:** Integrate visualizing neural repair sessions into a comprehensive concussion recovery [plan](#).

Brainwave Sleep Study

The goal of this study was to assess the efficacy of open-loop audio-visual entrainment to improve chronic insomnia in adult dayworkers with normal sleep duration.

- ▶ Australian Coal Miners - 10 hours in bed but only 1-2 mins of level 4 deep sleep. (We need an hour)
- ▶ The group using the BrainTap Headset returned to 70% improvement in just 3 weeks.
- ▶ The group using just the APP reached 70% in 6 weeks.

Mastering Mental Energy Management

Energy Visualization Techniques: BrainTap Provides sessions to help your Patient/Client manage their energy.

- ▶ 2 PM Fatigue Management: Understand how mental strategies can effectively manage fatigue and enhance daily vitality.
- ▶ Patient Empowerment: Empower patients with tools to take control of their energy levels and improve their overall well-being.
- ▶ Visualization Integration: Integrate energy management visualization into routine therapeutic practices.
- ▶ Outcome Tracking: Monitor the impact of mental energy management techniques on patient vitality and recovery progress.

Restoring Inner Peace through Balance & Breathing

Stress Reduction Techniques: Learn effective breathing techniques and mindfulness practices to reduce stress and anxiety.

- ▶ **Emotional Stability:** Understand the role of balance and breathing exercises in restoring emotional stability.
- ▶ **Patient Guidance:** Morning Alkalizing Breath sessions to help patients achieve inner peace and reduce stress-related symptoms.
- ▶ **Holistic Integration:** Box Breathing for stress reduction techniques into a comprehensive treatment plan for concussion recovery.
- ▶ **Long-Term Benefits:** 4-8 Breath for deep sleep for long-term benefits of maintaining emotional stability through balance and breathing practices.

Sharpening Memory with Guided Visualization

Cognitive Exercises: Learn targeted cognitive exercises to enhance memory retention and mental clarity.

- ▶ **Visualization for Memory:** Understand the power of visualization in improving memory and recall abilities.
- ▶ **Patient Engagement:** Engage patients in guided visualization practices to support cognitive enhancement.
- ▶ **Session Customization:** BrainTap memory enhancement sessions to address individual patient needs and goals.
- ▶ **Cognitive Monitoring:** Track improvements in memory function and overall cognitive clarity as a result of guided visualization.

Sustaining Positive Emotions

Emotional Anchoring: Learn advanced NLP techniques to help patients anchor positive emotional

states.

- ▶ Emotional Stability: Understand the importance of sustaining positive emotions for overall mental health and recovery.
- ▶ Guided Imagery: Use BrainTap's guided imagery to reinforce positive emotional states and improve mood stability.
- ▶ Patient Tools: Equip patients with tools to maintain emotional resilience and reduce mood fluctuations.
- ▶ Therapeutic Integration: Integrate emotional stability techniques into a holistic concussion recovery plan. Every Patient gets the FREE 14 day trial.

Enhancing Cognitive Control

Focus and Concentration: Learn techniques to improve attention span and reduce distractibility in patients..

- ▶ **Cognitive Control:** Understand how structured mental exercises can enhance cognitive control and performance.
- ▶ **Patient Exercises:** Provide patients with exercises to boost focus and cognitive precision.
- ▶ **Session Customization:** Tailor the 2000+ BrainTap sessions to meet the unique needs of each patient.
- ▶ **Performance Monitoring:** Monitor improvements in cognitive control and concentration as a result of targeted sessions.

Managing Sensory Overload

Controlled Exposure Techniques: Learn techniques for controlled exposure to gradually desensitize patients to sensory overload.

- ▶ **Sensory Management:** Understand effective strategies to manage and reduce sensory overload symptoms.
- ▶ **Calming Environment:** Create a calming environment for patients to practice sensory management techniques.
- ▶ **Patient Guidance:** Guide patients through controlled exposure sessions to enhance their ability to handle sensory stimuli.
- ▶ **Outcome Assessment:** Assess the effectiveness of sensory overload management techniques on patient comfort and recovery.

Relieving Headache Pain

Relaxation Techniques: Learn effective relaxation techniques and guided imagery to relieve headache pain.

- ▶ **Pain Management:** Understand holistic approaches to managing and alleviating headache symptoms.
- ▶ **Patient Tools:** Provide patients with tools and techniques for immediate headache relief and long-term management.
- ▶ **Integrative Approach:** Integrate headache management strategies into a comprehensive concussion recovery plan.
- ▶ **Monitoring Relief:** Monitor the impact of relaxation techniques on reducing headache frequency and intensity.

Overview of the BrainTap 10 Week Protocol

The protocol is to be used as the last therapy before the Patent leaves the office.

- ▶ Each time a Patent comes in they get a different entrainment in the series.
- ▶ The Patent is given access to the 14 Day Trial and strongly suggested they continue the home care program.
- ▶ The Patent starts the day with one of the AM Sessions for stimulating the SMR (Sensory Motor Rhythm) brainwaves.
- ▶ The Patent ends the day with one of the Delta series to quickly reach level 4 sleep for detoxing the brain.

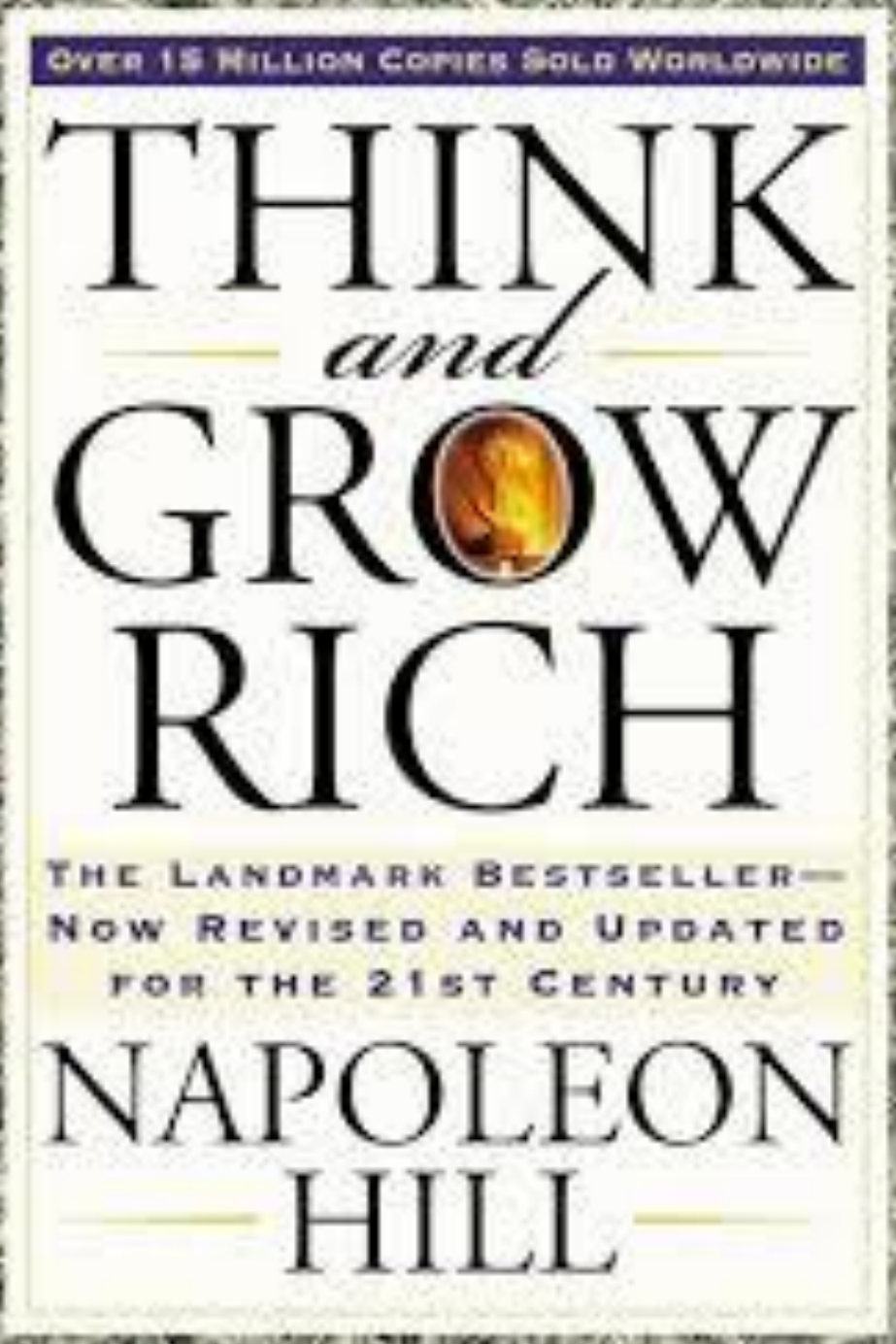


Your #1 Asset

MINDSET

Stress Prevents Wealth Thinking





BUILD WEALTH

Like a **SHARK**

Insights From 31 of North America's Leading Authorities

Featuring **Kevin Harrington**

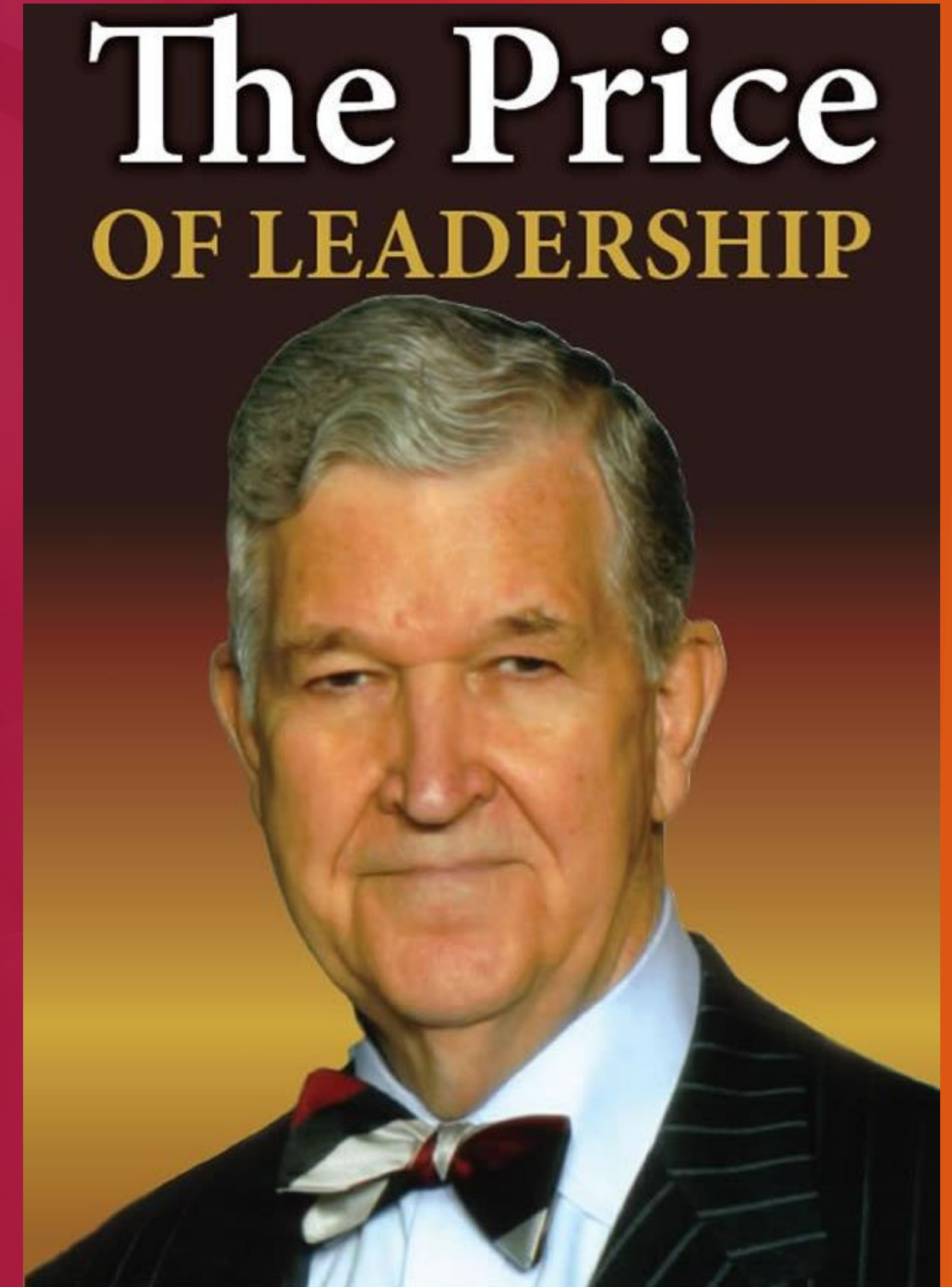


Available on iOS and Android



Your Network is Your Net Worth

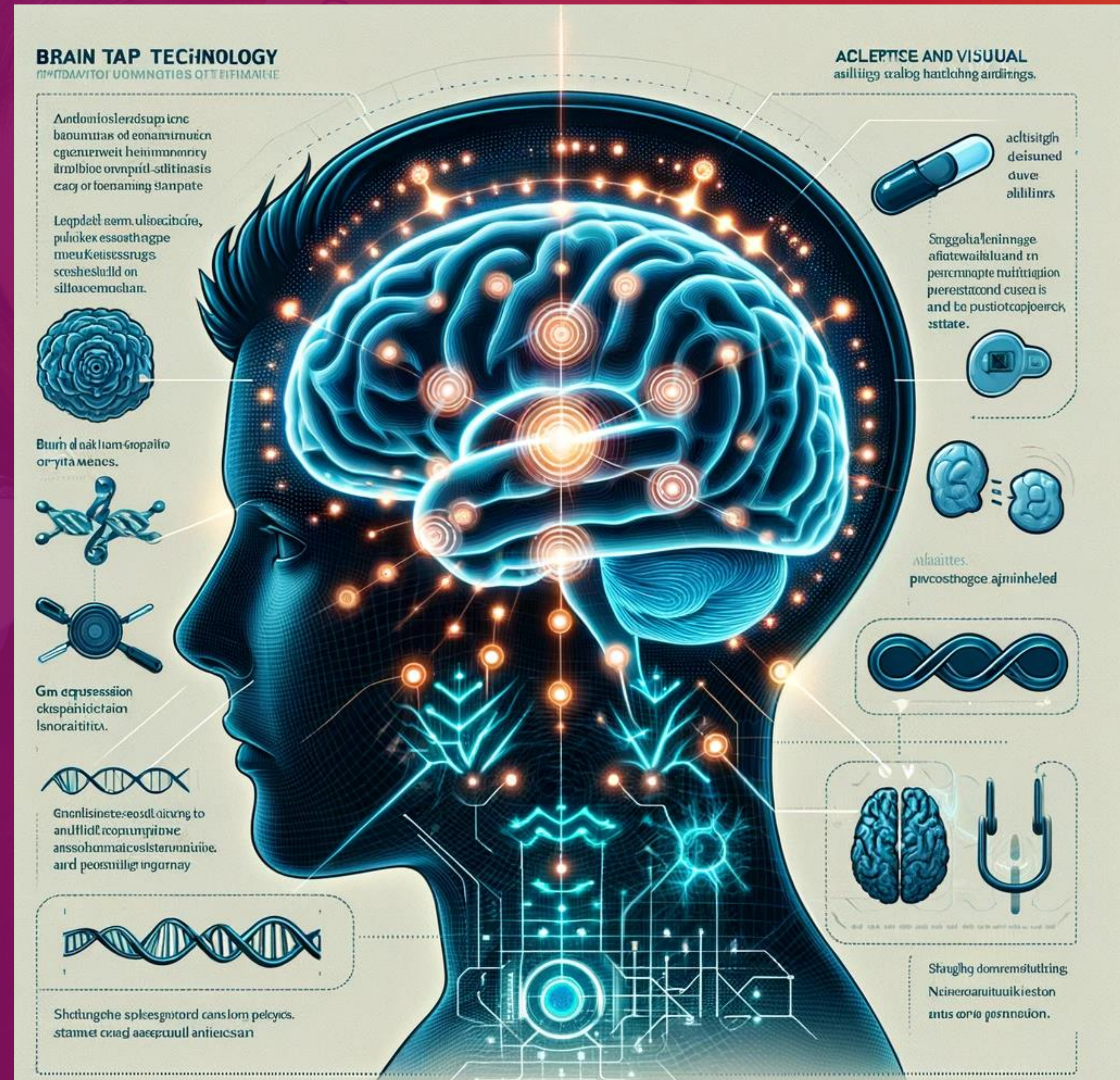
- You are the sum total the Last five books you have read
- Your 5 closest fiends
- And the thoughts you think!



Charlie "Tremendous" Jones

Your Revenue Generating Machine

- Gamma
- Beta
- Alpha
- Theta
- Delta



Brain Fitness Routine – Average Session 20 Min

Morning

Digital Coffee.

Break through the brain fog and get energized.

SMR/Alpha

Daytime

Reset your energy and focus.

Rejuvenate with a BrainTap power nap.

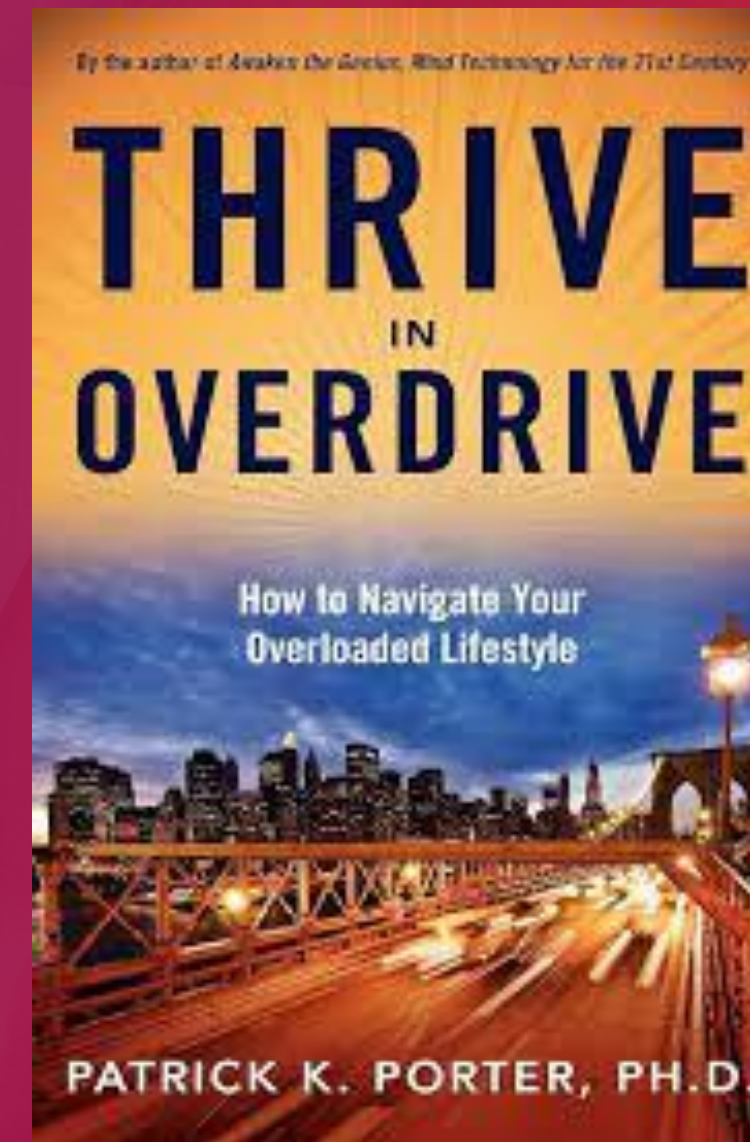
Theta/Gamma

Night

Calm the mind and prepare for deep sleep. Guide the brain into deep relaxation.

Delta





Come by for a scan and
we will send you
a digital copy of
Thrive in Overdrive.

www.BrainTap.com

@braintaptech

@DrPatrickPorter