

# Dr. M Shane watt neurobolic health center



# What Box



# If treatment were

- Painless
- Drugless
- Non-Invasive
- And Has No Side Effects
- It Works

# *Why are we in a Box*

*Standard Medical Care*

*Psychiatry*

*Pharmaceuticals*

*Psychology*

*Rest*

*Neurologist*

*Neurofeedback*

*Functional Neurology*

*Metabolic Changes*

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[utahneurofeedback.com](http://utahneurofeedback.com)

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- Neurofeedback an  
Alternative Approach for  
the Helping of Brain  
Trauma

- ✿ Chiropractic Physician 20 yrs
- ✿ Last 6 years Doing More Functional Health
- ✿ Thyroid - Depression and Anxiety

# Neurofeedback helps

- \* Anxiety
- \* Depression
- \* Epilepsy
- \* ADD- ADHD
- \* Insomnia
- \* Memory
- \* Headaches

*& Much More*

neurofeedback helps

✿ **BRAIN TRAUMA**

# WHAT IS THIS

- ❖ SCIENCE BASED WITH OVER 40 YEARS OF CLINICAL RESEARCH
- ❖ TRAINING METHOD BASED ON OPERANT CONDITIONING - REWARDED FOR BEHAVIOR
- ❖ THROUGH OPERANT CONDITIONING AN ASSOCIATION IS MADE BETWEEN A BEHAVIOR AND A CONSEQUENCE
- ❖ THE REWARD IS VISUAL OR AUDITORY

# Neuronal pathways

*Developing new pathways*

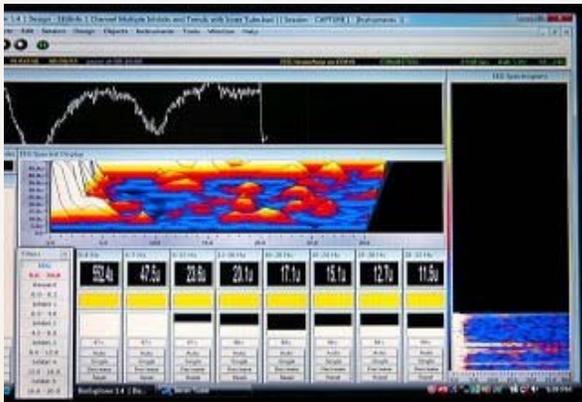


*Neuroplasticity*

# qeeg evaluation

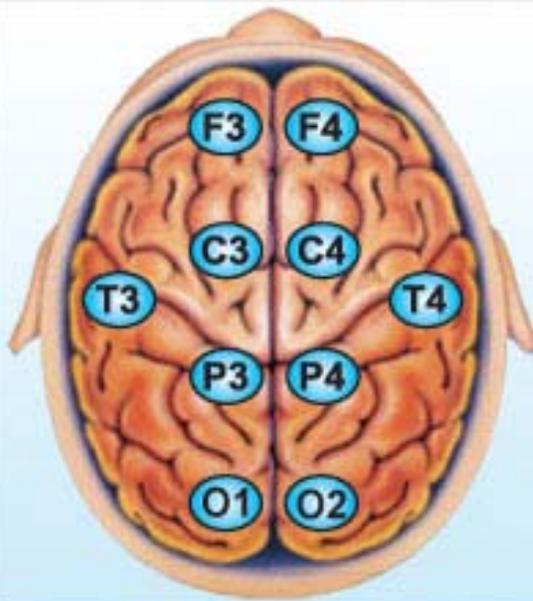


- The QEEG evaluation begins by placing surface sensors at specific sites on the scalp



- These sensors detect brain waves and display them on the computer screen

# The Brain Map



**Frontal Lobes**  
Working Memory, Facial Recognition, Problem Solving, Short Term Memory, Vigilance Area

**Central Lobes**  
Sensory and Motor Functions

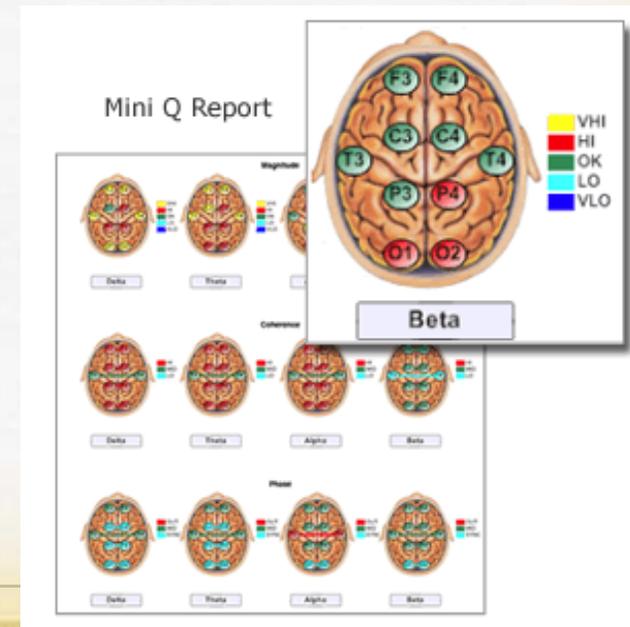
**Temporal Lobes**  
Language Comprehension, Long Term Memory, Personality, Organization

**Parietal Lobes**  
Short Term Memory Problems, Visual processing, Personality

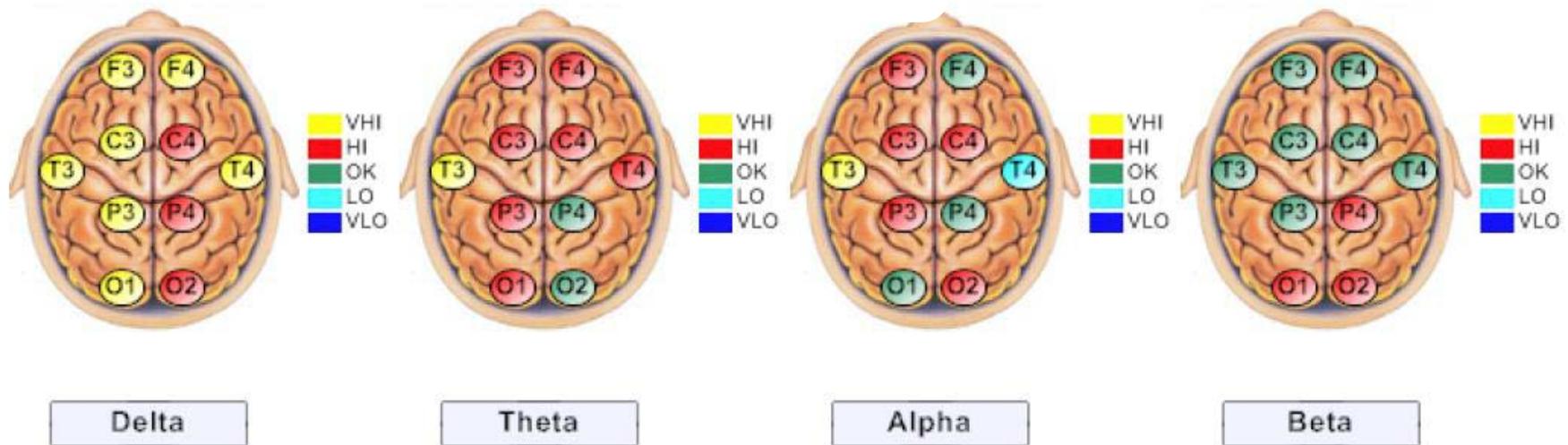
**Occipital Lobes**  
Visual Processing, Procedural Memory, Dreaming

# window to the brain

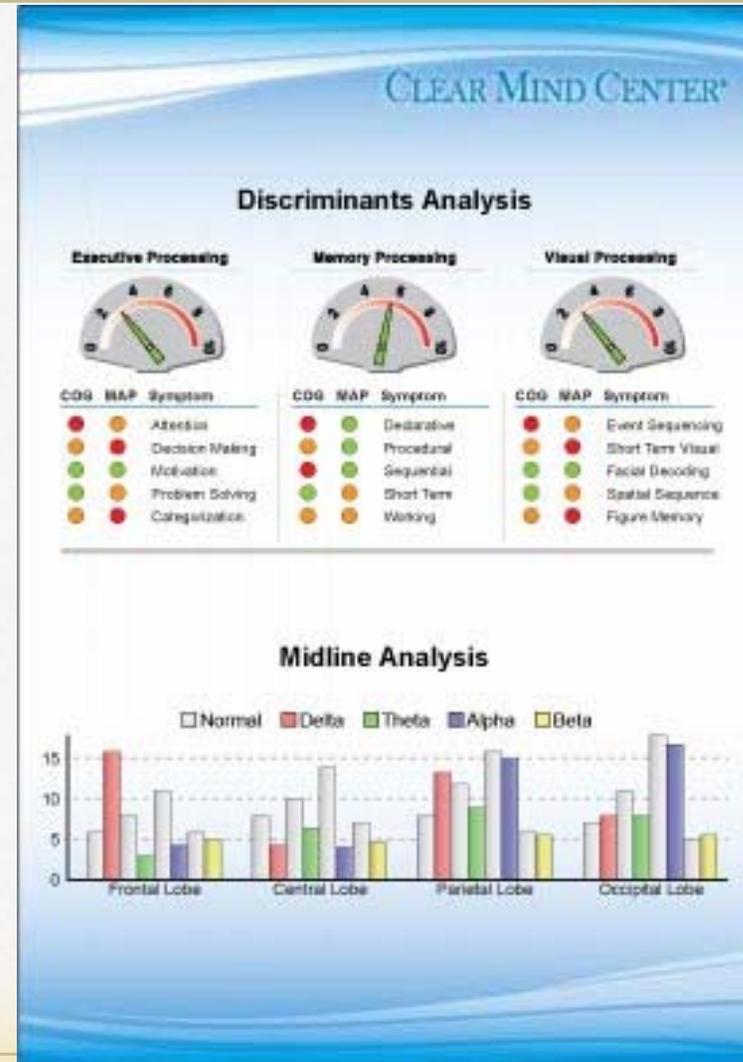
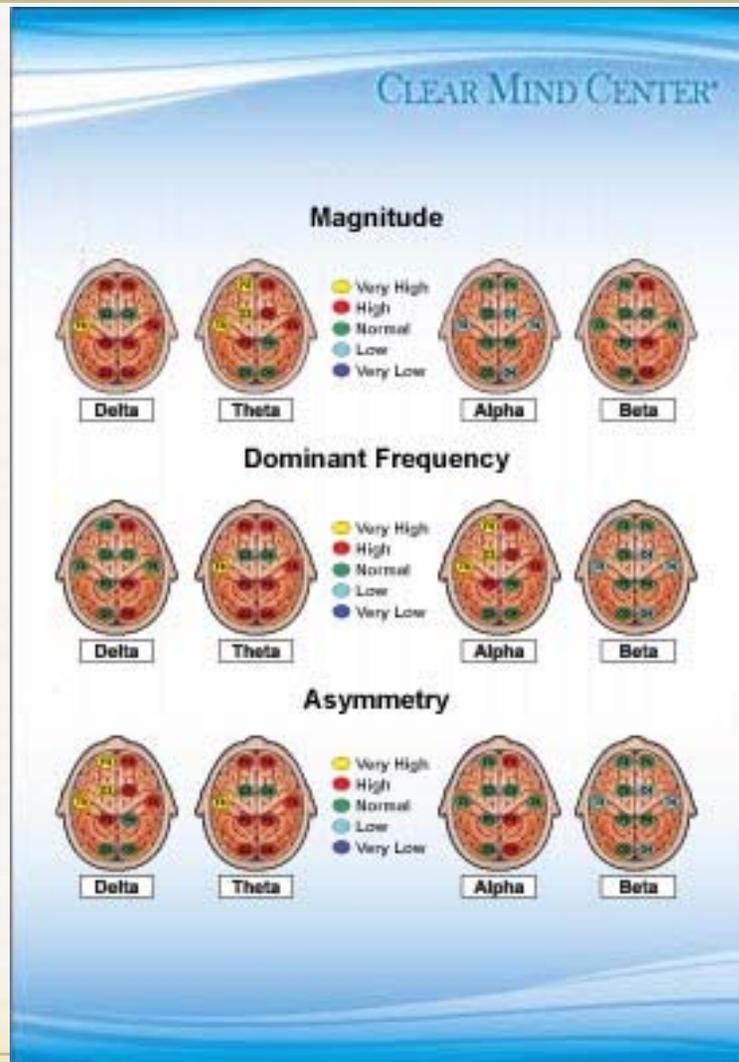
- During the course of the next 12-1 minutes readings, 6 with eyes open and 6 with eyes closed the software monitors the brainwaves, looking for Neuronal Dysregulation
- A report is generated demonstrating imbalances associated with the patient's given symptomatology



# map example



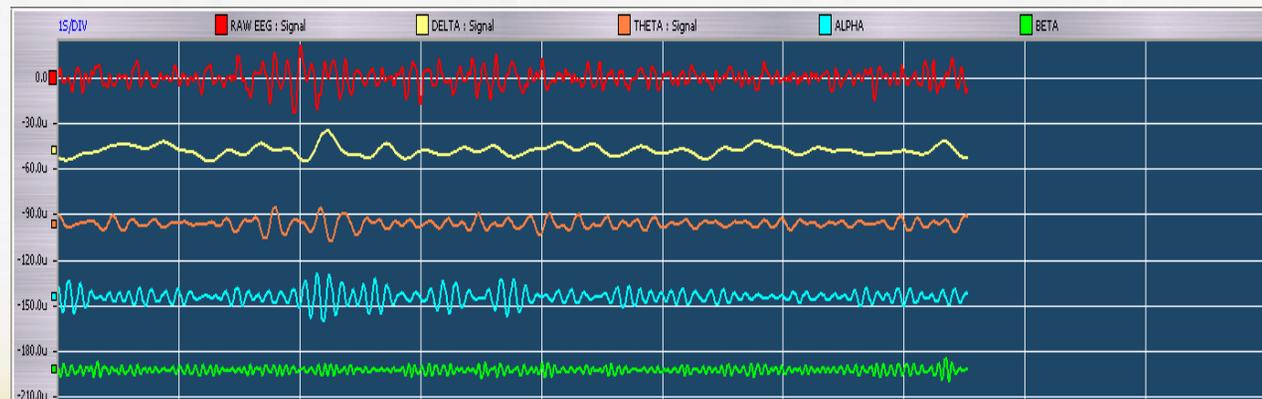
# Map Results



# the waves

- The ability of the brain to regulate itself
- Mental states are associated with specific brainwaves
- Brainwaves tell us how different areas of the brain communicate
- These brainwaves include:

- Delta
- Theta
- Alpha
- Beta



# delta brain wave

- Produced during deep sleep
- Associated with the release of Human Growth Hormone



# theta brain waves

- This is the predominant brainwave that your brain produces when you are just about to fall asleep
- It is associated with creativity and memory retrieval
- This is why you seem to get your best ideas just as you are falling asleep. It is also why you typically remember things when you are just about to fall asleep.

# alpha brain wave

- Associated with meditation and a sense of inner calm or peacefulness
- They are produced when the brain is in an idle state
- This mental state is sometimes described as a quiet alertness

# beta brain wave

- The brain produces brain waves when we are:
  - Awake
  - Alert
  - Externally focused
  - Logical
  - Problem solving
  - Attentive

# Neurological dysregulation

- ✱ Caused by Poor Nutrition, Emotional and or Physical Trauma, Stress, Drugs, and Toxins.
- ✱ Dysregulated brainwave patters may result in many different conditions and symptoms. Each condition has an associated pattern of Neurological Dysregulation that can be helped by NF

# the plan

- Based on the patient history and the QEEG Evaluation results, a customized training program is designed for the patient
- The training program is different for each individual case but typically it involves either training the patient to produce more of a certain brainwave or less of a certain brainwave

# doing neurofeedback



# Training



- During the training session the patient is connected to the EEG using the surface sensors and the patient's brainwaves are displayed on the computer these sensors are for output only NO INPUT
- On a separate monitor the patient is watching a movie that is being controlled by the patient's own brainwaves

# training the brain



**1**

Sensors are placed on the regions of your brain that were identified by the QEEG brain-mapping. Like a stethoscope is used to listen to your heart, these EEG sensors listen to the brainwaves produced at the specific location in your brain. This information is sent to the Neurofeedback system.

**2**

Based on protocols from your QEEG brain-map, our certified technician isolates the frequencies causing brain dysregulation. The Neurofeedback system helps your brain control the movements of a videogame.

**3**

As you watch the monitor, your brain is receiving visual and auditory feedback. You quickly learn how to regulate your brainwaves and make the video game move. With repetition, the brain dysregulation is trained away and the results become a new learned behavior that lasts.

# training the brain

- The movie will only play if the patient's brain is producing the desired brainwave
- During the course of 30 to 40 training sessions, the patient's brain learns how to produce the desired brainwave
- This new ability is associated with the alleviation of the associated symptoms
- The best part is that the changes experienced by the patient are permanent!
- It has been demonstrated that after 40 or more training sessions, the brain actually remodels itself – a process known as Neuroplasticity

# what about tbi



# the trauma

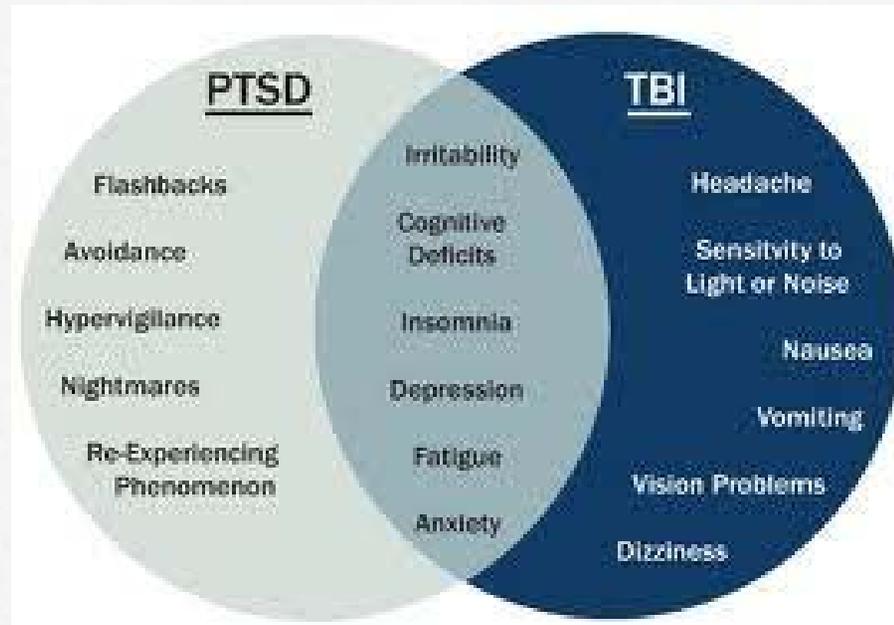
## Primary Impact

The primary injury can be described as the mechanical damage occurring at the time of trauma to the neurons, axons, glia and blood vessels through shearing, tearing and stretching .

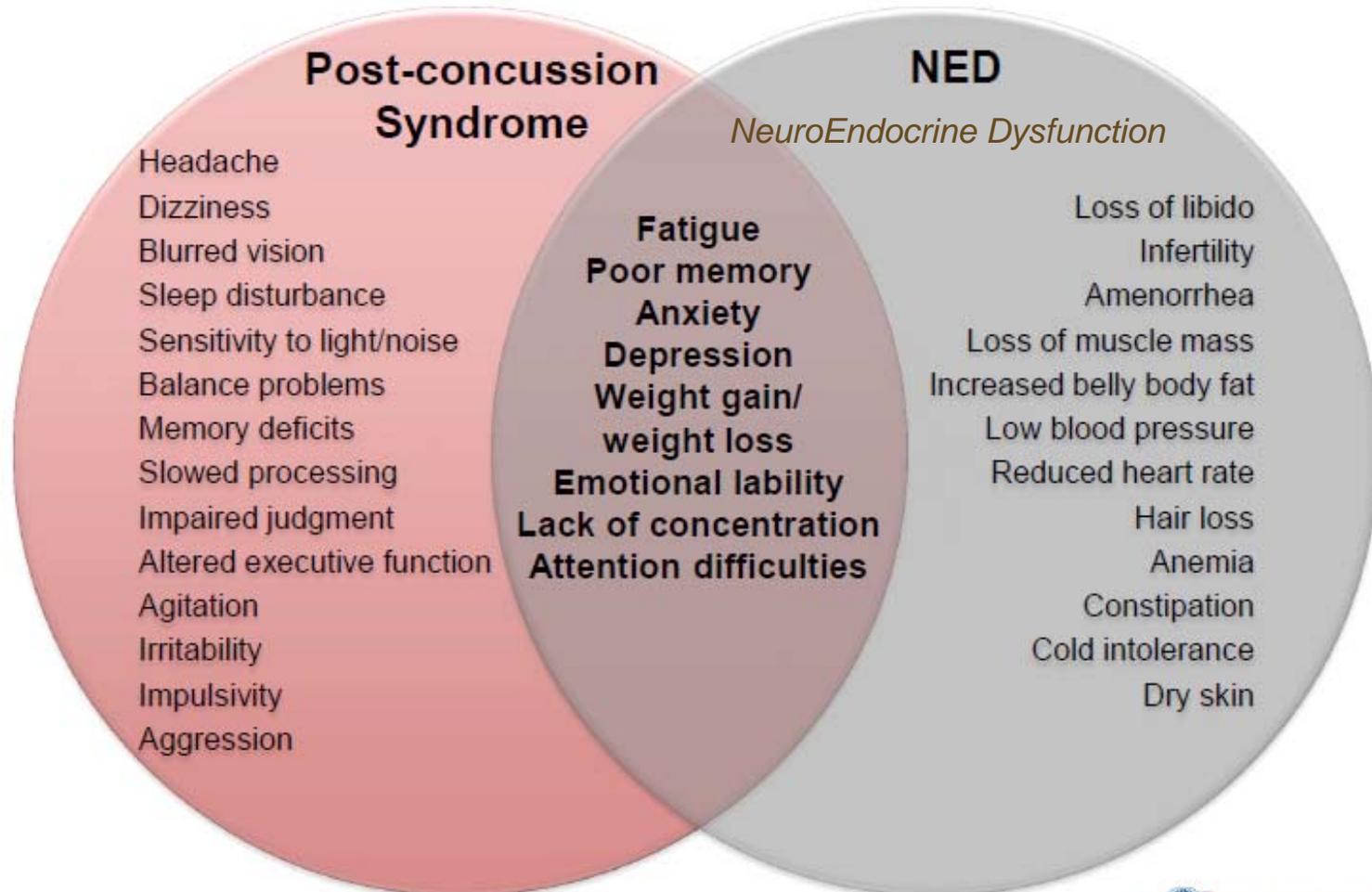
## Secondary Cascades

Such events pave the way for secondary pathophysiological cascades that include biochemical, metabolic and physiological changes such as spreading depression, ionic imbalance, release of excitatory neurotransmitters, mitochondrial dysfunction, and activation of inflammatory and immune processes, among others.

# more than a bump



# Much more



# studies

## Neurofeedback Training Induces Changes in White and Gray Matter

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G. Reyburn<sup>1</sup>, G. Gilbert<sup>2</sup>, J. Lévesque<sup>1</sup>, and M. Beauregard<sup>1,2,3</sup>

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### Abstract

The main objective of this structural magnetic resonance imaging (MRI) study was to investigate, using diffusion tensor imaging, whether a neurofeedback training (NFT) protocol designed to improve sustained attention might induce structural changes in white matter (WM) pathways, purportedly implicated in this cognitive ability. Another goal was to examine whether gray matter (GM) volume (GMV) might be altered following NFT in frontal and parietal cortical areas connected by these WM fiber pathways. Healthy university students were randomly assigned to an experimental group (EXP), a sham group, or a control group. Participants in the EXP group were trained to enhance the amplitude of their  $\beta 1$  waves at F4 and P4. Measures of attentional performance and MRI data were acquired one week before (Time 1) and one week after (Time 2) NFT. Higher scores on visual and auditory sustained attention were noted in the EXP group at Time 2 (relative to Time 1). As for structural MRI data, increased fractional anisotropy was measured in WM pathways implicated in sustained attention, and GMV increases were detected in cerebral structures involved in this type of attention. After 50 years of research in the field of neurofeedback, our study constitutes the first empirical demonstration that NFT can lead to microstructural changes in white and gray matter.

### Keywords

neurofeedback, structural magnetic resonance imaging, white matter, gray matter, sustained attention

Neurofeedback deals with the brain in a functional way it helps it to feel and function better, this is a powerful tool to help the symptoms of TBI

# how it can help

For many with TBI's the brain feels like it is stuck the great success of Neurofeedback is that it un sticks the brain and gets the function on a different level, this is how it is helping to alleviate many symptoms.

The military is now using Neurofeedback to help soldiers who have been suffering with TBI and PTSD. The NFL is now doing a study with Neurofeedback and their players who have been suffering

# supplementation for inflammation

- \* Omega 3 Fatty Acids
- \* Turmeric
- \* Resveratrol
- \* Cheyenne, Ginger, Cinnamon, Cloves,  
Rosemary

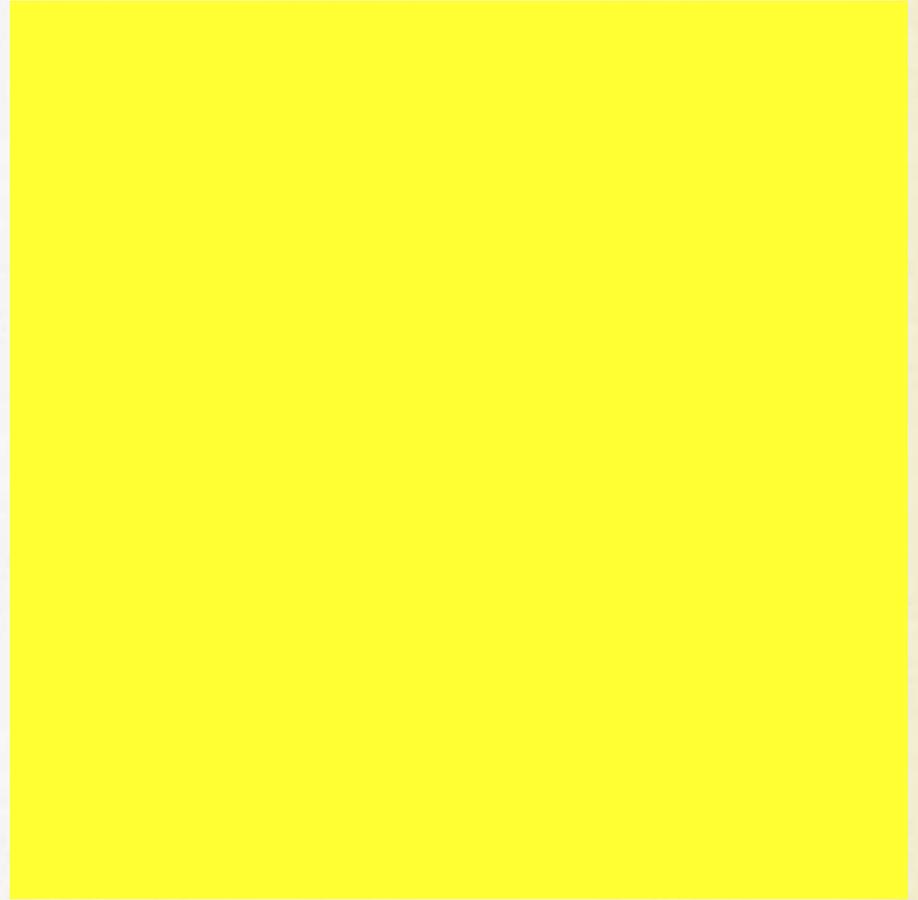
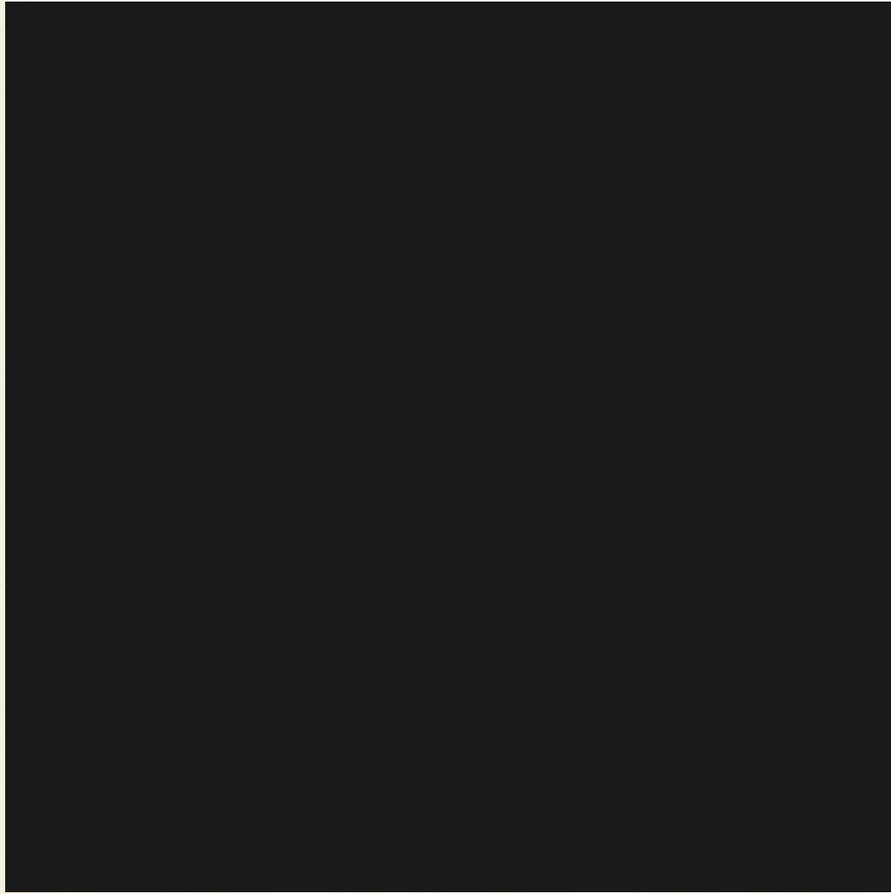
# Additional supplementation

- \* Nitric Oxide - Cellular Oxygenation
- \* Methylated Vit. B's - Nervous System Health
- \* Diatomaceous Earth - Detoxification
- \* Rooibos Tea - Inflammation, Circulation, Detox
- \* Good Fats - Coconut Oil, Avocado Oil
- \* Essential Oils

# Gut Functional changes

- \* HCL -
- \* Pre & Pro Biotics
- \* Dietary Changes Out - A) Sugars/ Fake B) Grains C) Processed Foods D) Refined Foods
- \* Dietary Changes In- A) Bone Broth
- \* Pure Water, 1/2 body weight in Oz.

change the box change  
the world





**OMG, I have finally  
Discovered what's  
wrong with my  
Brain:**

**on the left side,  
there is nothing  
right, and  
on the right side,  
there is nothing left...**



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