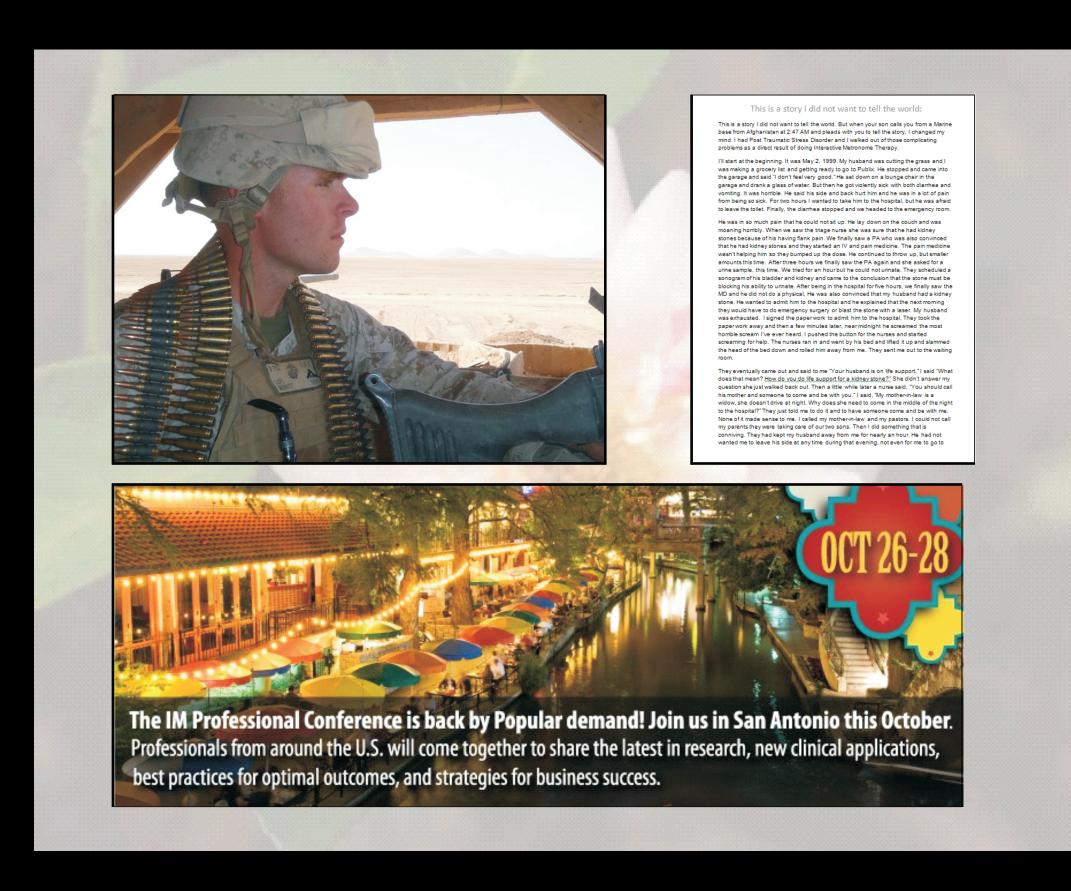
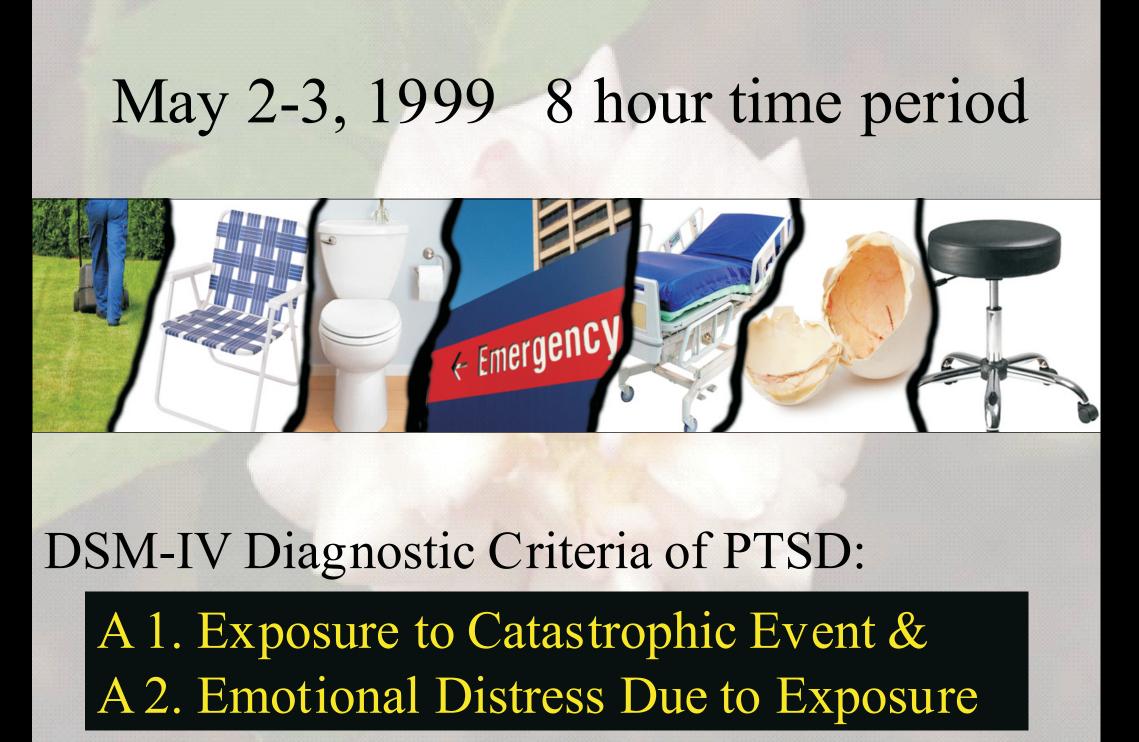
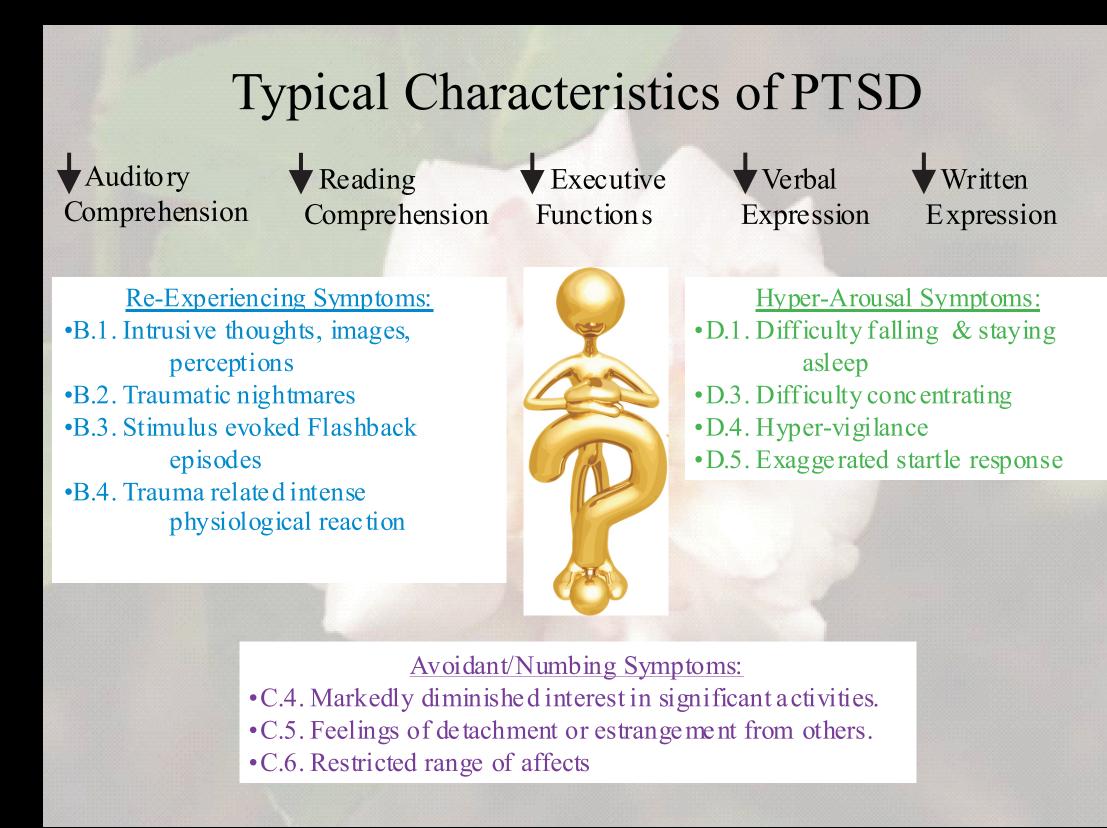
# "IM Resolved My PTSD"

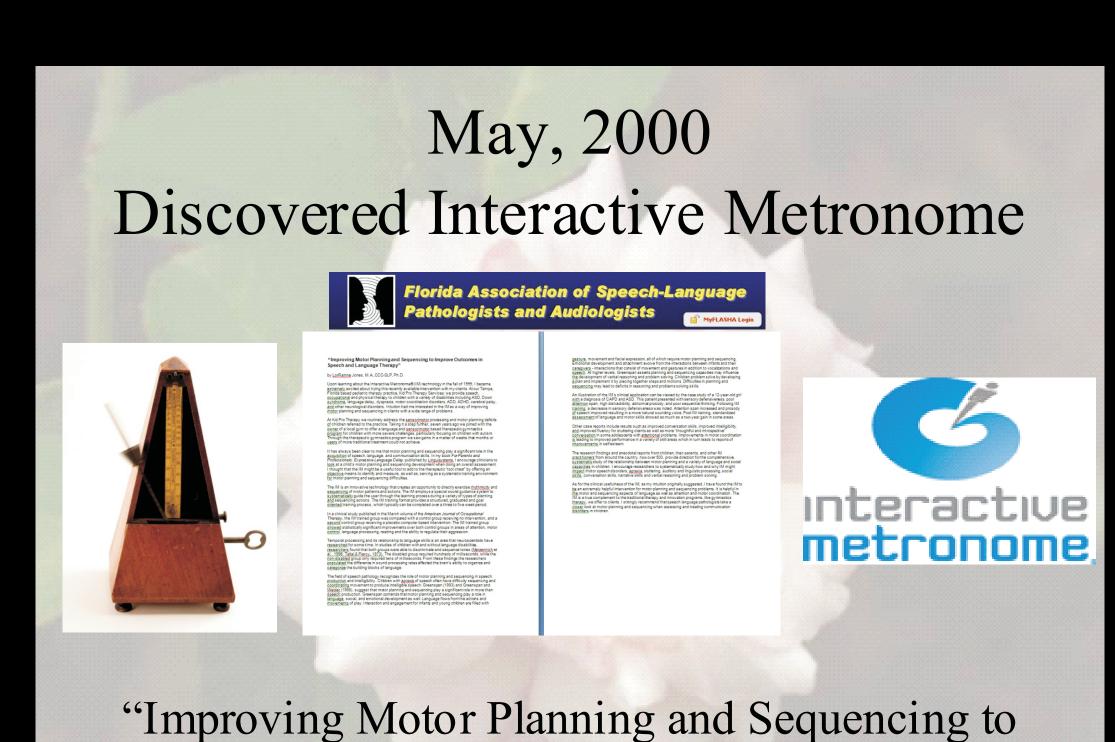


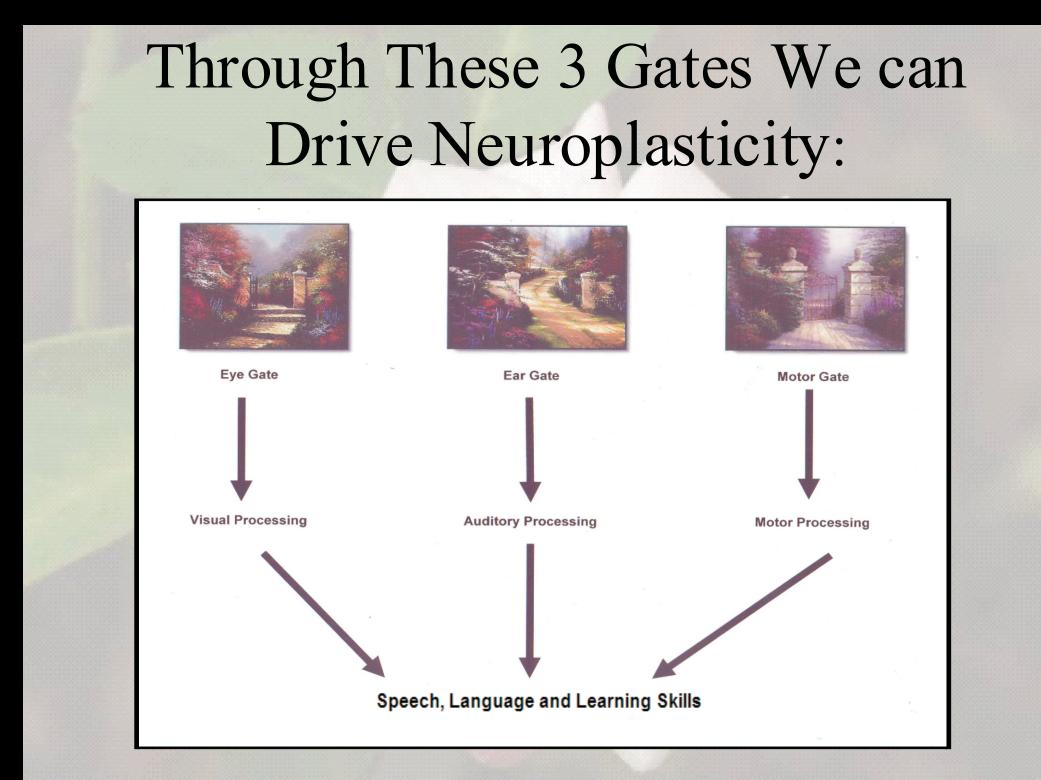


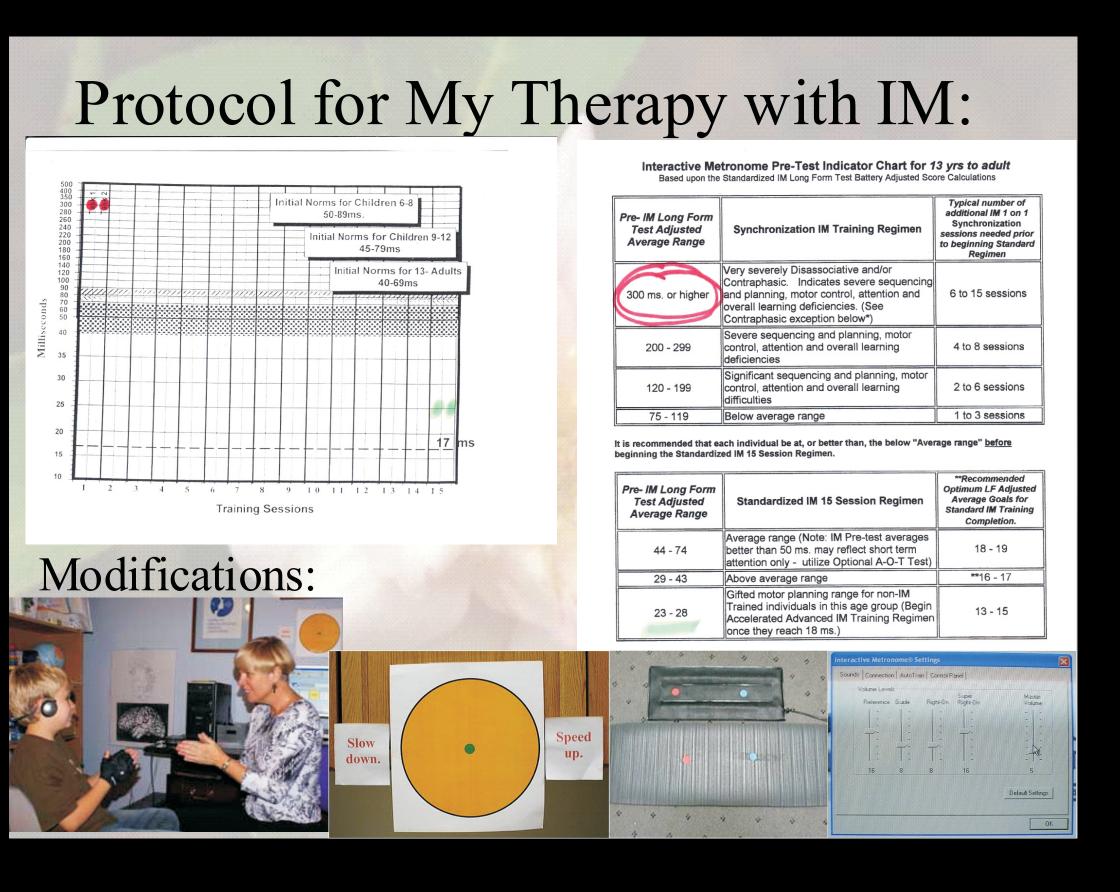


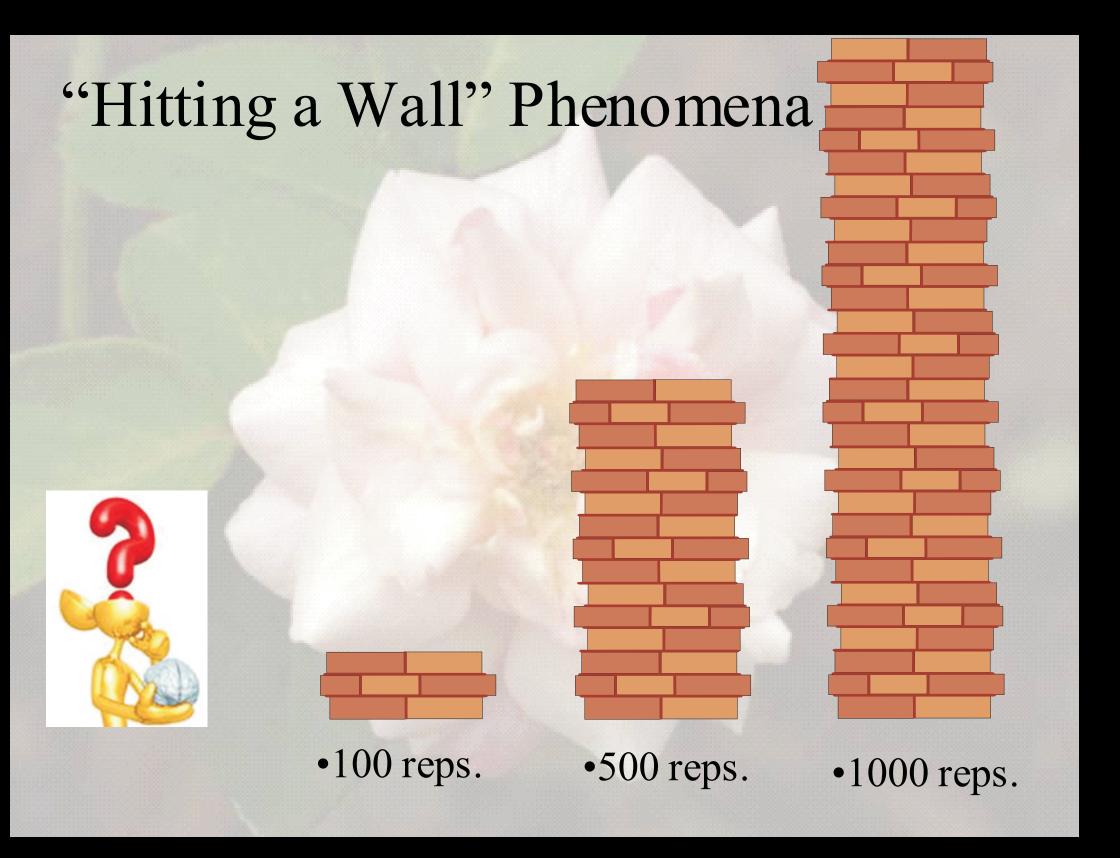


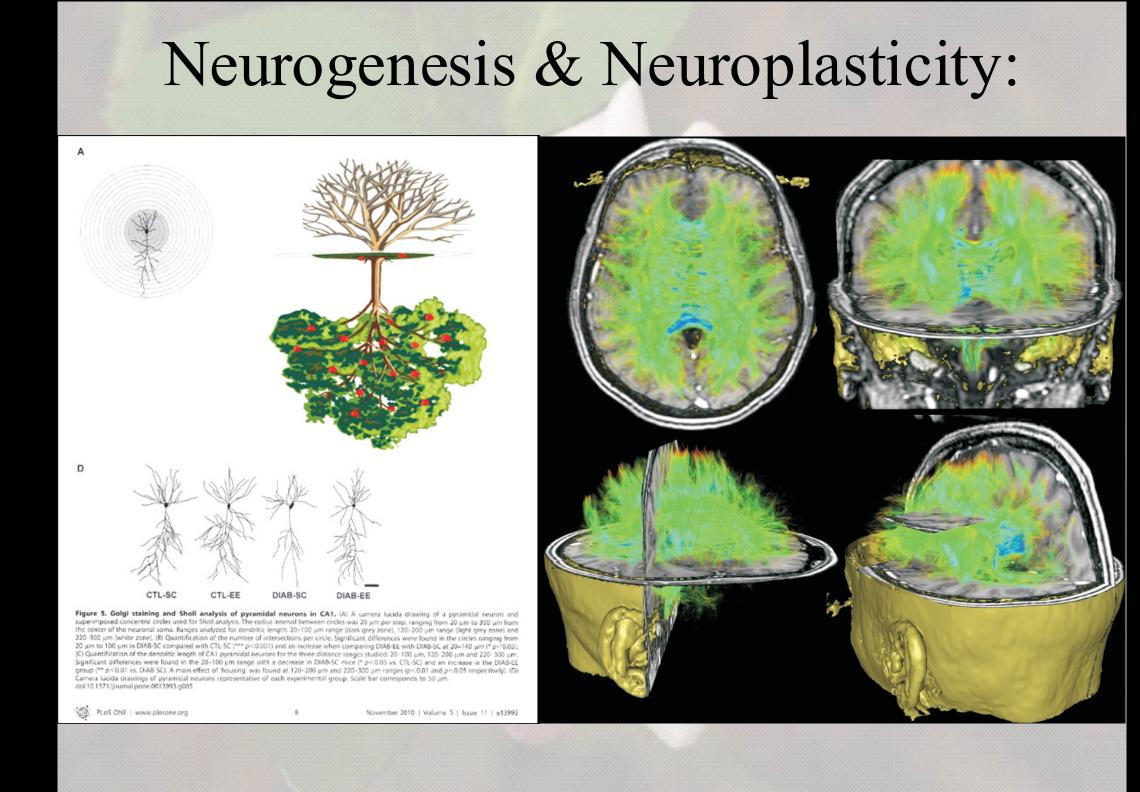


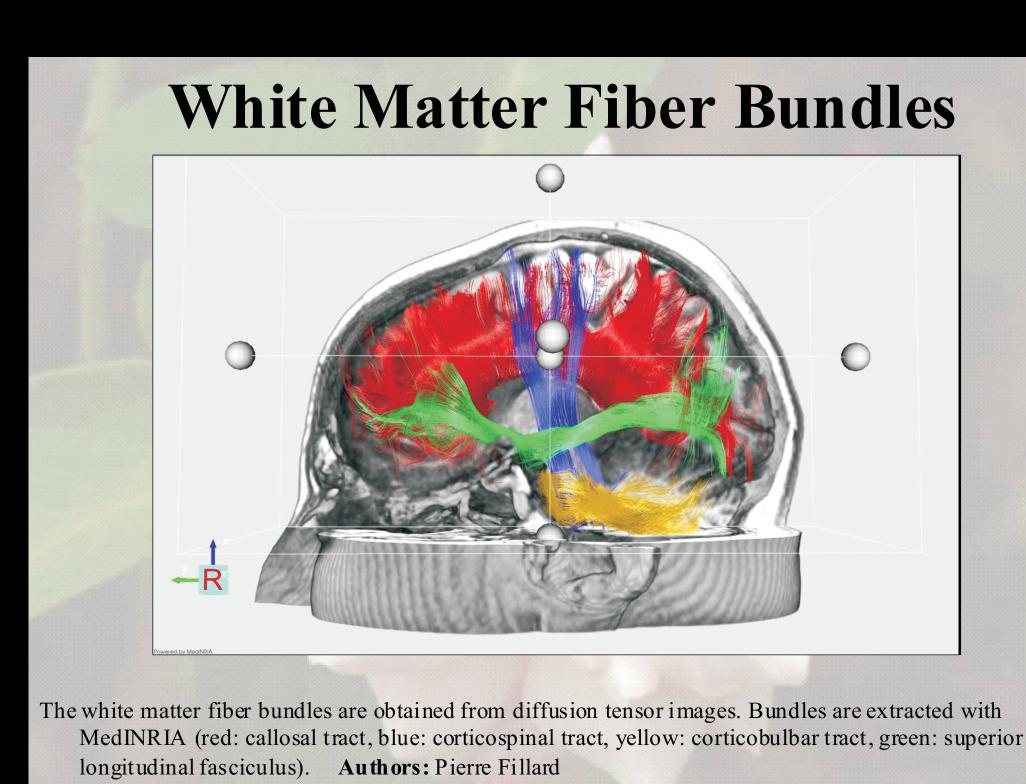












### What are the Psychobiological Abnormalities for PTSD?

Improve Outcomes in Speech and Language Therapy"

by Dr. LorRainne Jones

#### Alterations in Brain Structure

Advanced neuroimaging techniques show brain abnormalities among adults and children with PTSD. Specifically they have reductions in hippocampal volume. The hippocampus is important in information processing, learning, and memory.

Alterations in Highly Activated Adrenal System and Sensory Nervous System

- ↑ Blood Pressure
- Racing Heart Rate
- Fight or Flight Response

#### Chemical Messengers are Altered in Brain

Although the normal human stress response is associated with elevated cortisol levels, people with PTSD re-act just the opposite: the normal Hypothalamic-Pituitary-Adreno coritcal (HPA) function is disrupted. Serotonin modulates the humans stress response, but that delivery mechanism is abnormal. The Corticoptropin Releasing Factor is elevated. HPA, Serotonin, and CRF Systems are skewed.

These neurotransmitters (chemical messengers) that convey signals from one neuron to another are altered. This change in chemical messengers then leads to a biological response: a behavior, a thought or a reaction.

### Common Psychological Tx: & Medical Tx:

#### Global Therapies

- Psychological DebriefingPsycho-educational Approaches
- Individual Psychotherapies
- Exposure TherapyCognitive Therapy
- Group Therapy
- Supportive Group Therapy for Grief

# Medical Treatments for PTSD: This is a simplistic summary of medications that target B Symptoms: Intrusive recollections C Symptoms: Avoidant / Numbing

Selective Serotonin Reuptake
Inhibitors (SSRIs)
Monoamine Oxidase Inhibitors
(MAOIs)
Tricyclic Antidepressants (TCAs)

Anti-adrenergic Agents
Anti-anxiety Agents
Anticonvulsants
Antipsychotics
Sleeping Medicines
Appetite Enhancing Medicines

### The Hebbian Learning Rule:

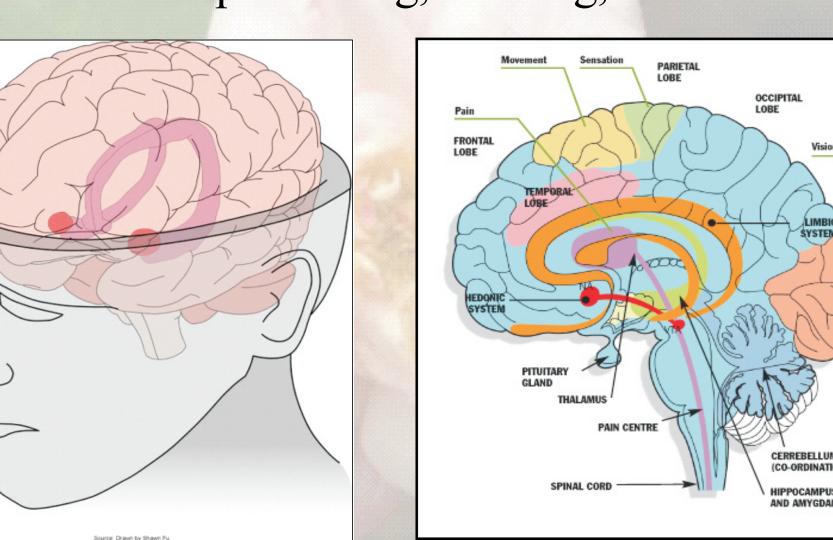
"When neuron A repeatedly participates in firing neuron B, the strength of the action of A onto B increases."

"neurons that fire together...
wire together"

It is often stated that the neurons must fire simultaneously, but simultaneously is relative depending on the system. It could be measured in milliseconds or it could be measured in hours.

### Hippocampus

The hippocampus is important for information processing, learning, and memory.



## "the power of neurogenesis & the power of neuroplasticity."

My goal in presenting this information is to encourage you to learn more about the subject of PTSD and how powerful IM is to generate new neural pathways. This treatment procedure impacted my speech, language, learning, & executive function skills. By providing this information, I hope to serve as a "gate" to help you do so.

# Thank you! Dana M. Merritt, MS CCC-SLP

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