

An Overview of Complex Trauma and Innovative Treatment Considerations

2016 Jackson Trauma Conference

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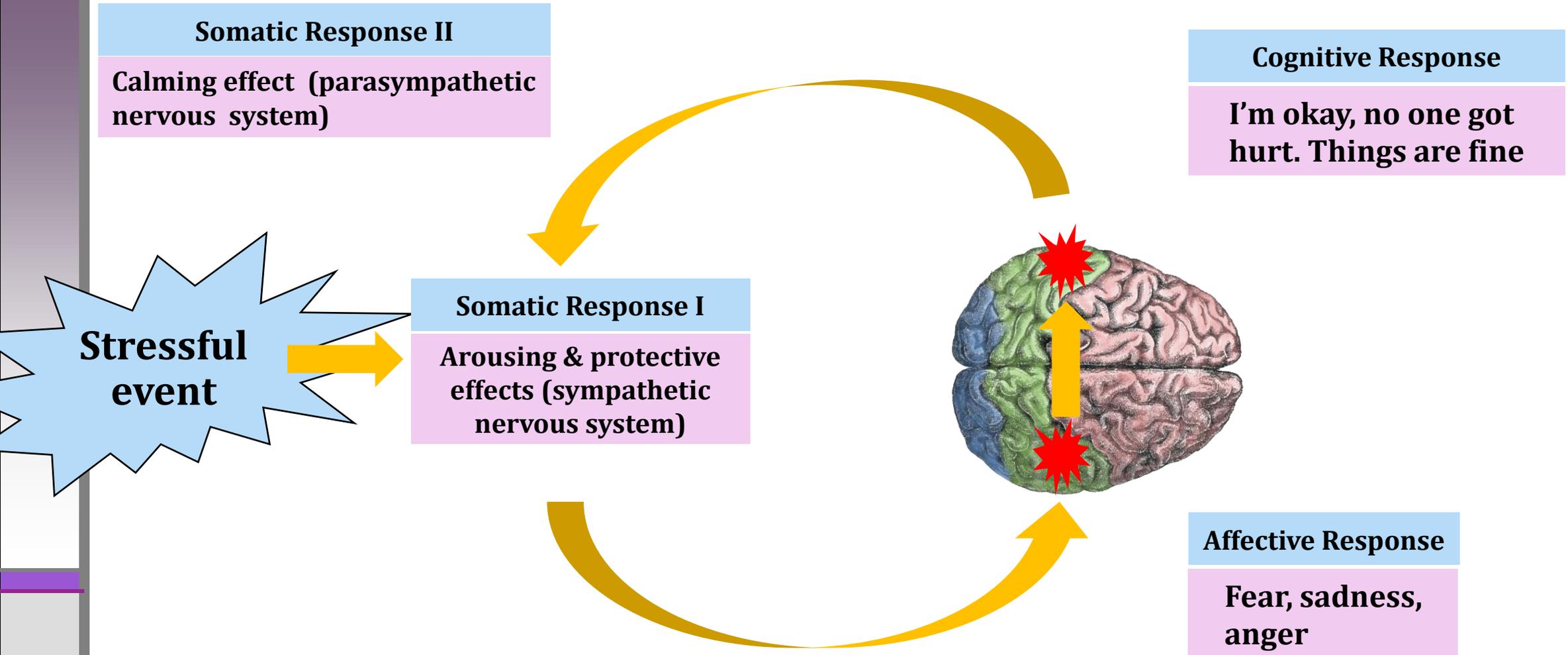
Engagement • Discovery • Integration • Transformation

Acute trauma

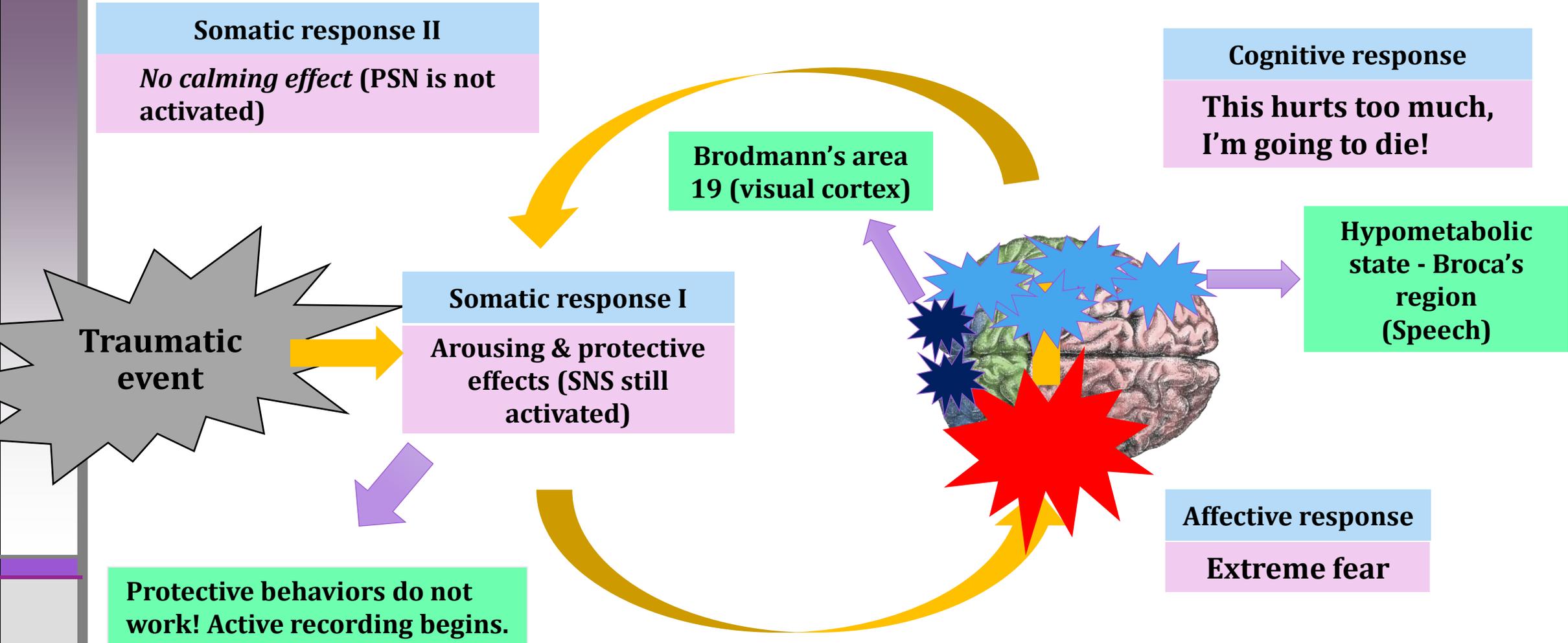
- Single Incident
- Sudden, unexpected altercation/abuse
- Out of the ordinary - healthy and supportive environment is mostly intact/ assumed
- Less difficult to treat



Almost getting into a car accident

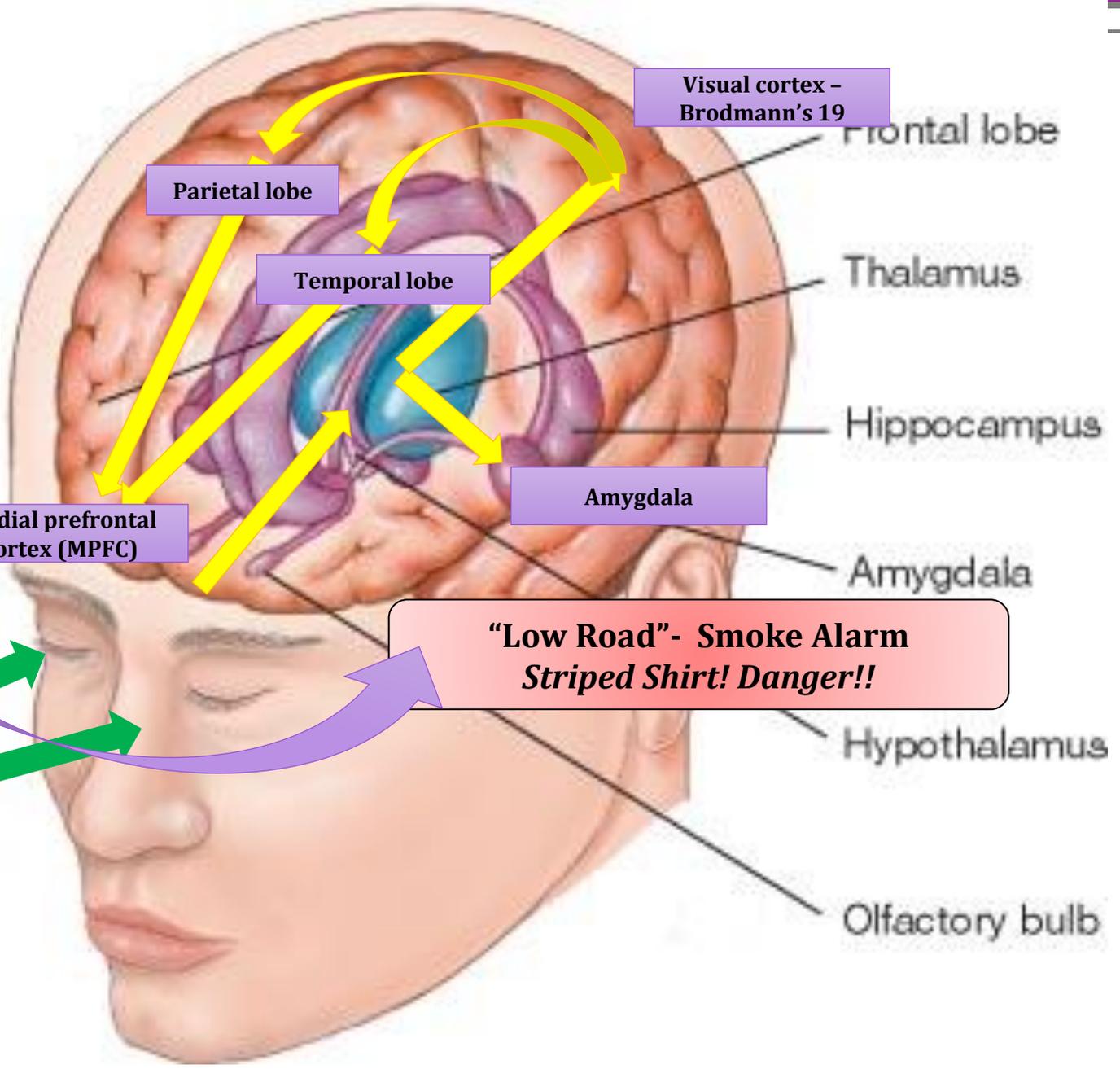


Being Brutally Mugged



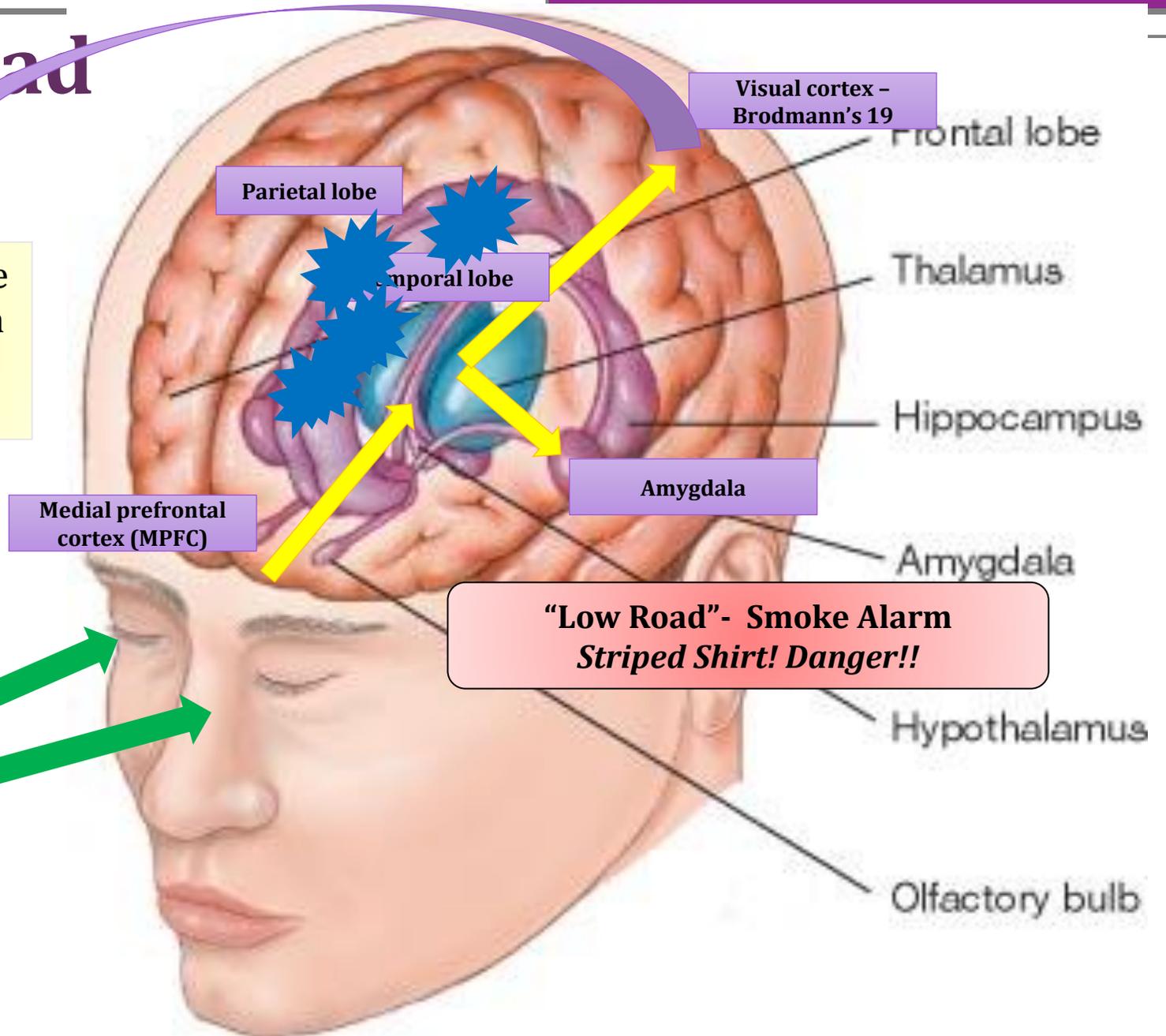
The High Road

“High road” - Watch Tower
“The attack happened 5 years ago, that’s not my attacker, I’m safe.”



The High Road

Times of hyperarousal can also be associated with flashbacks, which depending on the severity, can be viewed as hallucinations



“...and because trauma can tattoo the imagination and disrupt normal powers of narrative, it can create episodes that seem supernatural in origin.”

–p. 108, David Morris, *The Evil Hours*

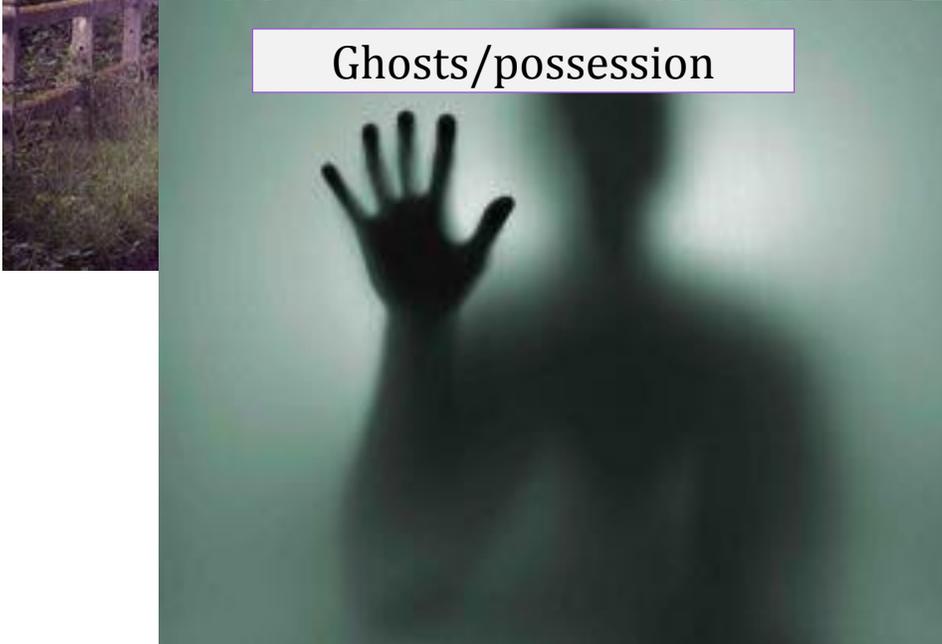
Doppelgangers



Omens (apophenia)



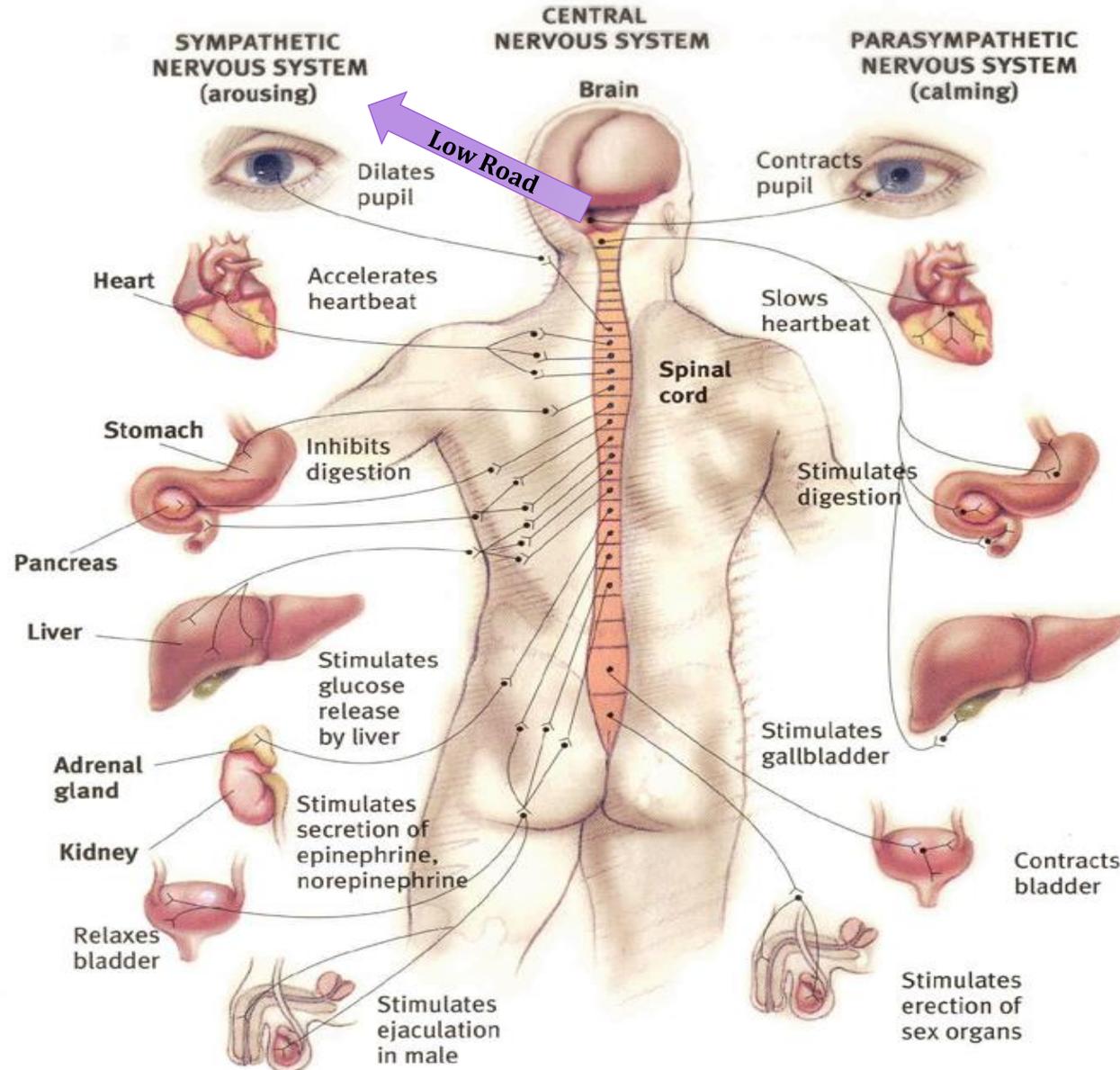
Ghosts/possession



Nightmares



The "Low Road"



People who have experienced long-term and significant trauma may live with a perpetually over activated SNS, thus they always feel anxious, hypervigilant and on edge.

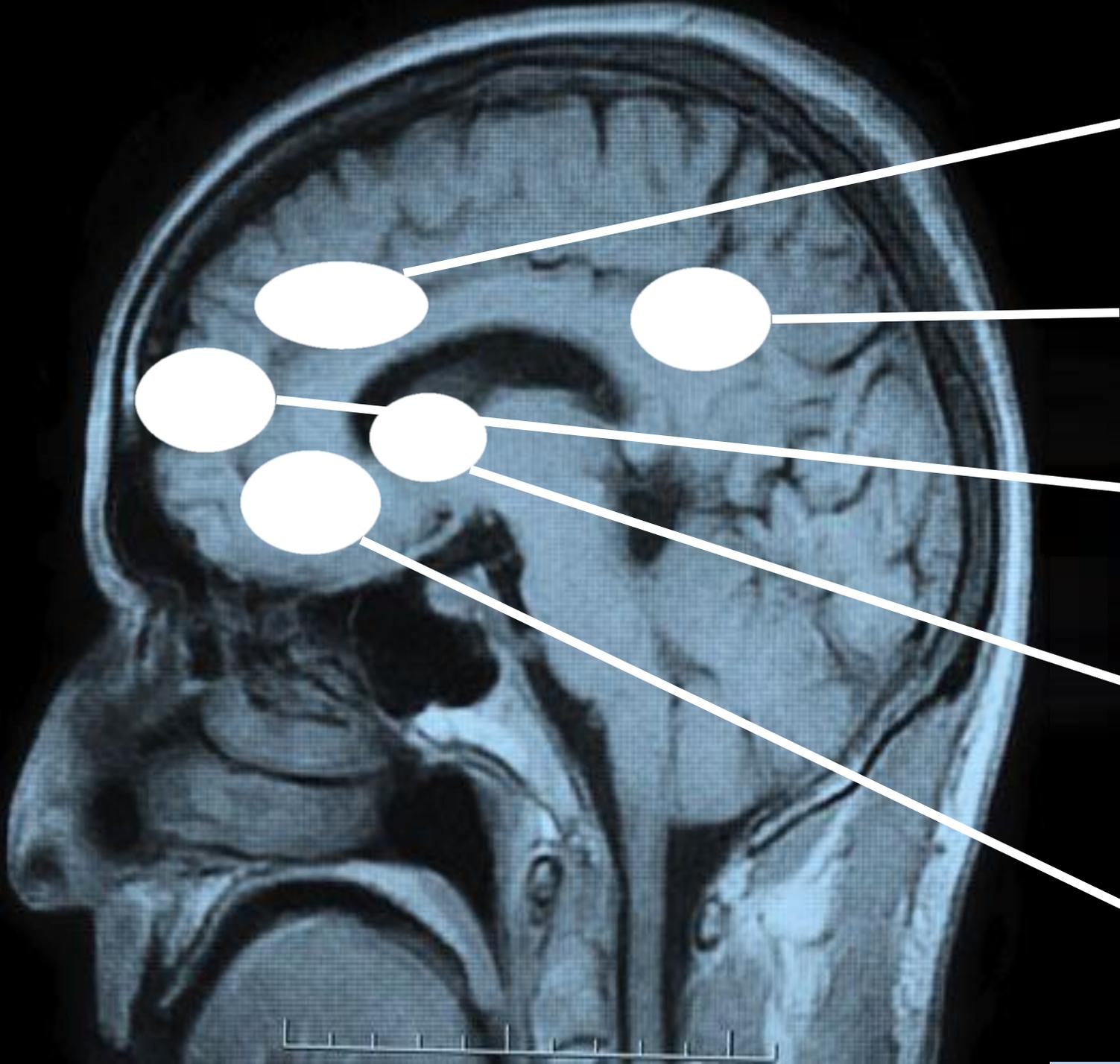
What happens when we are repeatedly traumatized (complex trauma)?



The brain, which is always adapting to the environment, will start to shut down regions of the brain responsible for registering pain. This means we lose our ability to feel pain, and all other sensations (good and bad). Eventually we can lose our sense of “self.”

We need to understand what happens to our brain in a resting state

R
1
2
8



Anterior Cingulate – Error detection, emotional awareness, pain sensitivity, & consciousness

Posterior Cingulate - Spatial orientation, autobiographical memory

Medial Prefrontal Cortex – Decision making processes, executive functioning (attention and short-term memory)

Insula – Introceptive awareness, motor functioning, consciousness, and homeostasis

Orbital Prefrontal Cortex – Sensory integration, affective values, and decision making (especially in social situations)

Trauma Continuum (resting state)

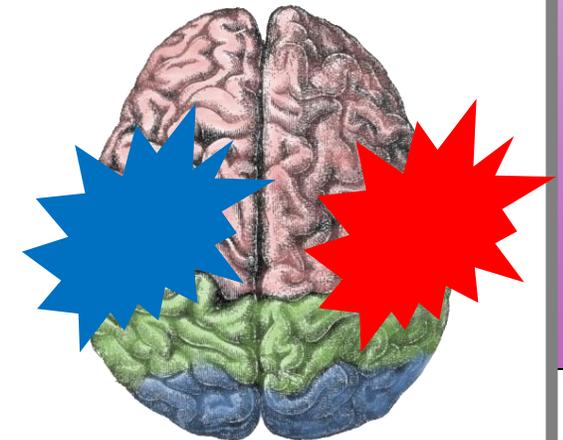
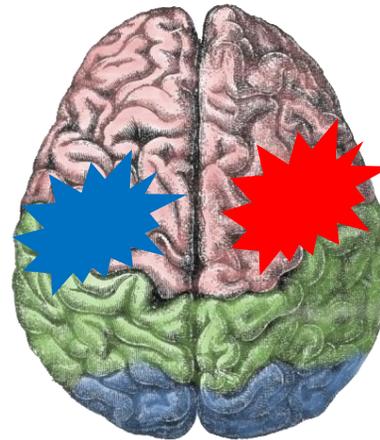
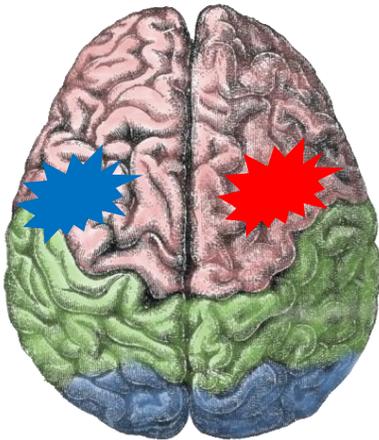
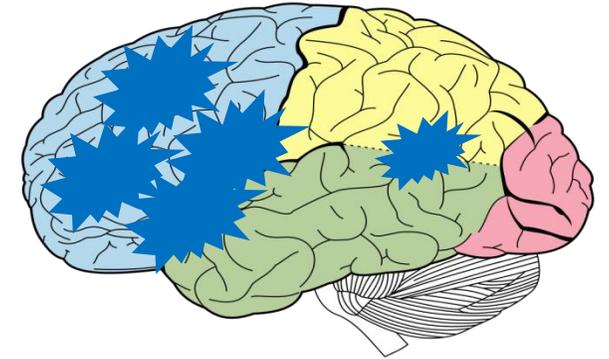
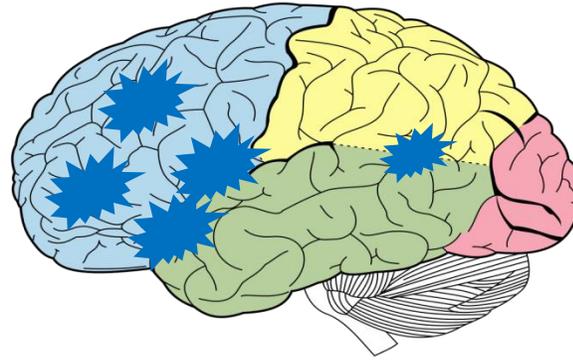
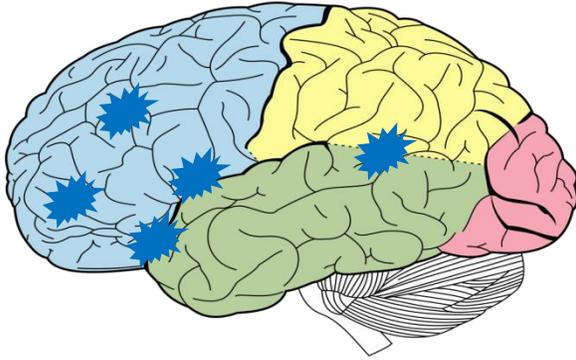
Acute trauma

Complex Trauma

Intact sense of "self"

Fragmented sense of "self"

Lack of sense of "self"



Trauma Continuum (resting state)

Acute trauma

Complex Trauma

Intact sense of "self"

Fragmented sense of "self"

Lack sense of "self"

Mind

Mind

Mind

Emotions

Body

Emotions

Body

Emotions

Body

Trauma Continuum

← Acute trauma

→ Complex Trauma

- Flashbacks
- Nightmares
- Mood swings
- Physical pain/tension
- Anger outbursts or depressive episodes

- [include previous box]*
- + Relationship difficulties
- + Mood swings
- + Difficulty with processing/executive functioning.
- + Increased difficulty identifying physical pain

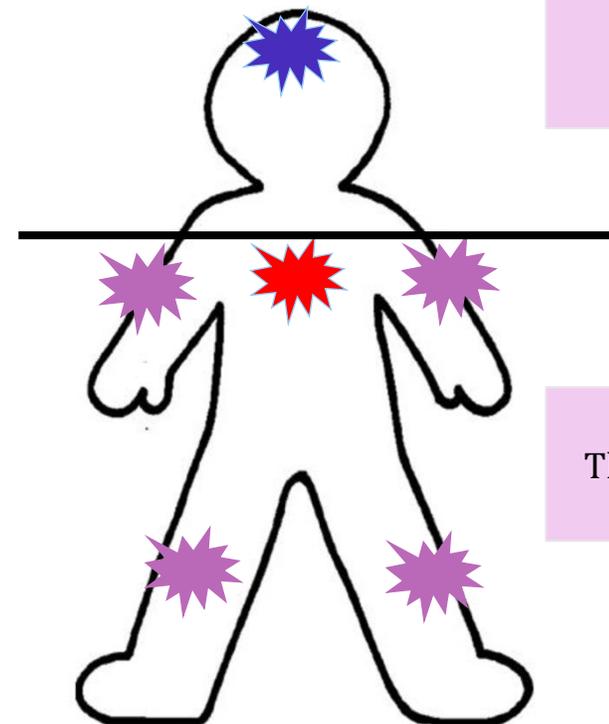
- ❖ *[Include previous box]*
- ❖ Suicidal thoughts, ideation, attempts
- ❖ Alexithymia
- ❖ Self-harm (non-suicidal)
- ❖ Hallucinations
- ❖ Explosive rages, aggression, severe depression.
- ❖ Severe lack of mind, body, emotion connection
- ❖ Dissociative Identity Disorder (DID)

Complex trauma

When our brain continues to experience repeated traumatic events, it continues to “shut down” the regions of our brain responsible for reasoning and logical thinking. This means we cannot process the emotional and physical experiences from the abuse.

The more trauma we experience, the more it creates a kind of “wall” between our **cognitive** and **emotional** + **physical** self.

This feeling is often referred to as being “disconnected.”



Alexithymia
“No words for emotions”

Analgesia
The inability to feel pain

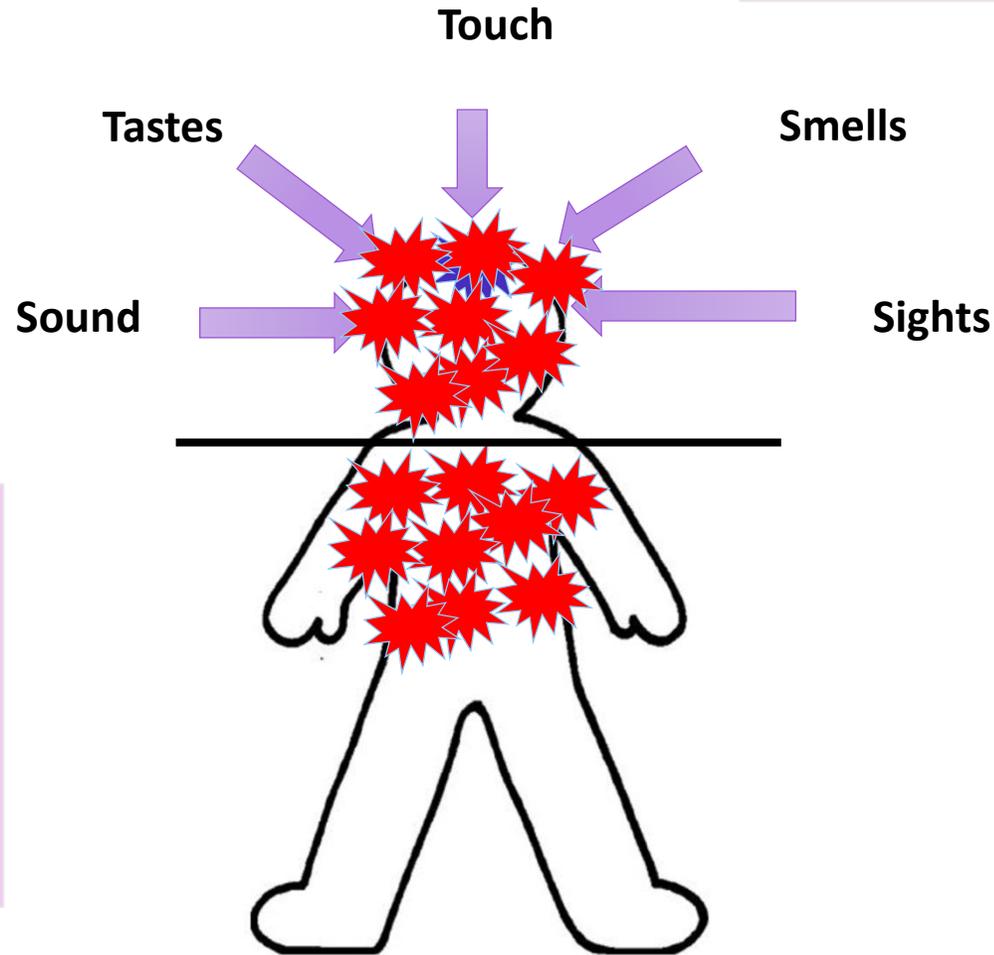
Loss of emotional control

Repeated traumas can make the surrounding environment filled with potential triggers. The client may, *or may not*, know why they are hyper aroused.

When the triggers become too much, the physical and emotional response can break through that “wall” causing severe aggression and/or self-harm, or even blackouts.

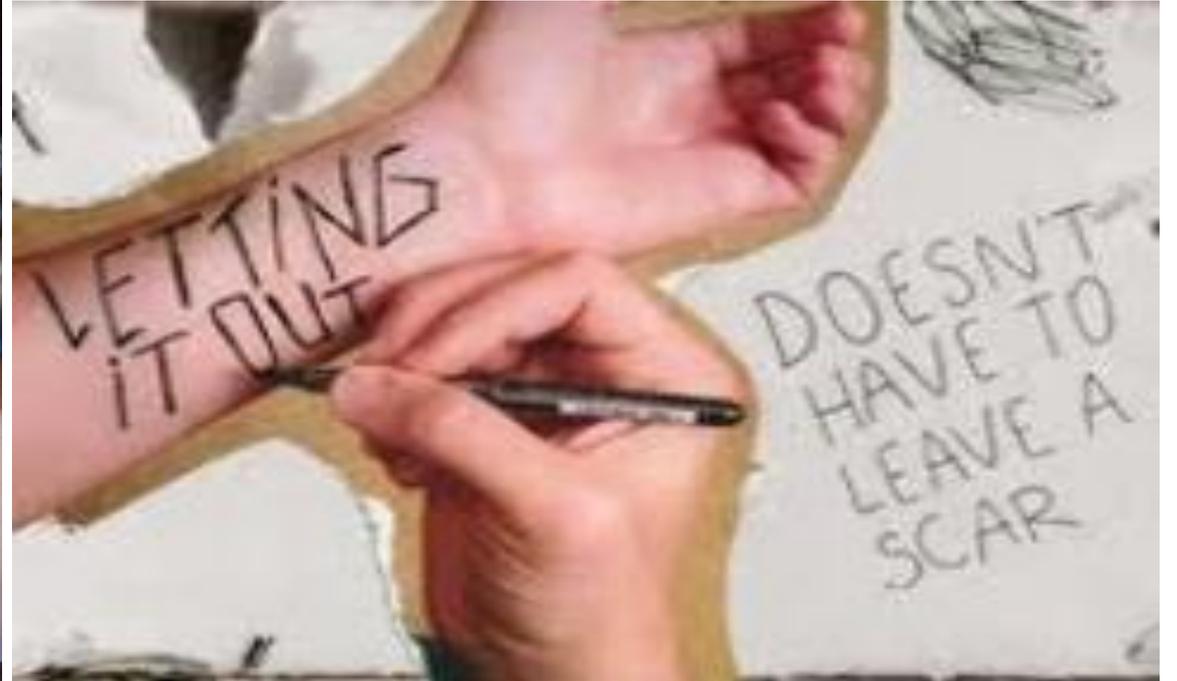
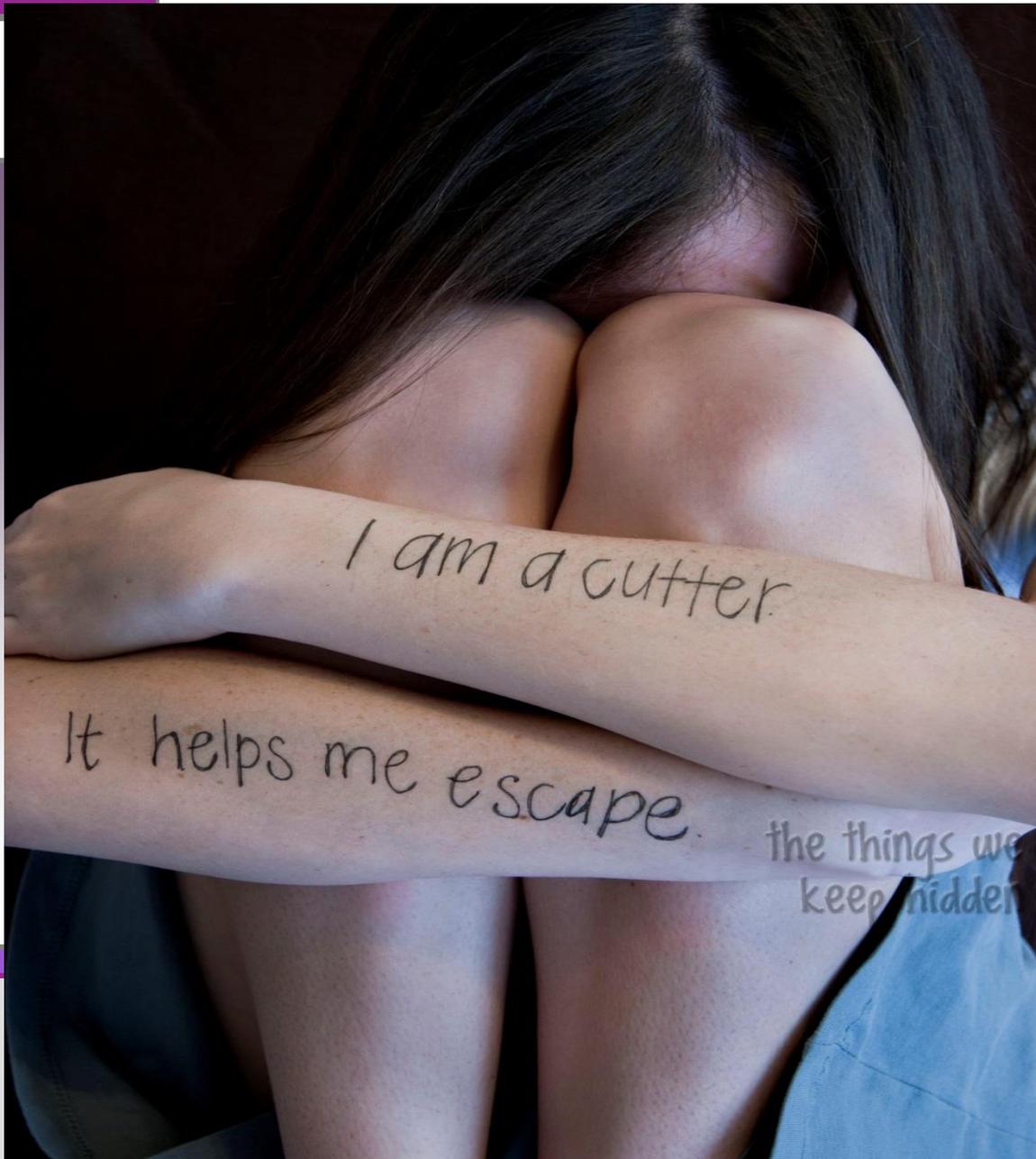
Amnesia
Memory loss

Regression
Acting the age you were traumatized



Thus, besides having to protect themselves from outside pain, children now have to “cope” with these uncontrollable emotions.

Self-Harm

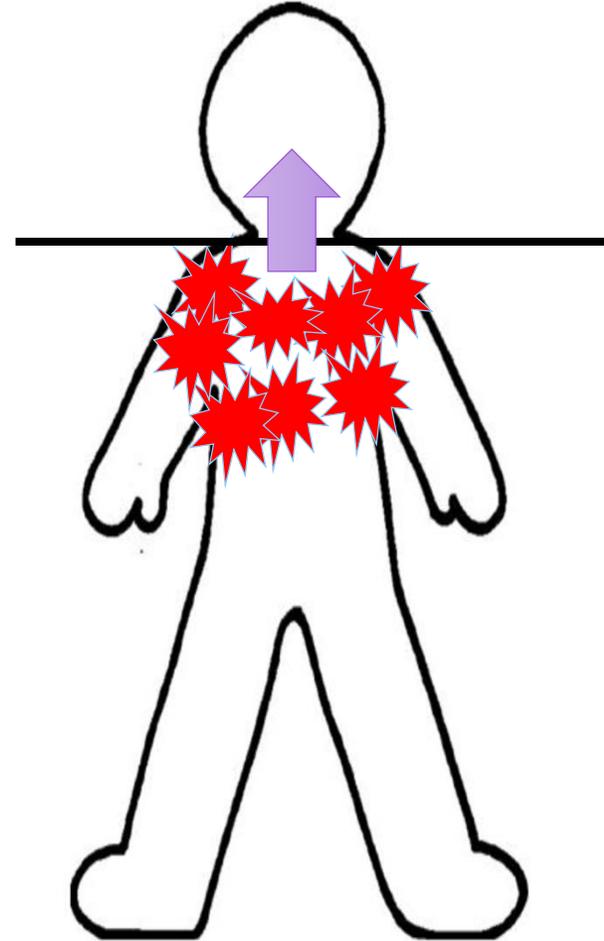


Self-harm

Common in clients with complex and, especially those who have experienced prolonged sexual abuse.

The act of harming, especially cutting, can create a combination of pain and pleasure and act as an opiate (through endorphin release). It's like taking an instant shot of low-dose heroin.

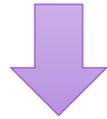
Clients experience feeling "alive" and like they can "feel again" → especially prevalent in those with high degree of dissociation. Can also be used to circumvent the flooding of painful emotions



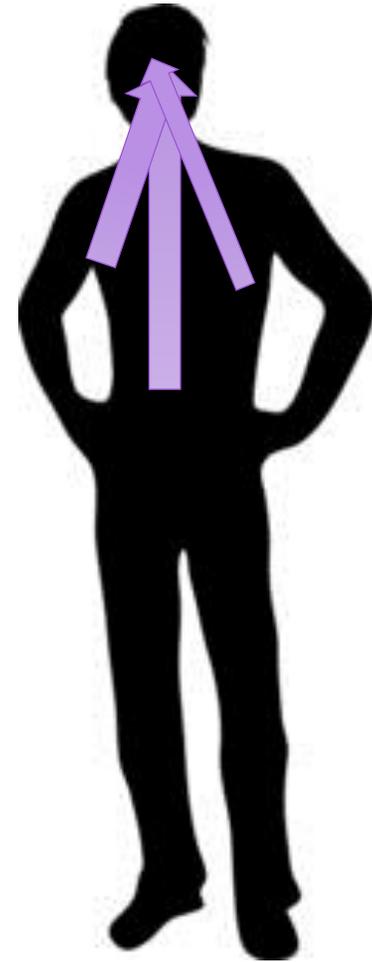
Bottom-Up Approach

Recalibration of the autonomic nervous system (enhance the parasympathetic nervous system functioning). In other words, we have to find a way to get the **heart rate** under control.

--Includes trauma focused yoga, dance, breath work, techniques that promote synchronicity, and structured play activities (for children).



Overtime, the body will become less reactive to stress, the heart rate will slow, and the client will become more “in-tune” with their body. Then, top-down interventions can be used (talk therapy, TFCBT, EMDR, Mindfulness, etc).



Yoga

The yoga subjects ($n = 19$) reported greater improvement in mood and greater decreases in anxiety than the walking group ($n = 15$). The 12-week yoga intervention was associated with greater improvements in mood and anxiety than a metabolically matched walking exercise. This is the first study to demonstrate that **increased thalamic GABA** levels are associated with improved mood and decreased anxiety.

Streeter, C. C., Whitfield, T. H., Owen, L., Rein, T., Karri, S. K., Yakhkind, A., ... & Jensen, J. E. (2010). Effects of yoga versus walking on mood, anxiety, and brain GABA levels: a randomized controlled MRS study. *The Journal of Alternative and Complementary Medicine*, 16(11), 1145-1152.

GABA (An amino acid that is a major inhibitory transmitter found throughout the nervous system and is important for down regulating excitatory inputs so they don't run amok. It also combats stiffness within the body.)



Yoga – How does it work?

Vagus nerve stimulation (VNS) and cortisol reduction.

The yogic breathing can correct imbalances between the SNS and PNS, which then corrects for imbalances in HRV. As a result, the SNS becomes less activated, reducing cortisol levels, and increasing GABA levels.

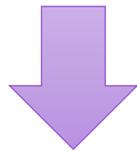
The beauty in this lies in the fact that the client does not have to think about anything, they just have to hold the positions, and breathe. Doing so will push the body into PNS overload, and therefore start to balance out internal stress response systems.

Stress	Yoga-Based Practices
↑ Sympathetic Nervous System (SNS)	↑ Parasympathetic Nervous System
↑ Hypothalamic-pituitary-adrenal Axis	↓ Hypothalamic-pituitary-adrenal Axis
↓ GABA Activity	↑ GABA Activity

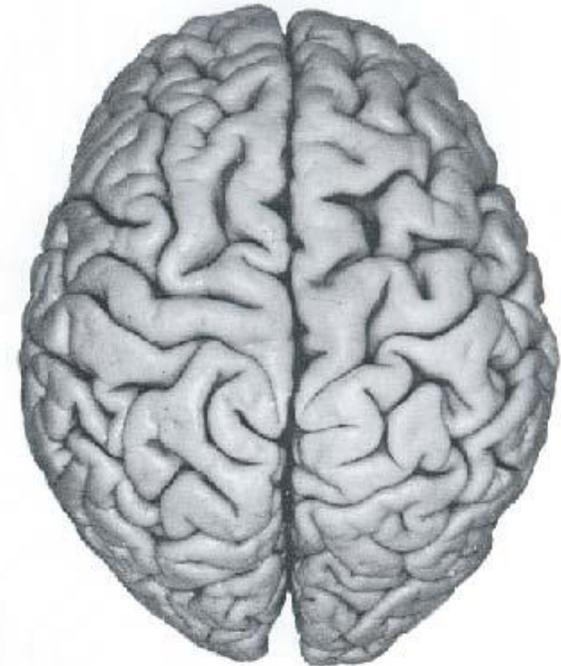
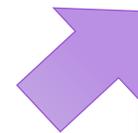
Yoga – How does it work?

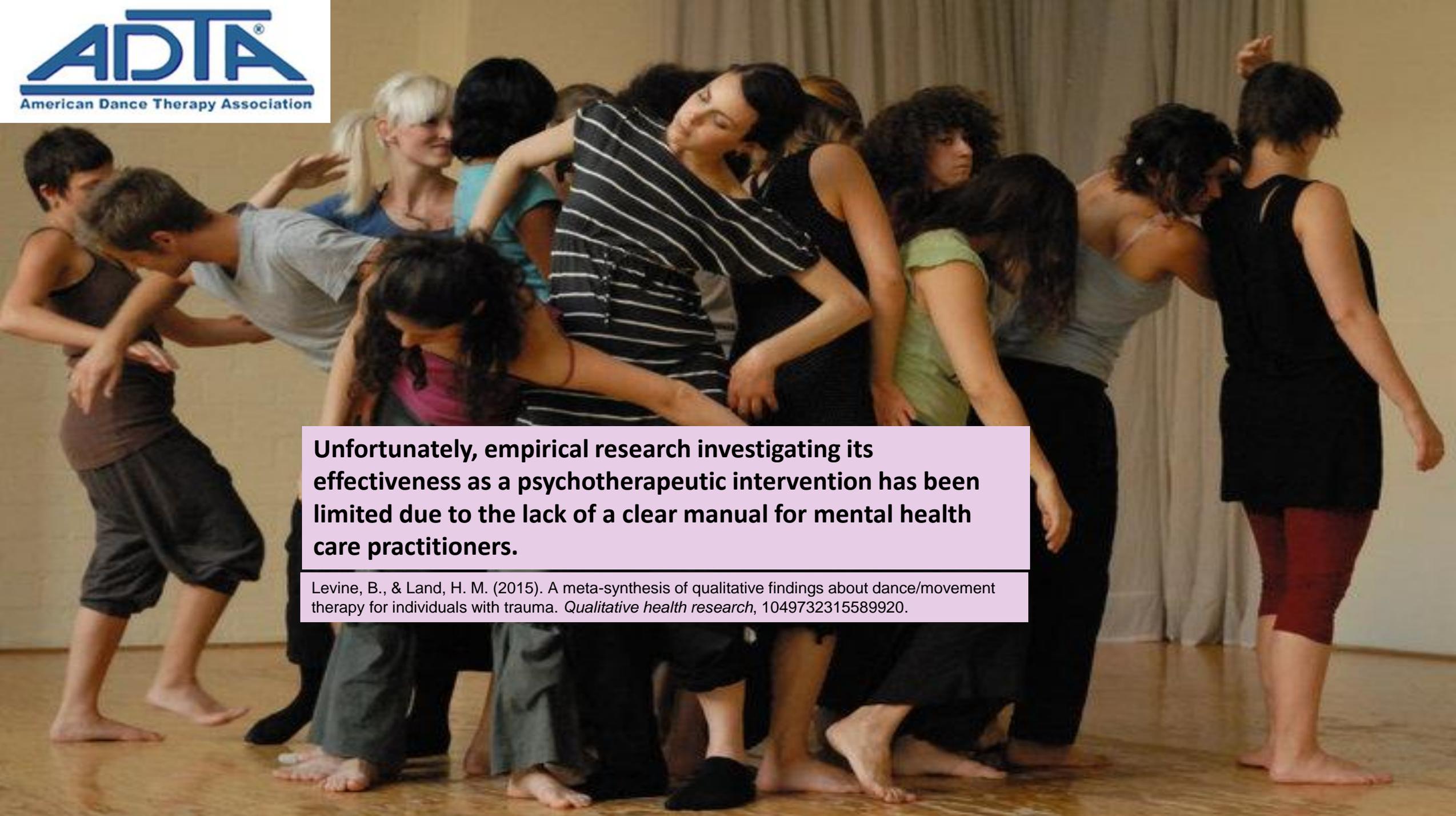
Years of yoga experience correlated mostly with gray matter (GM) volume differences in the left hemisphere (insula, frontal operculum, and orbitofrontal cortex) suggesting that yoga tunes the brain toward a parasympathically driven mode and positive states.

Villemure, C., Čeko, M., Cotton, V. A., & Bushnell, M. C. (2015). Neuroprotective effects of yoga practice: age-, experience-, and frequency-dependent plasticity. *Frontiers in human neuroscience*, 9.



For there to be increased GM volume, there has to be increased blood flow, which would combat the hypometabolic effects of trauma on the brain.





Unfortunately, empirical research investigating its effectiveness as a psychotherapeutic intervention has been limited due to the lack of a clear manual for mental health care practitioners.

Levine, B., & Land, H. M. (2015). A meta-synthesis of qualitative findings about dance/movement therapy for individuals with trauma. *Qualitative health research*, 1049732315589920.



Mindfulness

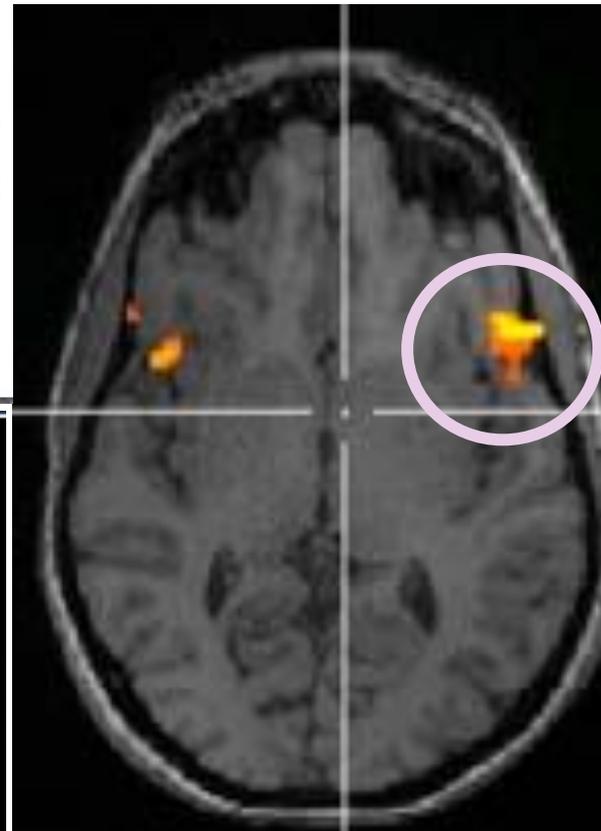
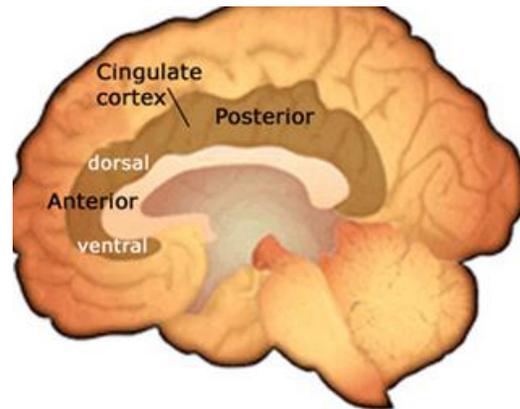
Combination of meditation & body awareness, used to become more mindful. The attention is on the present. Focus on single stimuli, or bodily awareness.

Participants with the greatest amount of MT practice showed improvements in response inhibition and increased recruitment of **dorsal anterior cingulate cortex**, medial prefrontal cortex, and **right anterior insula**.

Allen, M., Dietz, M., Blair, K. S., van Beek, M., Rees, G., Vestergaard-Poulsen, P., ... & Roepstorff, A. (2012). Cognitive-affective neural plasticity following active-controlled mindfulness intervention. *The Journal of Neuroscience*, 32(44), 15601-15610.

Dorsal anterior cingulate cortex

In situations with stable cognitive demands, this signal promotes efficiency by hastening responses, but in situations with changing demands it engenders accuracy by **delaying responses** => "Slow down, and take your time" response.



Right anterior insula

- Aids in interoceptive awareness of body states, such as the ability to time one's heart beat.
- Greater gray matter in this area correlates with increased subjective sense of inner body, and with negative emotional experiences.
- It is involved in the control of blood pressure, particularly after exercise.

Sheth, S. A., Mian, M. K., Patel, S. R., Asaad, W. F., Williams, Z. M., Dougherty, D. D., ... & Eskandar, E. N. (2012). Human dorsal anterior cingulate cortex neurons mediate ongoing behavioural adaptation. *Nature*, 488(7410), 218-221.

Clinical Considerations

