

The Neurobiology of Bravery

**How Teaching People to Manage Their
Stress Response Can Create More
Effective Bystanders**

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**Why do we engage
bystanders?**

**What do we hope they
will do?**



Some Goals of Bystander Education

- Interrupt sexual assaults
- Challenge abusive behavior
- Challenge actions that perpetuate oppression
- Change or reinforce social norms
- Offer support to survivors

How do we get them to
do it?

The Brain on Stress



What is Stress?

- The body's reaction to circumstances that excite, frighten, confuse or endanger
- A physical response that helps us cope with new situations and challenges
- A normal and essential part of everyday life.

*Trauma First Aide Associates, 2007



What is Trauma?

- Overwhelming feelings of terror, horror, helplessness, fear, loss of trust, loss of sense of safety, guilt, or shame
- In response to an event that is life-altering, life-threatening, or life deadening.

* Trauma First Aide Associates 2007

Difference between Stress and Trauma

STRESS

- Symptoms will diminish or disappear soon after the cause of stress is removed.

TRAUMA

- Symptoms persist after situation is over.

*Trauma First Aide Associates, 2007

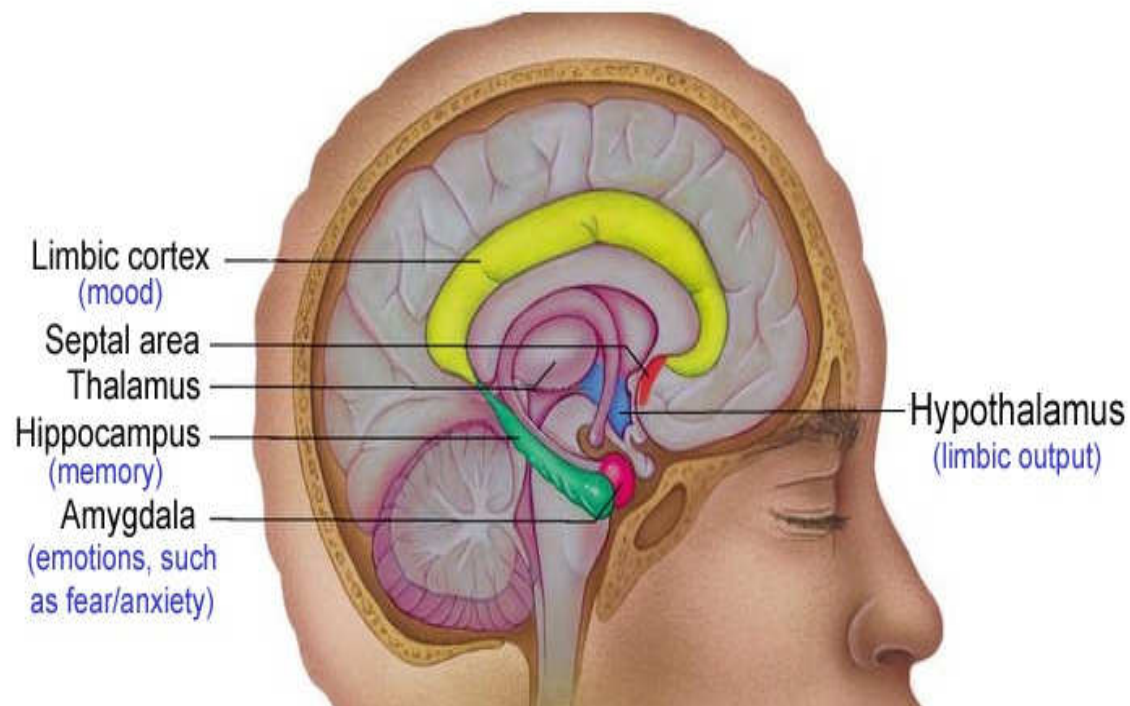




Stress vs. Trauma

- In stressful situations we return to homeostasis once the stressor is over.
- In traumatic situations people stay stuck on high or low even when the situation is over. People often re-experience feelings associated with the trauma even if the actual threat is over.

How Our Brains Process Trauma & Stress

Limbic System





Axis HPA (Hypothalamus-Pituitary-Adrenal)

(Cycle of Panic)

Amygdala
(scans the senses for signs of threat, danger, change, or stress)



Hypothalamus
CRF (corticotrophin releasing factor)



Pituitary Gland
ACTH (adrenocorticotrophic hormone)



Adrenal Glands
Cortisol (adrenaline, stress hormones)



What is Adrenaline?

Adrenaline is a stress hormone produced in the body when there is a perceived threat or danger.



Adrenaline: The “Stress Hormone”

- Produced by your adrenal glands, this “stress hormone” helps regulate blood pressure and the immune system during a sudden crisis (trauma).
- Chronic trauma or deregulation can keep this survival mechanism churning in high gear, having a negative effect.
- Chronically high cortisol levels can cause sleep problems, a depressed immune response, blood sugar abnormalities, abdominal weight gain, and over long periods of time, can cause damage and cell death in the brain.



Fight, Flight, Freeze Response

- Blood rushes to major muscles
- Heart – may feel heart racing
- Lungs – may experience shorter, faster breath
- Limbs – may be shaky, or feel cold or hot

These are physical sensations that we interpret as fear, anger, stress.



Effects of Adrenaline on Brain Function

- Prefrontal Cortex (controls language and high-order) thinking is most vulnerable to stress hormones
- Stress can cause a decline in prefrontal cortex activities
(Arnsten 2009)
- Brain scans of humans under stress show diminished activity in the prefrontal cortex
- Humans under stress default to habitual behaviors
 - Activation of habitual/automatic responses
 - De-activation of complex thinking and decision making
(Yu 2016)

How Empowerment Self-Defense Shifts Habitual Responses

- Rehearsing poise under stress
- Practice managing adrenaline response
- Intervention Responses become habitual



Video

[Meg's video & discussion of bystander skill building]



NOTE: Need slides

- [Patti's slides about somatic healing]

Exercise

Strong voice & stance

Exercise

Responding to microaggressions

Becoming Brave

Next steps for addressing stress responses in prevention & healing



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