



UNDERSTANDING TRAUMA: OUR BODY, MIND & EMOTIONS

Prema McKeever, M.Sci, BBTRS Practitioner

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LOGISTICS

We will meet over 3 sessions - your webinar access/log in is always the same.

At the end of the course there will be a multiple-choice quiz. Passing the quiz is required in order to receive credit towards your BBTRS certification.

If you are interested in receiving CE from the National Certification Board for Therapeutic Massage & Bodywork (NCBTMB) e-mail me at prema Breath@gmail.com

Any questions about course material please post to the BBTRS Forum. Register for forum access at: <https://www.biodynamicbreath.com/registration/>

A file containing the recording of each webinar will be sent to you within 24 hours. It will come via wetransfer.com - watch for it in your email/bulk/spam folder.

Email questions to prema Breath@gmail.com

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Forum

BioDynamic Breath & Trauma Release Institute

Our Breathwork Forum is a resource for breathwork practitioners, BBTRS students & people who are new to breathwork. Here we share knowledge and talk about experiences related to breathwork & trauma release & healing.

Announcements Anything new and important about BBTRS events and other happenings!	Topics: 3 Posts: 5	Last Post: Prema McKeever - BBTRS Webinar - Anatomy & Physiology for Breathwork Practitioners - November 7, 2016
The BBTRS Experience This forum is for discussions about sessions with clients and friends. Please share about your experiences in sessions and encourage others to do the same.	Topics: 12 Posts: 38	Last Post: Prema McKeever - Hyperventilation - May 29, 2017
Breathwork Forum Everything related to breathwork experience goes here. Please note that we have a separate forum for BBTRS as it is the focus of our training.	Topics: 2 Posts: 4	Last Post: Niargo - Chakras loop meditations - May 3, 2017
Bodywork, Healing & Trauma Release There is not only 1 way. Here we can discuss all sorts of trauma release techniques and bodywork: Myofascial Release, massage techniques, shiatsu, dance therapy and more.	Topics: 0 Posts: 0	No Topics
BBTRS Webinars For students of the BBTRS webinars - here you can post questions and discuss your experience of the webinar material.	Topics: 4 Posts: 11	Last Post: Kiles - Impact of Breathwork on the body's hormones and immune response - June 10, 2017

Unread and recently updated topics

BBTRS Webinars

Impact of Breathwork on the body's hormones and immune response

↳ Last Post: Kiles - 2 weeks ago

Stay with your body by noticing your own bodily sensations, your breath and how you are feeling emotionally.

~ Please take breaks as needed ~

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WHY TRAUMA?

Currently in the midst of an unprecedented amount of research, awareness, and modalities of healing

Focus is on 3 avenues of treatment:

- 1) "Top Down" - Talk therapy. Re-establishing human connection, talking about memories.
- 2) Medication - Shuts down alarm reactions or changes brain function.
- 3) "Bottom Up" - Somatic. Experiences that deeply contradict the helplessness, rage or collapse of trauma.

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IMPACT OF TRAUMA - U.S.A.

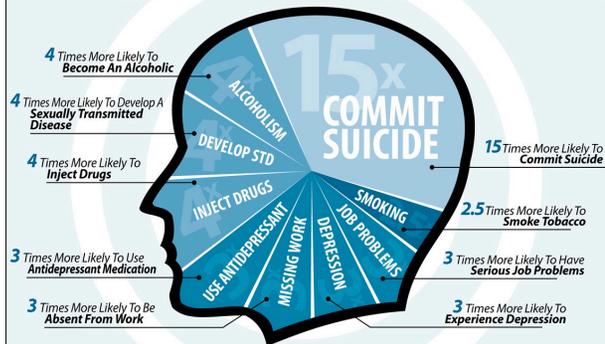
- About 6 of every 10 men (or 60%) and 5 of every 10 women (or 50%) experience at least one trauma in their lives. Women are more likely to experience sexual assault and child sexual abuse. Men are more likely to experience accidents, physical assault, combat, disaster, or to witness death or injury.
- About 7 or 8 out of every 100 people (or 7-8% of the population) will have PTSD at some point in their lives.
- About 8 million adults have PTSD during a given year. This is only a small portion of those who have gone through a trauma.
- About 10 of every 100 women (or 10%) develop PTSD sometime in their lives compared with about 4 of every 100 men (or 4%).

IMPACT OF TRAUMA

- Trauma affects not only those directly exposed to it, but those around them and future generations
- Wives of men who suffer from PTSD tend to become depressed
- Children of depressed mothers are at risk of growing up insecure & anxious
- More than half the people who seek psychiatric care have been assaulted, abandoned, neglected, or raped as children or witnessed violence in their homes.

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PEOPLE WHO HAVE EXPERIENCED TRAUMA ARE:



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WHAT IS TRAUMA?

- Derived from the Ancient Greek word for “wound,” τραῦμα (traûma, “wound, damage”).

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- General Definition:
 - An event that is life-threatening or psychologically devastating to the point where the persons’ capacities to cope are overwhelmed.

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- General Definition:
 - An event that is life-threatening or psychologically devastating to the point where the person’s capacities to cope are overwhelmed.
 - Directly experienced, witness, or have knowledge of

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TRAUMA IS PHYSICAL & EMOTIONAL

- Trauma response/injury can develop from both physical and emotional trauma
- Trauma response/injury is both physical and emotional
- Trauma is mind-body: somatosensory
 - Physiological impact
 - Brain impact
 - Developmental impact

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WHAT IS TRAUMA?

The definition of trauma has been highly debated and variable over the years. The current DMS-5 (American Psychiatric Association, 2013) defines it as:

Exposure to actual or threatened death, serious injury or sexual violence in one or more of four ways:

- (a) directly experiencing the event;
- (b) witnessing, in person, the event occurring to others;
- (c) learning that such an event happened to a close family member or friend; and
- (d) experiencing repeated or extreme exposure to aversive details of such events, such as with first responders.

Actual or threatened death must have occurred in a violent or accidental manner; and experiencing cannot include exposure through electronic media, television, movies or pictures, unless it is work-related.

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WHAT IS TRAUMA?

There are many dimensions of trauma, e.g., magnitude (life or harm threat, betrayal, loss, etc.), complexity, frequency, duration, predictability, and controllability. This makes arriving at an objective definition of trauma difficult, if not impossible.

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It is natural for people to have many different reactions to traumatic events ranging from relatively mild, creating minor disruptions in their life, to severe and debilitating.

Some of these reactions may include: intense fear; anxiety, terror, shock, and upset, as well as emotional numbness, helplessness and personal or social disconnection. The ability to integrate the emotional experience is often overwhelmed.

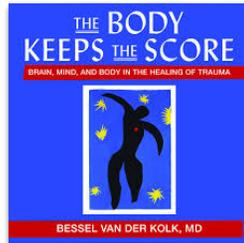
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WHAT IS TRAUMA?

Bessel Van Der Kolk, MD - leading researcher in the field of trauma and author of:

"THE BODY KEEPS THE SCORE - Brain, Body and Mind in the Healing Of Trauma"

"Trauma is fundamentally a disruption in our ability to be in the here and now"



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WHAT IS TRAUMA?

Traditionally - our coping mechanisms are completely overwhelmed. Often involves a toxic mix of terror, powerlessness, helplessness and frozenness that in turn creates our trauma responses.

We often think about trauma as a shocking horrible event and that certainly can be true. But more often, what shows up is an accumulation of traumatic events or highly-stressful events that the person hasn't learned to metabolize, to digest.

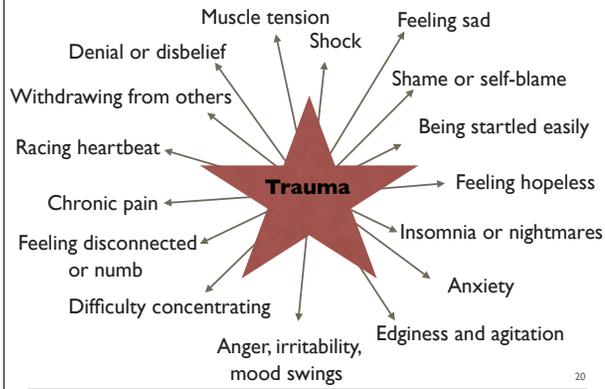
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WHAT IS TRAUMA?

"Too Much Too Fast"

When we have the experience that there is 'too much' for me to handle - it's coming too fast and I have no way of metabolizing, digesting, integrating the experience. This integration needs to take place somatically & emotionally, and for many, spiritually.

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Trauma is not the thing that happened to us but **the effect left within us by our experiences....**

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OFTEN NOT RECOGNIZED

- Ignorance
- Shame & taboo
- Denial
- Happens to others, not us
- Victim blaming
- Unrecognized or under recognized by medical and mental health professionals
- Health care system may interpret it only as physical trauma and may not consider or understand psychological impact or injury

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SOME TRAUMAS ARE MORE COMPLEX THAN OTHERS

- Private, hidden, secret
- In essential relationships and involving betrayal and second injury
- Over the course of childhood: younger children more vulnerable
- Repeated, prolonged, chronic, endemic
- Objectively more severe
- Layered & cumulative
- Where recognition and support are not available
- Where victim is blamed, shamed, isolated

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WHAT IS TRAUMA?

There are two main categories of trauma: shock trauma and complex trauma.

Experiencing complex trauma as a child can predispose someone to being more vulnerable to the effects of shock trauma later in life.

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WHAT IS TRAUMA?

Impersonal (Shock Trauma)

- Disaster, weather, car accident, medical, injury, etc

Interpersonal (Complex)

- Relational/attachment: insecure or worse
- Abuse (physical, sexual, emotional), assault, victimization, exploitation, neglect,

Identity

- Gender, ethnic and cultural identity, sexual orientation

Community

- Religion, political group, ethnicity

Someone can have one or all--they are not mutually exclusive

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SHOCK TRAUMA

Type I: Single-incident trauma, e.g. a sudden and unexpected trauma, a single episode or experience of trauma. "Shock trauma" leaves an individual frozen in fear and frozen in time—is clinically recognized and treated under the diagnosis of post-traumatic stress disorder (PTSD).

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One event can have a profound effect on a survivor's ability to sleep, to relate to others, and to function in a way that they had prior to that event. Anxiety, depression, isolation, increased use of drugs or alcohol are common following a traumatic event.

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WHAT IS TRAUMA?

Shock trauma includes but is not limited to:

- physical or emotional violence
- rape or sexual assault
- witnessing physical or emotional violence
- war or combat
- motor vehicle accidents
- dental or medical surgeries
- falls or other injury
- tragic or sudden loss of loved ones
- tending to the seriously injured or witnessing sudden death (common for first-responders)

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In single-event shock trauma, the completion of the fight-flight response was not possible.

When working with someone who have experienced shock trauma, the goal is to help them resolve the frozen shock state which is stored inside and to complete the fight/flight reaction.

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COMPLEX TRAUMA

Type II: This usually involves multiple unresolved traumas carried out by a person known to the victim. Affects as many as 1 in 7 to 1 in 10 children. More often occurs in combination with other traumas or cumulatively (known as "polyvictimization"). Involves a higher risk of PTSD developing.

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Sustained and repeated traumatic events often involving being trapped emotionally and/or physically. Ex: chronic illness, combat, child sexual abuse, battered syndrome (i.e., spousal abuse), being taken as political prisoner or prisoner of war (POW), and Holocaust victimization.

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COMPLEX TRAUMA

Complex trauma includes but is not limited to:

- birth trauma
- early childhood neglect
- early childhood emotional abuse
- childhood physical abuse and/or witnessing violence
- childhood sexual abuse
- growing up in families with addiction
- being the victim of prejudice, discrimination or bullying
- being publicly humiliated, especially in early childhood

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DEVELOPMENTAL TRAUMA

- The relatively new term that addresses ongoing experiences of neglect and frustration of needs in early childhood.
- Cases of developmental trauma—which includes profound caregiver misattunement as well as ongoing abuse and neglect of varying degrees—there is no single traumatizing event.

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DEVELOPMENTAL TRAUMA

- Although the physiological response may be similar to that of shock trauma, there are ongoing distressing relational dynamics to take into consideration.

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DEVELOPMENTAL TRAUMA

- Although the physiological response may be similar to that of shock trauma, there are ongoing distressing relational dynamics to take into consideration.
- Clients, very often, have no idea. They will report what has happened after the time that they can remember. They assume that something they can remember must be the cause of their symptoms. They have no idea that their nervous system might have been compromised before they had the capacity for memory.

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NEUROBIOLOGY OF TRAUMA



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THE NEUROBIOLOGY OF TRAUMA

- Trauma is not purely a psychological issue
- The effects of trauma last far beyond the event partly due to the way our brain changes after traumatic events
- Trauma affects memory, learning, the ability to regulate emotions and our social development
- “What fires together wires together”
- Trauma causes both immediate and long-term endocrine changes that affect our metabolism and neuropsychology

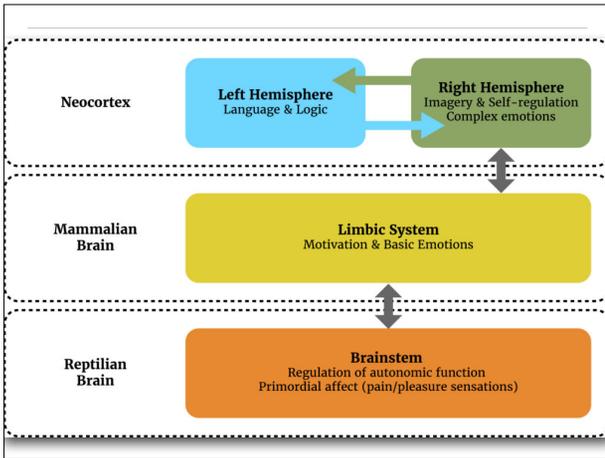
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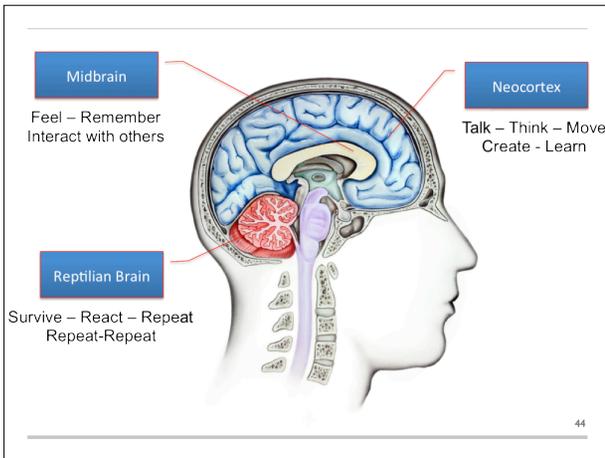
THE NEUROBIOLOGY OF TRAUMA

Trauma produces actual changes in our brain/nervous system:

- Re-calibrates the brain’s “alarm system”
- Increases stress hormone (adrenaline and cortisol) activity
- Alters the part of the brain that filters relevant information from irrelevant
- Compromises the areas of the brain that communicate the physical, embodied feelings of being alive

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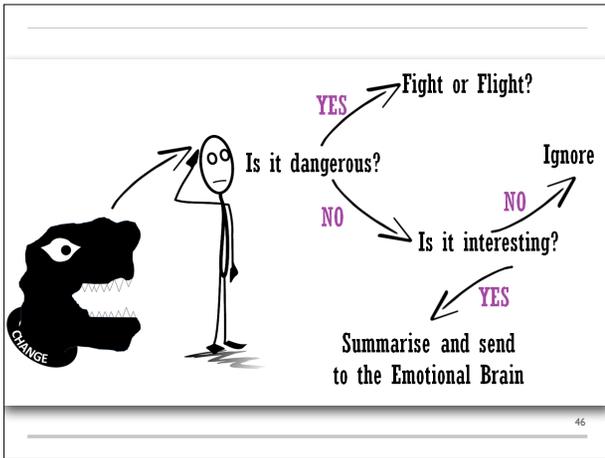
BRAIN STEM: AKA REPTILIAN BRAIN

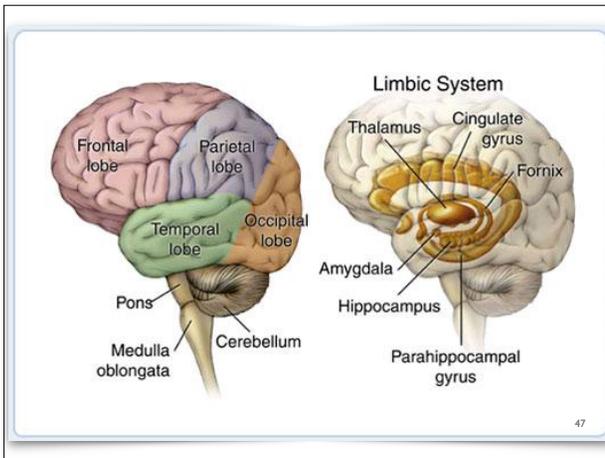
What are you thinking?

Survive...

- Focuses on survival and takes over when in danger and don't have time to think.
- Acts on stimulus and response - perfect for quick decisions without thinking
- Concerned with getting food and keeping us from becoming food.
- Fear driven - takes over when we feel threatened or endangered

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LIMBIC SYSTEM

Directly in control of our sympathetic nervous system (SNS) and parasympathetic nervous system (PNS) "stress response" and:

- Heart rate
- Blood pressure
- Breathing
- Memory
- Stress levels
- Hormone balance
- Mood

LIMBIC SYSTEM

Remembers both pleasant and traumatic events, perceives outside threats, make choices based on history rather than analysis

- Controls emotions like anger and fear
- Responds to pain and pleasure
- Senses sexual satisfaction
- Controls aggressive or violent behavior
- Responds to sensory information, especially sense of smell

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LIMBIC SYSTEM

In short, it is responsible for governing “avoidance” versus “approach” behaviors in most animals — in other words feelings of pleasure versus anxiety/pain.

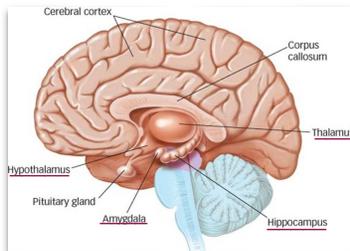
Approach and avoidance are exactly what help keep us alive and ensure survival.

That’s why the limbic system is said to be so “primitive” and is found in all types of species.

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MAIN COMPONENTS:

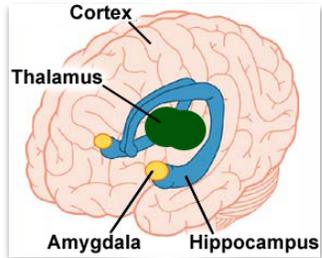
- Thalamus - information hub, processes sensory info and sends to cortex
- Hippocampus - memory, focus, learning and emotions
- Amygdala - fear and anxious emotions, aggression, sexual behaviours
- Hypothalamus - hormone secretion



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THALAMUS: "GATEKEEPER"

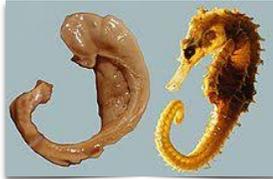
- Receives sensory info from outside world, creates an experience of "this is what is happening to me".
- Filter or gatekeeper:** to distinguish between relevant and unimportant. Passes on only a small percentage of arriving information.



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HIPPOCAMPUS

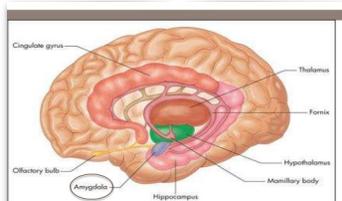
- Likes to know what time it is, where you are, orienting
- Forms and stores memory - consolidates short-term to long-term memories
- Recognizes what's known versus new - when we come across something threatening, our hippocampus immediately compares the image to its stored list of dangers
- Works faster than conscious mind
- Depression, chronic stress & PTSD can shrink



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AMYGDALA: "ALARM BELL"

- Receives information from pain sensors, vision and sound
- Alarm portion of brain**
- Identifies whether incoming info is relevant for survival
- Trigger for fight/flight response

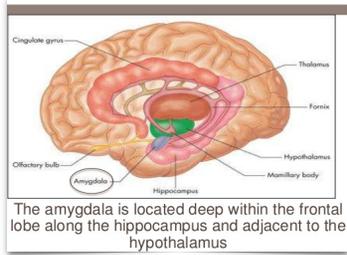


The amygdala is located deep within the frontal lobe along the hippocampus and adjacent to the hypothalamus

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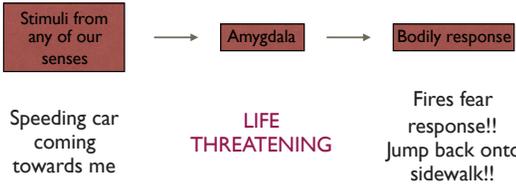
AMYGDALA: "ALARM BELL"

- Helps process emotions, especially fear and anger and stores memories of emotional events
- Right brain amygdala stores trauma or memories of anything to be fearful
- Right brain amygdala is responsible for implicit or unconscious memory



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Amygdala as interpreter and fire alarm

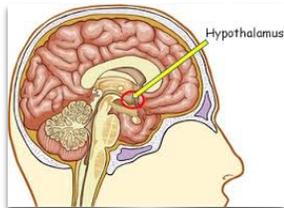


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HYPOTHALAMUS

Controls release of hormones and Autonomic Nervous System (ANS)

- Send signals to the pituitary/ thyroid/adrenal glands to release hormones
- Receives information from many body parts, including the heart, vagus nerve, gut/digestive system and skin.
- Cannot determine the nature of the stress and whether or not it poses an actual danger to our survival.



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DANGER & LIMBIC RESPONSE

Amygdala receives input from thalamus

- Cannot distinguish between past and present

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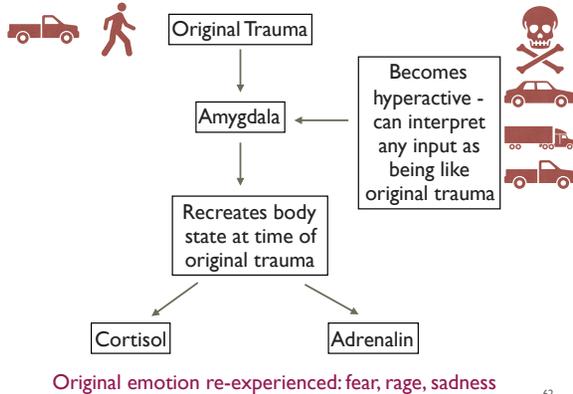
- Cannot distinguish between past and present
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- If it senses a threat - instantly send alarm to hypothalamus and Reptilian brain to activate stress hormones (via adrenals) and ANS - whole body fight/flight response

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DANGER & LIMBIC RESPONSE

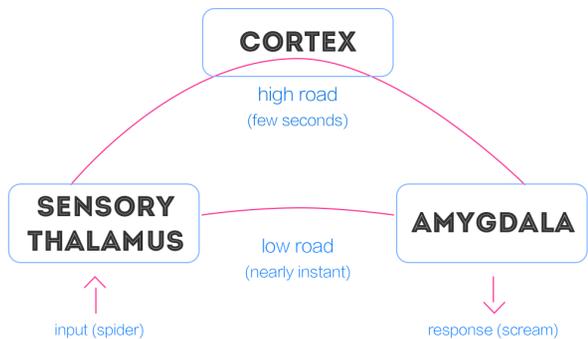
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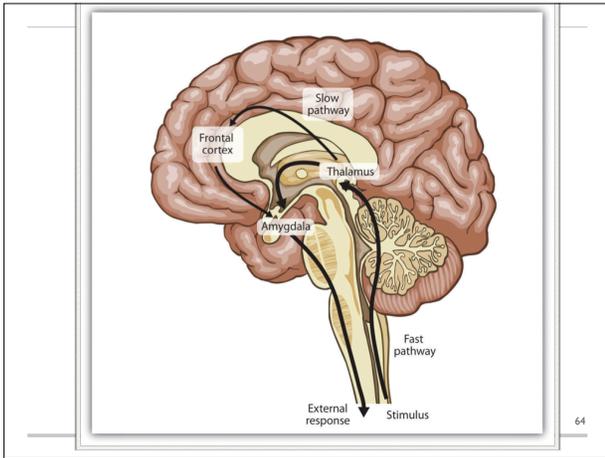
- Cannot distinguish between past and present
- Job is to identify whether incoming input is needed for survival
- If it senses a threat - instantly send alarm to hypothalamus and Reptilian brain to activate stress hormones and ANS - whole body fight/flight response
- Processes faster than neocortex - it decides whether incoming info is a threat even before we are consciously aware of danger ⁶¹



HOW THE BRAIN PROCESSES FEAR

(the high and low road)





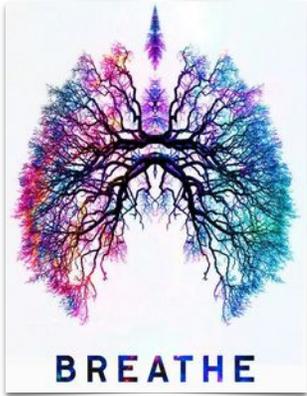
LIMBIC SYSTEM

Typically detects negative information faster than positive information in order to prioritize ensuring survival. This is often called our “negativity bias” and explains why it’s often easier to remember bad events more easily than positive ones.

LIMBIC SYSTEM

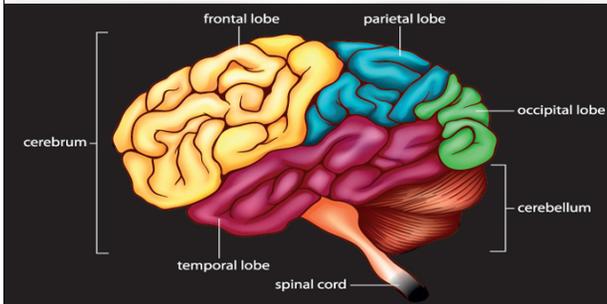
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Not good at denial. Can be reactivated at slightest hint of danger causing intense emotions, uncomfortable physical sensations, impulsive and aggressive actions - think post-traumatic reactions.

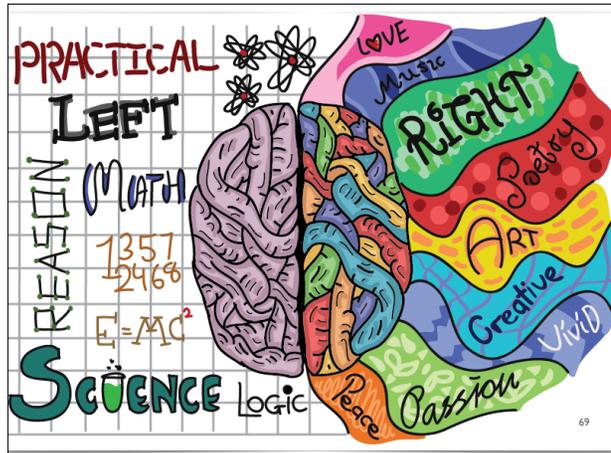


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NEOCORTEX



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NEOCORTEX

Left Hemisphere

- Linguistic
- Sequential
- Analytical
- Naming
- Comparing
- Remembers facts & stats

Right Hemisphere

- Intuitive and emotional
- Visual
- Spatial
- Communicates through facial expression and body language
- Memories of sound, touch, smell and emotions they evoke

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NEOCORTEX

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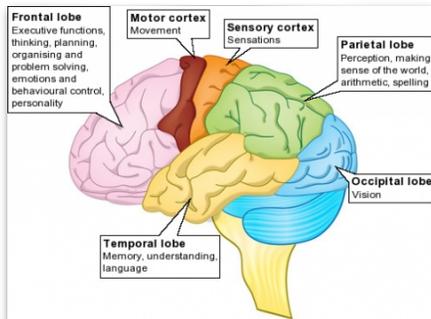


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NEOCORTEX

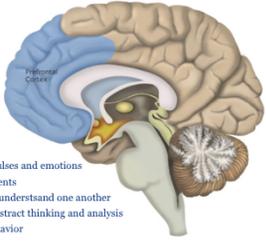


- 30% of brain mass
- Understanding how things & people work, figuring out how to accomplish goals and manage time, plans out our actions, etc

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PREFRONTAL CORTEX

Prefrontal Cortex Roles and Responsibilities

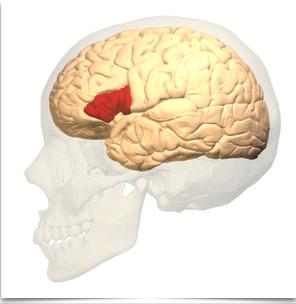


- Controls impulses and emotions
- Forms judgments
- Helps people understand one another
- Engages in abstract thinking and analysis
- Regulates behavior
- Predicts outcomes

- Medial prefrontal cortex (MPFC) acts as a "watchtower"
- As long as we are not too upset it can restore balance, help us realize any false alarms and stop a stress response.

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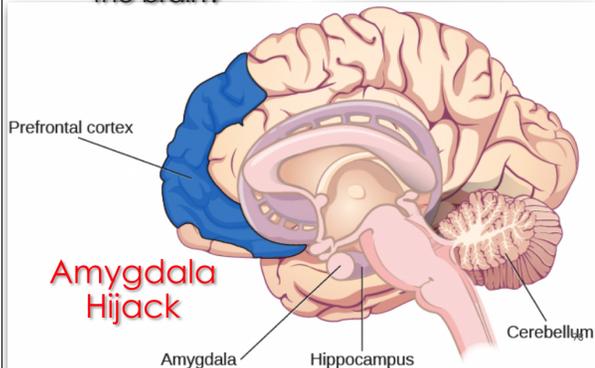
BROCA'S AREA



- Left frontal lobe of cortex
- One of the main centres of speech - allows us to put thoughts and feelings into coherent words
- Significant decrease in activity during trauma and during PTSD flashbacks

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What happens in the brain?



Amygdala Hijack

Prefrontal cortex

Amygdala

Hippocampus

Cerebellum

AUTONOMIC NERVOUS SYSTEM

ANS called autonomic because it functions autonomously.

Autonomic also means **self-regulating** and this is a key principle - depends on constant feedback in order to maintain homeostasis. There are multiple feedback loops in the body which continually send and receive information about what's going on.

These feedback loops can be severely impaired by trauma

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AUTONOMIC NERVOUS SYSTEM

- Two divisions:
 - Sympathetic - "fight or flight", allowing us to function under stress
 - Parasympathetic - "rest and digest", counterbalancing SNS

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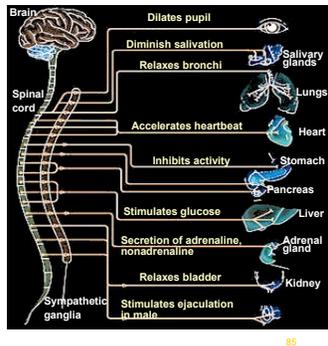
AUTONOMIC NERVOUS SYSTEM

- Two divisions:
 - Sympathetic - "fight or flight", allowing us to function under stress
 - Parasympathetic - "rest and digest", counterbalancing SNS
- Control involuntary functions
 - heartbeat
 - blood pressure
 - respiration
 - perspiration
 - digestion
- Can be influenced by thoughts and emotions

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Sympathetic Nervous System

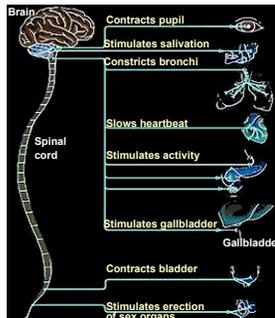
- Gets our whole body ready for action
- “Fight or flight” response
- Increases activity during stress and arousal - whether positive or negative
- Releases adrenaline and noradrenaline
- Increases heart rate and blood pressure
- Increases blood flow to skeletal muscles
- Slows digestive functions



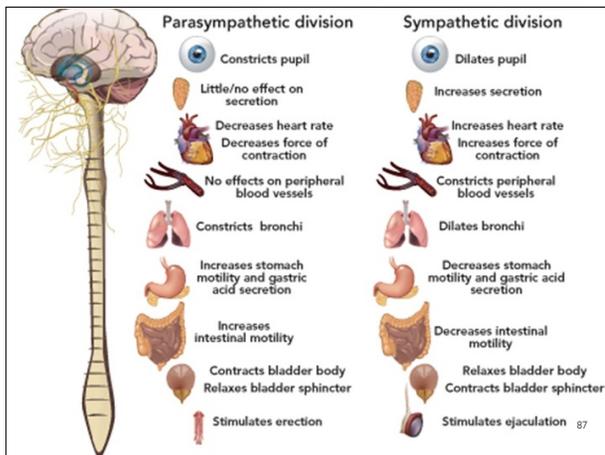
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Parasympathetic - 2 Branches

- “Social engagement system” - Ventral Vagal
- “Rest & Digest” & “Freeze” response - Dorsal Vagal
- Calms body to conserve and maintain energy
- Lowers heartbeat, breathing rate, blood pressure
- Helps us let go of muscle tension
- Slows and deepens breathing



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GENERAL PSYCHOLOGICAL MODES

Sympathetic

- Activity
- Speed
- Tension
- Focus
- Extroversion
- Goal-oriented

Parasympathetic

- Receptivity
- Slowness
- Relaxation
- Broader scope
- Introversion
- Process oriented

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PARASYMPATHETIC- SYMPATHETIC RELATIONSHIP

- The Sympathetic branch is like the gas pedal of our nervous system. It gives us energy for any action we plan, and will help us prepare for threat.

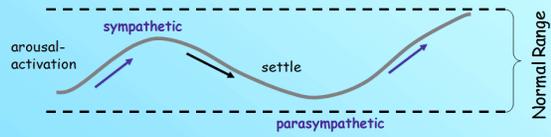
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PARASYMPATHETIC- SYMPATHETIC RELATIONSHIP

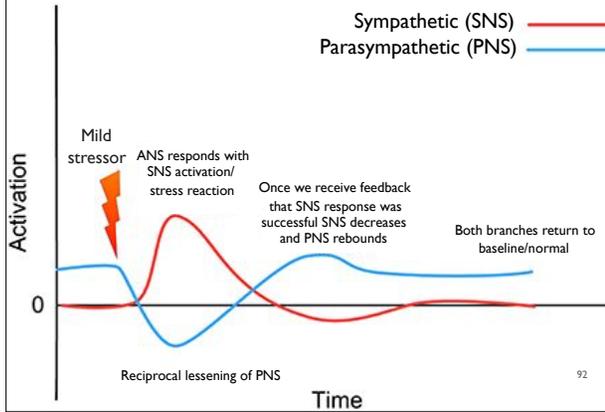
- The Sympathetic branch is like the gas pedal of our nervous system. It gives us energy for any action we plan, and will help us prepare for threat.
- The Parasympathetic branch acts like the brake pedal for our nervous system. It helps us to relax, unwind and ultimately discharge the arousal of sympathetic activation.

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A Healthy Nervous System



Mild acute stress reaction



HOW IT'S MEANT TO WORK...

- Extreme stress response ~ gazelle/cheetah video

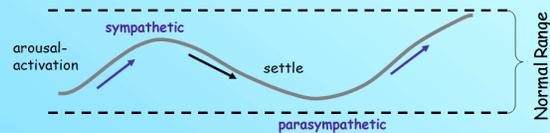
So now that we have gone over the parts of the nervous system and what happens during a traumatic event, let's re-look at what trauma actually is....

hint: It's about what is still stuck in our nervous system and body

TRAUMA & ANS DYSREGULATION

- Trauma symptoms arise when the normal regulatory flow between the PNS & SNS (brake/gas pedal) is interrupted.
- Like a car driven with both brake and gas pedals fully engaged
- Nervous system becomes over-activated when there is too much or too fast stimulation that cannot be metabolized
- Fight/Flight/Freeze are all automatic survival responses

A Healthy Nervous System



COMMON SIGNS OF ANS DYSREGULATION

- ▣ migraine headaches
- ▣ vertigo
- ▣ rapid heart rate
- ▣ heart arrhythmias, POTS (rapid heartbeat and fainting)
- ▣ chronic pain
- ▣ complex regional pain syndrome (CRPS)
- ▣ fibromyalgia
- ▣ Irritable Bowel Syndrome (IBS)
- ▣ Chronic Fatigue Syndrome (CFS)
- ▣ asthma
- ▣ autoimmune diseases

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Peter Levine, PhD

Traumatic symptoms are not caused by the “triggering” event itself. They stem from the frozen residue of energy that had not been resolved or discharged; this residue remains trapped in the nervous system where it can wreck havoc on our bodies and spirits.

From Waking the Tiger

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