

- ### Goals for Today
- Basic overview of principles of neurobiology as it relates to stress and trauma
 - Dynamics of victimization
 - Basic strategies to assist first responders
 - Wrap-up & Questions

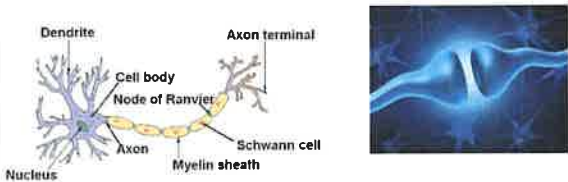
- ### Definitions
- Stress: any event, real or imagined that taxes an individual's coping mechanisms
 - Trauma: any event, physical, psychological or witnessed that overwhelms an individual's capacity to cope
 - Victimization: actual or perceived violation of basic physical and/or legal rights

EXAMPLES

- Verbal or emotional abuse
- Physical or sexual violence
- Chronic stress
- Witnessing or experiencing any event where one feels their life, or the life of someone they care for, is in danger
- Accidents/tragedies
- Natural & man-made disasters

Neuron

Structure of a Typical Neuron



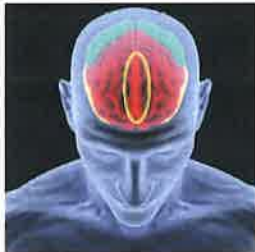
Primary Neurotransmitters

- Dopamine – motivation, learning, pleasure & reward, insight
- Serotonin – mood, social behavior, impulsivity
- Acetylcholine – learning & memory
- Oxytocin & Vasopresin – attachment & bonding

RIGHT BRAIN VS. LEFT BRAIN

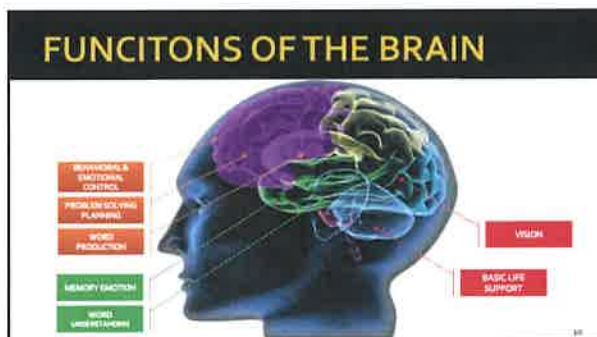


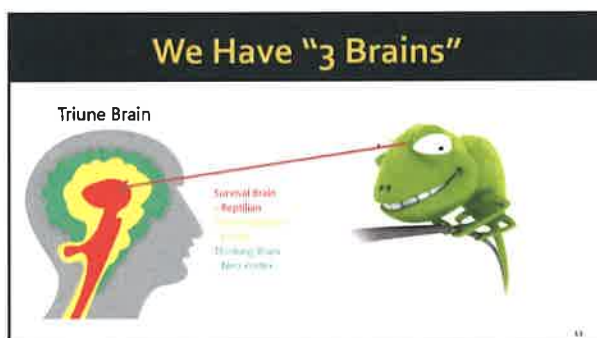
Corpus Callosum

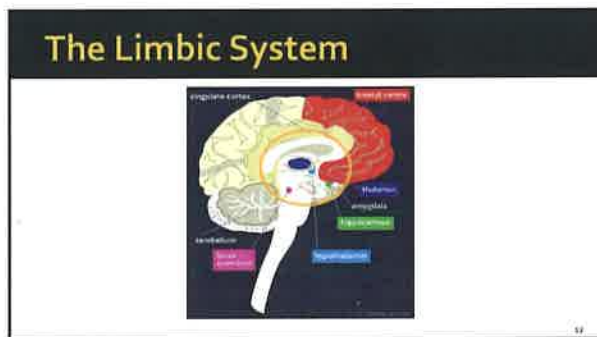


PARTS OF THE BRAIN










The Limbic System

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Autonomic Nervous System

BRAKES				GAS
PARASYMPATHETIC "REST & DIGEST"	CONTRACTS PUPILS		DILATES PUPILS	STYMPATHETIC "FIGHT & FLIGHT"
	STIMULATES SALIVA		INIBITS SALIVA	
	SLOWS HEARTBEAT		INCREASES HEARTBEAT	
	CONTRACTS AIRWAY		RELAXES AIRWAY	
	STIMULATES STOMACH ACTIVITY		INIBITS STOMACH ACTIVITY	
	INIBITS GLUCOSE RELEASE		STIMULATES GLUCOSE RELEASE	
	STIMULATES GALLBLADDER		INIBITS GALLBLADDER	
STIMULATES INTESTINAL ACTIVITY	INIBITS INTESTINAL ACTIVITY			
CONTRACTS BLADDER	SECRETES EPINEPHRINE & NOREPINEPHRINE			
	RELAXES BLADDER			

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The Hi-Jacked Frontal Lobe

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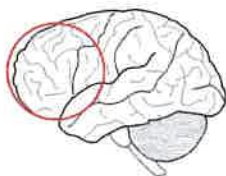
Neurobiology of Chronic Stress, Threat or Fear

- INCREASES in activation of SYMPATHETIC
- DECREASES ability of PARASYMPATHETIC to come to work and do its job
- Functioning of certain areas of brain are diminished over time

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Executive Functioning Challenges

- Abnormalities in executive function systems cause problems with:
 - Short-term memory
 - Organizational skills
 - Planning & problem-solving
 - Excessive procrastination
 - Poor time-keeping
 - Regulating emotions
 - Problems concentrating



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Chronic Stress and Victimization



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ASSESSING MENTAL STATUS

T • THOUGHTS	T • TIME
A • APPEARANCE	P • PLACE
B • BEHAVIOR	P • PERSON
S • SPEECH	S • SITUATION

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STRATEGIES FOR FIRST RESPONDERS

<p style="text-align: center;">PHYSICAL</p> <ul style="list-style-type: none">• Allow extra time for your client to get from place to place• Keep the environment quiet with noises and bright lights to a minimum• Keep sessions with the client short	<p style="text-align: center;">COGNITIVE/BEHAVIORAL</p> <ul style="list-style-type: none">• Work on one task at a time• Slow down your speed of discussion to allow time for client to process what you are saying• Allow the client additional time to provide written and/or verbal responses
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Collateral Damage

- Chronic physical health problems = higher use of services and greater healthcare costs
- Untreated symptoms = higher rates of addiction, financial problems and suicide risk

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Collateral Damage

- Untreated symptoms = higher rates of family discord & stress
- Higher rates of family stress = more domestic violence & child abuse

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Resources

- The National Center for PTSD – <http://ptsd.va.gov/>
- The National Center for Trauma-Informed Care - <http://www.samhsa.gov/nctic/>

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