

# Psychotherapy for Individuals and Families Affected by Brain Injury: A Mindfulness Based Approach

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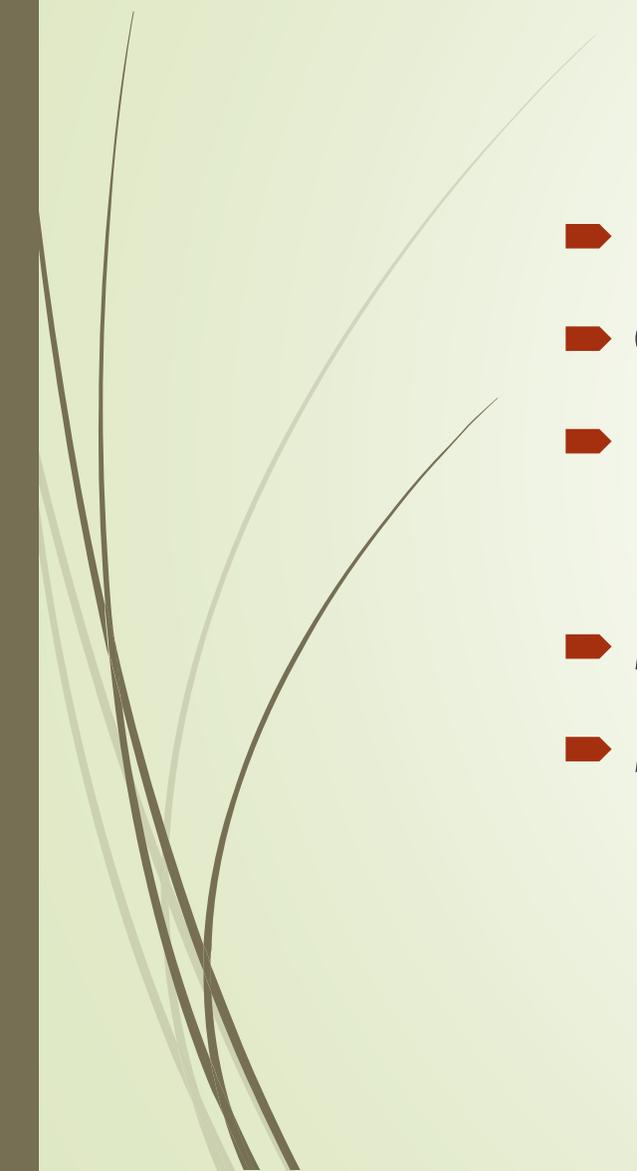
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# Discussion for Today:

- Psychotherapy and Brain Injury
  - Clinical Treatment Strategies
  - Impact of Chronic Stress on the Body and Mind
    - Attention Towards Brain Injury
  - Mindfulness
  - Mindfulness as an Intervention
- 

# Grounding Exercise



# Impact of brain injury on families

## Stress of everyday life

- Too much to do,  
not enough time
- Work/employment
- Family/relationships
- Health & Safety
- Finances
- Laundry, groceries, chores
- Traffic
- Cell phones, tablets,  
computers
- Focus on productivity





# Additional stresses when living with a neurological condition

- Impact on Relationships
    - Roles shift
    - Increased demands on family members time
    - Responsibilities change
    - Less time for self care
  - Increase in family conflict
  - Employment/financial difficulty
- 



# Common experiences:

- Fear
- Worry
- Powerlessness
- Uncertainty
- Lack of control
- Frustration
- Grief

Communication  
challenges

Cognitive  
Impairment

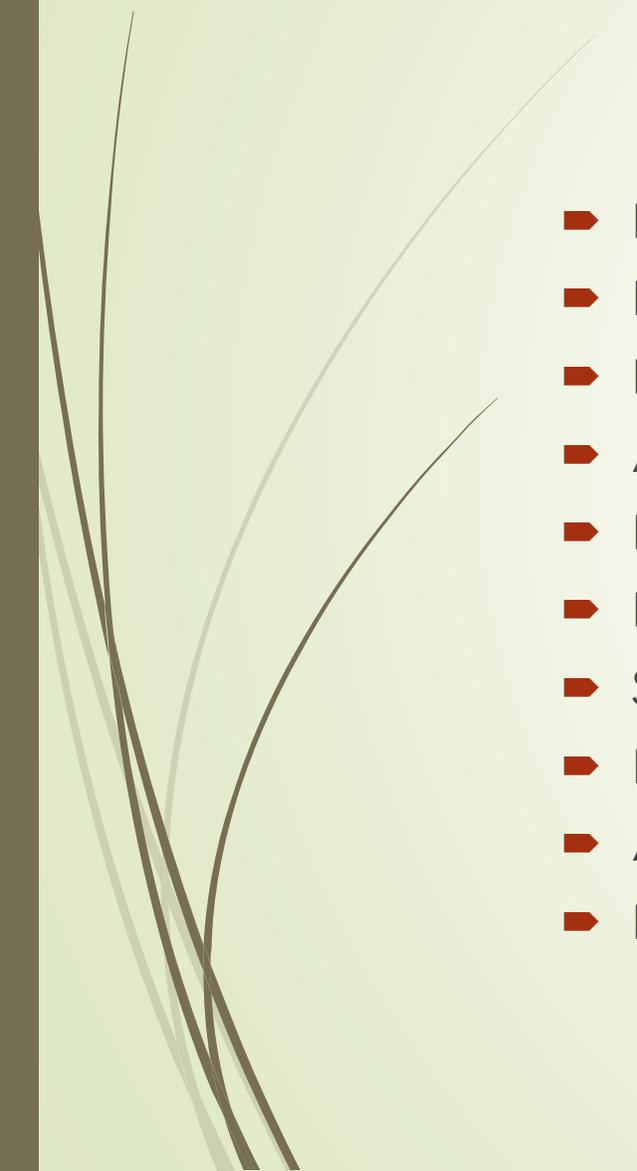
Inappropriate  
behavior

Repetitive  
questions

Mental  
Inflexibility



# Referrals for Psychotherapy

- ▶ Post-concussive syndrome
  - ▶ Depression
  - ▶ Post-traumatic stress disorder and other anxiety disorders
  - ▶ Anger, agitation, aggression, and violence
  - ▶ Behavioral regulation
  - ▶ Lack of awareness
  - ▶ Sexuality, sexual functioning, and intimacy
  - ▶ Relationship issues
  - ▶ Alcohol and substance abuse/dependence
  - ▶ Family/caregiver distress
- 



# Clinical Strategies

- ▶ Understanding the symptoms and behavior are **very important**
  - ▶ Cognition: Neuropsychological testing
  - ▶ Behavior Symptoms
  - ▶ Emotional disturbance
- ▶ Take a structured approach
- ▶ Involving family members can be helpful
- ▶ Include the individual with TBI when developing treatment strategy
- ▶ Consider his/her strengths and weaknesses – best case for success if they can rely on what they know
  - ▶ Learning style in the context of cognitive profile
  - ▶ Set realistic expectations
- ▶ Functional needs are a good place to start
  - ▶ Independence and autonomy
- ▶ Education



# Treatment Strategies



- ▶ **Insight Oriented Psychotherapy:** a process to gain more awareness and insight into our thoughts, feelings, and behaviors
  - ▶ May not be useful given the patients deficits, awareness of changes or difficulties, willingness to participate in treatment
  - ▶ Individuals with TBI, who may have problems with attention, memory, thought organization, or abstract processing, may not benefit from this style
  - ▶ Insight oriented psychotherapy could only be implemented with individuals who have suffered mild or moderate debilitating effects (Wood and Worthington, 2002)
- ▶ If pursued: focus on increase of understanding of what has happened, the injury, and its effects (Prigatano, 1986)
  - ▶ develop strategies for acceptance of injury, achieve self-acceptance, be realistic, and adjust to role and relationship changes
  - ▶ increase social appropriateness and develop behavioral strategies
- ▶ Often conducted in a group setting



# Treatment Strategies

- ▶ **Cognitive Behavioral Therapy:** Behavior is shaped by interpretation and perception of experience
  - ▶ links beliefs, thoughts, feelings, and behavior
- ▶ Individual is required to analyze maladaptive behavior in regard to any underlying beliefs that may be untrue, unrealistic, or counterproductive to meeting basic needs.
- ▶ Benefit of this approach is that one can alter behavior by changing beliefs or the way one thinks when it may not be possible to change the external situation
- ▶ Effectiveness of cognitive behavioral therapy with TBI is often dependent upon the individual's level of cognitive functioning
  - ▶ self-direction
  - ▶ self-monitoring
  - ▶ ability to tolerate frustration
  - ▶ requires mental flexibility
- ▶ Sessions can be highly structured, repetitive, and include role play.
  - ▶ through repetition and structure, the likelihood will increase that CBT will be successful
- ▶ A more flexible protocol can be useful
  - ▶ the therapist might adapt to the needs of the individual rather than the individual adapting to the structure of the treatment



# Treatment Strategies

**Behavior Therapy:** manipulate the person's environmental antecedents (what precedes a behavior) and consequences (what follows or results from the behavior) in order to decrease the likelihood of maladaptive behaviors occurring and increase more positive, adaptive behaviors

- ▶ Typically, individuals who are not appropriate for insight oriented psychotherapy or CBT are able to benefit from behavior therapy.
- ▶ Behavior therapy is currently accepted as an effective intervention for modifying behavior following TBI.
- ▶ Traditionally, behavior therapy has focused on modification of maladaptive behaviors.
- ▶ However, it has also been effective in helping individuals to relearn other skills such as self-care, budgeting, etc.



# Treatment Strategies: Mindfulness

Cultivating a friendly, non-judging, present moment awareness in everything we do

An opportunity to work towards greater self-understanding and peacefulness

Being awake and fully aware

Paying attention on purpose

Openness and Acceptance of difficult experiences

Mindful presence promotes *being* instead of *doing*



# Mindfulness

Everything happens in the **present moment**.

*The past is a memory that is occurring in the present moment.*

*The future is something being imagined in the present moment.*

We really only have control of what is happening in the present moment!

Every moment is a chance to be your best self, to show up fully, in that very moment.



# How does mindfulness work?

Meditation practices help cultivate mindfulness by helping you become aware, becoming present to each moment in it's fullness.

As you become aware of your experiences you begin to see them as 'conditions of the present moment' instead of your 'enemy' or 'problem'

You turn toward the experience rather than resist it or be fearful of it.

# 7 essential attitudes of mindfulness:

**Nonjudging:** take the position of an unbiased, nonreactive, non critical witness to your experience without judgment

**Patience:** bear difficulty with calmness and self control, have faith and courage in yourself

**Beginner's mind:** be open to the experience in each moment as if meeting it for the first time

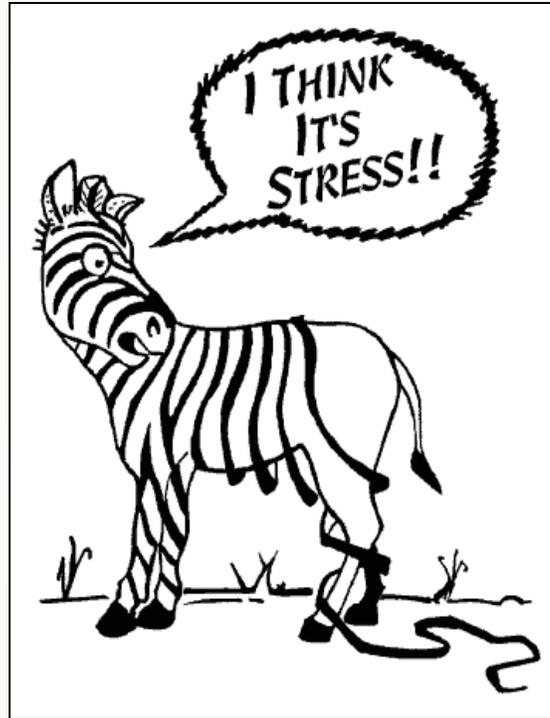
**Trust:** of yourself and your feelings. You and you alone are the best person to know what is going on with you

**Non-striving:** being instead of doing, allow what is happening to happen without yearning for something more or something different

**Acceptance:** the willingness to see things exactly as they are in the present moment rather than as you think they are or should be

**Letting Go:** non-attachment, non-clinging to ideas or views about yourself, others, and situations

Standard American lifestyle...promotes  
mindlessness



STRESS: A process by which we appraise and cope with environmental challenges and threats that affect our well being.

# Stress Response: Activates the Sympathetic Nervous System

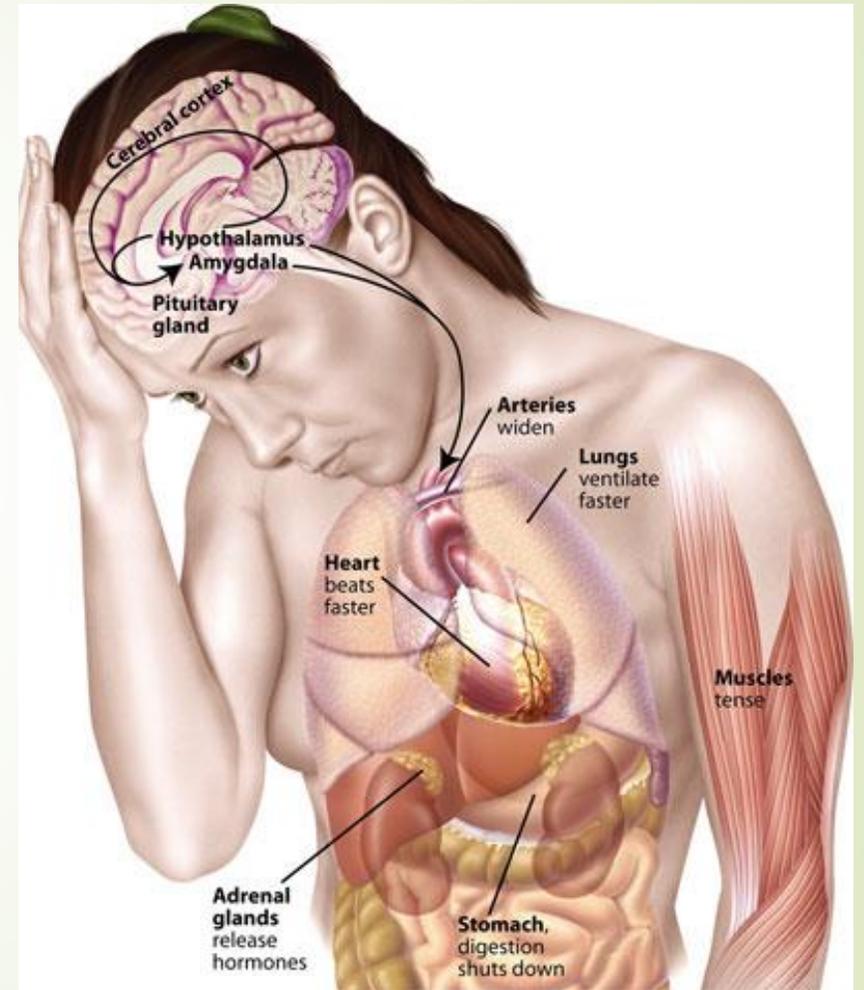
The brain sends an alarm signal via chemical transmission when a stressful event occurs.

**Pupils Dilate** to let in more light, all of the senses heightened.

**Body Perspires** – the cooling system as increased metabolism generates more heat.

**Breathing** becomes rapid and shallow.

Blood flow restricted to the **digestive system, hands and feet** and increases to the brain and major muscles. Skin pales, extremities get cold.



# Stress Response: Activates the Sympathetic Nervous System

**Epinephrine increases, heart rate**

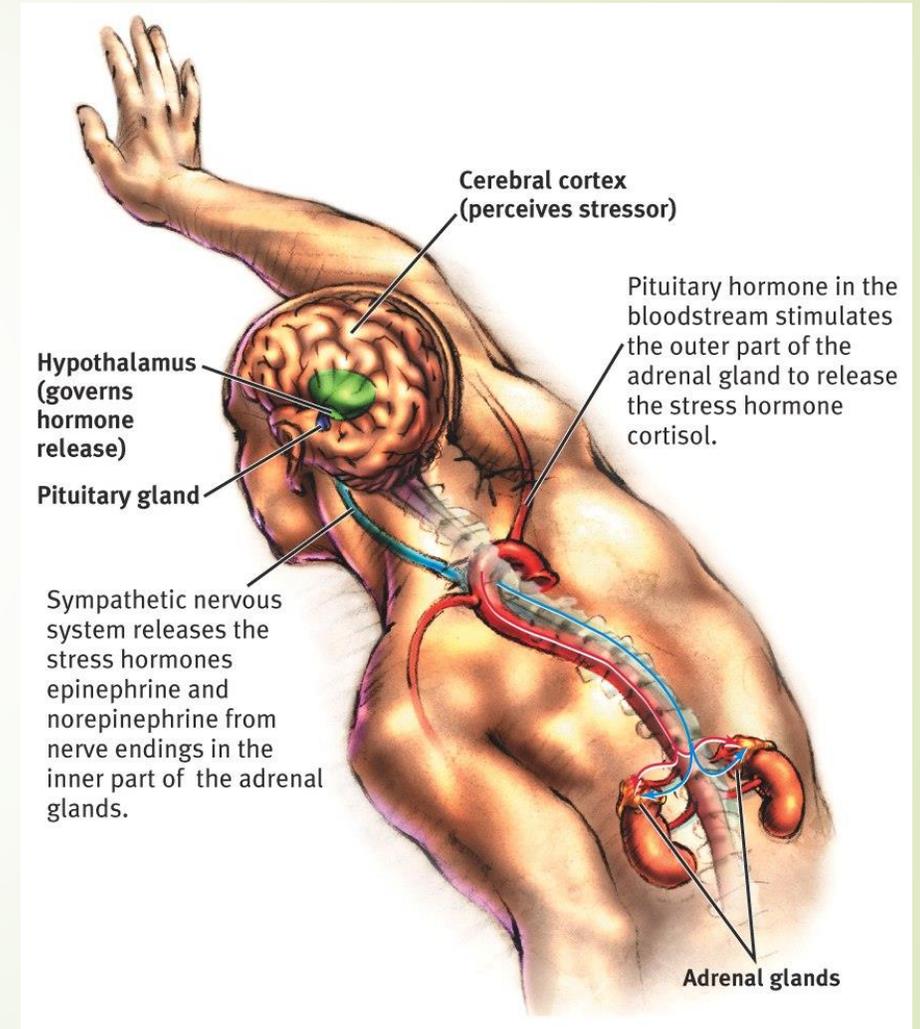
**increases:** pumps blood faster to carry O<sub>2</sub> and nutrients to cells and clear waste products quickly

**Norepinephrine sends blood to large muscles** which tense for movement or protective actions.

Adrenal glands release cortisol which suppresses immune system

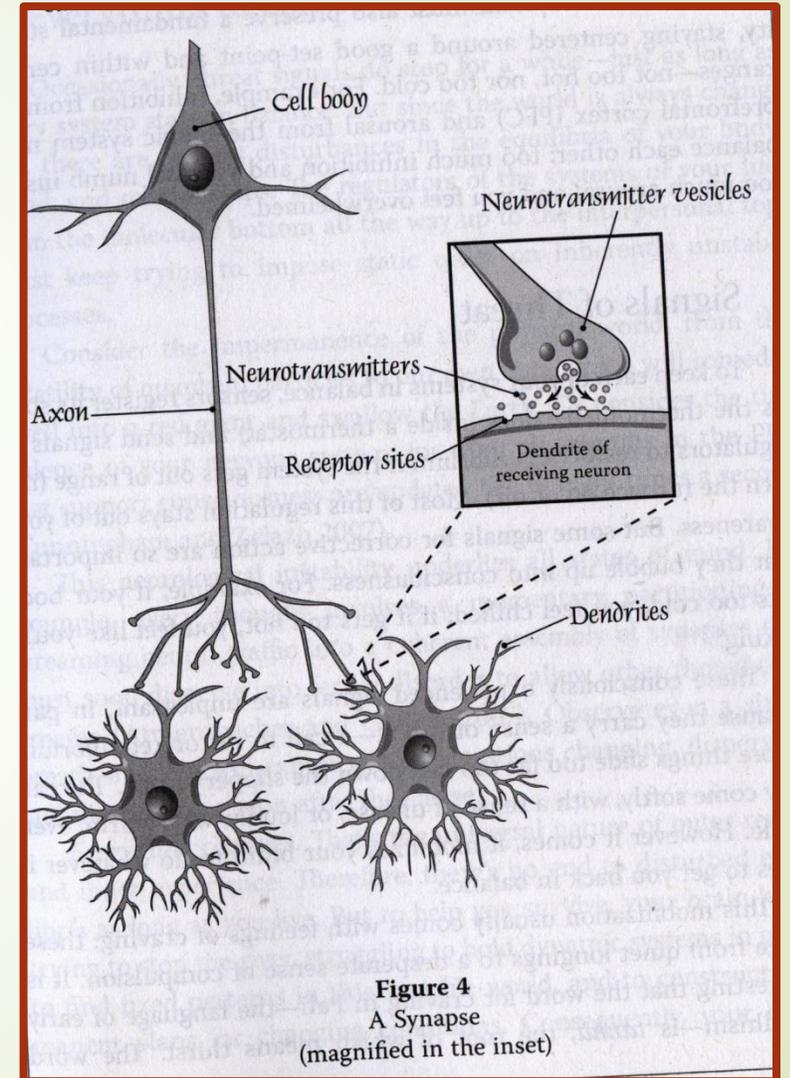
**Lipids** (fats) are released into the bloodstream

Liver releases stored **sugar** into the blood to meet the increased energy needs



# Stress Response: Activates the Sympathetic Nervous System

- Excess Cortisol and Glucocorticoids
  - wears on hippocampus - weakens synapses and prevents formation of new ones, affecting memory
  - depletes dopamine, affecting experience of joy or pleasure
  - depletes norepinephrine which helps us feel cheerful and alert, leading to fatigue and lack of concentration
- Stress also reduces serotonin, affecting mood



# Parasympathetic Nervous System

A normal resting state

Slows the heart rate, increases intestinal and gland activity, relaxes muscles

Equilibrium in the body

Rest and Digest

The body is cooling and conserving energy

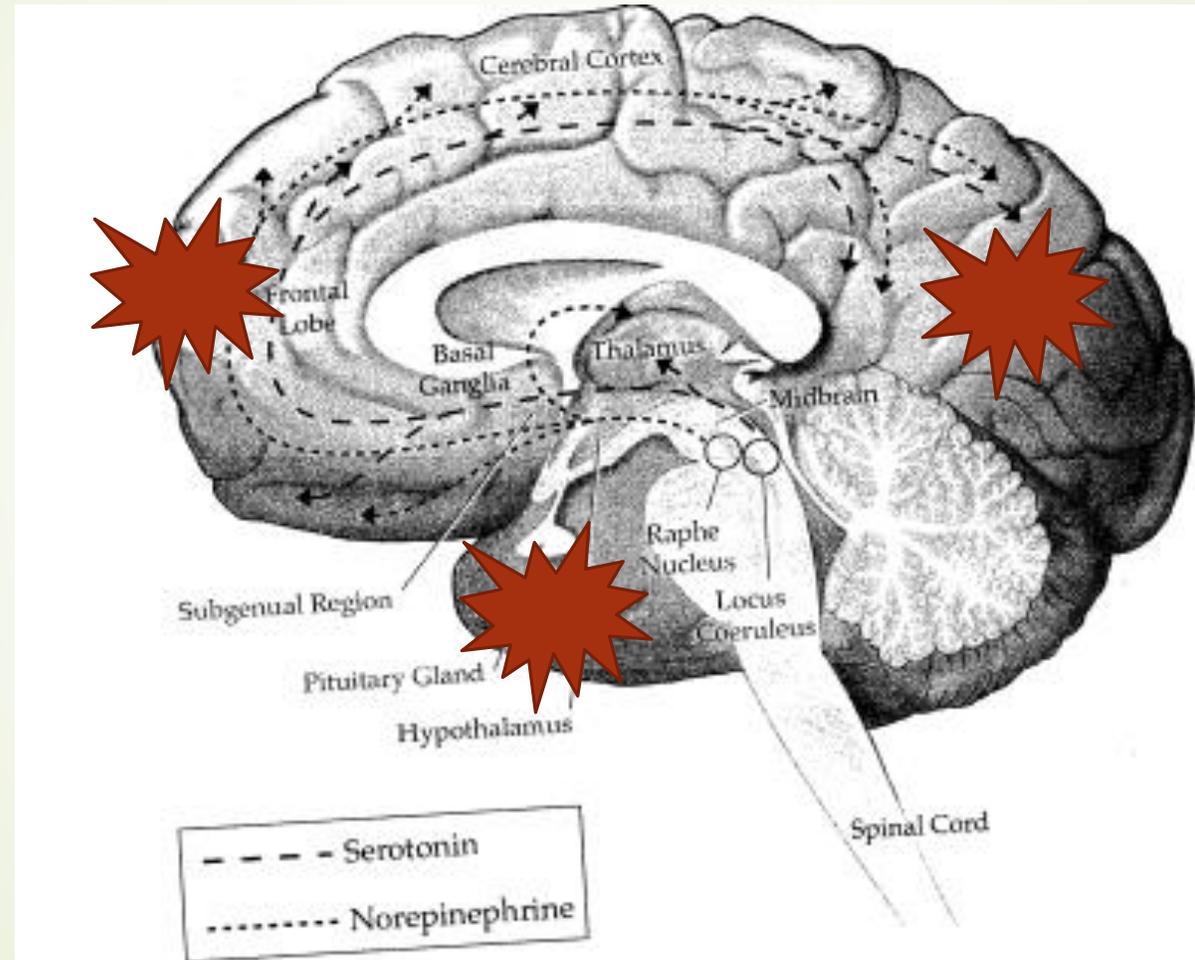
Produces feeling of relaxation and contentment

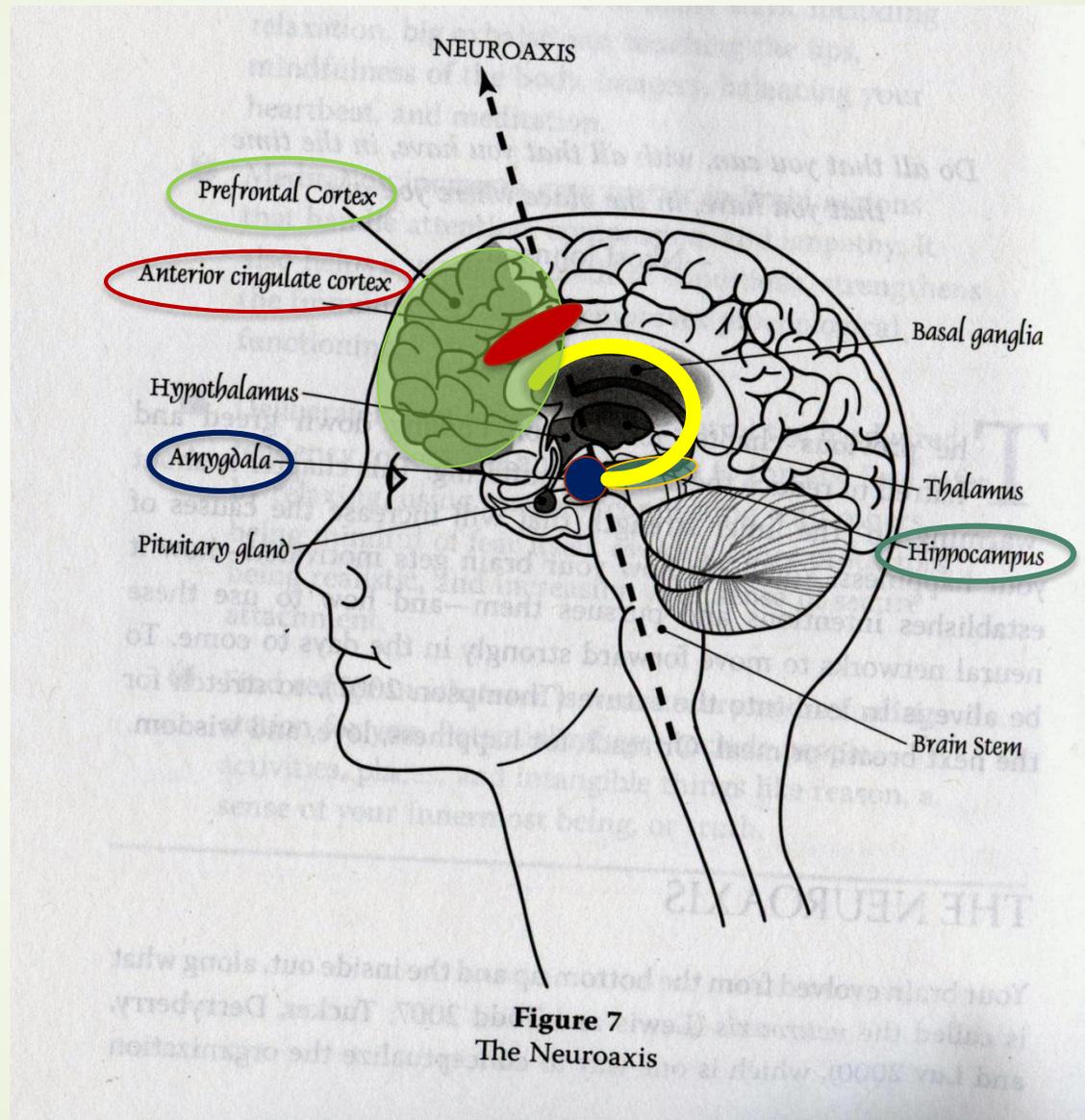
Activating the parasympathetic system includes:

- Diaphragmatic Breathing, especially a long 'out' breath
- Progressive Relaxation
- Guided Imagery
- Meditation
- Social support (feeling safe, secure attachments)
- Finding refuge (safety, protection, solace) church, nature, bath, people, creativity
- Mindfulness



# Mindfulness and brain injury





Hanson, 2009

Poor planning,  
problem solving,  
goal setting and  
poor inhibition  
of emotions

Decreased  
concentration  
and attention,  
cognitive  
control,  
integration of  
thoughts and  
impulses

Fear  
perception,  
start stress  
cascade

Emotions take over,  
more reactive to  
perceived threat  
further promoting  
fear, anxiety, anger...

Memory  
suppressed

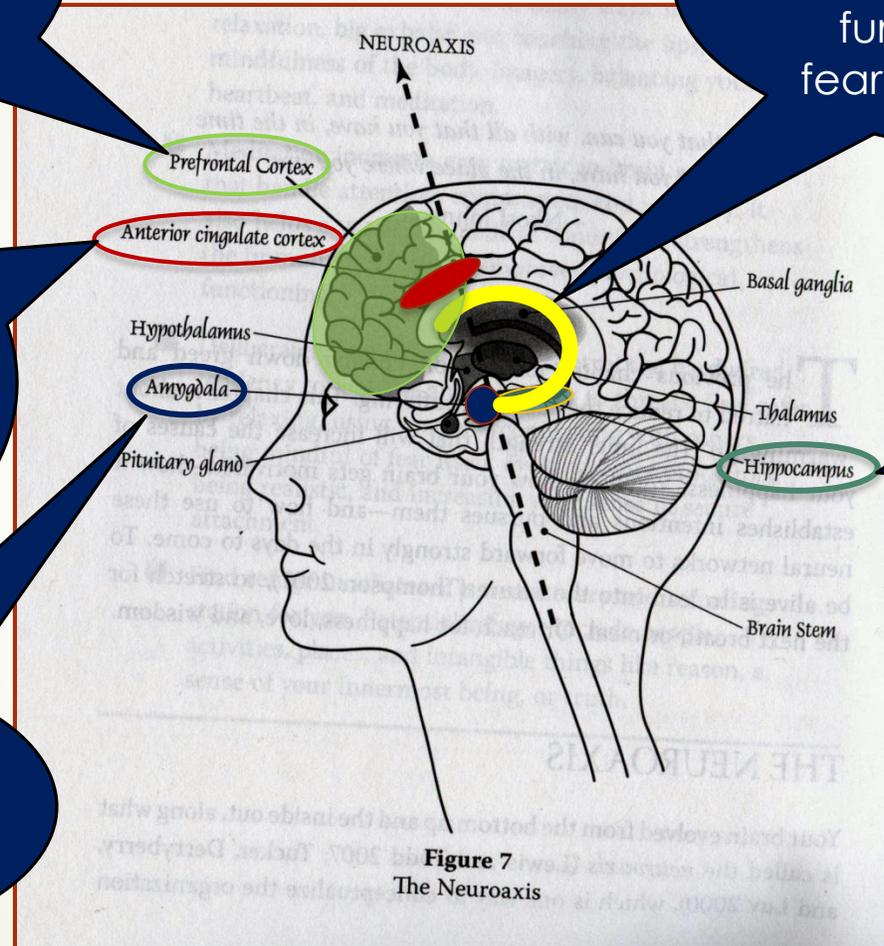
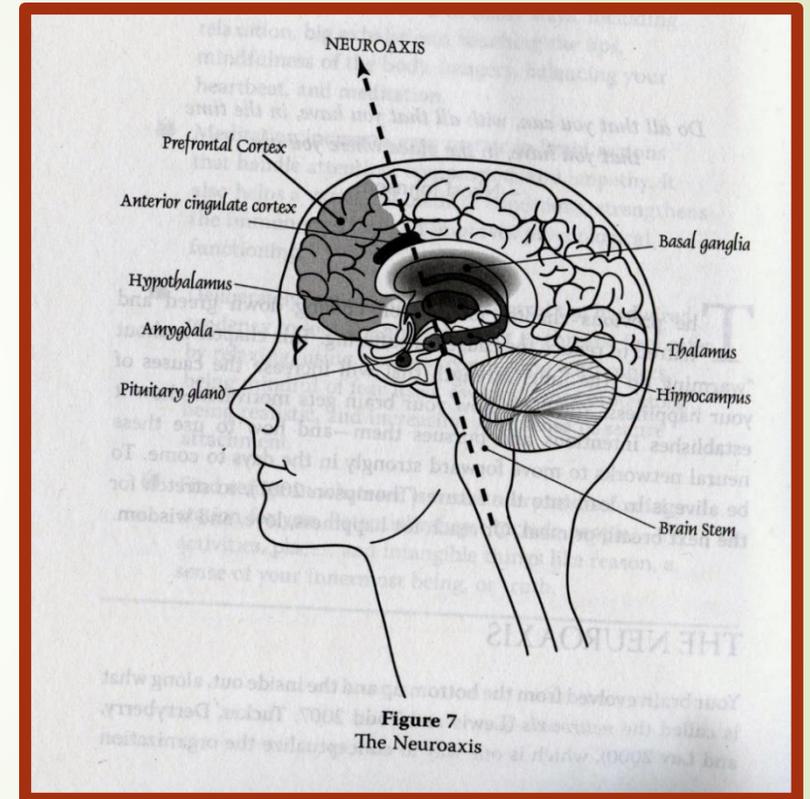


Figure 7  
The Neuroaxis

# The Mindful Brain

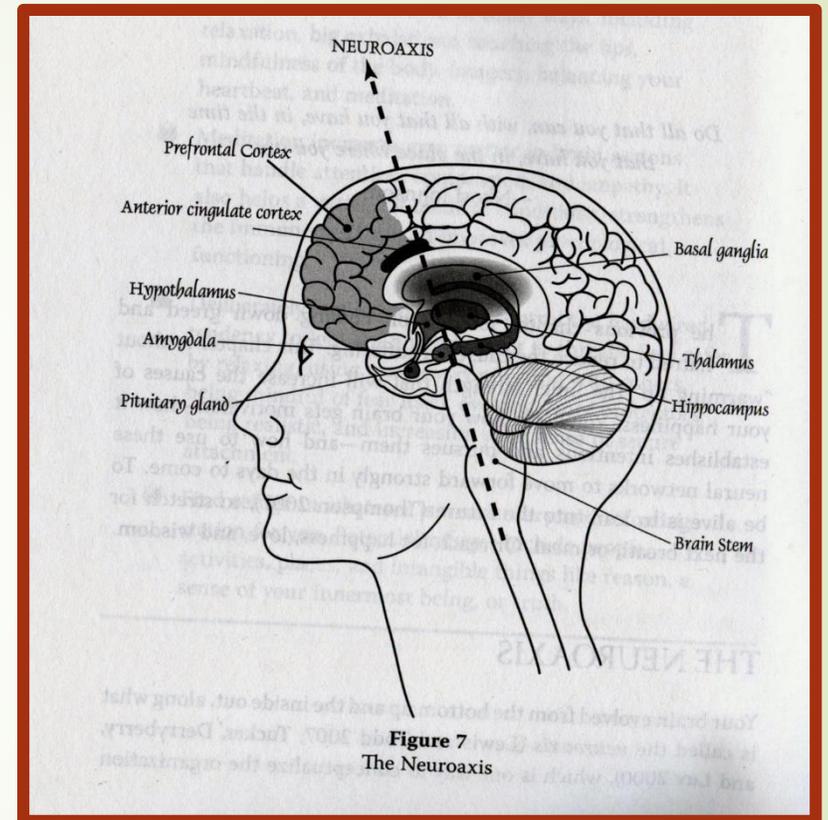
## Prefrontal Cortex (PFC)

- involved in ability to identify and/or label ongoing subjective experiences
- has top down regulation of the amygdala (involved in fear processing)
- theorized to be a part of the cognitive reappraisal process – making meaning of sensory events, and regulating emotions (Banks, 2007, Drabant, 2009, Goldin, 2008)
- hub for integrating self narrative thought (Farb 2013);



# The Mindful Brain

- ▶ Structural density and gray matter differences in the amygdala and insula of meditators (Holzel, 2008, 2010, Zeidan, 2011)
- ▶ Less age related changes including cortical thinning (Grant, 2010; Hozel, 2008; Lazar, 2005)
- ▶ Reduced neuroendocrine stress reactivity (Brown, 2012; Ciesla, 2012; Tamagawa, 2013)
- ▶ Lower amygdala activity at rest (Way, 2010)
- ▶ Activation in the ACC was associated with reductions in pain and anxiety level
- ▶ Attending to internal sensations and body awareness activates PFC, insula, sensory cortex (Farb, 2007)



# Mindfulness and Mood

- ▶ Those who practice mindfulness or who are dispositionally mindful are more successful at controlling affective responses to negative stimuli (Modinos, 2010, Creswell, 2007)
- ▶ MBSR improves clinical anxiety with reductions in amygdala (Goldin, 2010)
- ▶ Reduction in symptoms of  
Anxiety (Roemer, 2008, Delgado-Pastor, 2015)  
Depression (Teasdale, 2000, Alderen, 2015, Kukyken, 2015)  
Eating disorder (Tapper, 2009, Atkinson, 2015)  
Chronic pain (Grossman, 2007)
- ▶ Better sleep and physical health (Murphy 2012)
- ▶ Higher psychological well being (Brown, 2003)



# Impact of Mindfulness

- Emotions
  - Behaviors
  - Cognition
- 



# Mindfulness and TBI

- Decrease depression and anxiety
  - Better able to cope with emotions
  - Pain control
  - Decrease medical and psychological symptoms
  - And research is beginning to demonstrate its similar efficacy in the treatment of complaints associated with TBI, revealing a reduction in anxiety, stress, and isolation, for example, along with improvements in memory, attention, and other cognitive functions.
- 



# How can mindfulness help with cognition or clearer thinking?

Attention is the key

- Strengthen neural pathways – neurons that wire together, fire together
- What we pay attention to is illuminated, becomes the focus
- When we attend to each moment, we “remember” better
- Increased cognitive efficiency, get more out of doing less
- Better able to achieve our cognitive capacity
- A “well” brain is less vulnerable to aging
- More in control of regulating our emotions – avoiding emotional interference

# How can mindfulness help family members?

- Mindfulness can be helpful to the diagnosed individual, whose world may now exist in the present moment. A family member who understands this mindset has a powerful perspective.
- Mindful approach focuses on *being* instead of *doing*. In a situation that calls for a lot of *doing*, practicing *being* can be helpful for both partners.



# How can mindfulness help with caregiving?

Family members can focus on **present moment awareness** to stop judgment of past behavior, extend forgiveness to themselves for real or perceived failings and recognize that they, and everyone else, are doing the best they can.

**“Acceptance** does not mean “liking” or “approving” or even “condoning.” Acceptance simply means coming to a serenity with what IS.

...to constantly fight and deny what has occurred is to keep ourselves from being compassionate and effective caregivers.”



# Mindfulness to cope with difficult behaviors

- ▶ Repetitive questions, irrational thinking, lack of emotions
  - ▶ The moment at hand is what matters. All prior and future moments don't matter in that moment the behavior is happening. This mindset will give the ability to respond without criticism or judgment of the behavior or a reaction to it
- ▶ Be a part of the moment rather than being controlled by it or fearful of it
- ▶ Ebb and Flow: recognizing successful behavior rather than only seeing failures
  - ▶ Accepting the loved ones new state of mind
- ▶ Repetitive Qs and Should Haves/SHOULDING
  - ▶ Ability to respond with compassion rather than anger
  - ▶ Kindness towards self
- ▶ Changing symptoms that can't be controlled
  - ▶ There will be embarrassing situations, behavior you will have to explain away,
  - ▶ You cannot control these situations, and getting into a peaceful mindset about this will ease your own suffering

# Mindfulness in Psychotherapy

- Education
- Discussion
- Practice

# HOW?

**Mindful-**

**awareness**

**breathing**

**thinking**

**eating**

**body scan**

**walking**

**Mindful-**

**cooking**

**dish washing**

**yoga**

**work**

**relationships**



**Stop and pay attention to everything you do**

# Breathe...

Mindful breathing can help reverse the stress response and retrain the body to be less reactive to stressful situations





# Mindfulness in Clinical Practice

- ▶ Mindfulness Based Cognitive Therapy
    - ▶ Changes thoughts associated with difficulty
    - ▶ e.g., STOP
  - ▶ Paying attention on purpose/mindful awareness
  - ▶ Gratitude practices
  - ▶ Judgment and Self-criticism, Kindness and Compassion
- 

## Stressing Out?



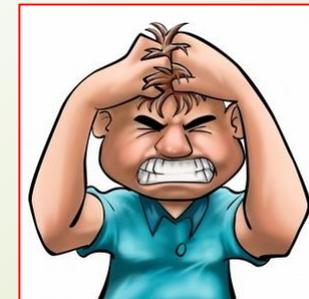
S	T	O	P
<p>Stop what you are doing. Put things down for a minute.</p>	<p>Take a few deep breaths. Pause to concentrate on your breath. Breathe in and out and follow the breath coming in and out of your nose.</p> <p>To help you concentrate on the breath you can say "in" on the in breath and "out" on the out breath.</p>	<p>Observe your experience just as it is, including <u>thoughts</u> <u>feelings</u> and <u>emotions</u>. Reflect about what is on your mind. Notice that thoughts are not facts and they are not permanent. Notice your emotions and how they are being expressed in your body. Name the emotions. Notice your body – where and what are the sensations in your body?</p>	<p>Proceed with what you were doing or choose to do something that will support you in the moment. Talk to a friend, stretch or rub your shoulders, have a cup of tea, go for a walk.</p>



# The "Cope" Chest

- Wake from sleep +3 credits
- Construction, slow commute -1 = 2 credits left
- Left your wallet at home -1 = 1 credit left
- Neighbor can't pick up your loved one -1 = 0 credits left

You have a conversation with your loved one about tomorrow's doctor appointment, and 5 minutes later they ask you questions that YOU JUST ANSWERED.  
*But you have no credits left.....*





# The “Cope” Chest (revised)

Wake from sleep +3 credits  
5 minute mindfulness meditation +1 = 4 credits  
Construction, slow commute -1 = 3 credits left  
Left your wallet at home -1 = 2 credit left  
Neighbor can't pick up your loved one -1 = 1 credit left  
5 minute mindfulness meditation +1 = 2 credits left

You have a conversation with your loved one about tomorrow's doctor appointment, and 5 minutes later they ask you questions that YOU JUST ANSWERED...



*You take a deep breath, smile, and repeat yourself, without judgment of the situation, accepting the circumstance for what it is, and acknowledging yourself and your loved one for doing the best you can.*

# Suggestions for starting a mindfulness/meditation practice

Start with 5 minutes per day

Find a community (local or online)

- ▶ Mindful practices are easier to sustain with a supportive community
- ▶ A community can be as small as two people. Partner with a fellow caregiver. Find a spiritual buddy.

Find a way to practice that works best for you, fits with your day and your lifestyle.

“ The best way to start and end the day is by practicing mindfulness by finding a quiet place, sitting in a relaxed posture, and closing the eyes to focus on breathing. A twice-a-day routine such as this can combat stress, and can help incorporate mindfulness into the daily routine.” ~ adapted *Marguerite Manteau-Rao, LCSW*





# Summary



- ▶ Psychotherapy for individuals and families affected by brain injury requires the clinician to attend to the unique circumstances of the impact of this condition on the cognitive, emotional, and psychosocial impact to the affected individual and the family system
- ▶ Mindfulness offers an opportunity to
  - ▶ Improve mood symptoms
  - ▶ Improve cognitive symptoms
  - ▶ Give families strategies to cope effectively with the impact of brain injury on their lives

# A small sample of References and Resources

- ▶ Jon Kabat-Zinn (1990) *Full Catastrophe Living*.
  - ▶ Founder of Mindfulness Based Stress Reduction technique
- ▶ Mind Deep: A Mindfulness Practice Blog  
<http://minddeep.blogspot.com/>
- ▶ [www.BrainLine.org](http://www.BrainLine.org)
- ▶ *Psychotherapy After Brain Injury: Principles and Techniques* by Pamela S. Klonoff
- ▶ *Effective Psychotherapy for Individuals with Brain Injury* by Ronald M. Ruff and Serana K. Chester



# Questions and Discussion

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