A stylized, light gray leaf graphic on the left side of the slide. It features a central stem with several elongated, pointed leaves branching out. Below the main cluster, there is a smaller, heart-shaped leaf with internal vein details, and a small sprig with two leaves at the bottom left.

# Wired for Connection: Unraveling the Neurobiology of Trauma and Attachment

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Katrina Eggers, LPC  
Denali Family Services

A stylized, light gray leaf graphic on the right side of the slide, mirroring the one on the left. It features a central stem with several elongated, pointed leaves branching out. Below the main cluster, there is a smaller, heart-shaped leaf with internal vein details, and a small sprig with two leaves at the bottom right.

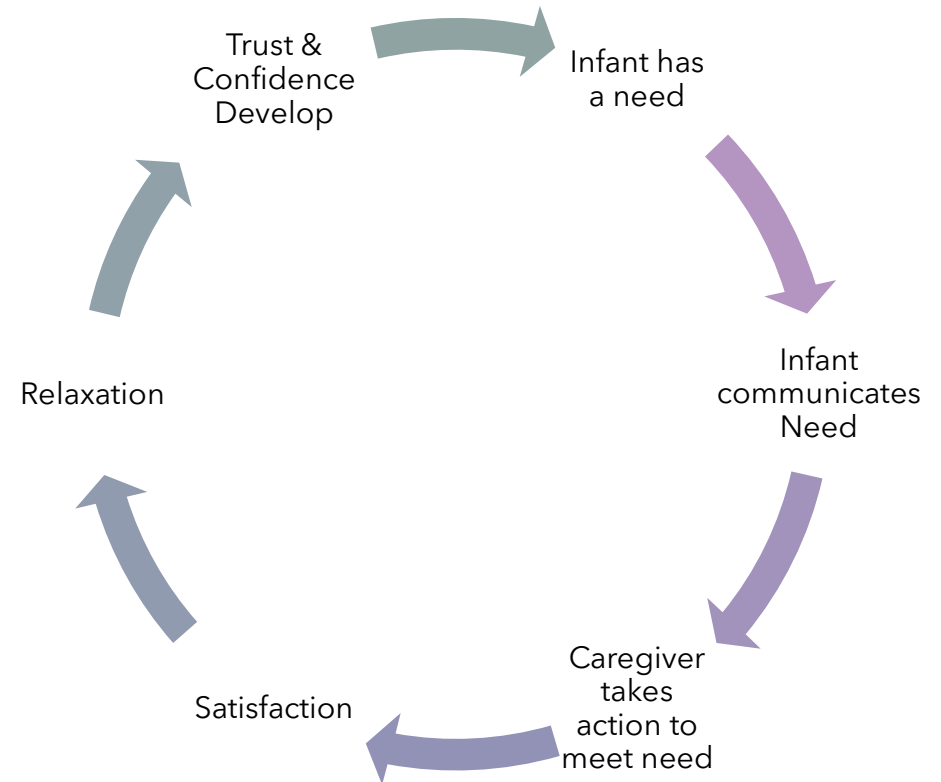
# Agenda

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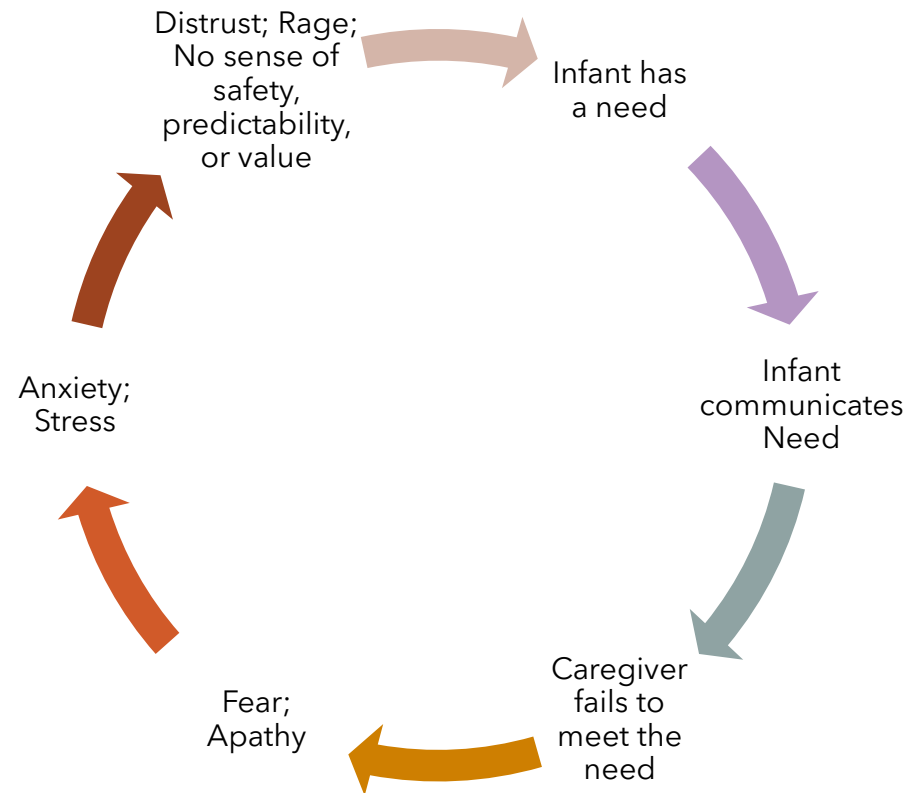
- Trust & Attachment
- Brain-Body Connection
- Memory
- Hope
- Q&A



# The First Year Trust Cycle

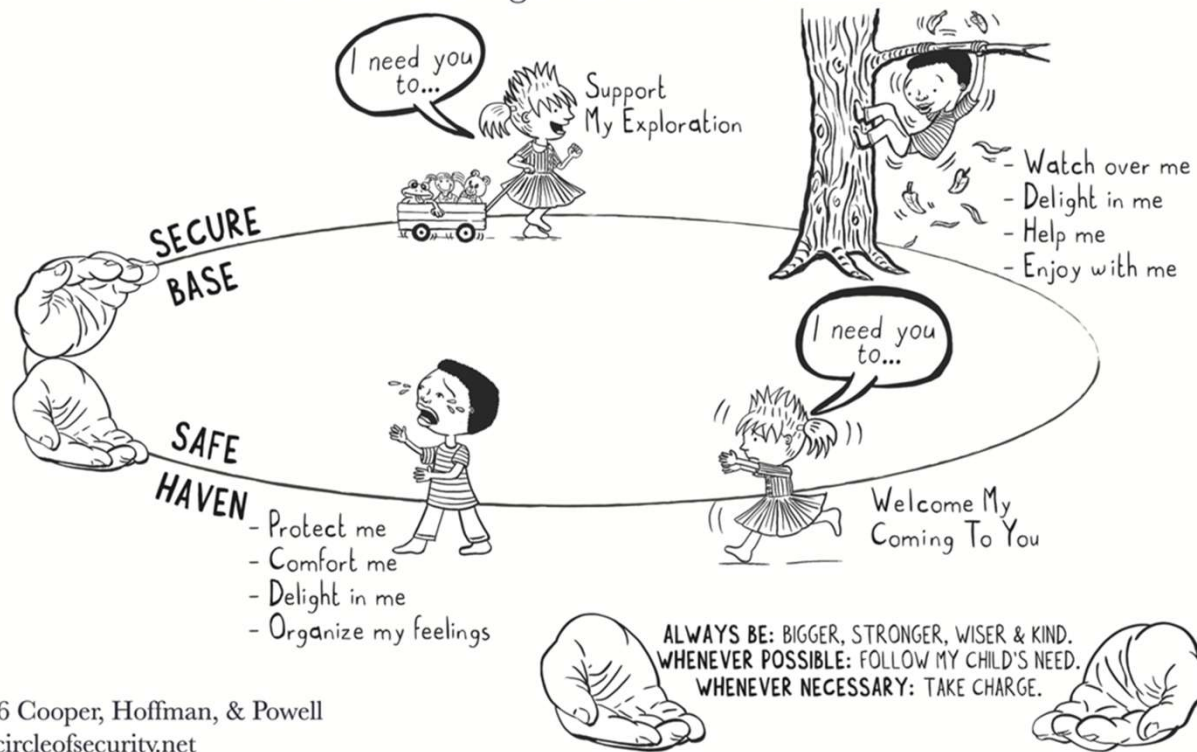


# The First Year Trust Cycle



# Circle of Security®

Parent Attending To The Child's Needs

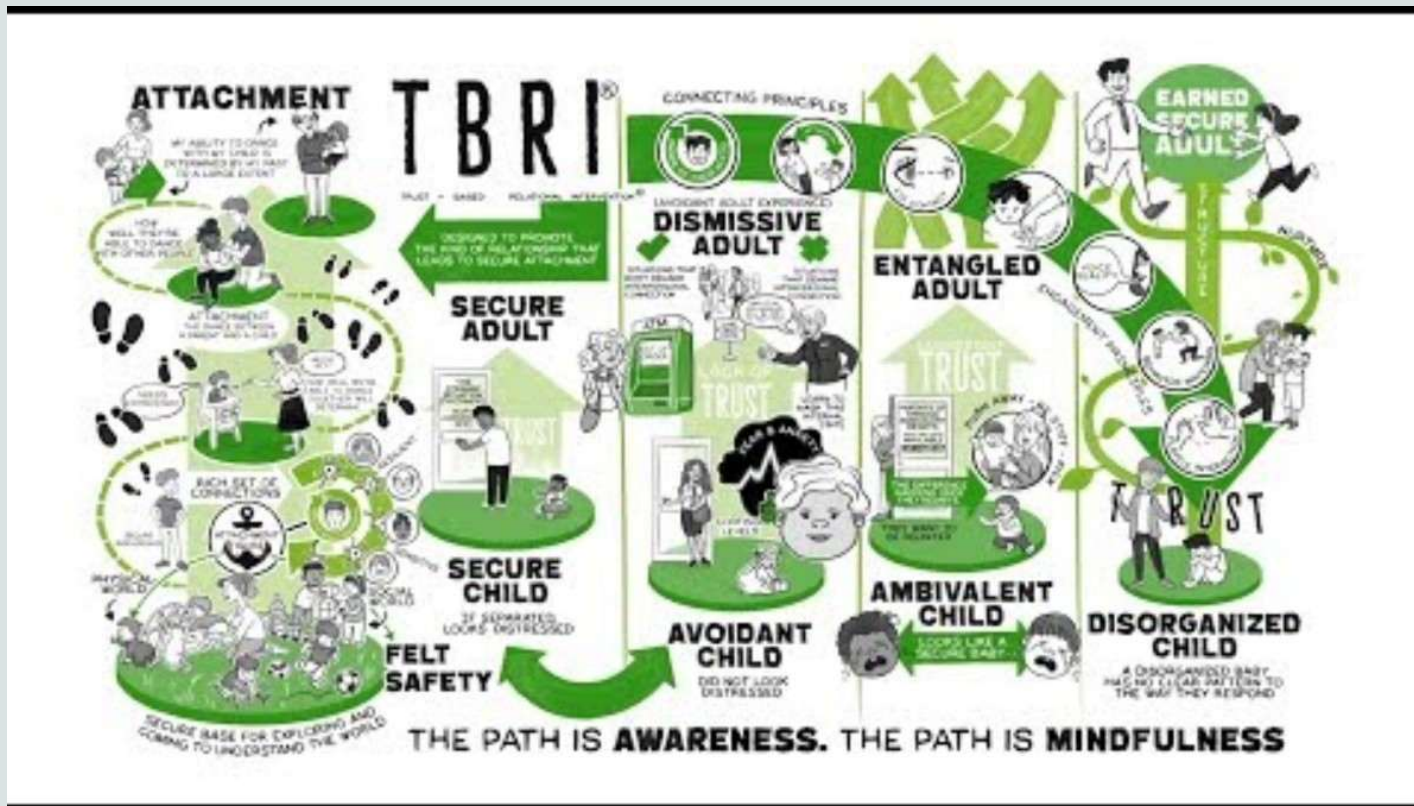


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## Circle of Security

BUILDING FELT  
SAFETY IN THE  
TODDLER &  
PRESCHOOL  
YEARS

# Karyn Purvis Institute of Child Development





# Infant/Child Attachment Styles



## **Secure**

- *Content, engaged, on task*

## **Anxious/Avoidant**

- *Quiet, withdrawn, anxious*

## **Anxious/Ambivalent**

- *Not focused, insecure, asking a lot of questions*

## **Disorganized**

- *Angry, depressed, not following directions, short fuse, difficulty making friends*

# What happens when we grow up?



Child Attachment Styles = Adult Mindset





# Adult Mindset



## **Secure/Earned Secure**

- Secure in relationships, values relationships, can give and receive care, realistic views on childhood, easily forms close relationships, positive self-esteem, negotiates needs

## **Dismissive**

- Limited childhood memory, emotionally closed off, values material things, may idealize caregiver, minimizes relationships, focus on goal attainment, avoids intimacy, little support to others in distress

## **Entangled/Preoccupied**

- Angry/resentful toward caregivers, often unsatisfied with closeness to others, worry that others don't reciprocate feelings, clingy, may be intrusive with caregiving or in relationships

## **Unresolved**

- Disorganized view of caregivers, dissociation, aggressive or hostile, untrusting, difficulty w/ relationships; mental health diagnosis or substance abuse, difficulty being present in the moment with child

# Hope for the future



- Protective factors
- Therapeutic interventions
- Felt safety

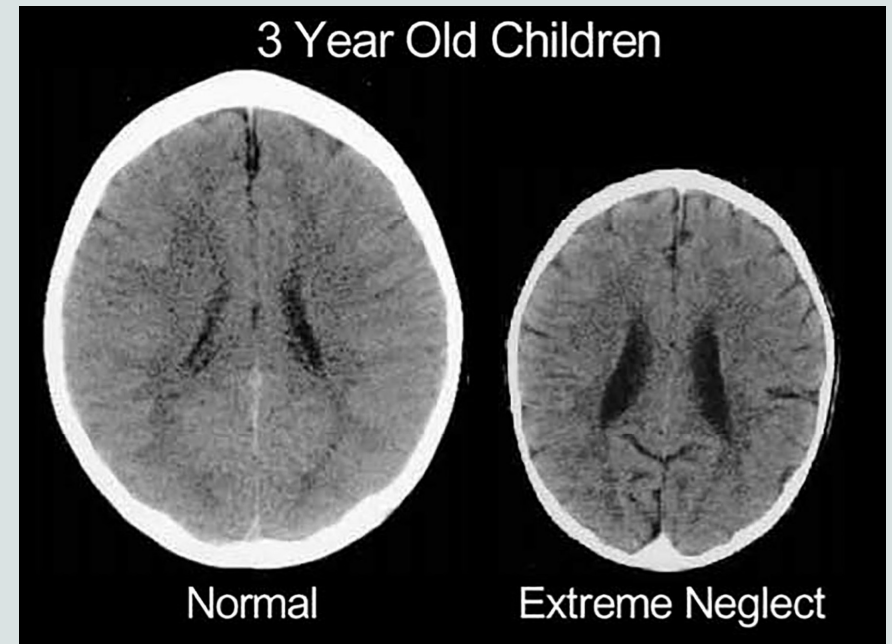


# Caregivers shape our brains



## **Early experiences shape the architecture of the brain**

- Fragile vs. Sturdy foundation
- Critically influenced by mutual responsiveness between adult and child



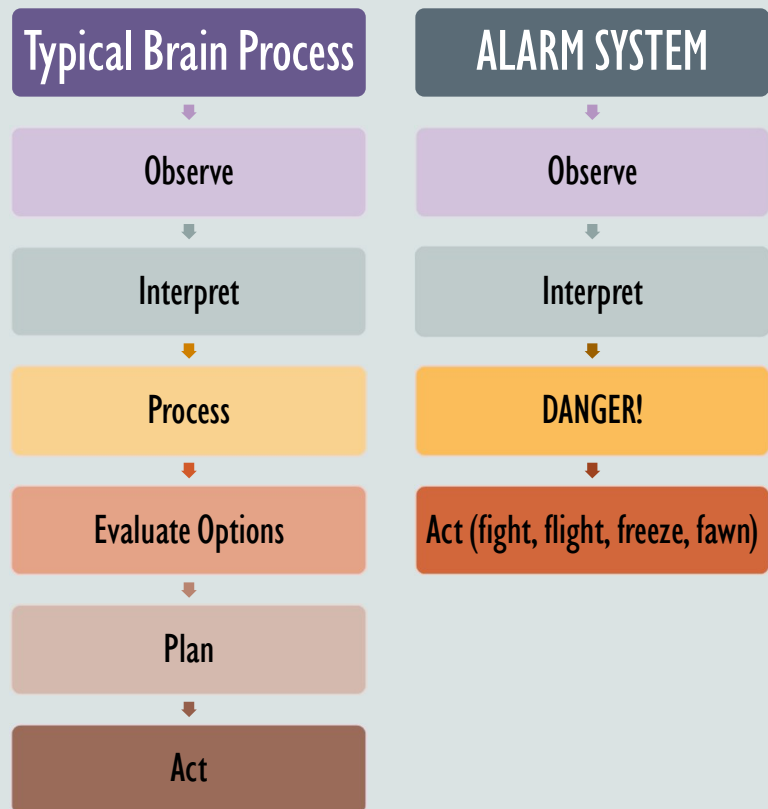
## How our bodies respond to stress

High levels of cortisol and other stress hormones can lead to long term health problems and impact healthy brain development.





# Alarm System Overactivation



# Amygdala

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- Works with the Hippocampus
- Hardwires emotional events as memories
- Like the secret service

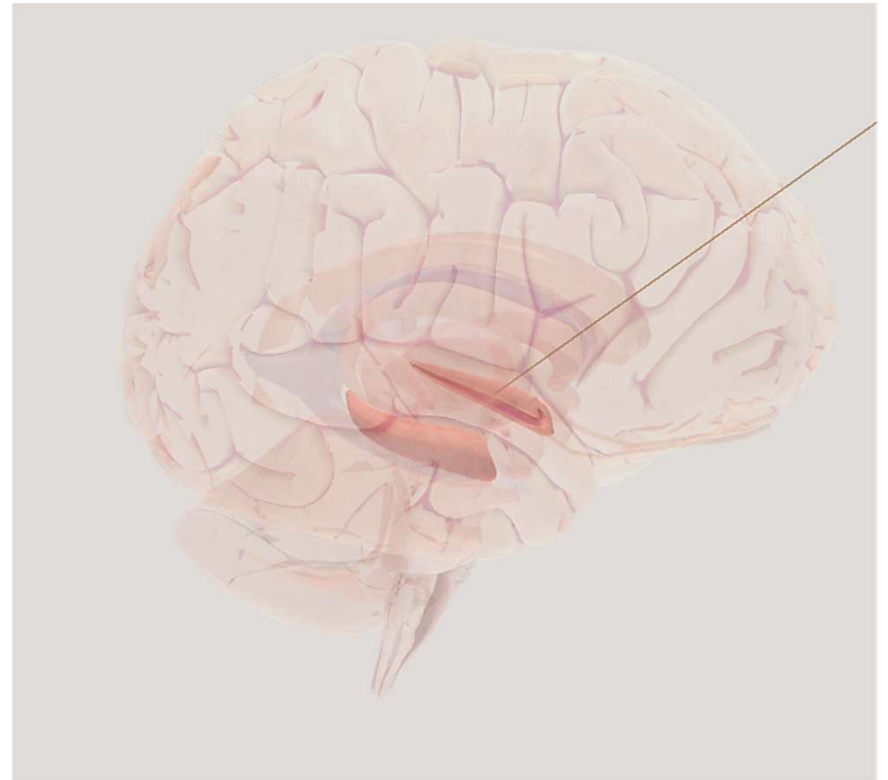




# Hippocampus

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- Responsible for long-term memory
- Only part of the brain that continues to produce new neurons
- Creates a mental map (Spatial memory)





## Hippocampus: Our Puzzle Master

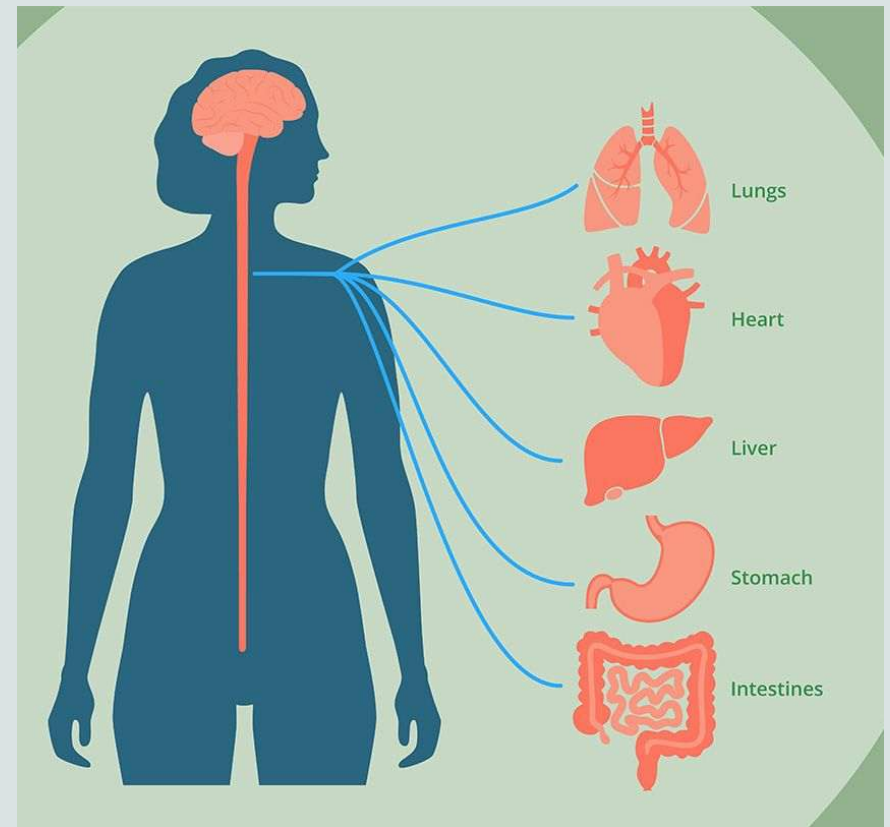
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- The brain likes complete pictures - like putting together a puzzle
- Hippocampus will squish pieces together that don't quite fit to make sense of experiences

# The Vagus Nerve

**How do we physically experience emotions?**

- *"gut wrench"*
- *"punched in the gut"*
- *"chest is caving in"*
- *"heartbreak"*
- *"Butterflies in my stomach"*



# Trauma & Memory

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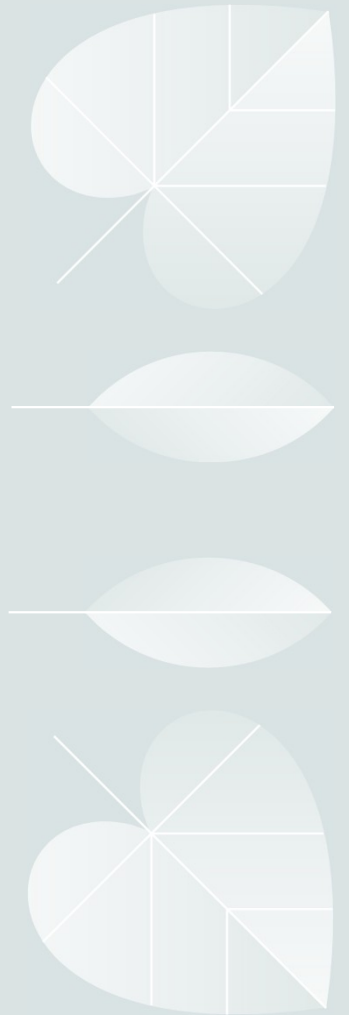


**Implicit:** stored  
in sensory form

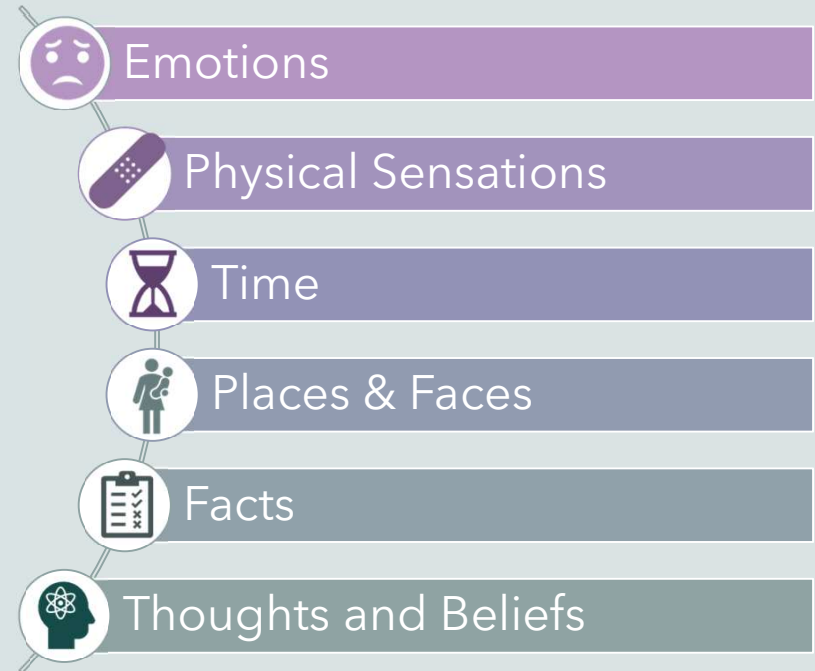


**Explicit:** stored  
in narrative form

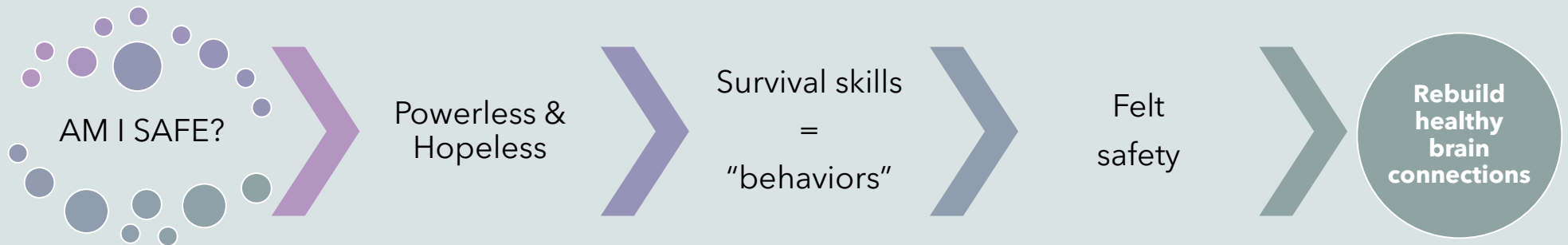
- Stress hormones prevent integration from implicit to explicit memory.
- Transfer of memory from the amygdala and hippocampus to the cortex is blocked
- Traumatic memories can be like “undigested memory capsules”  
(Corrigan & Grand, 2014)



# Trauma Capsule



# Trauma & Attachment





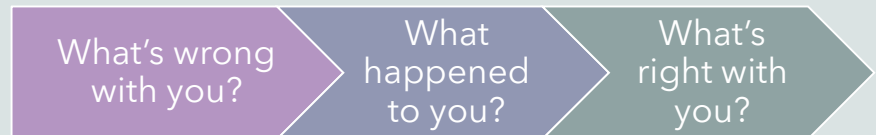
A decorative graphic of a leafy branch, rendered in a light, semi-transparent style, positioned on the left side of the slide. It features several elongated, pointed leaves arranged along a central stem.

## Where do I start?

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- Consistent responses
- Sensory systems and preferences
- Be willing to reflect on our own history and use mindfulness in the moment

**Healing from relational trauma is complex work, and requires patience, empathy, and consistency. We must be willing to see the whole person. We want to move beyond...**



It is a journey we cannot rush.



# Thank you

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## References

- Blaustein, M.E., & Kinniburgh, K.M. (2019). *Treating Traumatic Stress in Children and Adolescents: How to Foster Resilience through Attachment, Self-Regulation, and Competency*. (2<sup>nd</sup> ed.). The Guilford Press.
- Van der Kolk, B.A. (2014). *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma*. Penguin Books.
- Haines, S. (2016). *Trauma Is Really Strange*. Singing Dragon.
- Segal, D.J., & Bryson, T.P. (2012). *The Whole-Brain Child: 12 Revolutionary Strategies to Nurture Your Child's Developing Mind*. Bantam Books.
- Karyn Purvis Institute of Child Development. (2018, June 21). *TBRI® Animate: Attachment*. [Video]. YouTube. <https://www.youtube.com/watch?v=nlhATiiM-Pw>
- Sentis. (2012, November 6). *Neuroplasticity*. [Video]. YouTube. <https://www.youtube.com/watch?v=ELpfYCZa87g>

# References

- Rediger, J. (2020, April 17). How Human Connection Affects Our Hearts and Hormones. *Discover Magazine*. <https://www.discovermagazine.com/health/how-human-connection-affects-our-hearts-and-hormones>
- HeartMath Institute. (n.d.). Science of the Heart, Exploring the Role of the Heart in Human Performance: An Overview of Research Conducted by the HeartMath Institute. *HeartMath Institute*. <https://www.heartmath.org/research/science-of-the-heart/heart-brain-communication/>
- Harvard Medical School. (2021, April 19). *The gut-brain connection*. Harvard Health Publishing. <https://www.health.harvard.edu/diseases-and-conditions/the-gut-brain-connection>
- Chor, J.K.F. (2021, July 25). Second Brain Found in the Heart and Gut Neurons. *Owlcation*. <https://owlcation.com/stem/your-second-brain-is-in-your-heart>
- Wesselman, D. (2014, April 4). "Trauma Time". *WordPress*. <http://debrawesselmann.com/2014/trauma-time/>
- National Scientific Council on the Developing Child. (2007). *The Science of Early Childhood Development*. <http://www.developingchild.net>
- Felitti, V.J., Anda, R. F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V., Koss, M.P., & Marks, J.S. (1998, May 1). *Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study*. DOI: [https://doi.org/10.1016/S0749-3797\(98\)00017-8](https://doi.org/10.1016/S0749-3797(98)00017-8)
- Perry, B. (2010). Neurosequential Developmental Model. [graphic]. [www.childtrauma.org](http://www.childtrauma.org)
- MacKinnon, L. (2012). *The Neurosequential Model of Therapeutics: An Interview with Bruce Perry*. The Australian And New Zealand
- Journal Of Family Therapy. Volume 33 Number 3 2012 pp. 210-218. DOI: <https://doi.org/10.1017/aft.2012.26>