

November 2015 Issue 2

# Z E M

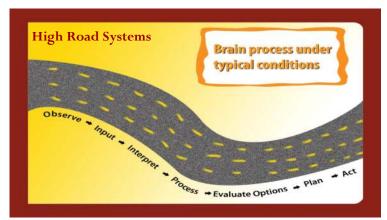


# Effects of Trauma on Neurological Development

There are two emotional processing systems of the brain, which work closely together such that we are usually unaware that these discrete systems exist.

#### **High Road Systems:**

- 1. Sensory Cortex accurate perception
- 2. Medial Temporal Lobe Memory System context
- 3. Prefrontal Cortex consciousness/working memory or the capacity to keep information in awareness/in-the-moment

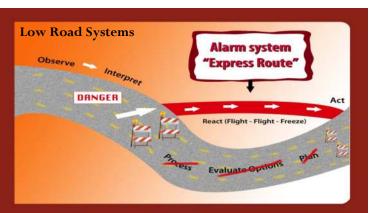


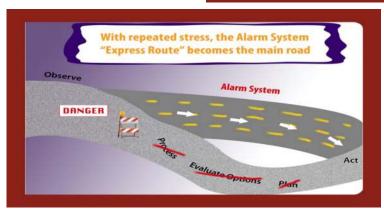
This involves the ability to shift attention to the things we want to attend to. Conscious thought is experimental action. It allows us to consider our responses carefully before responding. This is the wedge of cognition to regulate traumatic responses.

#### **Low Road Systems:**

- 1. The amygdala, which prepares the body for emergency responses
- 2. This pathway is unconscious and does not contain contextual information
- 3. This pathway is marked by very quick transmission of sensory information to give the organism basic information about danger
- 4. It sacrifices details in the service of speed dominated by processing that is ast, fragmented, decontextualized, aroused.

The amygdala is designed to quickly prepare the body to react and survive. This process of self-awareness is extremely adaptive. It allows an individual to use emotions as signals for effective action and underlies the critical process of emotional regulation.





Children repeatedly exposed to traumatic events and experiences are routed to and primarily operate from the low, survival brain pathway, versus the high road or thinking brain pathway.





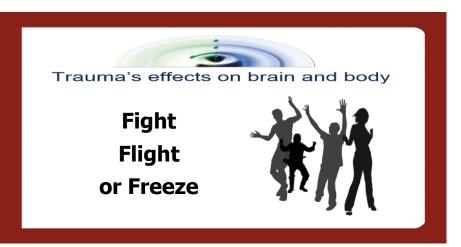






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## Trauma and the Brain...



Think of the trauma as a fire alarm going off. The lower regions of your brain respond automatically to save you. The upper region (the cortex) won't allow you to do calculus when the alarm is blaring. You cannot engage in a learning opportunity. THEREFORE, TRAUMA TURNS A LEARNING BRAIN INTO A SURVIVING BRAIN.

#### 4"R's"

(what happens when an emotional state changes:)

- 1. Regulating
  - 2. Revving
- 3. Re-experiencing
  - 4. Reconstituting

## **Common Errors**

- Personal space trespassing
- Touching without permission or warning
  - Ignoring
  - Intimidation as motivation
  - Rescuing, breaking boundaries
- Not demonstrating appropriate emotions
  - Splitting youth loyalty
- Using the relationship as reward or punishment