

**Brain Stem: Lower Level: “Little Brain/Reptilian”:** Responsible for arousal, reproduction and homeostasis of the body. First part of fear response. Fight/Flight response. Immediate response to danger. Dangerous emotions = a threat to survival. Basic affects (emotions).

**Limbic System: Middle Level: “Emotional Brain”:** This is where things either go right or wrong. Very black and white, safe or unsafe, in assessing information, people and situations. No logic. Feelings/emotions are experienced in the cortex and/or body. Sets the emotional tone of the mind. This is where the Hypothalamus and Amygdala (Fight/Flight) are located. The Thalamus is like the conductor of the brain: What do we do with this information? Is it safe? The Amygdala sets the emotional tone of the mind and is crucial for emotional processing.

**Neocortex: Third level “Thinking Brain”:** Rational thought. Imagination. Language. Information processing. Can see grey area which allows logic, eventually allowing information to go back and forth between left (logic) brain and right (emotions) brain = make good choices. Able to predict future outcomes.

**What does this all mean?** Trauma disrupts the Thalamus’ ability to bring information up to the Neocortex which is the higher thinking/adult self. This causes the person to be emotionally driven vs. logically driven. When the brain gets fragmented a person develops defenses.

**EMDR therapy** increases frontal lobe activity. Balances thinking and emotions. Brings you to the present and creates options. Promotes healthy memories and integration. **The brain changes after EMDR.**