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# TRAUMA TIDBITS

“Trauma is when your biology is assaulted in such a way that you might not be able to reset yourself.” (Bessel van der Kolk, MD)

“Without the body and mind accessed together as a unit, we will not be able to deeply understand or heal trauma.” (Peter Levine, author of *Waking the Tiger, Healing Trauma*)

“Trauma memory is stored differently than ordinary memory – in fragmented form. Trauma freezes the integrative process and the information is not integrated into schemas like ordinary memories. It helps us to understand why traditional talk therapy is inevitably limited and inadequate to effectively resolve early trauma.” (Laurel Parnell, author of *EMDR in the Treatment of Adults Abused As Children*)

“People with PTSD have difficulty in sorting out relevant from irrelevant stimuli; they have problems ignoring what is unimportant and selecting only what is most relevant.” (Bessel van der Kolk, MD)

“The primary healing of psychotherapy with adult survivors of childhood sexual abuse occurs in the context of the [healthy and safe] therapeutic relationship.” (Pearlman and Saakvine – “Trauma and the Therapist”)

“Trauma sits in the limbic system, in the “smoke detector” of the brain that is in charge of our primitive survival mechanisms that let us know if something is dangerous or safe, worthy of eating or reproducing with. The limbic system is the seat of what neurologists call the four F’s: fight/flight, freeze, feed and reproduce.” (Bessel van der Kolk, MD)

“Because traumatic memories split off and are not stored as a personal narrative they linger there and their capacity to grow is limited. When people fixate on their trauma and cannot integrate their traumatic memories, they seem to lose their capacity to assimilate other experiences as well. Freud said that the compulsion to repeat the trauma is a function of repression itself. If a person doesn’t remember, he is likely to act it out. He reproduces it, not as a memory, but as an action. He repeats it without knowing that he is repeating his trauma and in the end he understand that this is his way of living. The way a person records their memories is a function of the emotional arousal under which their memories are laid down.” (Bessel van der Kolk, MD)

“The amygdala lights up as people remembered their trauma. The Broca’s area in the left interior frontal cortex becomes deactivated as subjects remembered this trauma. Language capacity shuts down, the trauma is stored and returns later as images.” (Bessel van der Kolk, MD)

“Trauma doesn’t have to stem from a major catastrophe.” (Peter Levine)

“Human beings are born with an innate capacity to triumph over trauma. I believe not only that trauma is curable, but the healing process can be a catalyst for profound awakening.” (Peter Levine)

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“The imprint of trauma does not “sit” in the verbal understanding part of the brain. Words cannot integrate the disorganized sensations and action patterns that form the core imprint of the trauma. When people relive their

traumatic experiences, the frontal lobes become impaired and as a result, they have trouble thinking and/or speaking. They no longer are capable of communicating to either themselves or to others precisely what's going on. We're much less controlled by our conscious, cognitive appraisal than our psychological theories give us credit for being. When people get close to re-experiencing their trauma, they can get so upset that they can no longer speak. It seemed to me that we needed to find some way to access their trauma, while helping them stay physiologically quiet enough to tolerate it. People need to learn to regulate their physical states in order to get their minds to work. Once they shift their physiological pattern, their thinking can change." (Bessel van der Kolk)

"Traumatic experiences overwhelm abilities to cope and to make sense of events lying outside personal and collective frames of reference. They are traumata in large part because they throw into question or destroy understandings of self, other, life and God. Victims wander in uncertainty until able to integrate the implications of their traumatic injuries into more comprehensive approaches to life." (Robert Grant)

From EMDR in the Treatment of Adults Abused As Children, by Laurel Parnell

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Early trauma causes what Schore (1998) calls "synaptic pruning" in the orbital frontal cortex and creates a disturbance in the sympathetic-parasympathetic systems that results in hyperarousal, the misreading of external cues and difficulty with self-soothing or calming. Children who have been abused have problems with affect regulation. They become easily overstimulated and have trouble calming themselves. They also have difficulty coping with stress. Early trauma creates a predisposition to the development of posttraumatic stress disorder. Synaptic pruning also affects the ability to experience positive emotional states. Excessive pruning of the synapses in the orbital frontal cortex, affects attachment, empathy and the capacity to regulate body pain. People with childhood trauma DO hurt more.

Traumatic memories lodge in the brain in different ways from other memories. During the trauma, the pieces are not put together. Trauma freezes the integrative process and the information is not integrated into schemas like ordinary memory."

From a speech given by Bruce Perry, M.D., Ph.D. – EMDRIA 2002 Conference:

Therapeutic Interventions and Change: For a long time many people have believed, and some still believe that therapeutic interventions go into the brain and somehow reverse something that has already happened. You delve into a traumatic memory and release the "psychic pus," and patients get better. This is not a biologically accurate conceptualization. It's very important to recognize that therapeutic interventions, and all experiences create new memory and modify existing memory; they don't take things away. Once you've learned to ride a bicycle, you don't lose the "bicycle-riding" neuronal network for years, unless and until you begin to have degenerative disorders that are likely to deteriorate all your neuronal systems. Once you've learned to ride a bicycle there is no intervention to undo that learning, unless you activate the network of neuronal connections responsible for bicycle riding behavior. Neurons change response activation; that is, they change patterned, repetitive activation.

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*Pre-Cortical Associations of Abuse:* Another case involved a child who had been sexually abused by his father for the first few years of his life. He was finally removed from that setting and placed in a foster home, where he was physically abused by his foster parents. At one point, he was pushed down a flight of stairs and ended up in a hospital, in a coma. So here's a child in a coma, attached to a heart rate monitor and non-responsive cortically. The whole top of his brain was basically dysfunctional. And yet we could place one of his father's T-shirts under his nose, and his heart rate would go from 84 up to 136. This is pre-cortical association, and it happens all the time.

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***Maternal Heartbeat:*** This is very important for understanding the mechanism for the action of EMDR. In utero, the most powerful, patterned, repetitive sensory signal that the developing brain is exposed to is the maternal heartbeat. As the aorta moves it creates a powerful vibrating and auditory rhythm, which activates the brain stem for months and months, which in turn creates and organizes the brain stem and diencephalic system - which will ultimately be used in regulating sleeping and waking, and other kinds of rhythms. These neuronal networks, these core foundational templates are organized in response to patterned, neuronal activities which are guided and shaped by the maternal heart beat. Because of the way in which the brain makes an association between things that co-occur in time, this pattern becomes associated with being in utero where the fetus is warm and safe, and not hungry, etc., etc. See where I'm going with this?

This gives us a powerful insight into how to recreate a sense of safety in someone, to recreate a sense of calm and comfort. Isn't it interesting that every single Aboriginal healing ritual that involves grief or loss, involves patterned, repetitive dancing or drumming at a frequency of roughly 80 beats per minute, which is comparable to the maternal heart rate in utero?. Isn't it interesting that when children who are retarded or autistic get overwhelmed and engage in self-soothing behavior like rocking or head banging, it's at a frequency of 80 beats per minute? Isn't it interesting that when someone chants or says their rosary beads, it's at a frequency of 80 beats per minute? All of these things are self-soothing and we do them almost automatically, because they make us feel better.

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***Fight/flee/freeze:*** Both hyperarousal, the classic flight or flight response, and dissociation are mediated by neural systems that originate down lower in the brain and involve activation and changes in neural functioning from the brain stem to the diencephalon, to the limbic system, and to the cortex. Use dependent changes are likely to occur throughout all of these regions in response to threat.

The classic fight or flight response involves increasing your heart rate, and sending blood to the periphery of your body to prepare you to fight, or run away. However, if you are involved in an inescapable situation, it would be foolish to move all your blood to the periphery of your body, because you could bleed to death, if physically injured. Therefore, it makes more sense to decrease your heart rate, keep your blood in the trunk of your body, and release opiates so you can tolerate pain - and hopefully use other defense mechanisms.

If you are in an inescapable situation you can freeze and play dead, and in that way not attract predators. There are many reasons why the dissociative response is highly adaptive under certain circumstances, and why the fight or flight response is highly adaptive under different circumstances.

For more Bruce Perry information, please go to his website [www.childtrauma.org](http://www.childtrauma.org) and download articles, find training information and more. The Child Trauma Academy is located in Houston, TX.