

## [The Brain On Trauma](#)

It is likely that many reading this blog might be saying, “Why a blog on the brain?” The answer is that the brain is affected—long-term—by the experiences it encounters pre-natally and in the early years of one’s life. In particular, the brain grows more in the first year of life than at any other point in time! Brain growth is 90% complete by the time a child is three-years-old!

Parents and professionals alike can better understand the needs of traumatized children with a basic understanding of the brain literature that is now currently available. Parents can also find relief in this topic. Many parents blame themselves for their child’s problems. Parents often feel they should have the capacity to restore the traumatized child’s mental health post-adoption. When this doesn’t occur, parents turn their perceived failure onto themselves. In some cases, the blame is placed on the child. “He just doesn’t like us.” or “He just doesn’t want to fit into our family.” In either of these scenarios, the literature regarding brain development can help all of us understand that until we address the functioning of the brain, many children will be at risk for an unproductive future despite the loving efforts of their parents or the child’s perceived abilities to simply “straighten up and act right if she wanted to.”

The purpose of this post is to offer resources to help Mothers, Fathers, Social Workers, Counselors, teachers, etc., gain a basic overview of “normal” vs. “traumatized” brain development. This is also the first post in our new 2010 series, “A Bit about the Brain.”

### *Understanding the Effects of Maltreatment on Early Brain Development*

We’ll start our journey into the brain with the [Child Welfare Information Gateway](#) article, [Understanding the Effects of Maltreatment on Early Brain Development](#). This article provides a wonderful overview of how the brain develops and how trauma adversely interferes with normal brain development.

The article makes clear that brain growth is contingent upon the affection and psychological stimulation provided to the infant by the caregiver.

When this process is interrupted by neglect, physical abuse, sexual abuse, pre-natal drug and alcohol exposure, etc., the brain is unable to form the neuronal pathways and connections to carry out the process of attachment, the ability to develop emotional regulation and social skills. Areas of the brain responsible for memory, learning, empathy and remorse will also be impaired.

*Understanding the Effects of Maltreatment on Early Brain Development* further describes how the stress of living in a chaotic and/or neglectful environment creates a brain—a human being—more vulnerable to stress (i.e., real or perceived.) The child traumatized prior to adoption arrives in the family with an overactive stress response system. So, he or she will enter the states of flight—dissociation or fight—hyperarousal easily and long after placement in a healthy family system.

In essence, children with histories of trauma are like deer. Deer flee in an instant when frightened. Deer are hypervigilant—always wary of their environment. Traumatized children operate in a similar fashion. They are physiologically in a state of alarm, of “fight” or “flight,” even when there is no visible threat or demand. So, a stressor arises. Perhaps there is an argument with a peer or a demanding school task. The child escalates into a state of fear very

quickly; a temper tantrum occurs, an argument ensues, an object gets thrown. Parents, siblings or peers are left wondering what has happened.

In a state of *calm*, we use the higher, more complex parts of our brains to process and act on information. In a state of *fear*, we use the lower, more primitive parts of our brain. As the perceived threat level goes up, the less thoughtful and the more reactive responses become. Actions in this state may therefore be governed by emotional and reactive thinking styles. There is little ability to think about the consequences of actions taken.

*In describing Gina, their now 13-year-old daughter whom they adopted, John and Nancy stated, "We never know what is going to set her off. Everything can be calm and off she goes— shouting, swearing, running up and down the stairs. This can go on for several hours. Just the other night, we decided to play board games. We popped popcorn and made hot chocolate. The whole family sat down and she started screaming. We tried to ignore it. However, it was hard to ignore someone screaming while we were trying to have fun."*

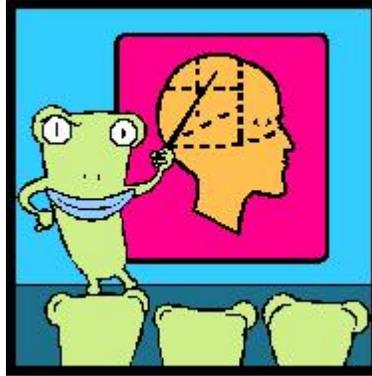
*Nancy went on to say that incidents like this are particularly disruptive to the whole family, which is also comprised of their two birth children, Joshua, age 9 and Carol, age 11. She continued by discussing that she expected that their lives would be more hectic with three children. She expected there would be more transportation issues, more homework to help with, more laundry, etc. To Nancy, what the adoption of Gina brought to the family was chaos. Plans often had to change based on her hyperarousal, or plans had to be cancelled. Promises of activities or one-on-one time to Joshua and Carol were broken.*

Many adoptive parents will be able to relate to the above vignette. The literature on brain development will give parents and professionals the rationale to understand such behavior and to repair the brain to decrease/cease this type of emotional dysregulation.

Proceeding on our path to learn "a bit about the brain" we want to make sure we also read, [The Boy Who was Raised as a Dog and Other Stories from a Psychiatrist's Notebook](#) and/or [The Developing Mind: How Relationships and the Brain Interact to Shape Who We are](#). Either of these books will help achieve depth of this important topic.

### *Becoming a "Brain Informed" Professional*

Mental health and adoption professionals want to incorporate brain literature into their pre- and post-adoption efforts to help heal traumatized children. Let's start this process with Perspectives Press' own author, Deborah Gray. Deborah's book, *Nurturing Adoptions: Creating Resilience After Neglect and Trauma* is designed to integrate the latest information on trauma, brain development and therapeutic interventions. The works of [Allan Schore](#), [John Briere](#) and [Bessel van der Kolk](#) need to be explored as well. The [videos](#) offered by the [Child Trauma Academy](#) could easily be incorporated into a pre-adoptive training program.



Professionals may also want to participate in the [online discussion](#) series offered by the Child Trauma Academy. The [National Child Traumatic Stress Network](#) provides an extensive list of trauma-related trainings being conducted in all parts of America. This organization is also home to the important article, [Complex Trauma in Children and Adolescents](#)—a landmark piece of literature.

#### *The Association for the Treatment and Training in the Attachment of Children (ATTACH)*

The ATTACH organization has for several years been conducting an annual conference focusing on current trends in the application of brain research in the treatment environment. Workshop after workshop is replete with ways to help traumatized children and their families heal the child—the whole child—brain, body, spirit, soul and so on. This year's conference, [The Loving Connection: Wired for Healing](#) will be held September 22-25, 2010 in beautiful San Francisco. Parents and professionals will leave this conference saying, "Wow!", I learned a lot about how to help adoptees and adoptive families!

#### *Neurofeedback: A Promising Treatment*

In conclusion, [neurofeedback](#) is a promising technology designed to train the brain to forge new pathways and thus new ways of operating. Neurofeedback can help the brain recover from the delterious impact of trauma. Neurofeedback is more than worth investigating and utilizing. The "Reading and Resources" (right) offer links to books and websites about neurofeedback and the impact of trauma on the brain.