

If interested, this topic can be learned in greater detail through a full day workshop called “Trauma Informed Classrooms.” Please contact Sara at [sara@growingrootstherapy.ca](mailto:sara@growingrootstherapy.ca) or 204-333-9804 for more information or to book a workshop.

## Being Trauma Sensitive

# Physiological Effects of Trauma

When children encounter danger, their brains trigger an automatic stress response to **fight, flight, or freeze** from the dangerous situation. Children who have experienced prolonged trauma are often in a state of constant alertness as they have been conditioned to respond to things that have been dangerous in the past without being able to pinpoint the stimulus. Consequently, a stress response is triggered regularly, even in safe situations. They cannot regulate their heightened levels of arousal, and thus cannot turn off stress response.<sup>3</sup> Two major patterns of response to threat displayed by traumatized children include: **hyperarousal** and **hypoarousal**.<sup>4</sup>

## Hyperarousal: Fight or Flight

- In threatening circumstances, a hyperarousal response pattern is triggered to prepare us to fight against or flight from the perceived danger. Typically this is triggered only in dangerous situations, but children who experienced trauma have been accustomed to reacting to any signs of danger. Therefore, they tend to perceive harmless situations as threatening and activate hyperarousal response pattern as a result.
- Hyperaroused children have difficulty with accurately evaluating situations and regulating emotions for its intensity and appropriateness.
- Prolonged hyperarousal response patterns cause physical discomfort and emotional distress in traumatized children and interfere with how they function in their daily lives.<sup>3</sup>
- Some physiological effects include: having difficulty with concentrating as they are focused on escaping danger, feeling dizzy as all the excess oxygen taken in by the lungs for getting ready to fight or flight is not used, breathing faster for more oxygen to run away faster, and heart beating faster to pump blood into muscles more quickly for fight or flight.<sup>1</sup>
- In a school setting, hyperarousal interferes with student learning as they are easily distracted and unable to stay focused. This results in inability to complete assignments, being disruptive in quiet time, being easily distracted by visitors or noise, etc.<sup>3</sup>

## Hypoarousal: Freeze or Submit

- If threat continues even when children are in a hyperarousal state, they move on to the hypoarousal response pattern to freeze. This state may look like the child becoming compliant, dissociated, and later submitting to the danger.
- Children displaying hypoarousal response pattern demonstrate being numb, compliant, avoidant, and having restricted emotions.<sup>4</sup>
- Some physiological effects include: feeling foggy as the brain and body try to dissociate from the world; having focused eyesight to look out for any potential danger; having a dry mouth as their digestive system shuts down to reserve energy for muscles; breathing rapidly or shallowly as lungs work to suppress breathing to hide from danger; appearing pale and feeling cold as the heart rate slows down causing blood pressure to drop; muscles freezing to immobilize the body to appear dead and escape from predators; or feeling numb as the brain releases chemicals to numb the body from feeling physical pain.<sup>2</sup>
- In a school setting, hypoaroused children are not attentive, are not emotionally attached to teachers, space out, are less interested in participating in activities, are socially withdrawn, etc.<sup>3</sup>

## Resources

1. Beacon House: Therapeutic Services and Trauma Team. (2015). *Survival: Fight/Flight. What are you feeling?* [PDF file]. Retrieved from <https://beaconhouse.org.uk/useful-resources/>
2. Beacon House: Therapeutic Services and Trauma Team. (2015). *Survival: Freeze/Collapse. What are you feeling?* [PDF file]. Retrieved from <https://beaconhouse.org.uk/useful-resources/>
3. Massachusetts Advocates for Children. (2005). Helping traumatized children learn. Retrieved from: <https://traumasensitiveschools.org/wp-content/uploads/2013/06/Helping-Traumatized-Children-Learn.pdf>
4. Perry, B. D., Pollard, R. A., Blakley, T. L., Baker, W. L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation, and “use-dependent” development of the brain: How “states” become “traits”. *Infant Mental Health Journal*, 16(4), 271-291. doi:10.1002/1097-0355(199524)16:4<271::aid-imhj2280160404>3.0.co;2-b

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