

# facts on

## Stress, Trauma, and Young Children

### What is Stress?

Stress refers to our biological and emotional responses to situations that are new, dangerous or a threat to our well-being. Childhood stress can be separated into three categories: positive, tolerable and toxic. Positive stress for infants refers to everyday challenges, such as feeling hungry or tired, that a caregiver responds to. This allows the infants, over time, to adapt and decrease their stress response. Positive stress for young children may include positive events such as meeting new people, social gatherings, and trying new things. Tolerable stress refers to more serious stress that is buffered by adults (e.g., having a caregiver support you while in the emergency room). Toxic stress is stress that is frequent, serious or prolonged (e.g., sexual abuse). In cases of toxic stress, the child has little to no adequate adult support around the situation. Toxic stress is the most damaging.

### What is Trauma?

Trauma can be either a type of tolerable or toxic stress. It is defined as young children's experience of events that harm them physically or emotionally or that threaten to harm children or others around them. The most frequent causes of trauma in children are serious accidents and falls; medical and surgical procedures; violent acts and abuse; grief and loss; and environmental stressors (e.g., witnessing intimate partner violence).

### Can young children experience stress and trauma?

Many individuals do not believe that young children, particularly those under the age of 3, can experience stress and trauma. However, young children (including infants) can experience stress and trauma. In fact, both stress and trauma can have immediate effects during childhood as well as lifelong impacts.

### Do young children experience stress/trauma the same way an adult does?

Children's bodies undergo the same physical response to stress and trauma as does an adult's; however, there are some differences. First, most adults can soothe themselves, can release stress related chemicals from their bodies, and have the cognitive ability to determine how serious a threat is. Second, young children are more likely to have stress responses to new stimuli because many of their experiences are new. Third, young children may experience and process events differently than adults or older children based on their developmental age. For example, for the first five years of a child's life, most memories will be stored as somatic (physical) and sensory memories (pertaining to the five senses) as opposed to narrative memory (stories). This makes it much more difficult for a young child to tell the difference between an isolated threat and an ongoing, more generalized threat. Finally, a young child may perceive and process experiences differently than adults, and therefore, may find things stressful or traumatizing that an adult does not.

### For More Information

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### **What happens in a young child's body when he experiences stress or trauma**

The human stress response system is located in the amygdala, one of the most primitive areas of the brain. Activation of the stress response system is instinctual. The purpose of the human stress response system is to protect us from harm. The human stress response system is activated when we come into contact with anything that is new, threatening, uncontrollable, or unpredictable. Stress responses occur in response to both internal and external stimuli.

Children can have one of three reactions to stress:

#### ***Hyper-arousal: Defensive and Flight/Fight Response***

The first stage of this response occurs when the child feels threatened, alarmed or faced with a new situation or environment. This stage results in an increased heart rate, blood pressure and respiration, release of stored sugars, increase in muscle tone, hyper-vigilance, and a tuning out of non-essential information. The second stage of this response occurs when a threat is actually present. During this stage, different systems in the body are activated that release a variety of chemicals, including adrenocorticotropic hormones and cortisol. The long term build up of stress related hormones has been connected to structural differences in the brain, organ damage, physical illness and mental illness.

#### ***Sensitized Hyper-arousal Response***

Specific or generalized reminders of past stressors can reactivate the above response. Because reminders occur over and over again, the brain becomes sensitized to responding. The constant triggering of the stress response system can cause a constant state fear or hyper-arousal state. Young children are particularly vulnerable to developing this type of response because they are not at a developmental stage where they store memories in a narrative fashion. Memories that are somatic or sensory are more likely to cause sensitized responses because responses are triggered from primitive areas of the brain and are less likely to be processed and placed in context by the child.

#### ***Dissociation: Freeze or Surrender Response***

If young children are ignored or are not soothed during the first phase of the flight or fight response described above, they will become either hyper-aroused or dissociate. Dissociating is biologically adaptive because it helps a child cope with pain and fear, and makes the child less noticeable in the immediate moment. In children, symptoms of dissociating include numbing, compliance, avoidance, restricted affect, robotic movements, non-reactivity, and daydreaming. Biological responses that occur during dissociation include decreased blood pressure and heart rate, increases in epinephrine, opioids, and dopamine. Dissociation can make it seem like the child is not reacting to trauma or stress.

### **What are the short term impacts of experiencing stress/trauma on young children?**

- Child may perceive normal everyday (non toxic) stress as threatening
- Child may experience generalized helplessness or fear
- Child may have difficulty understanding cues to danger
- Child may have difficulty growing and developing as other children do
- Child may be in a constant state of hyper-arousal
- Child's safe haven may be disrupted if the perpetrator of trauma is in the immediate family or a caregiver
- Child may be unable to rely on his/her parents for emotional and behavioural regulation
- Child may regress to younger behaviour
- Child may experience physical health problems, e.g., stomachaches
- Child may be unable to form secure attachments or there may be a disruption in existing secure attachments
- Child may have problems in emotional and behavioral regulation and self concept
- Child may begin to view world in light of trauma, e.g., believing that the whole world is a violent place
- Child may dissociate
- Child may exhibit avoidance behaviors, e.g., excessive shyness
- Child may experience behavior problems and emotional outbursts, e.g., impulsivity, tantrums, aggressiveness, frequent crying, and irritability
- Child may develop new fears
- Child may become lethargic
- Child may repetitively re-experience trauma through play
- Child may experience nightmares or night terrors

### **What are the long term impacts of experiencing stress/trauma on young children?**

- Child may develop Traumatic Stress Disorder
- A build up of stress related chemicals in the body can lead to chronic illnesses and damage to various organs
- Creation of neural networks that are highly sensitized to threats or perceived threats
- Child may be "triggered" by everyday events and, therefore, have a continually activated stress response system and hyper-arousal
- Persistent states of hyper-arousal can impact the brain, including decreasing the size of the hippocampus (may impact motivation levels), changes to the frontal lobe (may impact attention, planning, critical thinking, problem solving, self-control, language, and complex movement), and asymmetry in the volume of the right and left side of the brain
- Hyper-arousal caused by stress/trauma has been linked to decreased readiness to learn, and deficits in memory, attention, abstract reasoning and executive functioning

- Child is at greater risk of mental illness in adolescence and adulthood
- Child may have develop differently slower than others
- Child may experience long term language problems
- Later in life, the individual may have difficulties forming relationships (friendships and romantic)
- Child may have a greater risk of being criminally active later in life

### What can you do?

- Help caregivers to understand that young children can and do experience stress and trauma
- Help caregivers to recognize what might be stressful or traumatic to their children
- Teach and model to caregivers ways to support young children who are experiencing stress and trauma
  - ❖ Children re-enact their trauma through play. Play is an excellent opportunity to work with children to help them feel more in control of the trauma.
  - ❖ As children grow older, they gain more verbal skills. Helping children place words and narratives to past traumas can help decrease somatic and sensory triggers.
  - ❖ Help parents to re-create safe places for their children. This can be a physical space or just a feeling of safety.
- Help children who are hyper-aroused learn to sooth themselves
- Help parents understand the need to help their child “release” stress chemicals from his/ her body and provide ways to do this
  - ❖ Soothing such as, rhythmic drumming, blowing bubbles, laughing and dancing.
  - ❖ Physical activity, such as running and jumping.
  - ❖ Emotional releases, such as allowing a child to cry.
- Support caregivers when they are experiencing stress or trauma so that they can respond in a sensitive and timely manner to their children
- Provide care and support to young children if community stress or trauma occurs, especially if their caregivers are not immediately able to provide this care and support

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