

## Stress and Child Development

Stress is an everyday part of life, even for infants and young children. Often as adults we do not think of infants and children experiencing stress but research tells us they do. Research also highlights that not all stress is bad. Some can even be a healthy part of child development and strengthen skills like resiliency, persistence, and self-regulation later in life. So what is the difference between good and bad stress for infants? This article aims to inform parents about the different types of stress and how to best support your little ones while they experience stress.

### How does our brain and body process stress?

Before we go over the different types of stress we need to understand how our brains and bodies experience stress. Everyone's brain is wired to experience stress the same way. However, how we recover from stress, how long we are stressed, and what we find stressful is different for everyone. These differences are formed in the early years of life. Our brains are divided into different areas. Each area serves a purpose. One of those areas handles our bodies reaction to stress. Whenever anyone is stressed or fearful their brain takes over in order to protect the body. Hormones called cortisol and adrenaline are released. These hormones cause our body to react by increasing our heart rate, turning off the sensations of hunger and arousal, increase our sensitivity to our environment and prepare us to react.

There are generally three ways our bodies will react. This reactive process is known as your fight, flight or freeze response. When we are in this state our ability to think clearly and rationally is turned off. We are in survival mode. Our temperament and the situation often contribute to how we react. Will we react aggressively and fight, run away mentally or physically in flight, or be frozen in place. As the treat or stress become manageable or is regulated, our brain reacts by turning off the flow of the stress hormones and turns on your response system.

The body and brain will begin to return back to normal. Back to a state of calm. Slowly your heart rate will lower and you will feel your muscles relaxing, your breath slowing. For a developing infant how often, how intense, and the level of support from a responsive caregiver when experiencing stress can potentially impacts brain development. The pathways that activate the areas of the brain that trigger the stress hormones and response system are still connecting and growing. The developing brain's architecture can be influenced by the child's environment and experiences.

Before we learn about how the developing brain can influenced by stress we need to know about the different levels of stress identified in research. Research into infant and childhood stress has identified three different types, or levels, of stress.

## **What are the different types/levels of stress in child development?**

The types of stress are positive, tolerable and toxic stress. All three levels look at three main characteristics. They evaluate the level of stress, the length of time and if the infant or child receives support from a responsive caregiver.

**Positive stress** - is a low level of brief stress that is supported by a responsive caregiver. Every day situations like waiting for the next spoonful of food, trying to reach for that rattle, or learning to ride a bike can be examples of positive stress if they are experienced briefly and a caregiver steps in or acts to remove the stress. In other words, the stress system is activated but because someone is there to help the infant or child recover, lower levels of cortisol are released. The pathways that support the recovery system are strengthened.

**Tolerable Stress** – is a considerable level of stress that last for a substantial time but is still supported by a responsive caregiver. Losing a loved one, or starting a new school might be considered examples of tolerable stress when support is available. In tolerable stress, as in positive stress, the recovery system is activated again and strengthen their pathways.

**Toxic Stress** – is when the infant is not offered support by a responsive caregiver and experiences stress. The stress system is often turned on for prolonged amounts of time while the response system stays inactive because there is no support. Child abuse, neglect, parental addiction and other adverse childhood experiences might be considered examples of toxic stress. Because the cortisol hormone is left in the brain longer, larger amounts are released.

So how might Toxic Stress influence early brain development?

Research suggests that cortisol has the potential to cause damage to the developing brain. The pathways responsible for the recovery response may become underdeveloped while the pathways for the stress response may become overdeveloped with frequent exposure to toxic stress. This is thought to be caused by the absence of a responsive caregiver when infants and young children experience stress. Infants and toddlers are completely reliant on their caregivers for basic human needs as well as their emotional and mental health needs. Infants can not sooth themselves, they are unable to self-regulate. Because they are reliant on their caregiver without one their stress system is frequently engaged for extended periods of time. This frequent exposure strengthens the stress response system causing it to more reactive to all stress. This can continue throughout adulthood and might be seen in adults who may be thought, by others, to overreact to simple everyday stress. They may also have more aggressive reactions. They are running on high and their breaks, or recovery system, hasn't learned how to slow them down. Research also shows that frequent exposure to toxic stress early in life may cause health issues in adults. These issues include hypertension, diabetes, and heart diseases.

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Thankfully, research also highlights that the potential damage caused by toxic stress can be lessened or repaired with exposure to a responsive caregiving relationship. The earlier the better, but it is never too late.

### How can I support my child when they experience stress?

The best way to support you little on through a stressful activity or time is to be a responsive caregiver. Staying close to your little one and being available is what research tells us is most helpful. It is tempting to rescue children immediately when they experience stress, but no stress may also be detrimental to brain growth. Children need to be given to opportunity to become stressed and to recover. So when your little one is reaching for that toy and getting upset, step-in and use your calming voice and encourage your little one. If they continue to get upset put the toy a little bit closer or give them the toy and express your pride in them for trying. This will help build persistence and resiliency skills. Stepping in and supporting in a small way still allows for your child to be successful.

Speak often to your children about emotions. All emotions are new emotions for growing children. They need a responsive caregiver to explain the emotion and to provide support in over coming these emotions. Finally try and understand your child's temperament. Knowing your child's temperament will give you clues as to how your child interprets their environment and can support responsive caregivers to foresee what their children may find more stressful.

Disclaimer: The information contained in this article are the opinions of the author based on their own interpretation of the resources and research reviewed in the creation of this article.

### For additional information on stress please see the links below:

- <https://developingchild.harvard.edu/science/key-concepts/>
- <https://www.albertafamilywellness.org/what-we-know/stress>
- <https://www.unicef.org/parenting/health/how-children-can-develop-toxic-stress>
- <https://www.nationwidechildrens.org/family-resources-education/700childrens/2017/07/toxic-stress-how-the-bodys-response-can-harm-a-childs-development>