

# STRESS & EARLY BRAIN GROWTH

## Understanding Adverse Childhood Experiences (ACEs)

### What are ACEs?

ACEs are serious childhood traumas -- a list is shown below -- that result in toxic stress that can harm a child's brain. This toxic stress may prevent a child from learning, from playing in a healthy way with other children, and can result in long-term health problems.

#### Adverse Childhood Experiences can include:

1. Emotional abuse
2. Physical abuse
3. Sexual abuse
4. Emotional neglect
5. Physical neglect
6. Mother treated violently
7. Household substance abuse
8. Household mental illness
9. Parental separation or divorce
10. Incarcerated household member
11. Bullying (by another child or adult)
12. Witnessing violence outside the home
13. Witness a brother or sister being abused
14. Racism, sexism, or any other form of discrimination
15. Being homeless
16. Natural disasters and war

#### Exposure to childhood ACEs can increase the risk of:

- Adolescent pregnancy
- Alcoholism and alcohol abuse
- Depression
- Illicit drug use
- Heart disease
- Liver disease
- Multiple sexual partners
- Intimate partner violence
- Sexually transmitted diseases (STDs)
- Smoking
- Suicide attempts
- Unintended pregnancies

### How do ACEs affect health?

**Through stress.** Frequent or prolonged exposure to ACEs can create toxic stress which can damage the developing brain of a child and affect overall health.

Reduces the ability to respond, learn, or figure things out, which can result in problems in school.

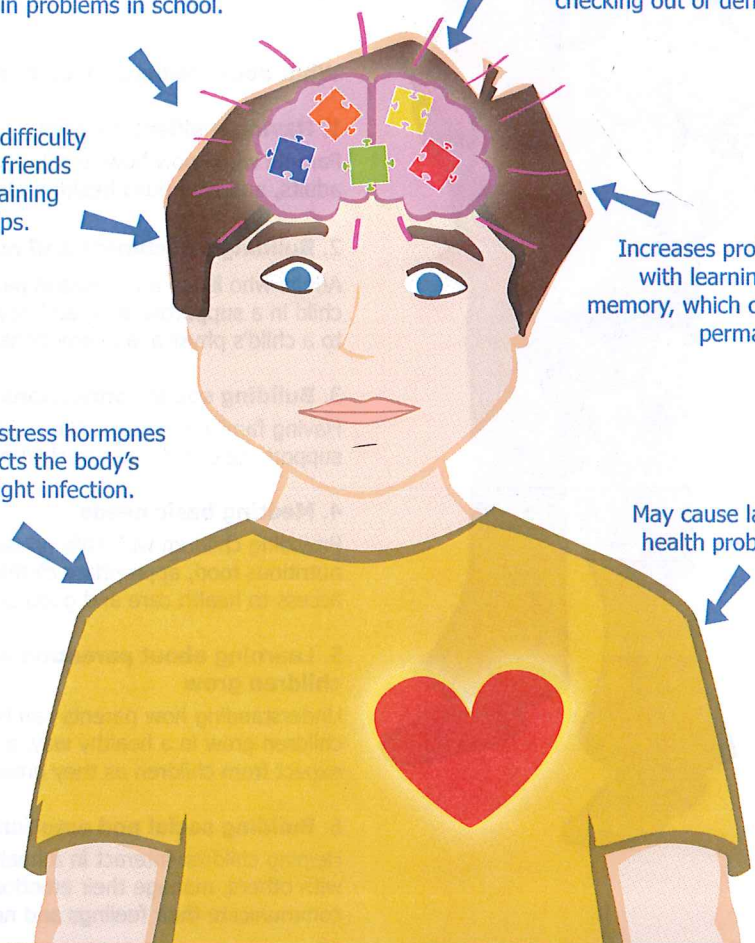
Lowers tolerance for stress, which can result in behaviors such as fighting, checking out or defiance.

Increases difficulty in making friends and maintaining relationships.

Increases problems with learning and memory, which can be permanent.

Increases stress hormones which affects the body's ability to fight infection.

May cause lasting health problems.



**A Survival Mode Response** to toxic stress increases a child's heart rate, blood pressure, breathing and muscle tension. Their thinking brain is knocked off-line. Self-protection is their priority. In other words:  
**"I can't hear you! I can't respond to you! I am just trying to be safe!"**