

Better Brains for Babies

*...You can make
a difference!*



*Governor's Office for
Children and Families*

This project was supported in part by the Governor's Office for Children and Families through the U. S. Department of Health and Human Services, Administration for Children and Families, Community Based Child Abuse Prevention and Treatment Act (CFDA 93.590). Points of view or opinions stated in this document are those of the author(s) and do not necessarily represent the official position or policies of the Governor's Office for Children and Families or the U. S. Department of Health and Human Services, Administration for Children and Families, Community Based Child Abuse Prevention and Treatment Act (CFDA 93.590).



Objectives



At the end of today's webinar, participants will be able to:

- Describe how the brain responds to stress
- Compare and contrast the three levels of stress
- List potential negative effects of long-term toxic stress
- Explain ways to buffer the developing brain from toxic stress

Stress and the Brain: An Example

Grace, a 2 year old, lives with her mother and three older siblings. Her mother, a single parent, works two jobs. Grace is left in the care of her 8-year-old sister while their mother is at her night job.

Grace's mother has no time to cook, so there are no planned meals. There usually is food available for the children in the refrigerator. The choices are limited to snack-type items like sodas, chips, cereals, canned spaghetti, peanut butter crackers, some canned fruit, and cheese. Grace needs help to open the refrigerator or cabinet doors and get the food out. Sometimes the others are too busy to help her right away.

What kinds of stress is Grace experiencing?



Why is it so important to study the brain?

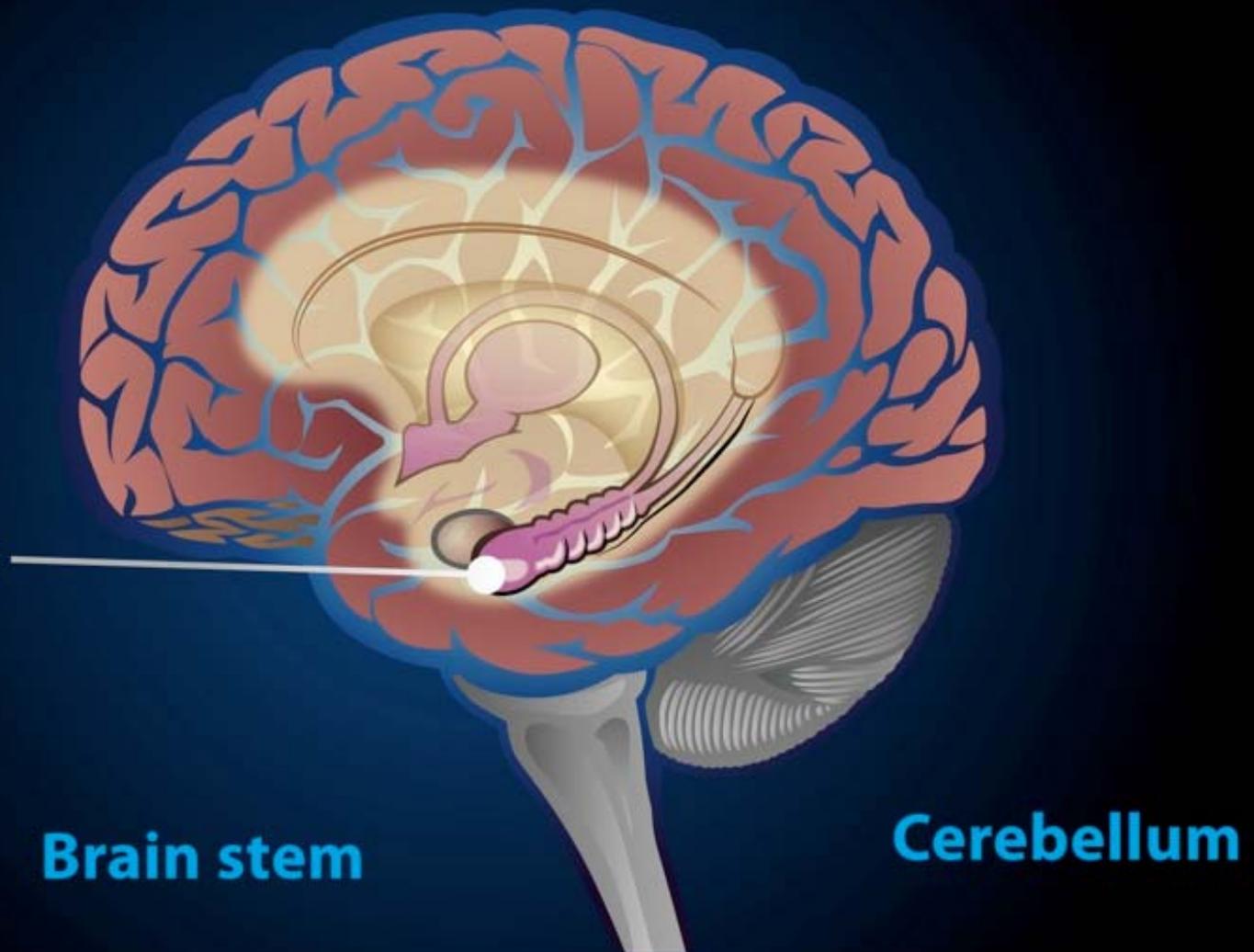
Recent brain research tells us...

- *The brain is not fully developed at birth*
- *Important foundations are formed before age 3*
- *Early, positive interactions with nurturing adults are vital to healthy brain development*
- *Sensory experiences affect early brain development*



Parts of the Brain

- **Limbic system**
(inside the brain)
 - **Amygdala**
 - **Hippocampus**

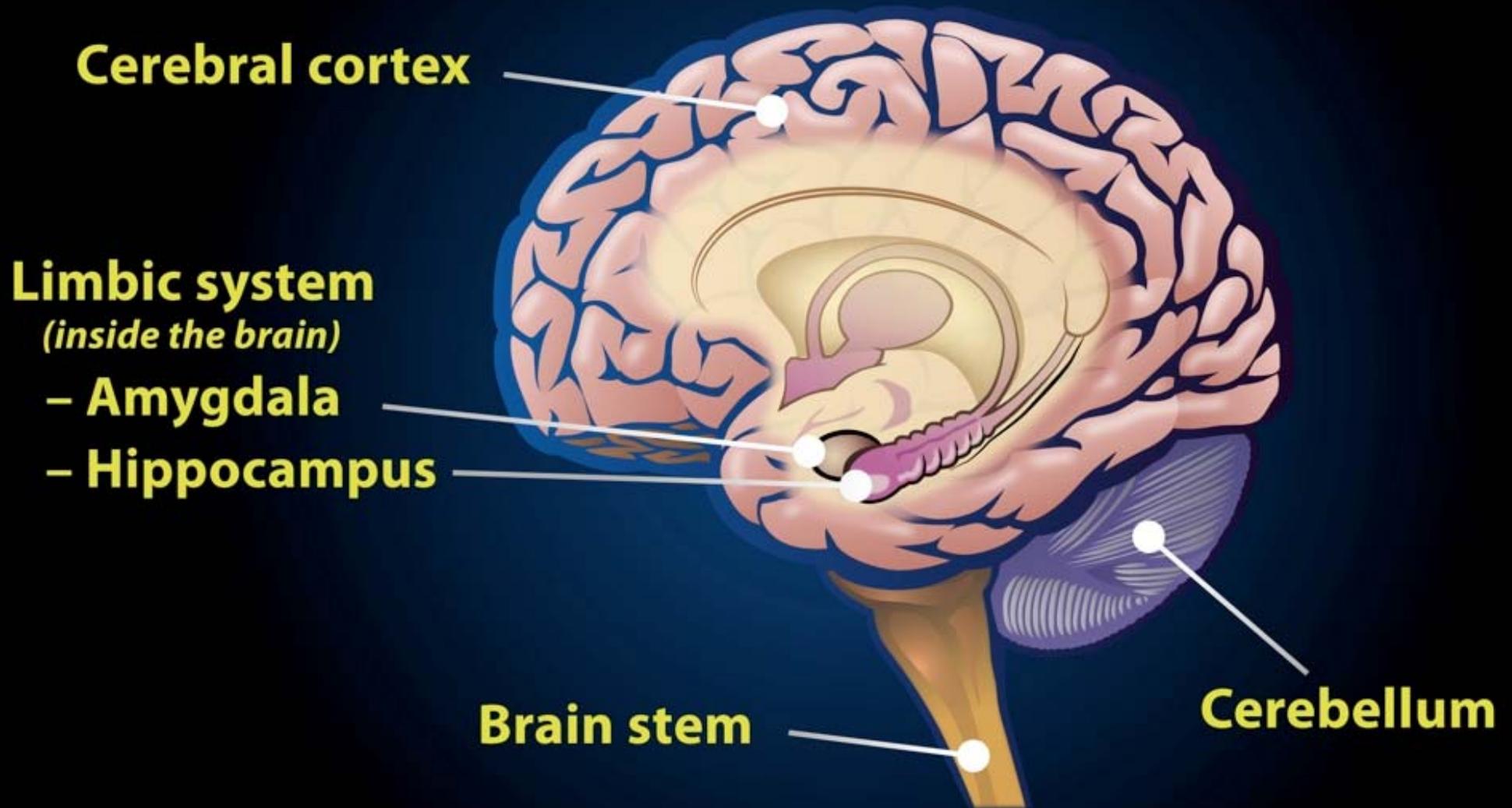


Brain stem

Cerebellum



Parts of the Brain



The Stress Response

- ▶ **Stressors cause physical and psychological changes**
 - **Release of cortisol**
 - **“Fight or flight” response**
 - **Increased heart rate**
 - **Increased adrenaline**
 - **Highly focused attention**
- ▶ **Primitive parts of the brain take over**



Levels of Stress

3 Levels of Stress:

- ▶ **Positive Stress**
- ▶ **Tolerable Stress**
- ▶ **Toxic Stress**



Stress and the Brain: An Example

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What levels of stress is Grace experiencing?



Stress and the Brain: Grace's Life

Potential Positive Stressors

- Waiting for food
- Being cared for by her aunt
- Others?

Stress and the Brain: Grace's Life

Potential Tolerable/Toxic Stressors

- Single parent who works 2 jobs
- Being cared for by 8-year-old sister
- Poor nutrition
- Irregular eating schedule; not having needs met
- Others?

What might Grace need to make these stresses tolerable rather than toxic?



Dangers from Prolonged Stress

- ▶ **Fewer synaptic connections**
- ▶ **Dominance of survival instincts**
- ▶ **Persistent hyper-arousal**
- ▶ **Impulsivity**
- ▶ **Reduced ability to learn**
- ▶ **Memory loss**



Importance of Consistency

- ▶ **Predictability minimizes stress**
- ▶ **Repetition reinforces brain connections**
- ▶ **Knowing what to expect builds confidence and competence**
- ▶ **Limits encourage self-regulation**



Key Factors that Mitigate Stress

- ▶ **Loving, responsive, consistent relationships**
- ▶ **Safe environments**
- ▶ **Experience regulating stress in supportive environments**
- ▶ **Development of trust**
- ▶ **Resiliency**



Stress and Trauma

When you look at children who come out of terrible environments and do well, you find someone in their lives somehow instilled in them the attitude that they aren't helpless, that they aren't powerless, that they can do something.

—Dr. Bruce Perry

...You can make a difference!



Some Resources on Toxic Stress

- “Toxic Stress: The Facts”: Harvard Center on the Developing Child - <http://bit.ly/1m3RnkG>
- “Excessive Stress Disrupts the Architecture of the Developing Brain”: Harvard Center on the Developing Child - <http://bit.ly/1m3RA7o>
- “Toxic Stress and its Impact on Early Learning and Health”: Wisconsin Family Impact Seminar - <http://bit.ly/1m3R4Gy>



Brain Development

Society cannot continue to ignore the laws of biology. The more we learn about early brain development, the more responsibility we have to act on that knowledge.

—Bruce D. Perry, M.D., Ph.D.

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Contact Us



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Better Brains for Babies at
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