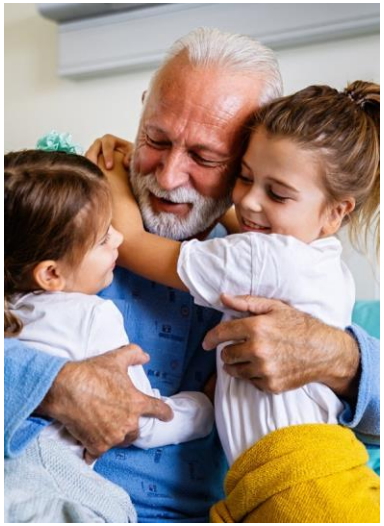
Preparing for a Lifetime
It's Everyone's Responsibility

GRANDPARENT

TOOLKIT



Cognitive Development

Cognitive development refers to changes in the brain that prepare people to think and learn.

Adolescent brains experience a lot of growth and development. These changes will strengthen young peoples' abilities to make and carry out decisions that will help them thrive now and in the future.

The Adolescent Brain

What's Happening to the Brain During Adolescence?

As the teen brain develops and matures it:

- quickly grows new brain cells
- removes connections to brain cells that are unused
- strengthens connections to brain cells that are used the most

These changes help teens gain the ability for:

Enhanced learning

Abstract thinking

Advanced reasoning

Metacognition

Cognitive Growth: What to Expect

Ages 10-13

- Thinking more about personal decision-making in school and at home
- Begins to question authority and society's standards
- Begins to form and speak own thoughts and views about different topics

Ages 14-17

- Thinking more about the "what if's" and the future
- Questions and analyzes things more extensively
- Begins to form own code of ethics and thinking more about who they are and want to be

Ages 18-21+

- Focus is more on less self-centered concepts and personal decision-making
- Often develops idealistic views on specific topics
- Challenges opposing views rather than just accepting
- Begins to think about role in society and career plans

Nurturing Cognitive Growth in Youth

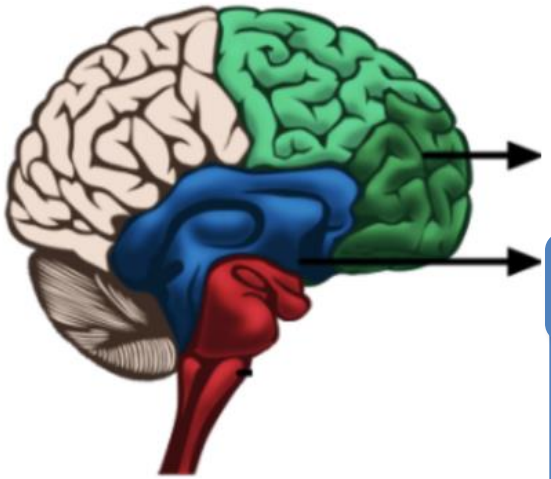
It is important for youth to form habits that will enhance growth such as:

- getting enough sleep
- exercising daily
- eating a variety of nutritious foods
- forming healthy relationships

Providing learning environments that offer opportunities for focused attention, originality, and challenge have been shown to stimulate positive changes in the brain.

The connections the brain decides to keep or remove are directly related to the experiences that young people are having.

Key Areas in Adolescent Brain Development



Pre-frontal Cortex – Thinking/Reasoning Center

- Rational thinking
- Judgement and decision-making
- Impulse control
- Regulation of emotions

Limbic System – Emotional Center

- Expression of emotions
- Instinctive behavior
- Forming and storing memories
- Motivation and feelings of gratification

Limbic System

Very influential and key to youth behavior during adolescence.

Matures between ages 10-13.

Responsible for:

- instinctual behaviors like fight, flight, and freeze
- expressing emotions
- feelings of pleasure
- motivation
- sensation-seeking
- storing memories

Very active and can be over-reactive in adolescence, causing youth to act before thinking.

Prefrontal Cortex

Fully developed and matured by age 25.

Often overpowered during times of excitement or stress.

Responsible for:

- rational and abstract thinking
- judgement and decision-making
- problem-solving
- planning and prioritizing
- impulse control
- regulating emotions

Stress: Interaction Between Limbic System & Prefrontal Cortex

Common Challenges Youth May Face

Trauma

Substance Use

Trauma & Brain Development

Adverse Childhood Experiences (ACEs) are traumatic events that happen in childhood that can have health impacts throughout life.

Experiencing and/or witnessing something traumatic can also have an impact on how the brain grows, functions, and reacts.

Exposure to repeated and/or constant trauma causes the brain to flood with stress hormones and areas responsible for emotions and survival behaviors remain on “high alert”, resulting in

- hypersensitivity to distress
- less active prefrontal cortex
- cognitive impairments and delays

Common Reactions to Trauma

- Strong feelings of sadness, anger, guilt or and/or anxiety
- Frequent nightmares, refusing to go to sleep, difficulty falling/staying asleep
- Isolating oneself or becoming over-attached to loved ones
- Depression and feelings of hopelessness
- Loss of interest in school, hobbies, or life in general
- Difficulty concentrating or remembering things
- Disruptive or destructive behavior
- Substance use

Helping Youth Cope with Trauma

- Provide a safe and secure environment and address basic needs
- Let them feel their emotions and express it in various ways
- Limit exposure to news about traumatic events
- Create and stick to daily routines
- Give them some control over decisions
- Seek help from mental health professional as needed

Substance Use & the Adolescent Brain

Adolescence is a defining time for the development of addiction. The reward/pleasure center of the brain is highly active during brain development, causing youth to seek out things that flood their brain with an enjoyable sensation.

When a substance is used that provides this "feel good" state of mind, the pleasure center of the brain will memorize this "new skill" and reward the behavior when it occurs.

Impacts of repeated use:

- connections between brain cells become damaged
- smaller brain structures
- reduced ability to experience pleasure
- formation of unhealthy habits

Providing Buffers to Substance Use

- Help them build school connections by encouraging participation in activities
- Be engaged with what they're doing, places they spend time, and who they spend time with
- Model healthy coping skills and help them develop their own
- Have clear family expectations and discuss these with them frequently
- Build strong sense of family by planning and doing activities together

Additional Brain Development Factors

Learning Styles

Disabilities

Mental Health Disorders

Supporting Healthy Cognitive Development

- Reinforce long-term rewards
- Encourage cold cognition
- Ask open-ended questions on complex issues
- Help youth consider consequences of actions at multiple time points
- Provide more learning opportunities that have healthy risks
- Encourage healthy sleep habits
- Promote injury prevention
- Seek out opportunities for teens to engage as learners
- Support adolescents with learning disabilities

Resources

988lifeline.org

samhsa.gov

cdc.gov/violenceprevention/aces/fastfact.html

OKLAHOMA
State Department
of Health

Grandparents Raising Grandkids
Oklahoma.gov/health/grandparenttoolkit
Grandparent@health.ok.gov

Acknowledgement

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