Transition to Adolescence

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1. **A Time of Developmental Change:**

   A. **Physiological:** Rapid body growth, secondary sex characteristics, hormonal changes, related sleep needs, etc.

   B. **Psychosocial:** Establishing an identity and morals, reasoning and abstract thinking skills, developing autonomy (the shift from dependence to independence), achievement issues, establish satisfying relationships with peers, and sexuality issues.

   C. **Neurological:** Recent findings show that the greatest changes to the parts of the brain that are responsible for impulse-control, judgment, decision-making, planning, organization and involved in other functions like emotion, occur in adolescence.

2. **Challenges:**

   A. Risky Behavior

   I. Accidents: Unintentional injuries are the leading cause of death of adolescents in Colorado as well as nationally.
   II. Sexual: Teen pregnancy, sexually transmitted diseases, sexual assault.
   III. Substance Abuse: Use of drugs/alcohol in adolescence dramatically increases the chances of addiction issues later in life.
   IV. Depression/Suicide: Nationally, the fastest growing group for suicide is youth aged 10 to 14. Suicide is the second leading cause of death for youth aged 15-19 in Colorado and is the third leading cause of death nationally.

   B. Stress: According to the Boulder Valley Healthy Youth Alliance, adolescents prioritize stress as their biggest challenge.

   C. Parent-Child Conflict: An inevitable consequence of adolescent development. A shift in parenting strategies is needed to effectively navigate adolescence.

3. **Opportunities:**

   A. **Foster Healthy Brain Development:** Adolescents need to be surrounded by supportive adults, resources, and institutions that provide them with opportunities to learn specific skills and appropriate behavior.

   B. Adapt Parenting Strategies: The importance of empowerment, the shift from control to advice, choosing your battles, talking often, when to just listen, the school of hard knocks.

   C. Encourage Prosocial After School Activities: Research documents their importance in fostering protective factors and reducing at-risk behaviors.

4. **What's Really Important:**

   A. The Relationship

   B. The Big Stuff (not the small stuff)

For more information on parenting strategies and adolescence, please visit our web site:

BoulderPsychologicalServices.com

The Adolescent Brain: A Work in Progress

What we now know

■ Neuroscience—the study of brain development— has made great strides over the past decade. This progress is due, in large part, to the development and continued sophistication of magnetic resonance imaging (MRI) that safely provides detailed and accurate pictures of the living, growing brain and of molecular biology, which has allowed for the molecular characterization of changes in brain growth and development in biological model systems.

■ Research has now determined that remarkable changes occur in the brain during the second decade of life.

■ The understanding that adolescence is a time of profound brain growth and change is contrary to long-held ideas that the brain was mostly fully "formed" by the end of childhood.

How the adolescent brain changes

■ Between childhood and adulthood the brain's "wiring diagram" becomes more complex and more efficient, especially in the brain's prefrontal cortex or frontal outer mantle.

■ An important part of the front lobes—and one of the last areas of the brain to fully mature—is the prefrontal cortex (PFC). The PFC is responsible for such skills as setting priorities, organizing plans and ideas, forming strategies, controlling impulses, and allocating attention.

How such changes take place

■ Like a computer, the maturing brain grows "circuits"—neural connections—that can perform several tasks simultaneously and with ever-greater efficiency.

■ Dopamine inputs to the PFC—a chemical messenger critical for focusing attention when necessary to choose between conflicting options— grow dramatically during adolescence. Why brain changes during adolescence matter

■ Impulse control, planning, and decision-making are largely prefrontal cortex functions that are still maturing during adolescence.

■ Adult response to stimuli tends to be more intellectual, while teens' is often more "from the gut." This suggests that while the changeability of the adolescent brain is well suited to meet the demands often life, guidance from adults are essential while this decision-making circuitry is being formed.

■ The ability for the brain to plan, adapt to the social environment, and to imagine possible future consequences of action or to appropriately gauge their emotional significance, is still developing throughout adolescence.

■ Brain functions that enhance teens' ability to connect gut feelings with their ability to help retrieve memories, to put situations into context, and to remember past details about a situation that might be important, are also under major construction during adolescence.

Implications

■ Neurobiological factors should be one part of a wider universe of factors that are considered when trying to understand teen decision-making and behavior, including pregnancy.

■ Teens need to be surrounded by caring parents, adults, and institutions that help them learn specific skills and appropriate adult behavior.

■ Teens themselves may be able to shape their own brain development. For example, neuroanatomical evidence suggests that learning and positive experiences help build complex, adaptive brains.

■ More research is needed to fully understand the brain development, including the relative influence of genetic and environmental factors and how much of the brain's developing "wiring diagram" process is automatic versus how much is susceptible to manipulation and intervention.

From: "The Adolescent Brain: A Work in Progress" by Weinberger, Elvevag and Giedd. June 2005

URL: www.teenpregnancy.org/resources/reading/pdf/BRAIN.pdf