

Understanding the adolescent ...and the adolescent brain

It is a common complaint among parents of adolescents: “I just don’t understand my child anymore!” The once well-mannered, easygoing son or daughter is suddenly a moody nightmare. And as tempting as it might be to blame that change on stubborn rebellion or social pressures, research shows that the root cause might be something physical—the adolescent brain. Just as “tween” bodies are visibly changing, so are their brains. Understanding what is literally happening inside adolescents’ heads is the first step to understanding the reasons behind the change in behavior and to explore ideas that can help youth through this unsettling time.

It really is a physical change!

Scientists at the National Institute of Mental Health learned that the adolescent brain is a work in progress. The more they discovered, the more they began to understand why adolescents behave as they do. Among their key findings are:

- It’s not an adult brain—yet. Although a child’s brain reaches 95 percent of its adult size by age six, the brain continues to develop throughout childhood. The gray matter or thinking part of the brain thickens as it creates extra connections much like a tree grows extra branches, twigs and roots. This challenges the idea that children’s abilities and temperaments are established in the first few years of life. The truth is that their brains have a long way to go.
- In the frontal part of the brain—the part of the brain involved in judgment, organization, planning, strategizing—this thickening of the gray matter peaks at about age 11 in girls and age 12 in boys, roughly about the same time as puberty. To no surprise then, children at this age often waste time, make poor choices, and get caught unprepared for even routine situations. This may explain why parents can remind a child to complete a few tasks around the house only to return later to discover the tasks undone and the child grabbing a snack in the refrigerator while texting a friend. And when asked why the tasks haven’t been completed, the child responds, “I forgot.” To the parent, the request was simple and straight-forward. The adolescent, however, faced other options (hunger and checking in with a friend), made the “wrong” choices, and forgot the original request.
- Preteens do not process information the same way as adults. In one experiment, adults, preteens, and teens looked at a photo of a woman’s face and were asked to identify the emotion she was expressing. All of the adults correctly recognized the woman’s expression as surprise, but only half of the children saw surprise; the others saw shock or fear. Even the most mature-behaving youth failed to recognize the correct emotion. Researchers believe that this explains a child’s often irrational response to a parent-child conversation. The parent expresses one emotion; the child senses something entirely different and responds in an unexpected way.
- Not only is the brain’s decision-making center still developing in the preteen years, many researchers believe the brain is also still establishing a pattern of pathways that will remain for the rest of a person’s life. Those parts of the brain that are stimulated will develop, while those that are not will wither away. In other words, when a preteen routinely practices a set of skills, the brain responds by expanding and committing those skills to memory. So, it is important for preteens to spend their time wisely. The child who does her schoolwork and spends time interacting with people will hardwire those skills in her brain. The child who withdraws and plays video games develops those instead.

- Physical exercise appears to be an important part of healthy brain development. Dancing, sports, or other physical activity may actually improve a child's thinking and problem-solving abilities.
- The brain, like muscles, needs a chance to rest after a workout. For adolescents, that means getting a good night's sleep. The average preteen and teen needs nine to 9 ½ hours of sleep each night.

It would appear that with patience, practice, and exercise, parents could develop a formula for raising brilliant children. Researchers warn, however, that the brain is not simply a computer that stores facts and processes data. It is largely wired for social interaction and bonding with caregivers. In other words, parent-child time is the most important factor in fully developing the adolescent brain. One researcher summed it up this way: "With all the science and with all the advances, the best advice we can give is things that our grandmother could have told us generations ago: to spend loving, quality time with our children."

Putting research to good use

Here are some ways families can help their preteens and teens through this often rocky period of life:

Stay calm. When emotions are high, lots of things, including memory, shut down and energies focus on survival. A simple question about homework can suddenly escalate into an irrational shouting match. Remember that for preteens, seemingly small things such as getting a pimple or being called on in class can feel like high-threat situations.

Prepare yourself. This adolescent is not an adult and is not likely to respond as an adult would to conversations or difficult situations. Think ahead and be prepared for the unexpected.

Prepare your child. In a non-threatening moment, talk about the things that have caught your child unaware and created difficult moments. Use that as an opportunity to help your child to think ahead and plan for future worst-case scenarios.

Provide security and structure. Knowing that adolescents struggle with organizational and decision-making skills, mutually agree on daily guidelines. Schedule a regular time and place at home where kids can complete their homework. Organization is key. Encourage your children to write lists and use assignment notebooks to keep track of homework and projects. Keep a calendar at home where they can post assignment due dates and other important events. Help them plan for projects as far in advance as possible. Encourage them to work on small manageable chunks of a project each day rather than doing it all at the last minute.

Exercise the "proper" brain muscles. Kids who spend much of their time on sedentary activities such as playing video games or surfing the Internet do so at the expense of other more challenging and useful skills. Encourage a mix of reading, writing, music, and other hobbies.

Save time for exercise. The expression "healthy mind, healthy body" is true.

Provide some down time. Middle school schedules can soon become jammed with homework, sports, and extracurricular activities. Everyone needs a chance to catch his or her breath. For many preteens, that means time with friends. Agree to healthy limits on social activities such as cell phone calls, texting, or hanging out with friends. Be sure to save time for family activities as well.

Insist on a good night's rest. Don't forget that adolescents need nine to 9 ½ hours of sleep each night. Without it, children may soon be falling asleep in class, have difficulty waking in morning, lose their ability to concentrate, or even suffer depression.

Speak with your child – routinely. Know your child and what types of situations are likely to trigger emotional responses. Keep the lines of communication open. If your child is doing poorly in a class, consider all the angles. Is there something physical or emotional getting in the way of learning? Enlist the help of your

child's guidance counselor or teacher to get to the root of the problem.