

The Teenage Brain

What Every Parent Should Know



What's really going on inside your child's head?

The Teenage Brain and Decision Making

Historically, adolescents were seen as miniature adults. Then the role of hormones was seen as the major influence in adolescent moods and behaviors. Now we know that the brain itself is responsible for a wide range of behaviors and experiences throughout adolescence.

Perhaps you've recognized some of these symptoms: difficulty planning, organizing and setting priorities; inability to foresee consequences; difficulty postponing gratification; poor impulse control; heightened emotional reactions and mood swings; exaggerated "black and white" thinking; difficulty interpreting or responding to social situations and challenges; high risk-taking behavior—and paradoxically—a fear of new situations and people; and difficulty gauging what others are thinking, feeling, or experiencing.

This may sound like a laundry list of typical adolescent behavior—and in many ways it is. These behaviors and experiences are related to a still developing and critically important area of the brain called the frontal lobes—particularly the prefrontal cortex (PFC)—located in the front of the brain just behind the forehead. The frontal lobes are considered the "chief executive" of the brain, responsible for reasoning, judgment, motivation, impulse control, application of effective social skills, and overall coordination of the various subsystems in the brain to solve problems, relate to others, and negotiate one's way in the world.

At puberty, the brain undergoes a series of fairly profound growth spurts and transformations where the number of nerve cells and (more importantly) their connections alternately increase and decrease. Periods of increased growth

(called exuberance) are associated with times when adolescents are most capable of learning new information and skills. This is also the time when the developing frontal lobes help to consolidate learning and experience in order to apply critical life skills and coping mechanisms. Periods of decreased growth (called “pruning”) occur when the brain actually erases or modifies cells and connections that are not used. Thus, neuroscientists are beginning to describe brain development based on the “use it or lose it” principle.

The recent developments in brain research have major implications for adolescent development. If teenagers don’t learn and practice effective coping skills at this time, they may have difficulty ever getting them completely in the future. And lack of exposure or practice is not the only threat: drug and alcohol use, media influences, and negative adult and peer role-modeling all have the potential to prevent or distort the development of executive functions and social skills. Kids who use drugs, aggressive confrontation, passive avoidance, or any other ineffective coping skill run the risk of “locking in” (biologically!) that pattern of behavior, making it more difficult to either resist or unlearn these behavioral responses in the future.

The solution is to provide teenagers with the opportunity to learn *and practice* effective coping strategies, especially when dealing with the most common adolescent issues: inclusion vs. exclusion, boredom, social/emotional coping skills, assertiveness and confrontation skills, ability to gauge others’ responses, and realistic self-appraisals.

One effective way to practice these coping skills is to provide opportunities for teenagers to “think through” problems, considering various alternatives and their likely outcomes. Reasoning out different possibilities can “stretch” the brain (stimulating neural connections), leading to more efficient problem-solving skills.

Adults (parents, teachers, counselors, etc.) often try to solve teenagers’ problems too quickly. Sometimes, the best assistance for a teenager facing a problem is to ask *them* to identify the potential options and then assist them in considering the pros and cons of each of those options. Not only does this lead to a resolution of the problem, it also gives the brain a workout that develops reasoning and decision-making skills for the future.