

Blame the brain for typical teenage behavior

My children were always good kids, but now that they're teenagers, they're impossible. What makes teens behave the way they do?

Ask any parent: A teen's behavior can be attributed to anything, everything or nothing. But recent research on brain development and activity offers some answers.

Even though most brain development — 90 to 95 percent — occurs during the first six years of life, there's an additional brain growth spurt around ages 10 to 12. After that, up to age 20, researchers say, there's additional pruning, organizing and other changes in the brain. During this developmental period, brain activity often manifests itself in emotional outbursts, irrational decision-making, rigid thinking and general disorganization.

Researchers at the National Institutes of Mental Health, Harvard University and other institutions have used brain imaging techniques to examine both brain activity and development in adolescents and teens. It appears that the brain's frontal lobe, where people process emotions, continues to develop into the early 20s and is normally the "first responder" in adult decision-making and judgment calls.

Teenagers, on the other hand, tend to rely more on a part of the brain called the "amygdala," part of the limbic system that is associated with instinctive gut reactions, including what's known as the "fight or flight" response. Because of that, they're more likely to react quickly and misinterpret facial expres-



sions of emotion — for example, they could possibly see anger in another person when, in actuality, there is none. You might also see the amygdala at work in your teen's rapid mood changes, impulsiveness, high level of emotion, and even risk-taking behavior.

As teens become young adults, activity shifts from the amygdala to the frontal lobe, allowing more control over emotions and impulses.

For parents, simply knowing that normal brain development is a likely cause of their teens' seemingly irrational behavior can be a relief. But you can do things to help smooth the transition to adulthood. For example:

- Provide opportunities for teens to use their "thinking brains" for planning, analyzing, organizing, problem-solving and making decisions. Understand they have a need to become more independent and self-sufficient, but also still need positive interactions with adults.
- Listen, encourage and support your teenagers. Don't overreact if they have an outburst, but have clear and consistent boundaries and expectations for behavior.
- Provide opportunities for enriching experiences and healthy risks, including sports, jobs and challenging studies. Limit use of television and video games if they interfere with other activities that permit healthy socialization, physical activity or real-life problem-solving.

Family Fundamentals is a monthly column on family issues. It is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Family Fundamentals, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH 43210-1044, or filipic.3@cfaes.osu.edu.



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Dear Subscriber: This column was reviewed by Melinda Hill, family and consumer sciences educator for OSU Extension in Wayne County.

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