

Making Sense of the Teenage Brain

It's been a few generations since adolescents were viewed primarily as young, slightly less responsible, adults. Since then, developments in neuroscience and imaging techniques have allowed scientists to better understand what is going on in that teenaged brain. **As it turns out, the rapid physical development of the brain in adolescence is comparable to—and no less dramatic than—the rapid rate of brain growth that children experience in the first couple of years.**

Different parts of the brain mature at different times:

- Puberty is triggered by the *hypothalamus*, which sets off a hormonal chain reaction that drives **sexual maturation**.
- Changes in the *amygdala* (part of the forebrain that processes strong emotions) lead to **changes in mood, aggressiveness, and social behavior**.
- Teenagers' tendency to **seek novelty** is driven by the brain's reward systems and the neurotransmitter *dopamine*.
- During adolescence, young people are prone to **take risks** because their sensation-seeking impulses are strong, but their self-regulation has not yet fully developed (blame the *prefrontal cortex*, which won't fully mature until about age 20). Adolescents weigh positive and negative outcomes differently from adults. It's not that teenagers believe they are immortal—they do weigh costs and benefits—they just don't have the experience or knowledge to see the full range of options, and **they may not be able to foresee the consequences of their actions**
- Another change in the brains of teenagers is a proliferation of receptors for the signaling chemical *oxytocin*, which mediates a wide variety of **bonding behaviors** and is produced during feelings of both romantic and parental love.

For anyone with teenagers in their life, it's important to take the long view—brain and behavioral changes occur over a ten to twelve year period. As adults, we may also need to consider a few adjustments in our own actions and expectations:

- Because teens are on edge and react with parts of the brain primed for fear and alarm, speak calmly and ask them for just one thing at a time.
- Try to sit back a bit, give subtle nudges and hint at possible outcomes.
- Rather than exerting control, try to give your teenager more choices.
- Accept that teens are wired to take risks and plan ahead for that (for example, by insisting on fewer kids in a car when driving)
- Give teens a wider definition of what success at their age means. Lighten up on over-scheduling them. Help them to get more sleep. Give them time and space to find their own path.

Sources: *Welcome to Your Child's Brain* by Sandra Aamodt and Sam Wang and *The Primal Teen* by Barbara Strauch. We really like this [website](#) which is packed full of great information. You may want to check out the "[Talking With Your Teen](#)" worksheet.

The Staples Resilience Project is an ongoing endeavor by the Staples Guidance Department aimed to promote the well-being of our students and foster a positive, inclusive school community.

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