

# Have the Conversation!

## Teen brains: Are they wired for risk-taking?

Are teen brains wired for risk taking? The answer is yes, but it's not a simple yes. There are numerous studies referring to the detrimental impact of alcohol and other substances on the ongoing development and maturation of the adolescent brain. The developing brain also plays a role in risky behavior.

Research over the last several years has linked risk-taking behavior to changes in the brain. The adolescent brain is extra sensitive to reward signals when the payoff for risk is higher than expected. Researchers have identified a surge of activity in a region of the brain, the ventral striatum, when reality exceeds expectations with the increased response highest among 14-19 year olds. This surge of activity is related to the release of dopamine – with more dopamine teens are more likely to feel risky behavior is more rewarding, especially if it ends well, than children or adults. According to B.J. Casey of Cornell University, in the heat of the moment (even though a teen may know better) the brain's reward system will overpower the logical decision-making part of the brain. "It's like they're pulled toward it," explains Casey. Examples might include skateboarding down steps, taking a big jump on a bike, or sneaking out after curfew.



The presence of peers substantially increases risk-taking, especially when emotions are elevated. When peers are involved, the social rewards of a risky behavior may outweigh the consequences. For example, when experimenting with alcohol and substance use, the perceived potential pleasure in the moment may outweigh the possibility of getting in trouble and other more serious consequences.

However, the enhanced response to risk-taking doesn't mean that all teens will engage in dangerous behaviors or ignore risk.

### According to the 2011 Boulder Valley Youth Risk Behavior Survey:

- 63 percent of high school students believe that one to two drinks of alcohol per day poses moderate to great risk, 90 percent believe cigarettes are risky and 47 percent believe marijuana is risky.
- The prevalence of high school students who have ever used more serious substances ranges from 3 percent for methamphetamine to 11 percent for ecstasy. While we should absolutely strive to have those numbers be as low as possible, it's also good to recognize that 90-97 percent of students have not tried more serious and potentially addictive substances.

### What does this mean for parents?

- Help your child learn to assess risk – Use movies or the news as tools to talk about behavior and consequences.
- Keep the lines of communication open – Share your values and let your children know that your job is to keep them safe
- Offer your teen a way out – If they are feeling uncomfortable or feeling pressured by peers to do something they don't want to do, let them know they can contact you to pick them up with no questions asked (at that time, at least).
- Encourage "safe" risk-taking – sports, performing arts, something that matches their passion and interests and provides that "rush."

Risk-taking is a reality for teens. Our job is to help them learn that positive risk-taking is necessary for them to explore their limits and boundaries on the path to becoming independent, self-reliant young adults.

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