

## The Teen Brain and Addiction

Drugs contain chemicals that tap into the brain's communication system and disrupt the way nerve cells normally send, receive, and process information. There are at least two ways that drugs cause this disruption: (1) by imitating the brain's natural chemical messengers and (2) by over stimulating the "reward circuit" of the brain. The result is a brain awash in dopamine, a neurotransmitter present in brain regions that control movement, emotion, motivation, and feelings of pleasure. The overstimulation of this reward system, which normally responds to natural behavior linked to survival (eating, spending time with loved ones, etc.) produces euphoric effects in response to psychoactive drugs. This reaction sets in motion a reinforcing pattern that "teaches" people to repeat the rewarding behavior of abusing drugs.

As a person continues to abuse drugs, the brain adapts, and more drugs are required to get the same effect. Long-term abuse causes changes in other brain systems and circuits as well. The brain attempts to compensate, which can impair cognitive function. *Brain imaging studies of drug-addicted individuals show changes in areas of the brain that are critical to judgment, decision-making, learning and memory, and behavior control.*

Why do some people become addicted while others do not? No single factor can predict whether a person will become addicted to drugs. Risk for addiction is influenced by a combination of factors that include individual biology, social environment, and age or stage of development. Genetic and environmental factors interact with critical developmental stages in a person's life to affect addiction vulnerability.

*The earlier that drug use begins, the more likely it will progress to serious abuse.*

Prevention is the key. Prevention is a team effort and parents are the most important part of the team. Students whose parents talk to them about drugs and alcohol are 40% less likely to use.

### Parenting Tips:

- ◇ Remind your teen that most of their peers are making healthy choices, and educate your teen about the [consequences of drug use](#). As the perception of harm decreases, teen drug use increases.
- ◇ Instill awareness of the positive side of changes your teen is experiencing, and channel these drives constructively. There are many options, including taking part in athletics where competition, speed, and power are part of the sport.
- ◇ Learn to resist the temptation to make decisions for your teen. Considering several alternatives, as well as the outcomes, gives our teens practice at making healthy choices.
- ◇ Controlling emotions is another important skill to develop. Teach your teen to count to ten or take a deep breath before acting out. Ask them about what made them feel this way.
- ◇ Teach your teen to deal with conflict. Help them to see things from someone else's perspective, listening to what is not being said and using humor.
- ◇ Try to stay open and accepting to the changes and challenges of adolescence. As adults supporting adolescents, such changes may challenge us to be open to what is happening, to be receptive and responsive instead of reactive, to connect rather than correct.

