

# ALCOHOL AND THE TEENAGE BRAIN

## **In the teen years, your child's brain goes through dramatic developmental changes!**

This is why their brain is so vulnerable to any negative impact or disruption to development, and also why alcohol use before the age of 21 is so harmful to the brain.

### **Impact of Alcohol on the Brain**

A teen's brain is going through major structural and functional changes. Their brain is going through a cleaning up process where frequently used neural connections are being strengthened and those not used so often are weakened or discarded. Alcohol use during this time:

#### **1. Disrupts neurons' communication with each other**

Neurons communicate with each other using chemicals (dopamine & GABA) called neurotransmitters. Alcohol disrupts these neurotransmitters making it more difficult for teens to

- learn new behaviors,
- feel motivated,
- calm their emotions, and
- feel rewarded.

#### **2. Damages brain tissue**

Alcohol damages brain tissue in key parts of the brain. -- the hippocampus – where new memories are formed.

#### **3. Damages areas of the brain focused on learning and memory**

Alcohol affects the white and gray matter of the brain. These are the superhighway (connects information across the brain) and the information processing center of the brain. When these are damaged, controlling behavior, paying attention, concentrating, and decision making are all compromised.



## Parents and Those in a Parenting Role Can Make a Difference!

You are the most important influence in your child's life.

You can directly impact whether your child decides to drink alcohol.

- Talk with your child about alcohol and its negative impacts
- Model healthy and positive behavior
- Stay involved in their life

### Important Reminders

The age at which your child first starts drinking matters! You can greatly reduce repercussions of alcohol on your teen's brain development if you can delay the age at which your child initiates alcohol use.

The teen brain is more susceptible to the negative effects of alcohol than an adult over the age of 25.

Teens who feel closely connected to their parents are less likely to use alcohol.

Teens desire the approval of their parents and those in a parenting role. Two-thirds of youth ages 13 to 17 say losing their parents' respect is one of the main reasons they don't use drugs.

Due to the way the human brain develops, when teens use alcohol, it puts them at increased risk for engaging in other risky behaviors like initiation of other drugs, unprotected sex, and greater likelihood of misusing alcohol later in life.

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