# MARIJUANA AND THE TEENAGE BRAIN

You have protected and provided enriching opportunities for your child's brain since the day they were born, and their brain continues to develop and be vulnerable throughout their teen years. Marijuana use can harm their brain development and function in ways that are long-lasting and even permanent.

### **Brain Science Made Easy**

There are two primary parts of the human brain:

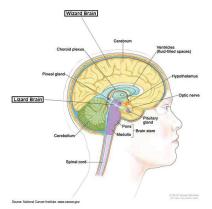
## 1. Limbic system (the "lizard brain")

- This reactionary system can be called the lizard brain because it is the most primitive part of the brain, comparable to the entire brain of a lizard.
- · The limbic system is responsible for
  - Emotions (fear, anger, negativity)
  - Quick decisions (fight or flight)
  - Social needs
  - Rewards

#### 2. Prefrontal cortex (the "wizard brain")

- The prefrontal cortex can be called the wizard brain because it is the thinker.
- The prefrontal cortex is responsible for
  - Decision making
  - Thinking through consequences
  - Controlling impulses

During the teen years, both the lizard brain and wizard brain go through massive changes and development. The lizard brain is done restructuring around the age of 15, but the wizard brain is not done restructuring and maturing until the mid-20s. This is



why the teen years are dominated by the lizard brain and the wizard brain takes a back seat. There is a disconnect between the lizard brain and the wizard brain, which is made worse by substances.

# **How Marijuana Impacts the Teenage Brain**

- Negatively impacts the development of the prefrontal cortex, which hinders learning and memory
- Associated with lower educational outcomes
- Greater risk of long-term cognitive and psychological challenges

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

- You are the most important influence on your child's/teen's life
- You play a critical role in your child's/teen's decision to not use marijuana when you
  - Talk to your child/teen
  - Model healthy and positive behaviors
  - Stay involved in their lives

The age of the person using marijuana matters in terms of the negative effects. Younger people are more susceptible to severe and long-lasting consequences. Preventing your teen from using marijuana, whether that means preventing them from ever using or delaying their start until at least the age of 21, greatly minimizes their risk.

Teens who learn about the risks of drug use from their parents are less likely to use drugs than those who don't.



Learn about this and more at ParentingMontana.org.

