

# TeachME Professional Development

## Drugs, The Brain, and Behavior

### Introduction

**1. Teens who use drugs may act out and may do poorly in school or drop out, and using drugs when the brain is still developing may cause lasting brain changes and put the user at increased risk of dependence.**

- A. True
- B. False

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### Drug Misuse and Addiction

**2. Addiction is defined as a chronic, relapsing disorder characterized by compulsive drug seeking and use despite adverse consequences, and it is considered a brain disorder because it involves functional changes to brain circuits involved in reward, stress, and:**

- A. Motivation
- B. Problem-solving
- C. Self-control
- D. Pleasure seeking

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### Dramatic Changes During Adolescence

**3. The part of the brain that is still maturing during adolescence and that allows people to assess situations, make sound decisions, and keep emotions and desires under control is the cerebral cortex.**

- A. True
- B. False

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### How Do Drugs Work in the Brain?

**4. Each of the following is an accurate statement about how drug use impacts the brain EXCEPT:**

- A. Drugs interfere with the way neurons send, receive, and process signals via neurotransmitters.
- B. Drugs mimic the brain's own chemicals, and they activate neurons in the same way as a natural neurotransmitter, which leads to excessive messages being sent through the network
- C. Some drugs, such as marijuana and heroin, can activate neurons because their chemical structure mimics that of a natural neurotransmitter in the body, and this allows the drugs to attach onto and activate the neurons
- D. Amphetamine or cocaine can cause neurons to release abnormally large amounts of natural neurotransmitters or prevent the normal recycling of these brain chemicals by interfering with transporters

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## How do Drugs Produce Pleasure?

**5. Although the pleasure or euphoria received from drug use is still poorly understood, it likely involves surges of chemical signaling compounds including the body's natural opioids and other neurotransmitters in parts of the basal ganglia.**

- A. True
- B. False

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**6. Just as drugs produce intense euphoria, they also produce much larger surges of dopamine, powerfully reinforcing the connection between consumption of the drug, the resulting pleasure, and:**

- A. Compulsivity
- B. All the external cues linked to the experience
- C. Overstimulation
- D. Desensitization to the substance

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## Treatment and Recovery

**7. Although treatment for drug addiction usually isn't a cure, addiction can be managed successfully, and according to the authors, treatment enables people to counteract addiction's disruptive effects on their brain and behavior and:**

- A. Enhance healthy personal and social development
- B. Rebuild damaged relationships
- C. Create emotional and physical sobriety
- D. Regain control of their lives

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## How Do Behavioral Therapies Treat Drug Addiction?

**8. Behavioral therapies such as cognitive-behavioral therapy, contingency management, and motivational enhancement therapy help people in drug addiction treatment modify their attitudes and behaviors related to drug use, so that they are able to handle stressful situations and various triggers that might cause another relapse.**

- A. True
- B. False

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