

# Substance Abuse ©

## <Lesson Plan>

*Grade 6*

H.E.L.P. for Kids 2008-2009

### **Teaching messages:**

1. Recreational drugs act on the nervous system through neurotransmitters or neurotransmitter receptors. They affect how one feels and acts, what one thinks and sees.
2. Marijuana is one of the most common recreational drugs that young people encounter.
3. Marijuana is a relaxant and a depressant. It can affect memory, sense of time, and coordination.
4. Cocaine is stimulant, which speeds up the activity in the central nervous system. It is highly addictive.
5. Inhalants act on the nervous system to produce a number of effects on sensory and motor activities. High doses and long-time use could cause death.
6. It is illegal to use, possess, buy, and sell recreational drugs.

### **Materials:**

- Earmuffs

## **Activity 1: Effect of Drugs on the Nervous System (60mins)**

This demonstration combines the effects of depressants and stimulants into one activity. Make sure students understand that all of the drugs mentioned have an effect on the nervous system, and focus on explaining the specific effects of marijuana (depressant), cocaine (stimulant), and inhalants.

- 1. Ask students what are some slang or nicknames of recreational drugs that they have heard of. List the responses on the board.**

### **Teaching Message #1:**

**Recreational drugs act on the nervous system through neurotransmitters or neurotransmitter receptors. They affect how one feels and acts, what one thinks and sees.**

Unlike drugs prescribed by our doctors, **recreational drugs** are those, which people take for fun and are generally not used to treat illnesses. Most are illegal to use.

These drugs act on the nervous system through neurotransmitters and neurotransmitter receptors to change the user's sensations, feelings, thoughts, actions and so on. They can be categorized into three major groups: **depressants**, **stimulants**, and **hallucinogens**.

**Depressants** – drugs that slow down the transmission of messages in the nervous system and thus diminish the actions or functions of specific parts of the body.

**Stimulant** – drugs that stimulate the transmission of messages in the nervous system and thus increase alertness and awareness.

**Hallucinogens** – drugs that alter perception, thinking, emotions, and consciousness.

- 2. Have students stand in a circle and act out the transmission of a message under normal circumstances.**

1. Whisper a sentence to one student in the circle.
2. Ask that student to whisper it to the person on his/her right, and so on around the circle.
3. Have the last student in the circle say the sentence out loud.

Explain that each student is acting as a neuron sending a message (the sentence) to other neurons. Under normal circumstances, the message is able to arrive at the final destination, such as a muscle, without any interruption. (i.e. the sentence should remain relatively unaltered as it travels around the circle.)

**Teaching Message #2**

**Marijuana is one of the most common recreational drugs that young people encounter.**

*What do you think is one of the most common drugs that young people encounter?*

**Marijuana** is made from dried flowers and leaves of the cannabis hemp plant.

*Do you know how many kids your age are actually using marijuana?*

Unlike what most kids believe, very few kids your age have ever used marijuana. So even though you may see marijuana being used in the movies or written about in songs, or even represented on T-shirts, it is not as commonly used by kids your age as you might have imagined.

**3. Have two students in the circle wear earmuffs and repeat the activity to demonstrate the effect of depressants on the functions of the nervous system.**

1. Have the students repeat the activity with earmuffs and time them.
2. Compare the time with the time it took them to complete the activity without earmuffs. (It should have taken them longer with earmuffs.)
3. Explain that the earmuffs represent depressants, like marijuana.

Depressants slow down a person's reaction time, much like how the earmuffs made a more difficult for the students to hear the message and slowed down the transmission of the message around the circle.

**Teaching Message #3:**

**Marijuana is a relaxant and a depressant. It can affect memory, sense of time, and coordination.**

Marijuana is a relaxant and a depressant. A **relaxant** causes the muscles to decrease tension, and a **depressant** causes various organs to slow down their activity. Marijuana slows down the reaction time as alcohol does. The pleasant feelings of relaxation could be followed by drowsiness, impaired coordination, impaired memory function, lapses of attention, disturbed thought patterns. At high doses, feelings of body-mind separation and sensory distortion could occur.

Marijuana increases the heart rate, and causes dilation of the blood vessels. It could also cause damage to the respiratory system if smoked. It reduces the capacity for the user to absorb and retain information and thus the user's ability to learn. Long-term use can also damage the reproductive system and the immune system.

Marijuana does not appear to cause permanent damages. Not everyone who uses marijuana becomes addicted, but some users do develop signs of dependence. However, just because it is not always addictive does not mean that it is not dangerous.

**Teaching Message #4:**

**Cocaine is stimulant, which speeds up the activity in the central nervous system. It is highly addictive.**

Cocaine is a stimulant. A **stimulant** increases the activity of the nervous system. Stimulants increase feelings of well-being and increase energy and alertness.

Cocaine speeds up the activities in the brain. It makes the user feel “high”, euphoric, energetic, talkative, and mentally alert - especially to the sensations of sight, sound, and touch. It can also temporarily stop the need for food and sleep. It can make some people feel contemplative, anxious, or even panic-stricken.

The high is short-lived that is immediately followed by the opposite, such as intense feelings of depression, edginess, and a craving for more of the drug. Other physical symptoms include faster heartbeat and breathing, and higher blood pressure and body temperature. Muscle spasms and convulsions can also occur. These effects can easily lead to respiratory failure, heart attacks, seizures and strokes.

Cocaine can cause sudden death in healthy young people.

**4. Repeat the activity again (without earmuffs) allowing the students say the message out loud each time instead of whispering to demonstrate the effect of stimulants on the functions of the nervous system.**

- Have the students repeat the activity, allowing them to say the message out loud instead of whispering, and time them.
- Compare the new time with the time it took them to complete the activity by whispering. (It should take them less time when they can say the message out loud.)
- Explain that passing on the message in a louder voice represents a stimulant, like cocaine.

Stimulants speed up the activity of the nervous system, altering how the nervous system functions (how the message is passed around the circle). Introduce the overall teaching message.

**Teaching Message #5:**

**Inhalants act on the nervous system to produce a number of effects on sensory and motor activities. High doses and long-time use could cause death.**

*What are inhalants?*

**Inhalants** are substances that produce gas vapors that can easily be inhaled through the nose. Inhalants slow down the body’s functions.

Inhalants are extremely dangerous, because they affect the brain so quickly and strongly that they could cause physical and mental damages before one knows what has happened. People who use inhalants could also lose their sense of smell, have nausea and nosebleeds. Inhalants could also cause sudden death.

*Can you name some inhalants?*

Common chemical inhalants include paint solvents, glues, gasoline, white out, and aerosol sprays.

*What population are most at risk of using inhalants and why?*

Young people are most at risk because these substances are readily available around the house and they do not have money to buy other drugs. Because they affect your brain quickly, they can cause irreversible physical and mental damage before you know what has happened.

- 5. Discuss with the students in small groups about their personal feelings and experiences about substance abuse, such as by relatives or friends.**

**Overall Teaching Message #7**

**It is illegal to use, possess, buy, or sell recreational drugs.**

It is against the law to use, to possess, to buy, or to sell most of the recreational drugs including marijuana, cocaine. People who commit the crime will go to jail and get fined and often have their lives ruined.