

Steroids



OBJECTIVE

- * The student will understand that steroids have a direct effect on the limbic system, which has a large role in the expression of emotions.

STEROIDS ACTIVITY ONE

Ask students to imagine a time where they experienced, very suddenly, either intense rage or aggressiveness. Those who would like to can share some of these experiences with the class. Reinforce that the limbic system was likely involved in these reactions and that steroid use directly increases the likelihood of such episodes. Mention that neuroscientists have long known about the important role the limbic system plays in emotions and have conducted animal research in which stimulating certain limbic system structures produces a rage reaction in a normally docile animal, while stimulating other structures makes a normally vicious animal calm and relaxed. Have students conduct research using the Internet and other sources to learn more about the role of the limbic system.

OBJECTIVE

- * The student will learn more about the functions of key neurotransmitters including serotonin, glutamate, dopamine, and acetylcholine.

STEROIDS ACTIVITY TWO

Indicate that steroids affect the function of several neurotransmitters, adding that each neurotransmitter communicates different types of messages. For example, glutamate communicates excitement, acetylcholine tells the heart to beat slower and commands memory circuits to store or remember thoughts, serotonin controls emotions and mood, and dopamine affects feelings of pleasure. Students will select a neurotransmitter and search the Internet and other sources for additional information. They will prepare a brief report summarizing their findings and create a comic art rendition of their neurotransmitter.

OBJECTIVE

- * The student will learn about the performance enhancing effects of steroids, and the medical risk factors.

STEROIDS ACTIVITY THREE

Remind students that despite their dangerous side effects, anabolic steroids are used by some high school, college, and professional athletes to give them the "edge" they feel they need to out perform the competition. Discuss with the students the short- and long-term dangers associated with the use of steroids for enhancing performance. A useful example for this discussion might be Lyle Alzado, a former professional football star who died from cancer attributed to steroid use.