

Central Nervous System Stimulants

Objectives

AFTER STUDYING THIS CHAPTER, THE STUDENT WILL BE ABLE TO:

1. Describe general characteristics of central nervous system (CNS) stimulant drugs.
2. Discuss reasons for decreased use of amphetamines for therapeutic purposes.
3. Discuss the rationale for treating attention deficit-hyperactivity disorder with CNS stimulant drugs.
4. Identify effects and sources of caffeine.
5. Identify nursing interventions to prevent, recognize, and treat stimulant overdose.

Critical Thinking Scenario

Mrs. Williams comes to your office with her 6-year-old son. She complains that he is a very active child who always seems to be getting into mischief. She likes a clean, orderly house and he likes to make messes. He seems to be doing OK in school, although she would like to see his grades improve. She was talking to a neighbor, who encouraged her to talk with a physician about prescribing Ritalin, because her son may have attention deficit-hyperactivity disorder (ADHD).

Reflect on:

- ▶ What advice you would have for Mrs. Williams.
- ▶ Possible therapeutic effects if the boy has ADHD.
- ▶ Possible negative effects if the boy does not have ADHD.

USES

Many drugs stimulate the CNS, but only a few are used therapeutically, and their indications for use are limited. Two disorders treated with CNS stimulants are narcolepsy and attention deficit-hyperactivity disorder (ADHD).

Narcolepsy

Narcolepsy is a sleep disorder characterized by daytime “sleep attacks” in which the victim goes to sleep at any place or any time. Signs and symptoms also include excessive daytime drowsiness, fatigue, muscle weakness and hallucinations at onset of sleep, and disturbances of nighttime sleep patterns. The hazards of drowsiness during normal waking hours and suddenly going to sleep in unsafe environments restrict activities of daily living.

Narcolepsy affects men and women equally and usually starts during teenage or young adult years. Its cause is un-

known; sleep studies are required for an accurate diagnosis. In addition to drug therapy, prevention of sleep deprivation, regular sleeping and waking times, avoiding shift work, and short naps may be helpful in reducing daytime sleepiness.

Attention Deficit-Hyperactivity Disorder

ADHD is reportedly the most common psychiatric or neurobehavioral disorder in children. It occurs before 7 years of age and is characterized by persistent hyperactivity, a short attention span, difficulty completing assigned tasks or schoolwork, restlessness, and impulsiveness. Such behaviors make it difficult for the child to get along with others (eg, family members, peer groups, teachers) and to function in situations requiring more controlled behavior (eg, classrooms).

Formerly thought to disappear with adolescence, ADHD is now thought to continue into adolescence and adulthood in one third to two thirds of clients. In adolescents and adults, impulsiveness and inattention continue but hyperactivity is