

amin supplements, candies, and chewing gums. The product, which may also contain theophylline and theobromine, is also available in teas, extracts, elixirs, capsules, and tablets of various strengths. In general, the caffeine content of a guarana product is unknown and guarana may not be listed as an ingredient. As a result, consumers may not know how much caffeine they are ingesting in products containing guarana.

As with caffeine from other sources, guarana may cause excessive nervousness and insomnia. It is contraindicated during pregnancy and lactation and should be used cautiously, if at all, in people who are sensitive to the effects of caffeine or who have cardiovascular disease. Overall, the use of guarana as a CNS stimulant and weight-loss aid is not recommended and should be discouraged.

Nursing Process

Assessment

- Assess use of stimulant and depressant drugs (prescribed, over-the-counter, or street drugs).
- Assess caffeine intake as a possible cause of nervousness, insomnia, or tachycardia, alone or in combination with other central nervous system (CNS) stimulants.
- Try to identify potentially significant sources of caffeine.
- Assess for conditions that are aggravated by CNS stimulants.
- For a child with possible attention deficit hyperactivity disorder (ADHD), assess behavior as specifically and thoroughly as possible.
- For any client receiving amphetamines or methylphenidate, assess behavior for signs of tolerance and abuse.

Nursing Diagnoses

- Sleep Pattern Disturbance related to hyperactivity, nervousness, insomnia
- Risk for Injury: Adverse drug effects (excessive cardiac and CNS stimulation, drug dependence)
- Deficient Knowledge: Drug effects on children and adults
- Noncompliance: Overuse of drug

Planning/Goals

The client will:

- Take drugs safely and accurately
- Improve attention span and task performance (children and adults with ADHD) and decrease hyperactivity (children with ADHD)
- Have fewer sleep episodes during normal waking hours (for clients with narcolepsy)

Interventions

- For a child receiving CNS stimulants, assist parents in scheduling drug administration and drug holidays (eg, weekends, summers) to increase beneficial effects and help prevent drug dependence and stunted growth.

- Record weight at least weekly.
- Promote nutrition to avoid excessive weight loss.
- Provide information about the condition for which a stimulant drug is being given and the potential consequences of overusing the drug.

Evaluation

- Reports of improved behavior and academic performance from parents and teachers of children with ADHD
- Self- or family reports of improved ability to function in work, school, or social environments for adolescents and adults with ADHD
- Reports of decreased inappropriate sleep episodes with narcolepsy

PRINCIPLES OF THERAPY

Appropriate Use

Stimulant drugs are often misused and abused by people who want to combat fatigue and delay sleep, such as long-distance drivers, students, and athletes. Use of amphetamines or other stimulants for this purpose is not justified. These drugs are dangerous for drivers and those involved in similar activities, and they have no legitimate use in athletics.

When a CNS stimulant is prescribed, giving the smallest effective dose and limiting the number of doses obtained with one prescription decrease the likelihood of drug dependence or diversion (drug use by people for whom the drug is not prescribed).

Toxicity of CNS Stimulants: Recognition and Management

Overdoses may occur with acute or chronic ingestion of large amounts of a single stimulant, combinations of stimulants, or concurrent ingestion of a stimulant and another drug that slows the metabolism of the stimulant. Signs of toxicity may include severe agitation, cardiac dysrhythmias, combativeness, confusion, delirium, hallucinations, high body temperature, hyperactivity, hypertension, insomnia, irritability, nervousness, panic states, restlessness, tremors, seizures, coma, circulatory collapse, and death.

Treatment is largely symptomatic and supportive. In general, place the client in a cool room, monitor cardiac function and temperature, and minimize external stimulation. Gastric lavage may be helpful if done within 4 hours of ingestion of the stimulant. After emptying the stomach, activated charcoal (1 g/kg) may be given. With amphetamines, urinary acidification, IV fluids, and IV diuretics (eg, furosemide or mannitol) hasten drug excretion. IV diazepam or lorazepam can be given to calm agitation, hyperactivity, or seizures; haloperidol may be given for symptoms of psychosis. If cardiovascular collapse occurs, fluid replacement and vasopressors may