

# DRUG OVERDOSE AND POISONING

# Poisoning

- **The most common routes of exposure in poisoning are inhalation, ingestion, and injection.**
- **Toxic chemical reactions can compromise cardiovascular, respiratory, central nervous, hepatic, gastrointestinal (GI), and renal systems.**
- **Most exposures to toxic fumes occur in the home.**
- **Poisoning in the home usually occurs when children ingest household cleaners or medicines.**

# Substance Abuse and Overdose

- **Intentional or suspected suicidal overdose**
- **Frequently have mental illness, substance abuse problems, or both**
- **Commonly abused substances are nicotine, alcohol, heroin, marijuana, narcotic analgesics, amphetamines, benzodiazepines, and cocaine.**
- **Some children and adolescents turn to common household substances because they are readily available.**

# Assessment

- Triage
- Goals of immediate treatment are patient stabilization and evaluation and management of **airway, breathing, and circulation.**
- History
  - Identify the drugs or toxins, the time and duration of the exposure, first aid treatment given before arrival at the hospital, allergies, and any underlying disease processes or related injuries.

# Management

- Prevent absorption of and further exposure to the agent.
- Advanced general management involves further steps to prevent absorption and enhance elimination of the agent.
- Antidotes, antivenins, or antitoxins, when available, may be administered.
- Support vital functions and monitor and treat multisystem effects.

# Stabilization

- Airway patency
- Breathing
- Circulation
- Cardiac function
- Acid–base balance and electrolyte homeostasis
- Mentation
- Injuries associated with toxic exposure and underlying disease processes
- Vital signs and temperature

# Initial Decontamination

- Ocular exposure
  - Flush to remove the agent.
- Dermal exposure
  - Flood the skin with lukewarm water for 15 to 30 minutes.
- Inhalation exposure
  - Move to fresh air as quickly as possible.
- Ingestion exposure
  - Milk or water dilutes ingested irritants, such as bleach, or caustics, such as drain cleaner

# Gastrointestinal Decontamination

- Gastric lavage
- Adsorbents
- Cathartics
- Whole-bowel irrigation

# Enhanced Elimination of the Drug or Toxin

- Multiple-dose activated charcoal
- Alteration of urine pH
- Hemodialysis
- Hemoperfusion
- Chelation
- Hyperbaric oxygenation therapy

# Antagonists, Antitoxins, and Antivenins

- **Antagonist is a substance that counteracts the action of another drug.**
- **Antitoxins neutralize a toxin.**
- **Antivenins are antitoxins that neutralize the venom of the offending snake or spider.**

# Continuous Patient Monitoring

- ECG
- Radiology
- Electrolytes, ABGs, and labs
- Anion gap
- Osmolal gap
- Toxicology screens

# Patient Teaching

- Childproofing home
- Lead poisoning
- Carbon monoxide detectors

# NCLEX QUESTION

- 1. A comatose 30-year-old man is brought to the emergency department by ambulance after a suspected overdose. Which three things should be the nurse's primary focus?
- A) Vital signs, level of consciousness, and degree of orientation
- B) Airway, breathing, and circulation
- C) Name, gender, and age
- D) Substance, quantity, and time since ingestion

# NCLEX QUESTION

- 2. A 20-year-old woman is brought into the emergency department with the following clinical presentation: agitation, dilated pupils, tachycardia, hypertension, and diaphoresis. Which toxidrome most closely fits this situation?
  - A) Cholinergic
  - B) Anticholinergic
  - C) Sympathomimetic
  - D) Opioid

# NCLEX QUESTION

- 3. A 45-year-old man has taken 20 bupropion XL 300-mg tablets 30 minutes prior to arriving at the triage station in the emergency department. What is the most appropriate method of GI decontamination?
  - A) Ipecac syrup
  - B) Orogastric lavage
  - C) Activated charcoal
  - D) Whole-bowel irrigation

# NCLEX QUESTION

- 4. A 66-year-old woman is admitted to the critical care unit after an intentional ingestion of 50 venlafaxine XR 150-mg tablets. She is tachycardic and hypotensive. What is the primary prognostic tool that the nurse should use in this situation?
  - A) The QTc interval from the 12-lead ECG
  - B) The heart rate
  - C) The blood pressure
  - D) The level of consciousness

# NCLEX QUESTION

- 5. A 21-year-old man is brought into the ICU from the ED after ingesting an unknown quantity of “Triple C.” He is tachycardic, hypertensive, mydriatic, and hallucinating. What is the likely motive for the ingestion?
  - A) Accidental
  - B) Suicidal
  - C) Therapeutic error
  - D) Abuse

## Question

- Which of the following involves the use of binding agent to remove toxic metals from the body?
  - A. Chelation
  - B. Hyperbaric oxygen therapy
  - C. Hemodialysis
  - D. Hemoperfusion