Poisoning and Overdose Emergencies
Key Term

Poison

Any substance that can harm the body
Four Routes of Poisoning

INHALATION
- Sprays
- Cleaning Fluid

INGESTION
- Lye
- Rat Poison
- Drain Cleaners
- Household Cleaners

INJECTION
- Drugs

ABSORPTION
- Insecticides
Information to Gather

☆ What substance involved?
  - Get exact name.
  - Bring container, if possible.

☆ When did exposure occur?

☆ How much was ingested (or involved)?
  - If not known, estimate maximum possible amount.
Information to Gather

- Over how long a period did exposure occur?
  - If not known, estimate shortest and longest possible time.
- What interventions taken?
- What is patient’s estimated weight?
- Any effects on patient?
Airway Management in Poisoning/Overdose

When treating a poisoned or overdosed patient, be prepared for deterioration, vomiting, and the need to secure airway.
Signs & Symptoms of Ingested Poison/Overdose

- Altered mental status
- Abdominal pain
- Chemical burns around mouth
- Unusual breath odor
Signs & Symptoms of Ingested Poison/Overdose

- History of ingestion
- Nausea
- Vomiting
- Diarrhea
Gather information. Remove pills from patient’s mouth carefully.
Consult medical direction.
Administer activated charcoal?
Administer activated charcoal as directed.
Position patient for vomiting. Save all vomitus. Have suction equipment ready.
Use of Activated Charcoal
Trade Names: SuperChar, InstaChar, LiquiChar
Activated Charcoal

* Indication
  * Poisoning by mouth

* Contraindications
  * Altered mental status
  * Ingestion of acid or alkali
  * Patient unable to swallow
Activated Charcoal

Medication Form

- Pre-mixed in water, commonly 12.5 grams in plastic bottle
- Avoid powder form in the field
Activated Charcoal

Dosage

Adults and children:
* 1 gram activated charcoal/kg of body weight

Adult:
* 25-50 grams

Pediatric:
* 12.5-25 grams
Activated Charcoal

Administration

1. Consult medical direction.
2. Shake container thoroughly.
3. Have patient drink mixture. If necessary, use a covered container and a straw.
Activated Charcoal

Administration

4. If patient does not drink all medication right away, shake again to prevent settling.

5. Record medication name, dose, route, and time of administration.
Activated Charcoal

**Actions**

- Binds to certain poisons; prevents absorption by body

**Side Effects**

- Black stools
- Some patients will vomit. If so, repeat the dose.
Inhaled, Injected and Absorbed Poisons
Signs & Symptoms of Inhaled Poisons

- History of inhalation; MOI
- Difficulty breathing
- Chest pain
- Cough
- Hoarseness
Signs & Symptoms of Inhaled Poisons

- Dizziness
- Headache
- Confusion
- Seizures
- Altered mental status
Have patient removed from hazardous environment.
Establish an open airway.
Maintain airway and administer oxygen.
Remove contaminated clothing.
Consult medical direction.
Transport the patient.
Carbon Monoxide

- Very common inhaled poison
- Colorless, odorless, tasteless gas
- Results from incomplete combustion
- Causes hypoxia by taking the place of oxygen in red blood cells
Carbon Monoxide Inhalation

Signs and Symptoms

- Headache, dizziness, nausea
- Difficulty breathing
- Cyanosis
- Altered mental status

Cherry red lips VERY UNCOMMON.
Signs & Symptoms of Injected Poisons

- Weakness
- Dizziness
- Chills and fever
- Nausea and vomiting
Emergency Care of Injected Poisons

- Secure airway; administer oxygen.
- Be alert for vomiting.
- Transport container/patient.
Signs & Symptoms of Absorbed Poisons

- History of exposure
- Liquid or powder on skin
- Burns
- Itching, irritation, redness
Remove patient from source without contaminating yourself.
Remove contaminated clothing and other articles.

*Brush* powders from patient.
Irrigate with clear water for at least 20 minutes.
Emergency Care of Eye Absorption

Irrigate with clean water for at least 20 minutes and continue en route if possible.
Alcohol Overdose

- Often not thought of as a “serious problem.”
- Providers may be callous towards it.
- High potential for traumatic AND medical emergencies.
- Key is providing a thorough assessment.
Signs & Symptoms of Alcohol Abuse

- Odor of alcohol on person
- Swaying/Unsteadiness
- Slurred speech/Incoherent words
- Nausea and vomiting
- Altered mental status

*All of these signs & symptoms could be serious medical problems as well!*
Problems Associated with Alcohol Withdrawal

- Symptoms may be the same as if intoxicated.
- Patients may suffer from delirium tremens (DT’s).
  - Patient may experience sweating, seizures, trembling, anxiety, and hallucinations.
- Can be fatal.
Emergency Care of Alcohol Overdose

- Assess for respiratory compromise.
- Monitor level of consciousness.
- Monitor vital signs.
- Treat for shock.
- Protect from injury and transport.
A patient under the influence of alcohol cannot make an informed refusal of transport!
Substance Overdose

- A chemical substance that is being taken for other than therapeutic (medical) reasons

- Most common substances are:
  - Uppers & Downers
  - Narcotics
  - Hallucinogens
  - Volatile Chemicals
Uppers & Downers

- Uppers – Stimulate the nervous system
  - Include caffeine, cocaine, & amphetamines

- Downers – Depress the nervous system
  - Include Rohypnol (“Roofies”) & GHB
Narcotics

Cause stupor, pain relief, sleep, and cough control
- Include heroin, codeine, & oxycodone
Hallucinogens

Alter perception of reality & cause intense excitement

* Include PCP, LSD, & ecstasy
Volatile Chemicals

Cause an intense rush and then depress the nervous system

- Include glue, cleaning fluid, & propane
Emergency Care of Substance Overdose

- Ensure scene safety; restrain patient if needed.
- Assess for respiratory compromise.
- Monitor level of consciousness.

Continued…
Emergency Care of Substance Overdose

- Monitor vital signs.
- Treat for shock.
- Assess for injuries.
- Transport.
1. List the four routes of poisoning.

2. What information should you obtain before contacting medical direction?
Review Questions

3. What are the emergency care steps for:
   - Ingested poisons?
   - Inhaled poisons?
   - Injected poisons?
   - Absorbed poisons?
4. Explain the relationship between poisoning and airway management.

5. What are the contraindications for activated charcoal?
What questions would you ask the patient’s mother next?

What signs or symptoms would you inquire about?
What treatments would you initiate?

Should you contact someone for advice? If yes, then who?
**PATIENT NAME:** Maria Prince

**DATE:** 10/05/20

**CHIEF COMPLAINT:** Coughing, possible ingested poisoning

**FAST MEDICAL HISTORY:** None
- Allergy to: 
- Hypertension
- Hypertension
- Stroke
- COPD
- Cardiac
- Other (List): Asthma

**Recent fever with mild cough**

**Current Medications (List):** Children’s Tylenol

**NARRATIVE:** Responded to a possible poisoning. Upon arrival, we found an 8-month-old female in the arms of her mother. Mother stated that she was doing the dishes when I turned around and saw Maria with an oil candle in her hands. I do not know how much she drank or how much she spilled.

Mother reports child’s weight as 20 pounds. Time of exposure was approximately 3-4 minutes before 9-1-1 activation. Patient received some water, which she vomited back up, prior to our arrival. Approximate amount of lamp oil ingested may have been as much as 50 cc.

Assessment revealed a crying and coughing infant, who appeared alert and responding to her mother. Upper airway was clear. Skin was warm and dry. Mucous membranes were moist and pink. Pupils were equal and reactive to light. Vitals above.

Treatment consisted of blow-by O₂ at 10 liters per minute. During transport, patient was kept with her mother to reduce anxiety. Lamp oil also transported for identification purposes. Poison control and medical direction contacted; both recommended only airway support and continued assessment. Upon arrival at ED, patient ceased her crying, but her cough was still present.

No other changes during transport.