

“My Child Just Ate My Medicine” What to Do?

SVEN A. NORMANN, PHARM.D., DABAT

CLINICAL ASSOCIATE PROFESSOR

UNIVERSITY OF FLORIDA – COLLEGE OF PHARMACY

GAINESVILLE, FLORIDA

**AMERICAN ASSOCIATION OF PHARMACY TECHNICIANS ANNUAL
CONVENTION**

AUGUST 30-31, 2019 • ORLANDO, FLORIDA

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Identify the most common agents (pharmaceutical and non-pharmaceutical) involved in unintentional poisonings.
2. Describe the key elements, importance, and process in obtaining the history of a poisoning exposure.
3. Counsel / advise patients on the proper course of action / first aid treatment for a possible poisoning emergency.
4. Explain the role, purpose and function of a Regional Poison Control Center.

Where do questions come from?

- Calls from patients / customers?
- “Walk-in” patients / customers?
- Clinical surveillance

Questions You've Had or Heard

- Acute exposures
 - Ingestions, dermal, ocular, bites / stings
- Chronic exposures
- Interactions / side effects
- Iatrogenic exposures
- Medication errors / misfills
- Overdose / Lethal Dose?

National Poison Center Hotline

1-800-222-1222

Where did you learn about Poisoning / Toxicology?

- Parents
- Grandparents
- Pharmacists
- Pharmacy Tech Program
- CE Conferences

Case 1

- A 3-year-old girl swallows a mouthful of household bleach. The patient is crying.



Case 2

- A 29-year-old man accidentally swallowed one-half ounce of a windshield washer solution, containing “methanol 99%” several minutes ago. The patient is fine.



Case 3

- An 18-month-old boy eats $\frac{1}{2}$ of a Poinsettia flower (Christmas plant) about 5 minutes ago. The patient is fine.



Case 4

- A healthy 24-year-old woman is stung by a scorpion on her hand. It is stinging quite a bit and is red and slightly swollen.



Case 5

- During a holiday party, a 3-year-old boy samples an unknown amount of a spiked punch approximately 30 minutes ago. The appears to be “drunk”.



Case 6

- A 5-year-old boy has given 25-Flintstone Chewable Multiple Vitamins (without iron) to his 3-year-old brother. The ingestion occurred two hours ago and the patient has a slight upset stomach.



Case 7

- A 3-year-old has eaten half of a small package that was in a shoe box...it is labeled: "Silica Gel-Do Not Eat". It has a "skull and cross bones" on it.



Case 8

- A 2-year-old boy has eaten 4- Lomotil® (diphenoxylate/atropine) approximately three hours ago. The patient is doing fine.



Case 9

- A 14-month-old girl was found nibbling on her grandmother's blood pressure medicine. It is determined that $\frac{1}{4}$ of a Catapres® (clonidine) tablet is missing.



Case 10

- A 12-month-old boy has chewed up two cigarettes approximately 10 minutes ago. The child is not having any problems.



Case 11

- A 3-year-old boy swallowed an estimated ½-teaspoonful of gasoline 10 minutes ago. The child is coughing.



Case 12

- A 5-year-old boy was accidentally given 1-teaspoonful of Oil of Wintergreen several minutes ago. The child has a slight amount of burning in his mouth.



Case 13

- A 2-year-old accidentally bites off the tip of a mercury thermometer and swallows the mercury. There are no cuts or bleeding noted. The child seems fine.



Case 14

- A 3-year-old girl has eaten 1- Harris Famous Roach tablet® that contains boric acid. The ingestion occurred 3 minutes ago and she is fine.



Case 15

- A 14-month-old swallowed ½-teaspoonful of Visine Eye Drops several minutes ago. The patient is fine.



Case 16

- A little boy, approximately 20 months old, has eaten two of his grandfather's heart pills....he is not having any problems. The pills are nitroglycerin for sublingual use.



Case 17

- A 65-year-old woman taking medicine in the dark, accidentally swallowed 1 tablespoonful of Campho-phenique® instead of cough syrup several minutes ago.



Case 18

- A 19-month-old girl has bitten into a tube of Super Glue® and swallowed some of the glue. She is crying and upset.

- Cyanoacrylate



Case 19

- A 22-month-old boy has gotten into his mother's birth control pills. Mom believes that there are 10 tablets missing.



Case 20

- A 3-year-old has eaten two tablespoonfuls of table salt.



Poisoning Assessment

- What?
- When?
- How much?
- Symptoms?
- Treatment provided?
- Age / Weight?
- Medical history?
- Why? / How?



Grandma's Purse

The source of many pediatric exposures, many that are serious.

Beta-blockers

- Examples: Inderal® (propranolol), Lopressor® (metoprolol), Visken® (pindolol), Normodyne® (labetalol)
- Use: Hypertension, arrhythmias, angina, migraine headaches, glaucoma
- Potentially fatal dose: 1 tablet

Calcium Channel Blockers

- Examples: Isoptin® (Verapamil), Cardizem® (diltiazem), Adalat® (nifedipine), Norvasc® (amlodipine)
- Use: Angina, coronary spasm, hypertension, hypertrophic cardiomyopathy
- Potentially fatal dose: 1 tablet

Cyclic Antidepressants

- Examples: Elavil® (amitriptyline), Sinequan® doxepin
- Uses: depression, migraine headaches, insomnia, nocturnal enuresis
- Potentially Fatal Dose: 1 tablet

Sulfonylureas

- Examples: Diabeta® (glyburide), Glucotrol® (glipizide)
- Use: oral hypoglycemic agent
- Potentially fatal dose: 1 tablet

Theophylline

- Examples: TheoDur®, Theo-Bid®, Slophyllin®
- Uses: Asthma, COPD, neonatal respiratory depression
- Potentially Fatal Dose: 1 tablet or capsule

Other Agents

- Chloroquine – CNS depression, Hypotension, Ventricular dysrhythmias
- Digoxin – Vomiting, Bradycardia, Heart block, hyperkalemia
- Camphor – Seizures; 100 mg/kg potentially fatal
- Isoniazid – Seizures, metabolic acidosis, Pyridoxine is antidote.
- Benzocaine – Baby Orajel®, has caused toxicity via oral and rectal administration, Methemoglobinemia
- Methylsalicylate – Oil of Wintergreen
- Lindane – Respiratory Depression, Seizures

More Other Agents

- Ethanol – CNS depression; hypoglycemia (may be delayed)
- Toxic Alcohols
 - Ethylene Glycol – CNS depression, metabolic acidosis
 - Methanol – CNS depression, metabolic acidosis, blindness
- Nicotine – Nausea, vomiting, arrhythmias, respiratory depression, bradycardia
- Ecstasy (MDMA) – ½ tablet toxic in child, seizures, hyperthermia
- Cocaine – 0.1 – 20 mg/kg potentially fatal; seizures and arrhythmias

Summary

- Many medications that may be harmful, deadly to a small child in very low doses.
- PALS for unstable children
- Toxicology specific –
 - Decontamination
 - Ipecac is RARE
 - Activated charcoal
 - Supportive care
 - Antidotes
- Prevention
 - Constant vigilance

Poison Center Statistics - 2017

- US Poison Centers 2.6 million calls
 - 1 call every 12 seconds
- 93 percent of all human exposures reported happened in the patient's own home.
- 66 percent of all human exposures were safely managed over the telephone.
 - 1.7 million patients did not have to go the Emergency Room.
- Doctors and nurses use poison center too.
 - 24% calls to poison center were from a health care facility.

Poison Center Statistics – 2017 (cont.)

- Common Victims
 - Children under 5 years of age
 - Less than 1 percent of deaths
- Teens (12-19) show higher proportion of intentional poison exposures.
 - 28 percent of teen exposures are intentional.
- Adults (Age 20 and older) make up 80 percent of all poisoning deaths.
 - Highest number of poisoning deaths is in adults age 50-59.

Poison Center Statistics – 2017 (cont.)

1. Painkillers (OTC or prescribed)
2. Household cleaning products such as bleach, dishwasher detergent, pest repellent and drain opener.
3. Cosmetics and personal care products (creams, lotions, make-up, perfume, and soap).