



PEDIATRIC TOXIC TRAPS

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PRESENTER DISCLOSURE INFO

- ▶ Mark Laubacher, RN BSN CEN EMT-P
- ▶ Pediatric Toxic Traps
- ▶ Financial disclosure: No relevant financial relationship exists

CENTRAL OHIO POISON CENTER

- ▶ 24 -7 phone coverage
- ▶ RN & RPh
 - ▶ national board certification
- ▶ Medical Toxicologist
- ▶ Toxicological surveillance
- ▶ Professional, public outreach



CENTRAL OHIO POISON CENTER

- ▶ 2015 – 64 county call region
- ▶ 39,561 poisonings
- ▶ ~108 per day
- ▶ 87% managed at home
- ▶ 7% treated at hospital
- ▶ 4% calls from EMS



PEDIATRIC TOXIC TRAPS

- ▶ Oral hypoglycemic agents
- ▶ Beta blocker, calcium channel blocker medications
- ▶ Buprenorphine
- ▶ Clonidine
- ▶ Laundry detergent pacs

ONE PILL CAN KILL

ORAL HYPOGLYCEMIC AGENTS

- ▶ Sulfonylurea medications
- ▶ Glyburide, glipizide, glimepiride
- ▶ Treat type II diabetes
- ▶ Causes release of insulin from pancreas
- ▶ Sx: hypoglycemia
- ▶ Altered mental status, confusion, seizure, low blood glucose
- ▶ Tx: glucose
- ▶ D₂₅W 2 to 4 mL/kg IV, IO over 1 to 2 minutes

BETA BLOCKERS, CALCIUM CHANNEL BLOCKERS

- ▶ Beta receptor blocker meds for tx dysrhythmias, hypertension
- ▶ Metoprolol, propranolol, labetalol, atenolol
- ▶ Calcium channel blocker meds for tx dysrhythmias, hypertension
- ▶ Diltiazem, verapamil, amlodipine
- ▶ Beware of 2 letters after med name!
- ▶ LA (long acting), ER (extended release), SR (sustained release)
- ▶ Immediate release diltiazem: 30, 60, 90, 120 mg
- ▶ Extended release diltiazem: 120, 180, 240, 300, 360, 420 mg

BETA BLOCKERS, CALCIUM CHANNEL BLOCKERS

- ▶ Toxicity: poisons the pump
- ▶ Sx: bradycardia, hypotension, A-V blocks, dizziness, lightheaded, altered mental status
- ▶ Tx: atropine, IV fluid bolus, glucagon

BUPRENORPHINE

- ▶ Treat opiate addiction
- ▶ buprenorphine & naloxone
- ▶ sublingual tab or film
- ▶ buprenorphine 8 mg, naloxone 2 mg; 4 mg / 1 mg; 2 mg / 0.5 mg; 12 mg / 3 mg
- ▶ Sx: opiate toxicity via opiate receptor stimulation
- ▶ CNS/respiratory depression, bradycardia, hypotension, miosis
- ▶ Tx: ABC, naloxone (pick your route), repeat prn

CLONIDINE

- ▶ Treat hypertension, attention deficit hyperactivity disorder (ADHD)
- ▶ Clonidine 0.1, 0.2, 0.3 mg tabs; transdermal patch
- ▶ Toxic dose for a child 4-years-old or younger = 0.1 mg
- ▶ Sx: CNS depression, bradycardia (<75 bpm), hypotension, miosis
- ▶ Tx: physical stimulation, atropine, IV fluid bolus, +/-naloxone

LAUNDRY DETERGENT PACS

- ▶ Concentrated liquid laundry detergent packets
- ▶ 1 oz laundry detergent vs. 1.5 oz pourable liq laundry detergent
- ▶ Toxicity: respiratory compromise, oral mucosal injury
- ▶ Sx: vomiting, respiratory distress, aspiration, drooling
- ▶ Tx: po fluids “the solution to pollution is dilution”; airway-respiratory management—O₂, bronchodilator aerosol prn

New Study Finds Laundry Detergent Packets More Dangerous than Other Types of Detergent

Researchers urge families with young children to use traditional detergent instead of packets

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Columbus, OH - 4/25/2016

[A new study conducted by the Center for Injury Research and Policy of the Research Institute at Nationwide Children's Hospital and the Central Ohio Poison Center](#) found that exposure to laundry detergent packets is more dangerous to young children than exposure to other types of laundry and dishwasher detergent.

The study, published online today in *Pediatrics*, found that from January 2013 through December 2014 Poison Control Centers in the U.S. received 62,254 calls related to laundry and dishwasher detergent exposures among children younger than 6 years old. The study included calls about both traditional detergent and detergent packets and found that detergent packets accounted for 60 percent of all calls. Almost half (45 percent) of the calls for exposure to laundry detergent packets were referred to a health care facility for evaluation and treatment, significantly more than calls related to exposures to traditional laundry detergent (17 percent), traditional dishwasher detergent (four percent), or dishwasher detergent packets (five percent).

Incidents related to laundry detergent packets saw the biggest rise - increasing 17 percent over the two year study period. Poison control centers received more than 30 calls a day about children who had been exposed to a laundry detergent packet, which is about one call every 45 minutes.

CASE REPORT I

- ▶ 12:30, dad noticed child was drowsy, listless, but contributed sx to "illness".
- ▶ 15:00 dad finds empty Rx bottle and some wet pills, child to ED
- ▶ 15:30 ED calls COPC, 11 mo male, lethargic, HR 131, (+) gag reflex
- ▶ Glyburide, initial glucose "LOW"

CASE REPORT I

- ▶ Pt received 2 mL/kg D₂₅ IV
- ▶ 19:00 glucose 45 mg/dL
- ▶ 19:46 glucose 64 mg/dL
- ▶ 20:50 glucose 77 mg/dL; 98.2°-115-31
- ▶ 24 hr later, pt still hypoglycemic. Discharged to home 48 hrs after ingestion.

CASE REPORT 2

- ▶ Mom reports dad set a pill on the fireplace and 2 yo reached, ingested the tab. Mom reports patient then spit out pill, mom reports seeing pieces of tab in patient's emesis.
- ▶ Mom calling hrs later, child is more drowsy than usual.
- ▶ EMS reports pt slow to respond, pinpoint pupils
- ▶ Buprenorphine ingestion, COPC rec naloxone
- ▶ ED initial vitals 97.4-110-18 98/67 99%
- ▶ Later child responds to touch, not verbally responsive; RR 14
- ▶ Next day awake, playful, 97.2-101-28 111/42

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