

**SECTION: PM-9**

**PROTOCOL TITLE: PEDIATRIC TOXICOLOGICAL EMERGENCIES**

**REVISED: October 15, 2014**

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**GENERAL COMMENTS:** This protocol directly supplements protocols R-1 through R-10 (Adult Toxicological Emergencies.)

**BLS SPECIFIC CARE:** See General Pediatric Care Protocol PM-1

In addition to standard medical history obtain:

- Name of ingested substance
- Quantity ingested
- Time of ingestion
- Has vomiting occurred

**ILS SPECIFIC CARE:** See General Pediatric Care Protocol PM-1

**ALS SPECIFIC CARE:** See General Pediatric Care Protocol PM-1

12 Lead ECG for all pediatric toxicological emergencies.

*Seizures secondary to toxic ingestion:*

- Follow Pediatric Seizure Protocol (PM-4)

*Hypotension secondary to toxic ingestion:*

- Follow Pediatric Hypotension and Shock Protocol (PM-5)

*Suspected (symptomatic) opiate ingestion:*

- Narcan
  - IV/ETT/IO: 0.1 mg/kg to max single dose of 2 mg.  
Repeat PRN

*Suspected TCA overdose: (do not administer Amiodarone)*

- Sodium Bicarbonate for hypotension, arrhythmia, QRS >100 ms
  - IV: 1 meq/kg IV
  - Re-bolus in 5-10 min at 1 meq/kg if s/s persist
- Magnesium Sulfate (*for Torsades REFRACTORY to sodium Bicarbonate*)
  - IV or IO: 25-50 mg/kg in 100 ml infused over 2-5 min
  - Max 2 g

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*Calcium channel blocker/beta blocker ingestion*

- **Calcium Chloride (for Calcium Channel Blockers Only)**
  - IV (Slow): 20 mg/kg over 10 minutes until s/s improve
- **Glucagon**
  - IV, IM, SQ: 0.1 mg/kg to a max of 1 mg every 5 minutes as needed and as available
  - Do not use diluents (e.g. propylene glycol) supplied with single use kits. Use Normal Saline instead
- **Epinephrine Infusion**
  - 0.1-2 mcg/kg/min, see drug index

*Organophosphate Exposure*

- Atropine Sulfate
  - IV/IO/IM: 0.05 mg/kg, repeated PRN for continued symptoms

*Hyperdynamic drug ingestion/exposure (with active s/s)*

- Diazepam (Valium)
  - IV/IO/IM: 0.2 mg/kg every 5-10 min PRN to a max of 10 mg
- Midazolam (Versed)
  - IV/IO: 0.1 mg/kg every 5-10 min (over 2-5 minutes if IV). Maximum dose of 2.5 mg
  - IN/IM: 0.2 mg/kg repeat every 5 min PRN. If no IV access is available (Max 5mg)

*EPS:*

- Benadryl (Diphenhydramine)
  - IV/IM: 1 mg/kg IVP max of 25 mg

## PHYSICIAN PEARLS:

The following are high risk toxicological situations that should be evaluated at a hospital regardless of clinical stability. *These are the substances that, for a variety of reasons, result in the highest ICU admissions.*

- Any situation where 2 or more agents/drugs may be involved (Poly-Pharmacy ingestion). 44% of fatal pediatric overdoses involve more than one substance
- Iron Ingestions (as little as 20-60mg/kg) Iron ingestions may present with a latent period at about 1-6 hours with cardiovascular collapse occurring 12-24 hours post ingestion. Commonly found in OTC supplements, *iron ingestions are the leading cause of pediatric fatal ingestion*
- Hyperdynamic Drug Ingestions/Meth Lab exposures
- Antidepressants: Tricyclic Antidepressants (TCAs) are especially high risk
- Anticonvulsants
  - Benzodiazepines
  - Depakote
- Digitalis (Nightshade) or Digitalis containing substances. (Digoxin)
- Opiates
- Hydrocarbon-based household products:
  - Gasoline, kerosene, etc
  - Gases & fumes (huffing)
- Alcohols: Alcoholic Beverages, Wood Alcohol, Etc.
- Cleaning substances

*In addition to the above substances, the following situations and symptoms are also worrisome with suspected toxic ingestion, and should be transported to the hospital.*

- Sudden onset of:
  - Abdominal pain
  - Nausea
  - Vomiting
  - Seizures
  - Coma
  - Decreased LOC
  - Bizarre behavior
  - Abnormal walking gait
- Sudden onset of unexplained illness
- Bizarre, incomplete, evasive history
  - Suspect abuse, neglect, or illegal activity
- Pediatric patient with cardio-respiratory distress

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