8.08 PEDIATRIC POISONING AND OVERDOSE

BLS – FAQ Link

Assess **Vital Signs**, ABC's and responsiveness, NPO, **Oxygen**,
Spinal Motion Restriction as indicated, bandage wounds, stabilize suspected fractures

ALS

Advanced airway as indicated. Assess for substance type. Check blood glucose.
May consult California Poison Control (800) 222-1222.

Normal Saline
IV/IO of Normal Saline TKO.

Pediatric hypovolemic shock: IV/IO bolus of 20 mL/Kg.
Repeat up to 60 mL/Kg if indicated.

Neonatal hypovolemic shock: 10 mL/Kg.
Repeat up to 30 mL/Kg.

Blood Glucose <60mg/dl?

Dextrose
Neonates < 1 month: D10W, 2 ml/kg IV/IO (0.2 g/kg)

Children> 1 month: D10W, 5 ml/kg IV/IO (0.5 g/kg, max 25 grams)

-- OR --

Glucagon
Less than 20kg: 0.5 mg IM/IV

Greater than 20kg: 1 mg IM/IV

Treatment Options Based on Type of Subsance

UNKNOWN SUBSTANCE

Activated Charcoal
1 G/kg mixed in water to form slurry.

Do not administer to infants < 12 mo

-- AND --

Naloxone
Less than 20 kg: 0.1 mg/kg IV/IM/IO.

Greater than 20 kg: 2 mg IN via MAD or IVP/ IM/ IO

Do not administer to neonates

OPIATES (KNOWN OR SUSPECTED)

Naloxone
Less than 20 kg: 0.1 mg/kg IV/IM/IO.

Greater than 20 kg: 2 mg IN via MAD or IVP/ IM/ IO

Do not administer to neonates

CARBON MONOXIDE (CO) / HYDROGEN SULFIDE

Oxygen
Give 100% NRB or via BVM regardless of pulse oximeter reading

TRICYCLIC ANTIDEPRESSANTS

Sodium Bicarbonate
Less than 2 years:
1mEq/kg IV/IO diluted 1:1 with sterile water.

May repeat 0.5mEq/kg q 10 min to total of 2mEq/kg.

More than 2 years:
1mEq/kg IV/IO.

May repeat 0.5mEq/kg q 10 min to total of 2mEq/kg.

ANTIPSYCHOTICS WITH EXTRAPYRAMIDAL EFFECTS

Diphenhydramine
1 mg/kg IVP, IO or IM (up to max. 25 mg)

ORGANOPHOSPHATES

Atropine
0.02 mg/kg IVP or IO (min dose 0.1mg, no max dose)

Organophosphate:
Consult **Protocol 11.03 Special Circumstances: Chemical and Radiologic Agents** for further treatment

BETA BLOCKER OR CALCIUM CHANNEL BLOCKER

Activated Charcoal
1 G/kg mixed in water to form slurry.

Contraindications:
Hydrocarbons, Gasoline, and Caustics

Do not administer to infants < 12 mo

Calcium Chloride 10%
20 mg/kg IVP or IO over 5 min

Ensure that you have patent IV line as calcium extravasation will cause tissue necrosis

NEVER induce vomiting for hydrocarbons (gasoline, kerosene, turpentine, Pine Sol) or caustic substances (alkali (e.g. lye or Drano) or acid substances).

Make Base Hospital Contact
For approval of **Glucagon** for Beta Blocker treatment and **Calcium Chloride 10%** for Calcium Channel Blocker treatment AND/OR if Poison Control recommends treatment outside of current protocols.

Effective: 04/01/24
Supersedes: 03/01/15

8.08 PEDIATRIC POISONING AND OVERDOSE

BLS Treatment – ALL Pediatric Poisoning and Overdoses
• Assess vital signs • Assess circulation, airway, breathing, and responsiveness • NPO • **Oxygen** as indicated.
ALS Treatment - ALL Pediatric Poisoning and Overdoses **Current American Heart Association Guidelines concerning Emergency Cardiac Care assessments and interventions shall always take precedence over local protocols when there is a conflict concerning techniques of resuscitation.**

• Advanced airway as indicated.
• Assess for substance type.
• Check blood glucose. If blood glucose <60 mg/dl: **Dextrose**.
• If no IV or IO access: administer **Glucagon.**
• Dextrose
  • Neonates < 1 month: D10W 2ml/kg IV/IO (0.2g/kg)
  • Children > 1 month: D10W 5ml/kg (0.5g/kg/ max 25 gram)
• Glucagon
  • Less than 20kg: 0.5mg IM/IV
  • Greater than 20kg: 1mg IM/IV
• IV/IO of **Normal Saline** TKO.
  • Pediatric hypovolemic shock: IV/IO bolus of 20ml/kg. Repeat up to 60ml/kg if indicated.
  • Neonatal hypovolemic shock: 10 ml/kg. Repeat up to 30ml/kg.
• May consult California Poison Control (800) 222-1222.

Base Hospital Contact Criteria
• If Poison Control recommends treatment outside of current protocols.
Comments
NEVER induce vomiting.

ALS Treatment – SPECIFIC Pediatric Poisoning and Overdoses
UNKNOWN SUBSTANCE

• **Naloxone**:
  ○ Less than 20kg: 0.1mg/kg IV/IM/IO
  ○ Greater than 20kg: 2mg IN via MAD or IVP/IM/IO
  ○ Neonate = AVOID use in neonate
• **Activated Charcoal** mixed in water to form a slurry IF patient is alert; able to maintain airway; non-acid, non-caustic, non-petroleum ingestion; it is within 1-hour of ingestion AND >1 year old.

KNOWN OR SUSPECTED OPIATES

Pinpoint pupils, respiratory depression, decreased level of consciousness, hypotension and decreased muscle tone:

- **Naloxone**:
  - Less than 20kg: 0.1mg/kg IV/IM/IO/IN
  - Greater than 20kg: 2mg IN via MAD or IVP/IM/IO
  - Neonate = AVOID use in neonate

ANTIPSYCHOTICS WITH EXTRAPYRAMIDAL EFFECTS
(Haldol, Haloperidol)

Fixed, deviated gaze to one side of body, painful spasm of trunk or extremity muscles and difficulty speaking:

- **Diphenhydramine**
  - 1mg/kg IVP/IO/IM (up to 25mg max)

ORGANOPHOSPHATES

SLUDGE Symptoms: Salivation, lacrimation, urination, diaphoresis/diarrhea, gastric hypermotility, and emesis/eye (small pupils, blurry vision):

- **Atropine**
  - 0.02mg/kg IV/IO (min dose 0.1mg, no max dose)

Organophosphate: Consult Protocol 11.03 Special Circumstances: Chemical and Radiologic Agents for further treatment.

TRICYCLIC ANTIDEPRESSANTS

May experience rapid depression of mental status, sudden seizures, or worsening of vital signs:

- If hypotensive, seizing and / or wide QRS > 0.10 sec
- **Sodium Bicarbonate**
  - Less than 2 years: 1mEq/kg IV/IO diluted 1:1 with sterile water. May repeat 0.5 mEq/kg q10min to total 2mEq/kg
  - More than 2 years: 1 mEq/kg IV/IO. May repeat 0.5mEq/kg q10 min to total 2 mEq/kg.

BETA BLOCKER OR CALCIUM CHANNEL BLOCKER
(e.g. Metoprolol)

Bradycardia, hypotension and / or shock:

- **Activated Charcoal** mixed in water to form a slurry IF patient is alert; able to maintain

airway; non-acid, non-caustic, non-petroleum ingestion; it is within 1-hour of ingestion AND >1 year old.

Base Hospital Contact Criteria

Contact Base Physician for approval of:

- **Glucagon** for Beta Blockers.
- **Calcium Chloride** 10% solution for Calcium Channel Blockers.
  - 20 mg/kg IV/IO over 5 min

Comments

Ensure that you have patent IV line as **Calcium Chloride** extravasation will cause tissue necrosis

CARBON MONOXIDE (CO) / HYDROGEN SULFIDE

Consider CO poisoning if found unconscious, or has AMS, or non-specific complaints AND patient situation includes:

- Found down in enclosed space with CO source (running motors, indoor use of charcoal/ gas grill/ generator or heater malfunction)
- Multiple persons sharing the vicinity have similar symptoms.
- Environmental CO detectors are alarming.

Give 100% NRB or via BVM regardless of pulse oximeter reading.

Comments

Patients with CO and hydrogen sulfide may have normal oxygen saturation readings, but cellular hypoxia due to displacement of the oxygen molecule from the hemoglobin in red blood cells.