Management of Medical Emergencies

For all emergencies

1. Discontinue dental treatment
2. Call for assistance / someone to bring oxygen and emergency kit
3. Position patient: ensure open and unobstructed airway
4. Monitor vital signs
5. Be prepared to support respiration, support circulation, provide CPR, and call for emergency medical services

Condition	Signs and symptoms	Treatment	Drug dosage	Drug delivery
Allergic reaction (mild or delayed)	Hives; itching; edema; erythema–skin, mucosa conjuctiva	1. Discontinue all sources of allergy-causing substances 2. Administer diphenhydramine	Diphenhydramine: follow manufacturer's instructions based on child's age/weight	Oral
Allergic reaction (sudden onset): anaphylaxis	Urticaria-itching, flushing, hives; rhinitis; wheezing/difficulty breathing; bronchospasm; laryngeal edema; weak pulse; marked fall in blood pressure; loss of consciousness	This is a true, life-threatening emergency 1. Call for emergency medical services 2. Administer epinephrine 3. Administer oxygen 4. Monitor vital signs 5. Transport to emergency medical facility by advanced medical responders	Epinephrine (1 mg/mL): 0.01 mg/kg every 5 minutes until recovery or until help arrives[1]	IM or SubQ (Auto injector available)
Acute asthmatic attack	Shortness of breath; wheezing; coughing; tightness in chest; cyanosis; tachycardia	1. Sit patient upright or in a comfortable position 2. Administer oxygen 3. Administer bronchodilator 4. If bronchodilator is ineffective, administer epinephrine 5. Call for emergency medical services with transportation for advanced care if indicated	1. Albuterol (patient's or emergency kit inhaler) 2. Epinephrine (1 mg/mL): 0.01 mg/kg every 15 minutes as needed[1]	Inhale IM or SubQ
Local anesthetic toxicity	Light-headedness; changes in vision and/or speech; metallic taste; changes in mental status; confusion, agitation; tinnitis; tremor; seizure; tachypnea; bradycardia; unconsciousness; cardiac arrest	1. Assess and support airway, breathing, and circulation (CPR if warranted) 2. Administer oxygen 3. Monitor vital signs 4. Call for emergency medical services with transportation for advanced care if indicated	Supplemental oxygen	Mask
Local anesthetic reaction: vasoconstrictor	Anxiety; tachycardia/ palpitations; restlessness; headache; tachypnea; chest pain; cardiac arrest	1. Reassure patient 2. Assess and support airway, breathing, and circulation (CPR if warranted) 3. Administer oxygen 4. Monitor vital signs 5. Call for emergency medical services with transportation for advanced care if indicated	Supplemental oxygen	Mask
Overdose: benzodiazepine	Somnolence; confusion; diminished reflexes; respiratory depression; apnea; respiratory arrest; cardiac arrest	1. Assess and support airway, breathing, and circulation (CPR if warranted) 2. Administer oxygen 3. Monitor vital signs 4. If severe respiratory depression, establish IV access and reverse with flumazenil 5. Monitor recovery (for at least 2 hours after the last dose of flumazenil) and call for emergency medical services with transportation for advanced care if indicated	Flumazenil 0.01 mg/kg (maximum: 0.2 mg); may repeat at 1 minute intervals not to exceed a cumulative dose of 0.05 mg/kg or 1 mg, whichever is less[1]	IV (if IV access is not available, may be given IM)

Abbreviations in table: CPR=cardiopulmonary resuscitation; IM=intramuscular; IN=intranasal; IV=intravenous; kg=kilogram; mg=milligram; mL=milliliter; SubQ=subcutaneous.

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Condition	Signs and symptoms	Treatment	Drug dosage	Drug delivery
Overdose: narcotic	Decreased responsiveness; respiratory depression; respiratory arrest; cardiac arrest	1. Assess and support airway, breathing, and circulation (CPR if warranted) 2. Administer oxygen 3. Monitor vital signs 4. If severe respiratory depression, reverse with naxolone 5. Monitor recovery (for at least 2 hours after the last dose of naxolone) and call for emergency medical services with transportation for advanced care if indicated	Naxolone 0.1 mg/kg up to 2 mg.[1,2] May be repeated to maintain reversal.	IV, IM, or SubQ
Seizure	Warning aura: disorientation, blinking, or blank stare; uncontrolled muscle movements; muscle rigidity; unconsciousness; postictal phase–sleepiness, confusion, amnesia, slow recovery	1. Recline and position to prevent injury 2. Ensure open airway and adequate ventilation 3. Monitor vital signs 4. If status is epilepticus, give either diazepam **OR** midazolam and call for emergency medical services with transportation for advanced care if indicated	Diazepam (5 mg/mL): 0.15-0.2 mg/kg per dose; maximum 10 mg per dose. May repeat dose once.[1] **OR** Midazolam: 0.2 mg/kg (maximum 10 mg)[1]	IV IM, IN, IV
Syncope (fainting)	Feeling of warmth; skin pale and moist; pulse rapid initially then gets slow and weak; dizziness; hypotension; cold extremities; unconsciousness	1. Recline, feet up 2. Loosen clothing that may be binding 3. Ammonia inhaler 4. Administer oxygen 5. Cold towel on back of neck 6. Monitor recovery	Ammonia in vials	Inhale

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Reference

1. Shenoi RP, Timm N, AAP Committee on Drugs, AAP Committee on Pediatric Emergency Medicine. Drugs used to treat pediatric emergencies. Pediatrics 2020;145(1):e20193450. Available at: "https://publications.aap.org/pediatrics/article/145/1/e20193450/36970/Drugs-Used-to-Treat-Pediatric-Emergencies". Accessed August 24, 2022.