

Table 5 Management of Acute Reactions in Children
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Urticaria

1. No treatment needed in most cases.
2. For moderate itching, consider H₁-receptor blocker: Diphenhydramine (Benadryl[®]) PO/IM or slow IV push 1 to 2 mg/kg, up to 50 mg.
3. If severe itching or widely disseminated, consider alpha agonist: epinephrine IV (1:10,000) 0.1 mL/kg slow push over 2 to 5 minutes, up to 3 mL.

Facial Edema

1. Secure airway and give O₂ 6 to 10 liters/min (via mask, face tent, or blow-by stream). Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Give alpha agonist: epinephrine IV (1:10,000) 0.1 mL/kg slow push over 2 to 5 minutes, up to 3 mL/dose. Repeat in 5 to 30 minutes as needed.
3. Consider H₁-receptor blocker: Diphenhydramine (Benadryl[®]) IM or slow IV push 1 to 2 mg/kg, up to 50 mg.
4. Note, if facial edema is mild and there is no reaction progression, observation alone may be appropriate.

If not responsive to therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.).

Bronchospasm

1. Secure airway and give O₂ 6 to 10 liters/min (via mask, face tent, or blow-by stream). Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Give inhaled beta-agonist [bronchiolar dilator, such as albuterol (Proventil[®] or Ventolin[®])], 2 to 3 puffs from metered dose inhaler. Repeat as necessary.
3. If bronchospasm progresses, give epinephrine (1:10,000) IV 0.1 mL/kg slow push over 2 to 5 minutes, maximum 3mL/dose. Repeat in 5 to 30 minutes as needed.

If not responsive to therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.) for severe bronchospasm or if O₂ saturation < 88% persists.

Laryngeal Edema

1. Secure airway and give O₂ 6 to 10 liters/min (via mask, face tent, or blow-by stream). Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Give epinephrine (1:10,000) IV 0.1 mL/kg slow push over 2-5 minutes, maximum 3mL/dose. Repeat in 5 to 30 minutes as needed.

If not promptly responsive to initial therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.).

Pulmonary Edema

1. Secure airway and give O₂ 6 to 10 liters/min (via mask, face tent, or blow-by stream).
Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Give diuretic: furosemide (Lasix[®]) IV 1 to 2 mg/kg.

If not responsive to therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.).

Hypotension with Tachycardia (Anaphylactic Shock)

1. Secure airway and give O₂ 6 to 10 liters/min (via mask). Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Legs elevated 60° or more (preferred) or Trendelenburg position.
3. Keep patient warm.
4. Give rapid infusion of IV or IO normal saline or Ringer's lactate.
5. If severe, give alpha agonist: epinephrine IV (1:10,000) 0.1 mL/kg slow push over 2-5 minutes, up to 3 mL/dose. Repeat in 5 to 30 minutes as needed.

If not responsive to therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.).

Hypotension with Bradycardia (Vagal Reaction)

1. Secure airway and give O₂ 6-10 liters/min (via mask). Monitor: electrocardiogram, O₂ saturation (pulse oximeter), and blood pressure.
2. Legs elevated 60° or more (preferred) or Trendelenburg position.
3. Keep patient warm.
4. Give rapid infusion of IV or IO normal saline or Ringer's lactate. Caution should be used to avoid hypervolemia in children with myocardial dysfunction.
5. Give atropine IV 0.02 mg/kg if patient does not respond quickly to steps 2, 3, and 4. Minimum initial dose of 0.1 mg. Maximum initial dose of 0.5 mg (infant/child), 1.0 mg (adolescent). May repeat every 3-5 minutes up to maximum dose up to 1.0 mg (infant/child), 2.0 mg (adolescent).

If not responsive to therapy, call for assistance (e.g., cardiopulmonary arrest response team, call 911, etc.).

Abbreviations: IM= intramuscular
IO= intraosseous
IV=intravenous
PO=orally