



ORANGE COUNTY EMERGENCY MEDICAL SERVICES

Prehospital Standing Orders / Treatment Guidelines

ALLERGIC REACTION / ANAPHYLAXIS - PEDIATRIC

#: P-060

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Orig. Date: 11/1987

Revised: 10/01/2026

Notes/Definitions

- **Allergic Reaction:** A skin-based reaction to an allergen with normal vital signs, such as hives, itching, flushing/redness and no airway involvement.
- **Anaphylaxis:** Acute onset of a systemic reaction involving two or more systems, any airway involvement or unstable vital signs.
- Diphenhydramine and Albuterol do not treat anaphylaxis. For patients with anaphylaxis, Epinephrine administration is the priority. Diphenhydramine and Albuterol may be administered in addition to Epinephrine.
- If there is a history of anaphylaxis, relay in report.

Base Hospital Contact for Anaphylaxis

BLS Interventions

- Refer to General BLS Standing Orders SO-BLS.
- Assist patients with the administration of their physician prescribed emergency devices and medications to include but not limited to bronchodilator inhaler / nebulizer or epinephrine device.
- Remove the stinger / injection mechanism.
- Ensure proper positioning for adequate ventilation and suction as needed.

ALS Interventions

- Assess Pediatric Assessment Triangle (PAT)
 - General appearance: tone, interactiveness, consolability, look / gaze, speech / cry
 - Work of breathing: retractions, nasal flaring, abnormal airway sounds, positioning
 - Circulation to skin: pallor, mottling, cyanosis
- When BLS airway management cannot maintain adequate ventilation or oxygenation and criteria met, consider:
 - Supraglottic airway insertion for ≥ 50 kg (PR-135)
 - Endotracheal intubation for > 36 kg (PR-030)
- Apply capnography (EtCO₂) as tolerated.
 - Maintain EtCO₂ between 35 and 45 mmHg
 - If EtCO₂ > 50 : ensure proper positioning for adequate ventilation and suction as needed.
 - If no improvement, initiate BVM.
- Obtain the patient's estimated weight utilizing an appropriate length-based resuscitation tape or age-based system.
- Initiate cardiac monitor as needed. Interpret, monitor, and document rhythm.
- Assess GCS. Use pediatric GCS for patients age ≤ 2 years. Refer to Procedure B-002.

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Allergic Reaction treatment:

- ▶ **Diphenhydramine (Benadryl®) 1 mg / kg IM** - once (max dose 50 mg).

*Do not administer if taken prior to arrival.

- Reassess VS and symptom severity. If patient is not improving or if airway involvement, consider treating as anaphylaxis.

Anaphylaxis: Any one of the following symptoms: wheezing, stridor, hypoxia (< 95%), signs of poor perfusion, hypotension, delayed capillary refill, or intra-oral swelling. **-OR-**

Any combination of the following symptoms: skin-based allergic reaction and persistent GI symptoms (nausea, vomiting, diarrhea, or cramping), treat as follows:

- ▶ **Epinephrine 0.01 mg / kg IM** lateral thigh (1 mg / mL concentration) (max dose 0.5 mg).
 - ▶ If SPO₂ < 95% apply **Oxygen** by mask (high flow) or nasal cannula (for nasal cannula provide 6 L / min flow rate) as tolerated.
 - Treat for wheezing, administer:
 - ▶ **Albuterol 6 mL (5 mg)** continuous nebulization for ages 31 days and older.
 - OR**
 - ▶ **Albuterol 3 mL (2.5 mg)** continuous nebulization for ages 0 – 30 days.
 - Treat for hypotension (refer to Vital Sign table below):
 - ▶ **Normal Saline 20 mL / kg IV / IO** (max dose 250 mL) – may repeat same dose twice for total of 3 boluses.
 - If symptoms persist after patient self-administered Epinephrine or 5 minutes after initial IM epinephrine, administer:
 - ▶ **Epinephrine 0.01 mg / kg IM** (1 mg / mL concentration) (max dose 0.5 mg).
 - For weak or absent palpable pulse, lack of response to fluid boluses or IM Epinephrine, and/or impending airway obstruction, consider:
 - ▶ **Epinephrine 0.01 mg / kg IV / IO** (0.1 mg / 1 mL concentration) (max dose 0.3 mg)
 - ▶ **Diphenhydramine 1 mg / kg IM / IV** - once (max dose 50 mg).
- *Do not administer if taken prior to arrival.

Transport Considerations

- ALS transport to the nearest ERC.
- **Base Hospital Contact required (CCERC Preferred)** for anaphylaxis symptoms, self-administration of Epinephrine, abnormal PAT, no response to treatment, or if status worsens for any of the above conditions.

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**Additional Considerations**

- Intraoral swelling can present as hoarse voice or swelling to tongue, lips or mouth, uvula or soft palate.
- Epinephrine is the priority and first line treatment for anaphylaxis. Patients in severe anaphylaxis may require multiple doses of epinephrine. Early base hospital contact encouraged.
- Maximum dose of Diphenhydramine is 50 mg IM or IV. Diphenhydramine does not treat anaphylaxis and should only be given once other treatments are complete or in stable patients with discomfort for isolated hives.
- Wheezing caused by anaphylaxis should be treated with epinephrine prior to albuterol.

Pediatric Vital Signs by Age

Age	Pulse	Systolic Blood Pressure	Respiratory Rate
Neonate (0-30 days)	100-180	> 60	30-60
Infant (31 days - < 1 yr)	100-160	> 60	30-60
Toddler (1 yr - < 3 yrs)	90-150	> 70	24-40
Pre-school (3 yrs - < 5 yrs)	80-140	> 75	22-34
School Aged (5 yrs - < 10 yrs)	70-120	> 80	18-30
Teen (≥ 10 yrs)	60-100	> 90	12-16

Base Hospital Considerations

- For impending airway obstruction or weak palpable pulse, consider:
 - ▶ **Epinephrine 0.01 mg / kg IV / IO** (0.1 mg / 1 mL concentration) (max dose 0.3 mg)

Cross References:

SO-BLS General BLS Standing Orders

BLS Procedure B-002 (Glasgow Coma Scale Score)

SO-P-080 Shock (Symptomatic Hypotension) - Pediatric

SO-FR-004 Oropharyngeal Airway (OPA)

SO-FR-005 Nasopharyngeal Airway (NPA)

ALS Procedure PR-030 Endotracheal Intubation (including EtCO₂)

ALS Procedure PR-135 Supraglottic Airway Device Placement – Adult / Adolescent

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