

Protocol 9-2

SECTION: Pediatric General Medical Emergencies

PROTOCOL TITLE: Medical – Allergic Reaction/Anaphylaxis

REVISED: 06/2017

ALLERGIC REACTION

OVERVIEW:

Acute respiratory emergencies in the pediatric patient are common. When not properly treated, respiratory distress can result in significant morbidity and mortality. Anaphylaxis in children commonly results from insect stings and, less frequently, from food or medications. Signs of shock as well as upper and lower airway obstruction are frequently present. If the reaction involves the respiratory system, signs similar to severe asthma may be present (cyanosis, wheezing, and respiratory arrest). Patients with allergic reactions frequently have local or generalized swelling while anaphylaxis can be characterized by wheezing, airway compromise, and/ or hypotension.

HPI	Signs and Symptoms	Considerations
<ul style="list-style-type: none"> Onset and location Insect sting or bite Food allergy / exposure New clothing, soap, detergent Past history of reactions Medication history 	<ul style="list-style-type: none"> Itching or hives Coughing / wheezing or respiratory distress Chest or throat constriction Difficulty swallowing Hypotension or shock Edema 	<ul style="list-style-type: none"> Urticaria (rash only) Anaphylaxis (systemic effect) Shock (vascular effect) Angioedema (drug induced) Aspiration / airway obstruction Vaso-vagal event Asthma

	EMR	EMT	A	I	P
1. Perform general patient management.	•	•	•	•	•
2. Support life-threatening problems associated with airway, breathing, and circulation.	•	•	•	•	•
3. Administer oxygen to maintain <u>SPO₂</u> 94 - 99%	•	•	•	•	•
4. Administer <u>DIPHENHYDRAMINE</u> 1 mg / kg up to 50 mg IM or IV. The IV route is preferred for the patient in severe shock. If an IV cannot be readily established, give diphenhydramine via the IM route.			•	•	•
5. If the patient is experiencing respiratory distress with wheezing, refer to the <u>Respiratory Distress protocol</u> .	•	•	•	•	•
6. Transport as soon as possible.	•	•	•	•	•
7. For severe symptoms such as airway compromise, severe respiratory distress, or hypotension:					
a. If available, administer epinephrine via an epinephrine autoinjector.		•	•	•	•

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Continued

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	EMR	EMT	A	I	P
b. If epinephrine autoinjector is unavailable; give <u>EPINEPHRINE</u> 1:1,000 0.01 mg / kg up to 0.3 mg IM. Call Medical Control if no improvement.			•	•	•
8. Establish an IV of normal saline at KVO. Titrate to a systolic pressure appropriate for child: a. Birth to 1 month - 60 mmHg b. 1 month to 1 year - > 70 mmHg c. Greater than 1 year – 70 + [2 x Age (years)]			•	•	•
9. If hypoperfusion persists following the first dose of epinephrine, consider administration of 20mL/kg normal saline IV. While administering a fluid bolus, frequently reassess perfusion for improvement. If perfusion improves, slow the IV to KVO and monitor closely. If patient develops fluid overload respiratory distress (dyspnea, crackles, rhonchi, decreasing SpO ₂), slow the IV to KVO.			•	•	•
10. Transport and perform ongoing assessment as indicated.		•	•	•	•

Age	Term	6 months	1 year	3 years	6 years	8 years	10 years	12 years	14 years
Weight (lb / kg)	6.6 lb 3 kg	17 lb 8 kg	22 lb 10 kg	30 lb 14 kg	44 lb 20 kg	55 lb 20 kg	75 lb 34 kg	88 lb 40 kg	110 lb 50 kg
Epinephrine 1:1,000 (1 mg / ml) 0.01 mg / kg	0.03 mg	0.08 mg	0.1 mg	0.14 mg	0.2 mg	0.25 mg	0.3 mg	0.3 mg	0.3 mg
Diphenhydramine 1 mg / kg	3.0 mg	8.0 mg	10.0 mg	14.0 mg	20.0 mg	25.0 mg	34.0 mg	40.0 mg	50.0 mg

PEARLS:

1. The most important component of respiratory distress is airway control.
2. Any pediatric patient presenting with substernal and intercostal retractions is in immediate need of treatment and transport. Do not delay transport with treatments that can be completed en route.
3. Avoid intravenous initiation or medication administration into same extremity as bite or allergen site.