

Protocol 3-3

SECTION: Adult General Medical Emergencies

PROTOCOL TITLE: Medical – Allergic Reaction and Anaphylaxis

REVISED: 06/2017

ALLERGIC REACTION

OVERVIEW:

Anaphylaxis allergic reactions and are serious and potentially life-threatening medical emergencies. It is the body's adverse reaction to a foreign protein, (i.e., food medicine, pollen, insect sting or any ingested, inhaled, or injected substance). Patients with allergic reactions frequently present only with local or generalized swelling; in contrast, anaphylaxis is characterized by wheezing, significant airway compromise, and / or systolic BP < 90 mmHg. Common to both disorders are urticaria and Angioedema, which when isolated are best treated with simple antihistamine therapy. It is when respiratory symptoms, such as upper airway edema, dyspnea, and wheezing are present EMS personnel should attribute these findings to anaphylaxis, and subsequently move to more aggressive therapy. Cardiovascular collapse may occur abruptly, without the prior development of skin or respiratory symptoms. **Constant monitoring of the patient's airway and breathing is mandatory.**

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 or COPD Heart failure

	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 SPO_2 94 - 99%	•	•	•	•	•
4. If signs of anaphylaxis, and if available, administer epinephrine via an epinephrine autoinjector.		•	•	•	•
5. If signs of anaphylactic shock and autoinjector has not been administered, administer <u>EPINEPHRINE 1 mg/ml</u> 0.01 mg / kg up to 0.5 mg IM.			•	•	•
6. If the patient is experiencing respiratory distress with wheezing, refer to the <u>Respiratory Distress protocol</u> .	•	•	•	•	•
7. Transport as soon as possible.		•	•	•	•
8. Establish an IV of normal saline at KVO.			•	•	•

	EMR	EMT	A	I	P
9. If hypoperfusion persists following the first dose of epinephrine, consider administration of 20 mL / 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. 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.			•	•	•
11. Transport and perform ongoing assessment as indicated.		•	•	•	•

PEARLS:

1. A thorough assessment and a high index of suspicion are required for all potential allergic reaction patients.
2. Individuals with asthma, atopic dermatitis (eczema), prior anaphylactic history, and those who delay treatment can be at greater risk for a fatal reaction.
3. It is strongly recommended that all patients receiving anti-cholinergic medications should be transported for observation following treatment for return of symptoms.
4. Gastrointestinal symptoms occur most commonly in food-induced anaphylaxis, but can occur with other causes. Oral pruritus is often the first symptom observed in patients experiencing food-induced anaphylaxis. Abdominal cramping is also common, but nausea, vomiting, and diarrhea are frequently observed as well.
5. Contrary to common belief that all cases of anaphylaxis present with cutaneous manifestations, such as hives or mucocutaneous swelling, a significant portion of anaphylactic episodes may not involve these signs and symptoms on initial presentation. Moreover, most fatal reactions to food-induced anaphylaxis in children were not associated with cutaneous manifestations.