

# Anaphylaxis and Allergic Reaction

## Protocol

Douglas County KS EMS System

November 2022

**Reference Procedures:** [Cricothyroidotomy](#), [Endotracheal Intubation](#), [ETCO2](#), [Pulse Oximetry](#)

### **Goals for patient care:**

- Adequate airway and sufficient oxygenation
- Clinical improvement

### **Medications**

#### ADULT Medications:

- **Epinephrine:** 0.3mg (1/1,000) IM  
☎ If hypotension <90 or severe respiratory distress, 0.3 mg (1/10,000) IVSP
- **Diphenhydramine:** 1.0-2.0 mg/kg IV, IO, IM (Max 50mg)
- **Albuterol:** 2.5mg in 3mL NS
- **Methylprednisolone:** 125mg IV slow or IM

#### PEDIATRIC Medications: Refer to HandTevy

- **Epinephrine:** 0.01 mg/kg (1,1,000) (max 0.3 mg)  
☎ If hypotension < age x 2 plus 70 or severe respiratory distress, 0.01 mg/kg (1/10,000) IVSP
- **Diphenhydramine:** 1.0-2.0 mg/kg IV, IO, IM (Max 50mg)
- **Albuterol:** 2.5mg in 3ml NS
- **Methylprednisolone:** 2mg/kg IV slow or IM

### **INITIAL STEP: Determine allergic reaction vs. anaphylaxis.**

A major difference between anaphylaxis and other allergic reactions is that anaphylaxis typically involves more than one system of the body.

Anaphylaxis is highly likely with symptoms of an allergic reaction (generalized hives, pruritus or flushing, swollen lips-tongue-uvula) **and one of the following:**

- Respiratory compromise (e.g., dyspnea, wheeze/bronchospasm, stridor, hypoxemia) **OR**
- Reduced blood pressure (BP) or associated symptoms and signs of end-organ malperfusion (e.g., collapse, syncope, incontinence)
- Persistent gastrointestinal symptoms and signs (perhaps crampy abdominal pain, vomiting).

Skin symptoms and signs are present in up to 90 percent of anaphylactic episodes.

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Patients may not technically fulfill all criteria for anaphylaxis but still be a patient in whom epinephrine is appropriate. For example, it would be appropriate to administer epinephrine to a patient with a history of severe anaphylaxis to peanut who presents with urticaria and flushing that developed within minutes of a known or suspected ingestion of peanut

### **Anaphylaxis:**

- If thought to be anaphylaxis, administer epinephrine IM.
  - Epinephrine is the most important medication in anaphylaxis
- Place on cardiopulmonary monitor, establish IV access and administer allergic reaction medications as indicated
- Anaphylaxis is most commonly related to offending foods, medications, or insect stings
- All patients with anaphylaxis should be transported
- It is acceptable to administer diphenhydramine, albuterol or methylprednisolone after epinephrine

### **Allergic:**

- Establish IV access
- Administer Diphenhydramine (Benadryl) IV/IM
- Administer nebulized Albuterol Sulfate for bronchospasm if respiratory component present
- Administer Methylprednisolone (Solu-Medrol)

**Angioedema:** commonly related to ACE-inhibitors (less commonly familial) and is treated as an allergic reaction though the mainstay of treatment is to stop any offending agent, consider early airway management and other medications not available in the prehospital setting.

**If airway is compromised and not responding to medications,  
consider cricothyroidotomy**

### **Considerations**

Considerations for crews on scene prior to ambulance arrival

- Determine known allergies
- Determine if this has occurred before, and how severe were the symptoms
- Remove from any possibly aggravating environment/substance
- Monitor airway and breathing closely
- Administer Oxygen as needed
- Monitor V/S closely
- Has patient had to be intubated in the past?
- Update ambulance as to severity of symptoms