# Allergic Reaction / Anaphylaxis

## History
- Onset and location
- Insect sting or bite
- Food allergy / exposure
- Medication allergy / exposure
- New clothing, soap, detergent
- Past history of reactions
- Past medical history
- Medication history

## Signs and Symptoms
- Itching or hives
- Coughing / wheezing or respiratory distress
- Chest or throat constriction
- Difficulty swallowing
- Hypotension or shock
- Edema
- N/V

## Differential
- Urticaria (rash only)
- Anaphylaxis (systemic effect)
- Shock (vascular effect)
- Angioedema (drug induced)
- Aspiration / Airway obstruction
- Vasovagal event
- Asthma or COPD
- CHF

## Assess Symptom Severity and Suspected Allergen Exposure

### Mild
**Skin Only**
- **A** Diphenhydramine 50 mg PO
- **B** IV Procedure if indicated
- **A** Diphenhydramine 50 mg PO/IV/IM/IO
- **B** Famotidine 20 mg PO/IV/IO
- **B** Monitor and Reassess
- **B** Monitor for Worsening
- **B** Signs and Symptoms

### Moderate
**2+ Body Systems**
- **A** Epinephrine 1:1000 IM 0.3 mg IM
- **B** Diphenhydramine 50 mg PO
- **A** Albuterol Nebulizer 5mg
- **Repeat x 3 if indicated**
- **A** Diphenhydramine 50 mg IV/IM/IO
- **If PO not already given**

### Severe
**2+ Body systems with Hypotension or Isolated Hypotension**
- **B** Epinephrine 1:1000 IM 0.3 mg IM
- **B** Albuterol 5 mg Nebulized
- **Repeat as needed x 3 if indicated**

## Airway Protocol(s)
- **AR 1-4** as indicated

## Hypotension/Shock
- **Protocol AM-5** if indicated

## Contact Destination or Medical Control

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Revised 8/2019

Clinical Operating Guidelines AM-1

This protocol has been altered from the original NCCEP Protocol by the Durham County EMS Medical Director
Allergic Reaction / Anaphylaxis

Pearls

- **Recommended Exam:** Mental Status, Skin, Heart, Lungs, Abdominal
- **Anaphylaxis** is an acute and potentially lethal multisystem allergic reaction.

**Epinephrine administration:**
- Drug of choice and the FIRST drug that should be administered in acute anaphylaxis (Moderate / Severe Symptoms.) IM Epinephrine should be administered in priority before or during attempts at IV or IO access.
- Diphenhydramine and steroids have no proven utility in Moderate / Severe anaphylaxis and may be given only After Epinephrine. Diphenhydramine and steroids should NOT delay repeated Epinephrine administration.
- In Moderate and Severe anaphylaxis Diphenhydramine may decrease mental status. Oral Diphenhydramine should NOT be given to a patient with decreased mental status and / or a hypotensive patient as this may cause nausea and / or vomiting.
- Anaphylaxis unresponsive to repeat doses of IM epinephrine may require IV epinephrine administration by IV push or epinephrine infusion. IV epinephrine dose may be created by drawing 1 mg of 1:1,000 epi into a 10cc syringe filled with NS. Contact Medical Control for appropriate dosing.

**Symptom Severity Classification:**
- **Mild symptoms:** Flushing, hives, itching, erythema with normal blood pressure and perfusion.
- **Moderate symptoms:** Flushing, hives, itching, erythema plus respiratory (wheezing, dyspnea, hypoxia) or gastrointestinal symptoms (nausea, vomiting, abdominal pain) with normal blood pressure and perfusion.
- **Severe symptoms:** Flushing, hives, itching, erythema plus respiratory (wheezing, dyspnea, hypoxia) or gastrointestinal symptoms (nausea, vomiting, abdominal pain) with hypotension/poor perfusion or isolated hypotension.

- Allergic reactions may occur with only respiratory and gastrointestinal symptoms and have no rash / skin involvement.
- **Angioedema** is seen in moderate to severe reactions and is swelling involving the face, lips or airway structures. This can also be seen in patients taking blood pressure medications like Prinivil / Zestril (lisinopril)-typically end in -il.
- **Hereditary Angioedema** involves swelling of the face, lips, airway structures, extremities, and may cause moderate to severe abdominal pain. Some patients are prescribed specific medications to aid in reversal of swelling. Paramedic may assist or administer this medication per patient / package instructions.

- 12 lead ECG and cardiac monitoring should NOT delay administration of epinephrine.
- EMR / EMT may administer Epinephrine IM and may administer from EMS supply.
- EMR / EMT may administer Epinephrine IM via AutolInjector or manual draw-up.
- EMT may administer Diphenhydramine by oral route only and may administer from EMS supply. Agency Medical Director may require contact of medical control prior to EMT / EMR administering any medication.
- EMT may administer Albuterol if patient already prescribed and may administer from EMS supply.
- The shorter the onset from exposure to symptoms the more severe the reaction.