Allergic Reaction/Anaphylaxis

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

**Signs and Symptoms**
- Itching or hives
- Coughing, wheezing or respiratory distress
- Chest or throat restriction
- Difficulty swallowing
- Hypotension or shock
- Edema
- Nausea or vomiting
- Feeling of impending doom

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

**Assess symptom severity**

**Systemic**
- Assist patient with self-prescribed Epinephrine Auto-Injector if available
- Administer Epinephrine Auto-Injector
- Epinephrine 1:1,000 0.3mg IM (Use 0.15mg for patients > 50 years of age)
- Establish IV/IO
- Cardiac monitor
- EtCO\(_2\) monitoring
- Albuterol nebulizer 5mg Repeat as needed if indicated
- Normal Saline bolus 500ml IV/IO Repeat as needed to Max of 1L
- If hypotensive or no improvement, Epinephrine 1:10,000 titrated in 0.1mg increments slow IV/IO Maximum 0.5mg
- Consider, Diphenhydramine 50mg IV/IO/IM
- Consider, 12-Lead ECG
- Airway Procedure if indicated

**Localized**
- Establish IV/IO
- Cardiac monitor
- Consider, Diphenhydramine 50mg IV/IO/IM
- Monitor and reassess Monitor for worsening signs and symptoms

**Notify receiving facility. Contact Base Hospital for medical direction**
Pearls

- Anaphylaxis is an acute and potentially lethal multisystem allergic reaction.
- Epinephrine is the drug of choice and the first drug that should be administered in acute anaphylactic reactions with moderate or severe symptoms. IM Epinephrine should be administered as priority before or during attempts at IV or IO access.
- Anaphylaxis that is unresponsive to initial treatment of IM Epinephrine may require IV Epinephrine administration.
- Allergic reactions may occur with only respiratory and gastrointestinal symptoms and have no rash or 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 ACE-inhibitor blood pressure medications such as Prinivil, Zesteril, or Lisinopril; medications typically ending in -il.
- Epinephrine may precipitate cardiac ischemia. The following patients should receive half the adult dose of Epinephrine (0.15mg Epinephrine 1:1,000) for the initial dose and any repeated doses:
  - Patients with a history of coronary artery disease, MI, stents, CHF, cardiac surgery; OR
  - Patients over 50 years of age.
  - EMT Optional Scope – use an EpiPen Junior.
- Adult patient who receive Epinephrine should receive a 12-Lead ECG at some point during their care, but this should NOT delay the administration of Epinephrine.
- All patients with respiratory symptoms must have continuous pulse oximetry and EtCO₂ measurement.
- The shorter the onset of symptoms from contact with an allergen, generally the more severe the reaction.