

Anaphylaxis

Definition: An acute and potentially life-threatening systemic allergic reaction that is usually, but not always, mediated by an immunologic mechanism causing the sudden release of biologically active mediators from mast cells and basophils and leading to symptoms involving the skin, respiratory tract, and cardiovascular and GI systems.

Causes you may see in hospitalized patients: Medications (antibiotics, chemotherapy, muscle relaxants, blood products, contrast dye), food, and latex

Signs and symptoms:

- **Upper and lower airways:**, tightness in throat or chest, nasal congestion, nasal discharge, dysphonia, stridor, cough, wheezing, shortness of breath
- **Cardiovascular system:** hypotension with or without syncope and/or cardiac arrhythmias, tachycardia
- **Cutaneous/mucosa:** diffuse or localized erythema or flushing, pruritis, urticaria, angioedema of lips-tongue-uvula
- **Gastrointestinal system:** nausea, vomiting, abdominal cramps, diarrhea
- **Misc:** pruritis about mouth and face, lightheadedness, diaphoresis, headache, uterine cramps, feeling of impending doom or apprehension, impaired consciousness or unconsciousness

Management:

- Assess **A**irway, **B**reathing, **C**irculation, and level of consciousness
- Establish and maintain airway and administer oxygen
- Have someone call supervising resident, PICU **and** attending (if not already done), you may also need to initiate the appropriate rapid escalation of care team (e.g., Rapid Response Team)
- Administer epinephrine: Aqueous epinephrine 1:1000 dilution (1 mg/mL), 0.01 mL/kg (max dose 0.5mL) intramuscularly every 5 minutes, as necessary
- Hemodynamic monitoring and continuous pulse oximetry
- Place patient in the recumbent position and elevate the lower extremities, as tolerated symptomatically
- Intravenous access and normal saline for fluid replacement (may need rapid replacement)
- Adjuncts to therapy:
 - H1-antihistamine, diphenhydramine: 1 to 2 mg/kg IV or 25 to 50 mg per dose
 - Consider H2-antihistamine, ranitidine: 12.5 to 50 mg IV (1 mg/kg)
 - Consider systemic glucocorticoids: 2mg/kg IV