

Anaphylaxis in the Urgent Cares

Signs of ANAPHYLAXIS or severe allergic reaction *

Yes

No

- Discontinue offending agent
- Assess ABCs
- Place in supine position (or position of comfort if vomiting or in respiratory distress)

Epinephrine IM in anterolateral thigh

- Repeat every 5-15 minutes as needed
- Push orange tip of autoinjector against thigh until it *clicks*, then hold in place for 10 sec

- Consider supplemental oxygen
- Support airway as needed
- Attempt IV access

OPA, OPM, GT- Call 911 for transfer to ED
Lib, UC-B- Call for rapid transfer

CONSIDER

- Second line therapies- glucocorticoids, diphenhydramine, ranitidine (see back page for details)
- NS bolus over 5-10 minutes (push-pull) (if time before transport arrives)
- Repeat Epinephrine IM (as needed every 5-15 minutes)
- Albuterol if wheezing present
- Racemic Epi if stridor present

Symptomatic treatment as needed

*Definition of Anaphylaxis

ANAPHYLAXIS is HIGHLY LIKELY if the patient has acute illness onset (minutes to hours) with any ONE of the following:

NO KNOWN allergen exposure with the findings of 1) skin and/or mucosa involvement **and** 2) either respiratory compromise **or** hypotension

LIKELY or POSSIBLE allergen exposure with 2 or more of the following findings (skin and/or mucosa involvement, respiratory compromise, hypotension and/or other signs of end-organ dysfunction, gastrointestinal symptoms)

KNOWN allergen exposure with hypotension. Regardless of the number of symptoms involved, a patient in distress after a known or suspected exposure should be treated as **anaphylaxis** until proven otherwise.

This is a guideline only and has been developed by Urgent Care within the Division of Emergency Medicine. The Medical Resuscitation Committee within the Department of Emergency Medicine has reviewed and endorses its use as a guideline. Last updated 6/2016

Details of Symptoms and Signs:

- **Skin/mucosa:** itching, flushing, urticarial, angioedema, morbilliform rash, swelling of lips/tongue/uvula, piloerection.
- **Respiratory:** nasal congestion or itching, rhinorrhea, sneezing, throat itching or tightness, dysphonia, hoarseness, stridor, cough, tachypnea, wheezing, dyspnea, shortness of breath, hypoxia, cyanosis, respiratory arrest.
- **Gastrointestinal:** abdominal pain, nausea, vomiting, diarrhea, dysphagia, metallic taste.
- **Cardiovascular:** chest pain, tachycardia, bradycardia, arrhythmias, palpitations, hypotension (which may manifest as urinary or fecal incontinence), other signs of end-organ dysfunction, cardiac arrest.
- **Central nervous system:** uneasiness or sense of impending doom, sudden behavioral change (in nonverbal patients), altered mental status, headache, tunnel vision, dizziness, confusion, syncope, hypotonia.

Diagnosis: Based on patient presentation, exam findings, and all possible events/exposures in the hours preceding the symptom onset.

Patient challenges/Risk factors encountered in making anaphylaxis diagnosis: Nonverbal (such as an infant or older patient with significant developmental delay), hearing or vision impairment, underlying neurologic or psychiatric conditions (ADHD, anxiety, autism spectrum disorder, depression, substance abuse), concomitant sedating medications, concomitant beta-blockers or angiotensin-converting enzyme (ACE) inhibitors, underlying cardiovascular diseases (which predispose to CHF, low oxygen saturations), underlying asthma/respiratory diseases, underlying allergic diseases.

Medication Doses:

First Line Therapy: **Epinephrine IM in anterolateral thigh** (at CCHMC, this is Epi Pen or Epi Pen Jr, which is loaded in the pyxis. **To administer**, place orange tip onto anterolateral thigh until it “clicks”, then hold in place for **10 seconds** to ensure adequate drug delivery)

- Dose for **<10 kg:** 0.01mg/kg (0.1mL/kg) **IM** of **1:10,000** product
- Dose for **10-25 kg:** **EpiPen Jr** (0.15mg) **IM**
- Dose for **>25 kg:** **EpiPen** (0.3mg) **IM**
- *If no pre-filled syringe is available* (such as Epi Pen or Epi Pen Jr, then **Epinephrine IM** dose is 0.01mg/kg of **1:1,000** concentration (maximum dose of 0.5mg/0.5mL)

Second Line Therapies: *Please note that no high-quality evidence from clinical trials or placebo-controlled randomized controlled clinical trials with these drugs have been conducted in anaphylaxis*

- Glucocorticoids: proposed mechanism to down-regulate the allergic inflammatory response; traditionally given to decrease the likelihood and/or severity of symptoms and biphasic reactions
 - Prednisone or prednisolone: 1 mg/kg PO (maximum dose 60 mg)
- Diphenhydramine (H₁ antihistamine): 1 mg/kg IM or PO (maximum dose 50 mg)
- Ranitidine (H₂ antihistamine): 2 mg/kg PO (maximum dose 120 mg)

Adjunctive Therapies:

- Albuterol: 2.5 mg (<30 kg) or 5 mg (≥30 kg) nebulizations q10-20 minutes for bronchospasm
- Racemic Epinephrine: 2.25% (0.5 mL drug mixed in 3 mL NS) nebulization q20 minutes for upper airway obstruction

Patient Positioning: The patient should remain supine with lower extremities elevated or in a position of comfort (if respiratory distress or emesis). Sudden changes in position such as sitting upright or standing should be avoided.

Biphasic Reactions: These are reported to occur in up to 23% of anaphylactic reactions, ranging from 1 hour to up to 72 hours after the initial presentation. The most recent reported median time to biphasic reaction was approximately 9 hours; the second reaction may be anaphylactic or non-anaphylactic in nature.

Disposition: The current evidence recommends an observation time of 4-10 hours for mild presentations versus admission for those with more severe presentation (ie. Refractory to initial treatment, requiring more than 1 dose of IM epi, recurrence of symptoms). Close follow up with PMD is recommended, as well as prescribing Epi Pen (with teaching provided). Definitive allergy testing as an outpatient is also recommended.