

OPI Management of Allergic Reactions

Inclusion Criteria: Patients \geq 3 months with suspected allergic reaction.

Exclusion Criteria: Blood transfusion reactions that are not anaphylactic in nature (Refer to Patient Care Policy F933 – Transfusion Reaction: Management) or symptoms are clearly attributable to other causes.

Overall Care Guideline: GRADE B

Any signs or symptoms of allergic reaction,
STOP infusion.
Notify on-call provider and ED response as appropriate.
If patient is unresponsive at any point, call a "CODE WHITE"

Recommendations/ Considerations

- Epinephrine is the medication of choice for the initial treatment of anaphylaxis. If injected promptly, it is nearly always effective. Delayed injection can be associated with poor outcomes, including fatality.

MILD to MODERATE ALLERGIC REACTION

- Itching
- Hives or welts
- Tingling mouth
- Abdominal pain, cramping, vomiting

NOTE: Mild to moderate allergic reactions may not always precede anaphylaxis

1. Consider Diphenhydramine 1mg/kg (max dose 50mg) for itching, facial flushing and/or hives
2. If no improvement, consider hydrocortisone 2mg/kg (max dose 100mg)

NOTE: If at any point evidence of respiratory distress or hemodynamic instability, shift to anaphylaxis treatment pathway

SEVERE ALLERGIC REACTION/ANAPHYLAXIS

Clinical Criteria is highly likely when any ONE of the following are met:

1. Acute onset of illness (minutes to several hours) with involvement of skin/mucosal tissue AND at least one of the following:
 - a. **Respiratory compromise** (dyspnea, wheeze, bronchospasm, stridor, hypoxemia)
 - b. **Reduced BP** or associated symptoms of end-organ dysfunction (syncope, hypotonia, incontinence)
2. TWO or more of the following that occur rapidly after exposure to a LIKELY allergen:
 - a. Involvement of skin/mucosal tissue
 - b. Respiratory compromise
 - c. Reduced BP or associated symptoms
 - d. Persistent GI symptoms (abdominal pain or vomiting)
3. Reduced BP after exposure to KNOWN allergen for that patient.

1. Administer IM Epinephrine IMMEDIATELY, repeat dose as clinically indicated every 5-15 minutes.

EPINEPHRINE DOSING		
< 5 kg	0.01 mg/kg	Epinephrine IM (0.1 mg/mL solution)
5 - 25 kg	0.15 mg	Epipen® Jr
> 25 kg	0.3 mg	Epipen

*Max dose for Epinephrine – 1mg

2. Obtain IV access, if not already in place.
3. Place patient on continuous monitor in supine position.
4. Check VS Q 5 minutes, until back to baseline
5. Administer O2 to keep saturations > 90%
6. Consider additional allergic reaction/ anaphylaxis medications (antihistamines, corticosteroids, bronchodilators)

Patient Education

- Provide counseling regarding allergen avoidance and allergic reaction discharge instructions.

Discharge Criteria

- Complete clinical resolution of all severe symptoms.
- Observe at least 4 hours:
 - after IM epinephrine administration
 - since latest, worsening symptoms
 - at least 2 hours with no oxygen needs
- Ensure parental/guardian comfort with discharge with good access to ED if symptoms recur.

Outpatient Infusion Management of Allergic Reactions References

Lieberman, P., Nicklas, R. A., Randolph, C., Oppenheimer, J., Bernstein, D., Bernstein, J., ... & Khan, D. (2015). Anaphylaxis—a practice parameter update 2015. *Annals of Allergy, Asthma & Immunology*, 115(5), 341-384. **(Level V)**

Sampson, H. A., Muñoz-Furlong, A., Campbell, R. L., Adkinson Jr, N. F., Bock, S. A., Branum, A., ... & Gidudu, J. (2006). Second symposium on the definition and management of anaphylaxis: summary report—Second National Institute of Allergy and Infectious Disease/Food Allergy and Anaphylaxis Network symposium. *Journal of Allergy and Clinical Immunology*, 117(2), 391-397. **(Level V)**

Sicherer, S. H., & Simons, F. E. R. (2017). Epinephrine for first-aid management of anaphylaxis. *Pediatrics*, 139(3), e20164006. **(Level V)**

<https://www.aaaai.org/Aaaai/media/MediaLibrary/PDF%20Documents/Practice%20and%20Parameters/Anaphylaxis-Practice-Parameter-2014.pdf>

<https://www.aaaai.org/Aaaai/media/MediaLibrary/PDF%20Documents/Practice%20and%20Parameters/2015-Anaphylaxis-PP-Update.pdf>

Clinical Pathways:

Seattle Children's: <https://www.seattlechildrens.org/pdf/anaphylaxis-pathway.pdf>

CHOP: <https://www.chop.edu/clinical-pathway/anaphylaxis-emergent-care-clinical-pathway>

MD Anderson: <https://www.mdanderson.org/content/dam/mdanderson/documents/for-physicians/algorithms/clinical-management/clin-management-hsr-pedi-web-algorithm.pdf>