

ANAPHYLAXIS IN THE ED: A Reference for Physicians

This reference for emergency physicians was developed by a forum of experts convened by the American College of Allergy, Asthma and Immunology (ACAAI) and the American College of Emergency Physicians (ACEP). The forum was supported by an educational grant from Dey, L.P.

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Anaphylaxis is a serious allergic reaction that is rapid in onset and may cause death.¹

Clinical Criteria for Diagnosing Anaphylaxis¹

Anaphylaxis is highly likely when any one of the following 3 criteria is fulfilled:

1. Acute onset of an illness (minutes to several hours) with involvement of the skin, mucosal tissue, or both (e.g., generalized hives, pruritus or flushing, swollen lips-tongue-uvula)
AND AT LEAST ONE OF THE FOLLOWING:
 - Respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced PEF, hypoxemia)
 - Reduced BP or associated symptoms of end-organ dysfunction (e.g., hypotonia [collapse], syncope, incontinence)
2. Two or more of the following that occur rapidly after exposure to a likely allergen for that patient (minutes to several hours):
 - Involvement of the skin/mucosal tissue (e.g., generalized hives, itch-flush, swollen lips-tongue-uvula)
 - Respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced PEF, hypoxemia)
 - Reduced BP or associated symptoms (e.g., hypotonia [collapse], syncope, incontinence)
 - Persistent gastrointestinal symptoms (e.g., crampy abdominal pain, vomiting)
3. Reduced BP after exposure to known allergen for that patient (minutes to several hours):
 - Infants and children: low systolic BP (age specific) or greater than 30% decrease in systolic BP*
 - Adults: systolic BP of less than 90 mm Hg or greater than 30% decrease from that person's baseline

PEF, Peak expiratory flow; BP, blood pressure.

* Low systolic blood pressure for children is defined as less than 70 mm Hg from 1 month to 1 year, less than (70 mm Hg + [2 x age]) from 1 to 10 years, and less than 90 mm Hg from 11 to 17 years.

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Patient Observation

Patients who respond to therapy require observation, as symptoms may recur in some patients. Although there is no documented evidence defining the optimum length of observation time, patients who should be held for longer observation include those who:

- Have hypotension
- Required more than one epinephrine injection for resolution of symptoms
- Ingested the suspected allergen
- Also have asthma

The S A F E System:

An Approach to the Patient with Anaphylaxis

ACAAI and ACEP have teamed up to create SAFE, a guide to helping patients manage allergic emergencies.

Seek Support.

Advise the patient who has had an anaphylactic reaction that there is a risk of subsequent reactions. Direct the patient to call an ambulance and get to the nearest emergency facility at the first sign of another reaction, even if epinephrine has already been administered. Also refer the patient to educational resources on allergies and anaphylaxis.*

Allergen Identification and Avoidance.

Question the patient regarding recent contact with food or other substances or activities that may have triggered the reaction. Emphasize the importance of testing to confirm what caused the reaction and the need to avoid the allergen or other trigger in the future.

Follow up for Specialty Care.

Advise the patient to follow up with his or her primary care physician and ask for a referral to an allergist, or to seek consultation directly with an allergist for testing, diagnosis and ongoing management of the allergy.

Epinephrine for Emergencies.

Provide the patient with a self-injectable epinephrine kit and instructions for its use, or with information about how to obtain a kit from another source, such as a primary care physician or allergist. Explain the importance of carrying the kit at all times and making sure that family and friends are aware of the risk of anaphylaxis, the triggers and how to use epinephrine.

* Direct the patient to educational support resources on allergies and anaphylaxis, such as the Web sites of the American College of Allergy, Asthma and Immunology (www.acaaai.org), the Food Allergy and Anaphylaxis Network (www.foodallergy.org), MedicAlert® (www.medicalert.org), the American Academy of Allergy, Asthma and Immunology (www.aaaai.org) and the American College of Emergency Physicians (www.acep.org).

Physician Resources

1. Sampson H, et al. 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. *J Allergy Clin Immunol* 2006; 117(2):391-397.

Joint Task Force on Practice Parameters; American Academy of Allergy, Asthma and Immunology, American College of Allergy, Asthma and Immunology, Joint Council of Allergy, Asthma and Immunology. The diagnosis and management of anaphylaxis: An updated practice parameter. *J Allergy Clin Immunol*. 2005; 115(3 Suppl):S483-523.

Simons FER. Anaphylaxis, killer allergy: Long-term management in the community. *J Allergy Clin Immunol*. 2006; 117(2):367-377.