

COMMONWEALTH OF VIRGINIA

Virginia Department of Health

Recognition and Treatment of Anaphylaxis in Public Places

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Healthy People in Healthy Communities
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Introduction

Anaphylaxis is a serious allergic reaction in which the immune system responds to otherwise harmless substances from the environment (called “allergens”). A variety of allergens can provoke anaphylaxis, such as insect venom; medications; latex; and more commonly, food. Unlike other allergic reactions, anaphylaxis is severe and potentially fatal.

The purpose of this guide is to provide guidelines for recognizing and treating anaphylaxis in a public place. Optional form templates are provided as adaptable examples at the end of the document.

State Laws

Background and Public Places

Code of Virginia [§ 54.1-3408\(D\)](#), enacted by the 2020 Virginia General Assembly, authorizes any employee of a public place—who is authorized by a prescriber and trained in the administration of epinephrine in accordance with policies and guidelines established by the Department of Health—to possess and administer epinephrine to a person present in the public place and believed in good faith to be having an anaphylactic reaction.

Code of Virginia [§ 15.2-2820](#) defines a public place as “any enclosed, indoor area used by the general public, including but not limited to any building owned or leased by the Commonwealth or any agency thereof or any locality, public conveyance or public vehicle, educational facility, hospital, nursing facility or nursing home, other health care facility, library, retail store of 15,000 square feet or more, auditorium, arena, theater, museum, concert hall, or other area used for a performance or an exhibit of the arts or sciences, or any meeting room.”

Liability Protection

Code of Virginia [§ 8.01-225](#) Exempts from liability

A. Any person who:

24. Is an employee of a public place, as defined in § 15.2-2820, who is authorized by a prescriber and trained in the administration of epinephrine and who administers or assists in the administration of epinephrine to a person present in the public place believed in good faith to be having an anaphylactic reaction, or is the prescriber of the epinephrine, shall not be liable for any civil damages for ordinary negligence in acts or omissions resulting from the rendering of such treatment. Whenever any employee is covered by the immunity granted in this subdivision, the organization shall not be liable for any civil damages for ordinary negligence in acts or omissions resulting from such administration or assistance.

Prescribers

As defined by Code of Virginia [§ 54.1-3408](#) a prescriber is

- A. A practitioner of medicine, osteopathy, podiatry, dentistry, or veterinary medicine or licensed nurse practitioner pursuant to [§ 54.1-2957.01](#), a licensed physician assistant pursuant to [§ 54.1-2952.1](#), or a TPA-certified optometrist pursuant to Article 5 ([§ 54.1-3222](#) et seq.) of Chapter 32 shall only prescribe, dispense, or administer controlled substances in good faith for medical or therapeutic purposes with the course of his professional practice.

For the purposes of prescribing epinephrine for public places, it is within the scope of practice for doctors of medicine or osteopathic medicine, licensed nurse practitioners pursuant to [§ 54.1-2957.01](#), and physician assistants pursuant to [§ 54.1-2952.1](#).

Allergies and Anaphylaxis: Key Information to Recognize and Respond to Anaphylaxis

An allergy is an adverse response to a substance that is triggered by the body's immune system. Symptoms of an allergic reaction may range from mild to severe, and may become life-threatening. Reactions vary with each person and exposure to an allergen, and the severity of an allergic reaction is not predictable.

Although anaphylaxis typically results in multiple symptoms, reactions may vary substantially from person to person. In some individuals, a single symptom may indicate anaphylaxis. Anaphylaxis usually occurs quickly, i.e., within seconds or minutes of exposure to the allergen. An anaphylactic reaction can occur up to one to two hours after exposure, however, and death has also been reported to occur within minutes.

Signs and symptoms of harmful reactions may include any or several of the following, all of which may require immediate emergency treatment:

Common Symptoms of Anaphylaxis ¹	
Mucous Membrane Symptoms	Red watery eyes or swollen lips, tongue or eyes, cyanosis (bluish circle around lips and mouth)
Skin Symptoms	Itchiness, flushing (turning red), rash, or hives
Respiratory Symptoms	Chest tightness, shortness of breath, wheezing or whistling sound, hoarseness, or choking
Gastro-Intestinal Symptoms	Nausea, vomiting, dry heaves; abdominal cramps or diarrhea
Cardiovascular Symptoms	Dizziness, fainting, loss of consciousness;
Mental or Emotional Symptoms	Sense of "impending doom," irritability, change in alertness, mood change, or confusion

¹ World Allergy Organization guidelines for the assessment and management of anaphylaxis. (2011). World Allergy Organization Journal, 4(2):13-37, February 2011.

Treatment for Anaphylaxis and Use of Epinephrine

Epinephrine (also known as “adrenaline”) is the drug of choice used to treat and reverse the symptoms of anaphylaxis. Epinephrine is a prescribed medication and is administered by injection, either within the muscle by an auto-injector or within the muscle by syringe. When injected, it rapidly improves breathing, increases heart rate, and reduces swelling of the face, lips, and throat.

Epinephrine should be administered promptly at the first sign of anaphylaxis. It is safer to administer epinephrine than to delay treatment for anaphylaxis. The sooner anaphylaxis is treated, the greater the person’s chance for surviving the reaction. Epinephrine is fast-acting, but its effects last only 5-15 minutes; therefore, a second dose of epinephrine may be required if symptoms continue.

Common Side Effects of Epinephrine	
Rapid heart rate	Tremor
Nervousness	Anxiety

Epinephrine is available pre-measured in an auto-injector or ampoule. This guide will address the use of epinephrine by auto-injector. For epinephrine in an ampoule, administration requires specialized equipment and training that is not suitable for use outside of the medical setting. A single-dose epinephrine auto-injector is currently available in two doses: 0.15mg (for individuals weighing 33 to 66 lbs.) and 0.3mg (for individuals weighing greater than 66 lbs.).² A third auto-injector, the AUVI-q[®] 0.1mg dose for toddlers weighing 16.5-33 lbs., is also available. Public places that frequently serve toddlers or infants may wish to stock this formulation. AUVI-q’s [resources](#) suggest that for otherwise healthy children with a body weight between 22 lbs. and 33 lbs., the dose of 0.15 mg of epinephrine is not hazardous. It should be noted, however, that such use is at the discretion of the prescriber.

Storage of Medication and Associated Supplies

Epinephrine auto-injectors should be stored in a safe, unlocked and accessible dark location at room temperature (i.e., between 59-86 degrees F). Auto-injectors should be protected from exposure to heat, cold, or freezing temperatures. Exposure to sunlight will hasten deterioration of epinephrine more rapidly than if stored as advised above.

² Note: Epinephrine can be given based on an estimation of the individual’s weight; the most important action to reverse an anaphylactic reaction is to give the epinephrine, so time should not be wasted seeking a precise weight. On average, children reach 66 pounds between ages 8 and 12 years of age. In an emergency such as anaphylaxis, it may be necessary to use best judgment as to whether or not the individual appears to weigh at least 66 pounds based on their apparent age and body build.

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The expiration date of epinephrine solutions should be periodically checked, and the drug should be discarded and replaced if it is past its expiration date. The contents should periodically be inspected through the clear window of the auto-injector. The solution should be clear; if it is discolored or contains solid particles, replace the unit.

Supplies associated with responding to suspected anaphylaxis (e.g., post-administration reports, copy of anaphylaxis guidelines) should be stored with the epinephrine. The epinephrine should be readily available and easily accessible to staff; it should not be locked up. It should not be accessible to children, however.

Each twin pack of epinephrine auto-injectors also includes a training pen that does not have a needle or medication. These pens have a spring mechanism that can be reloaded for multiple practice sessions.

Responding to Anaphylaxis

Outlined below are general directions on how to respond to a suspected anaphylaxis event.

1. Based on symptoms, determine that an anaphylactic reaction appears to be occurring. Act quickly. It is safer to give epinephrine than to delay treatment. **Anaphylaxis is a life-threatening reaction.**
2. *If you are alone and are able to provide epinephrine*, call out or yell for help as you immediately go to get the epinephrine. Do not take extra time seeking others until you have provided the epinephrine.
3. *If you are alone and do not know how to provide epinephrine*, call out or yell for help. If someone is available to help you, have them get the personnel who have been trained to administer epinephrine.
4. Call or have a bystander call 911 immediately. Advise the 911 operator that anaphylaxis or a severe allergic reaction is suspected and epinephrine was given. Your goal is to get someone (EMS or trained personnel) to provide epinephrine and additional care as soon as possible.
5. Select appropriate epinephrine auto-injector to administer, based on weight.
 - a. Dosage: 0.15 mg epinephrine auto-injector IM if less than 66 pounds (small child); 0.30 mg epinephrine auto-injector IM if 66 pounds or greater (large child or adult).
 - b. Frequency: If symptoms persist or return, a second dose should be administered 5 to 15 minutes after first dose.
6. To administer the epinephrine via auto-injector, follow these steps:

Symptom Reminder

- Sudden difficulty breathing
- Wheezing
- Hives
- Swelling of throat, lips, tongue
- Feeling of apprehension, agitation



- a. The individual should be seated or lying down before injecting epinephrine via auto-injector.
 - b. Pull off safety release cap from the auto-injector.
 - c. Swing and jab the auto-injector firmly into the upper, outer thigh of the individual believed to be experiencing anaphylaxis (through their clothing if necessary).
 - d. **Hold the auto-injector in place for 5 or 10 seconds to deliver medication, and then remove.** Note: Check manufacturer instructions for time of delivery of medication.
 - e. Massage the area for 10 more seconds.
 - f. Note the time.
7. Keep the individual either lying down or seated. If they lose consciousness, check if they are breathing and have a pulse. If not, begin cardiopulmonary resuscitation (CPR) and call out for help. Continue CPR until the individual regains a pulse and is breathing or until EMS arrives and takes over. Note: 911 should be called for verbal CPR instructions if no one is available who is trained in CPR.
 8. Stay with the individual until EMS arrives.
 9. If symptoms persist or return, repeat the dose after 5 to 15 minutes. Follow the directions in No. 6 above.
 10. Provide EMS with the epinephrine auto-injector(s) labeled with the name of the person who received the dose, the date it was administered, and the time it was administered. Note: Use caution. The needle on the syringe does not always retract.

Communication, Action, and Preparedness (CAP)

Prior to stocking epinephrine, public places should consider developing an action plan to increase awareness, provide education and training, and reduce the chance of exposure to allergens in addition to a response plan in the event of an anaphylactic emergency.

C

COMMUNICATION

- Ensure staff are aware of common allergens, the symptoms of a reaction, and what to do when they suspect a customer is having an allergic reaction.

A

ACTION

- Identify at least one staff person on each shift to complete a course on food allergies, including prevention, identifying symptoms of an allergic reaction, etc.
- Identify at least one staff person on each shift to complete an annual training on the signs and symptoms of anaphylaxis and how to care for a person having a severe allergic reaction, including how to administer epinephrine. Potential course providers are listed below, and optional training checklist templates are found at the end of this document. It is recommended that any personnel training records be maintained in accordance with the [Library of Virginia's](#) retention schedule.
- List of Course Providers
 - [Food Allergy & Anaphylaxis Connection Team \(FAACT\)](#)
 - [American Red Cross](#)
 - [Code ANA](#)
 - [Food Allergy Research and Awareness \(FARE\)](#)
- Identify a prescriber (physician, nurse practitioner, or physician assistant) willing to issue a standing order for the public place to acquire a stock of epinephrine from a licensed manufacturer, wholesale distributor, or pharmacy, and for trained employees to access and administer epinephrine for treatment of anaphylaxis. An optional standing order template is found at the end of this document. Note: The manufacturer, wholesale distributor, or pharmacy may require a copy of the standing order, these guidelines, and evidence of training when placing the order. Only obtain epinephrine from an entity licensed by the Virginia Board of Pharmacy.

P

PREPAREDNESS

- Develop a written Anaphylaxis Action Plan. A written plan will ensure that staff responsibilities are carried out in a clear and consistent manner. This plan may include a list of employees with allergen/epinephrine training, emergency contact numbers and instructions on who to call and when, and clear and concise walkthrough instructions to follow in the event of an emergency. An example template is found at the end of this document.
- Conduct routine training of all employees in the recognition of and response to anaphylaxis, including summoning of appropriate emergency care. Several online training options (noted above) are available.
- Establish procedures for documentation, tracking, and reporting of the event.

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- Establish procedures for the purchase, storage, and maintenance of supplies, including periodic review of expiration dates listed on the epinephrine packaging and replacement of expired drug.
- Conduct practice drills annually to ensure personnel are prepared to respond to an anaphylactic emergency.

Optional Templates for Adaptation by Public Places and Prescribers

Optional Template 1: Recognize Anaphylaxis Symptoms Flowchart

Optional Template 2: Sample Standing Order: Auto-Injector Epinephrine Administration

Optional Template 3: Stock Epinephrine Reporting Form

Optional Template 4: Anaphylaxis Skills Competency Checklist

Optional Template 5: Epinephrine Auto-Injector Skills Competency Checklist

Optional Template 1

ANAPHYLAXIS ACTION PLAN**WATCH FOR SIGNS OF ANAPHYLAXIS (ABCs)**

(1) IF AN INDIVIDUAL HAS COME INTO CONTACT WITH A KNOWN ALLERGEN, OR
 (2) IF ANY ONE OR MORE OF THE BELOW SIGNS ARE PRESENT,
 ACTIVATE YOUR ANAPHYLAXIS ACTION PLAN.

APPEARANCE

Hives, red and/or flushed skin
 swelling of tongue, lips, or
 throat

BREATHING

Difficulty breathing, wheezing
 hoarse, persistent cough

CIRCULATION

Pale, clammy,
 confused, agitated

TAKE ACTION

- **Call 911.** Advise anaphylaxis suspected and epinephrine given.
- If alone, call out or yell for help.
- Lay the person flat. If breathing is difficult or they are vomiting, let them sit up or lie on their side.
- Determine proper dose of epinephrine.
- Administer epinephrine. Note the time the dose was given.
- Maintain airway, monitor circulation, and start CPR as necessary. (911 can give verbal CPR instructions.)

RE-EVALUATE AND DOCUMENT

- Repeat dose after 5 to 15 minutes if symptoms persist or return.
- Stay with and monitor individual until EMS arrives.
- Provide EMS with used epinephrine auto-injector along with date and time it was administered.
- Complete any incident documentation according to company policy.

POST-INCIDENT REVIEW

Conduct review of actions taken, and discuss outcomes (areas of success and for improvement) of the anaphylaxis response.

Optional Template 2

Sample Standing Order: Auto-Injector Epinephrine Administration for Anaphylaxis

In the event of an anaphylactic reaction in an individual, epinephrine may be administered by an employee who is trained in its administration. This Standing Order is for the use of auto-injector epinephrine in such situations.

In the case of an individual who comes into contact with a known allergen or who exhibits symptoms of anaphylaxis, epinephrine may be administered pursuant to this standing order.

DEFINITION: Anaphylaxis means a severe allergic reaction which can be life threatening and occur within minutes to hours following a triggering event.

CAUSES: Extreme sensitivity to one or more of the following:

- Medication
- Exercise
- Foods
- Latex
- Idiopathic (unknown)
- Insect stings
- Asthma triggers
- Other

PHYSICAL FINDINGS: Common symptoms associated with anaphylaxis are as follows:

1. Wheezing or difficulty breathing;
2. Hives, generalized flushing, itching, or redness of the skin;
3. Swelling of the throat, lips, tongue, or throat; tightness/change of voice; difficulty swallowing;
4. Tingling sensation, itching, or metallic taste in mouth; and
5. Feeling of apprehension, agitation

STANDING ORDER:

1. Based on symptoms, determine that an anaphylactic reaction appears to be occurring. Act quickly. It is safer to give epinephrine than to delay treatment.
Anaphylaxis is a life-threatening reaction.
2. *If you are alone and able to provide epinephrine*, call out or yell for help as you immediately go to get the epinephrine. Do not take extra time seeking others until you have provided the epinephrine.
3. *If you are alone and do not know how to provide epinephrine*, call out or yell for help. If someone is available to help you, have them get the personnel who have been trained to administer epinephrine and the epinephrine medication. Select appropriate epinephrine auto-injector to administer, based on weight.

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- Dosage: 0.15 mg epinephrine auto-injector IM, if less than 66 pounds (small child)
 - 30 mg epinephrine auto-injector IM, if 66 pounds or greater (large child or an adult)
 - Frequency: If symptoms continue or return, a second dose should be administered 5 to 15 minutes after the first dose.
4. Inject epinephrine via auto-injector: Pull off safety release cap. Swing and jab firmly into the upper, outer thigh, (through clothing if necessary). Hold in place for 5 or 10 seconds to deliver medication, and then remove. Note: Check manufacturer's instructions for time of delivery of medication. Massage the area for 10 more seconds. Note the time.
 5. Call or have a bystander call 911 immediately or activate the Emergency Medical System (EMS). Advise the 911 operator that anaphylaxis or a severe allergic reaction is suspected and epinephrine has been given.
 6. Keep the individual either lying down or seated. If they lose consciousness, check if they are breathing and have a pulse. If not, begin CPR (cardiopulmonary resuscitation), call out for help, and continue CPR until the individual regains a pulse and is breathing or until EMS arrives and takes over.
 7. Stay with the individual until EMS arrives.
 8. Repeat the dose after 5 to 15 minutes if symptoms persist or return. Continue to follow the directions in No. 4 above.
 9. Provide EMS with the epinephrine auto-injector(s) labeled with the name of the person who received the dose, the date it was administered, and the time it was administered.
 10. Complete the follow-up form to send to the prescriber and/or (insert company contact). Replace the used epinephrine auto-injectors immediately.

Physician/Licensed Prescriber Signature _____

Date _____

Print Name _____

Effective for 12 months from the date of issuance, unless discontinued by the prescriber sooner.*

(*Must be renewed annually and with any change in prescriber.)

Optional Template 3

Stock Epinephrine Reporting Form

This form should be completed the same day as the administration of any stock epinephrine auto-injector and sent to the prescriber who issued the standing order.

Name of Location: _____

Address (Street, City, State, Zip Code): _____

Name of Person Completing Form: _____

Telephone of Person Completing Form: _____

E-Mail of Person Completing Form: _____

Date of Incident: _____ Time of Incident: _____ a.m. _____ p.m.

Location of Incident: _____

1. Name of person receiving epinephrine auto-injector: _____

2. Contact information of person receiving medication (Note: this is an emergent situation. Do not delay treatment to obtain demographic information):

3. Description of person receiving the medication:

- Staff member
- Visitor
- Other (please specify) _____

4. Symptoms: (Check all that apply)

- Difficulty swallowing, throat tightness, swelling of the throat and tongue
- Coughing
- Shortness of breath (actual or perceived), chest tightness
- Hives or itching
- Breathing difficulty, wheezing

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5. What trigger precipitated this episode?

Allergic reaction to food, insect bite, medication, latex, etc.

Unknown

Other (please describe) _____

6. Type of person who administered the epinephrine:

Trained employee/staff

Untrained employee/staff/bystander

Other (please specify) _____

7. Outcome:

Called 911 and no EMS transport

Called 911 and transported via EMS

Optional Template 4

Emergency Anaphylaxis Skills Training Checklist

Designee:	Location:
Medical Professional:	Date:

Performance Criteria	Practitioner Demo Date/ Initials	Designee Demo Date/ Initials	Annual Update Date/ Initials	Annual Update Date/ Initials
1. Describe symptoms of anaphylaxis				
2. Discuss appropriate treatment for anaphylaxis				
3. Locate and interpret medication permission forms				
4. State situations when the physician ordered response medication should be used				
5. Demonstrate how to administer oral medication, if applicable (complete Oral Medication Training Checklist)				
6. Demonstrate how to administer epinephrine auto-injector pen (complete Epinephrine Auto-Injector Pen Training Checklist)				
7. Demonstrate how to administer an inhaler if applicable (complete inhaler checklist)				
8. State when it is necessary to call 911 (911 is automatically to be called if epinephrine is administered)				
9. State precautions/actions to take after epinephrine is administered; a second injection may be necessary				
10. Discuss proper disposal of medical supplies				

Medical Professional Signature/Initials:	Date:
Designee Signature/Initials:	Date:

Optional Template 5 Epinephrine Auto-Injector Skills Competency Checklist

Designee:	Location:
Medical Professional:	Date:

Performance Criteria	Practitioner Demo Date/ Initials	Designee Demo Date/ Initials	Annual Update Date/ Initials	Annual Update Date/ Initials
1. Locate and verbalize understanding of how to read epinephrine/epinephrine auto-injector pen orders				
2. State storage location of epinephrine				
3. Locate injection site(s) to be used				
4. Demonstrate accurate injection technique for either epinephrine from ampule or epinephrine auto-injector (see below)				
5. State precautions/actions to take after epinephrine is administered; second injection may be necessary				
6. Discuss proper disposal of medical supplies				
Epinephrine Auto-Injector Pen				
1. Pull off appropriate caps				
2. Place tip of injector on outer thigh				
3. Use a swing and jab motion and press hard into thigh				
4. Hold in place and count to 10 then remove and massage injection site for 10 seconds				
5. State would call 911 if it had not already been done				
6. State if symptoms do not improve after 10 min., administer second dose if available				

Medical Professional Signature/Initials:	Date:
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Designee Signature/Initials:	Date:
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Note: Use N/A if not applicable.