

# NEW YORK STATE DEPARTMENT OF HEALTH BUREAU OF EMERGENCY MEDICAL SERVICES

## TRAINING PROGRAM OUTLINE FOR UNLICENSED OR UNCERTIFIED PERSONNEL TO ADMINISTER EPINEPHRINE BY AUTO-INJECTOR IN LIFE-THREATENING SITUATIONS

- PURPOSE:** To provide unlicensed or uncertified personnel with the basic knowledge and skills to administer epinephrine by auto-injector in a life-threatening situation. (For the purpose of this outline, "unlicensed or uncertified personnel" is defined as individuals who do not have a license or certification that allows them to administer prescribed medications.)
- INSTRUCTOR:** The Physician (Emergency Health Care Provider) or his/her designee should teach this program.
- OBJECTIVES:** Upon completion of the training the participants will be able to demonstrate the following competencies:
1. identify common causes of allergic emergencies;
  2. identify the signs and symptoms of a severe allergic reaction (anaphylaxis), and how they differ from other medical conditions;
  3. describe how to quickly access the Emergency Medical Services System (call 911 or appropriate emergency number);
  4. list the steps for administering epinephrine by an auto-injector;
  5. describe the methods for safely storing and handling epinephrine and appropriately disposing of the auto-injector after use;
  6. list the steps for providing for on-going care of the patient until EMS arrives;
  7. understand the state regulations that allow an individual to possess and use an epinephrine auto-injector in a life-threatening situation.

***What are the most common causes of an allergic reaction?***

A wide variety of different substances can cause allergic reactions in people. Some of the most common causes include:

- ✓ Venom from insect bites and stings, especially those of bees, wasps, hornets, and yellow jackets;
- ✓ Foods, including nuts, shellfish/crustaceans, peanuts, milk, eggs, chocolate, etc;
- ✓ Plants, including contact with poison ivy, poison oak, and pollen from ragweed and grasses;
- ✓ Medications, including penicillin and other antibiotics, aspirin, seizure medications, muscle relaxants, etc;
- ✓ Other causes include dust, latex, glue, soaps, make-up, etc.

***What are the signs and symptoms of an allergic reaction?***

Allergic reactions can range from the watery eyes and runny nose of hay fever to severe breathing problems (respiratory distress) and low blood pressure (hypoperfusion).

Physical findings that may indicate an allergic reaction include any of those listed below.

Generalized symptoms: Itchy, watery eyes, headache, or runny nose.

Skin: Swelling of the face, lips, tongue, neck, or hands. Itching, hives or red skin (flushing).

**Breathing Problems:** Cough, rapid breathing, difficulty breathing, noisy breathing, change in voice or loss of voice (hoarseness), high pitched noise during inhalation (stridor), or wheezing. **Serious breathing problems (severe respiratory distress) is a sign that the individual is having a severe allergic reaction (Anaphylaxis).**

Heart (Circulation) Problems: Increased heart rate, decreased blood pressure, or signs of cool, clammy skin (hypoperfusion).

Mental Status: Confusion, fainting or loss of consciousness.

***How can I tell it is a "severe allergic reaction" that needs the epinephrine auto-injector?***

You may need to administer epinephrine with the auto-injector if a patient, who has a history of allergies/allergic reactions, has come in contact with a substance(s) that causes the allergic reaction. If the patient has been prescribed an epinephrine auto-injector and is having a very hard time breathing (**severe respiratory distress**), you will need to administer the epinephrine. For other cases (i.e., someone who has not been prescribed an epinephrine auto-injector) you should consult with the physician (Emergency Health Care Provider).

***Does the epinephrine come in more than one size or dose?***

Yes, the epinephrine auto-injector comes in both an adult dose (0.3 mg) and a pediatric dose (0.15 mg). Generally the adult dose is for individuals who weigh 66 lbs. or more and the pediatric dose is for individuals who weigh 33 -66 lbs. You must consult with your physician (Emergency Health Care Provider) about which auto-injector is most appropriate to carry and use in your situation.

***If someone has a severe allergic reaction what should I do first?***

First have someone **CALL 911** or your local emergency number and request an ambulance! It is very important to activate your local Emergency Medical Services (EMS) Agency right away. The patient with a severe allergic reaction may require additional Advance Life Support (ALS) medications or other emergency life-saving procedures. All patients who receive the epinephrine must have immediate follow-up evaluation by a physician.

***How do I administer the epinephrine with the auto-injector?***

Sit the patient down and try to calm and reassure him/her. If the patient is confused, disoriented, or unconscious (altered mental state) and signs of a weak, rapid pulse, cool clammy skin (hypoperfusion), lay him/her down and slightly elevate his/her feet. If oxygen is available, and someone is trained in its use, administer a high concentration of oxygen. **If the patient is having a hard time breathing administer the epinephrine as follows:**

Step One Remove the safety cap from the auto-injector. Check to see if the fluid is clear and colorless. **Never put your fingers over the black tip when removing the safety cap or after the safety cap has been removed!**

- Step Two Place the tip of the injector against the patient's bare outer thigh. (Halfway between their waist and the knee)
- Step Three With a quick motion, push the auto-injector firmly against the thigh until the spring-loaded needle is activated. Hold the auto-injector in place for ten (10) seconds.
- Step Four Remove the auto-injector from the thigh and record the time of the injection.
- Step Five Carefully re-insert the unit (without replacing the safety cap) -NEEDLE FIRST- into the carrying tube and re-cap the carrying tube. **Never put your fingers over the black tip after the safety cap has been removed!** Give the tube to the ambulance crew so they know exactly what you have given and can appropriately dispose of it at the hospital. Also provide them with the exact time that you administered the epinephrine.
- Step Six Watch the patient carefully, and keep them calm. Note if the patient gets any better or worse. Be prepared to give CPR if needed.

***What will the patient feel when I use the auto-injector*** The injection itself is relatively painless and the patient may not feel the medication being injected. Soon after the injection the patient should begin to feel the beneficial effects of the drug. The most common changes the patient may feel are a more rapid heartbeat and a slight nervousness. The patient may experience palpitations, sweating, dizziness and a headache.

***What information do I need to give EMS?*** If the epinephrine auto-injector is used, make sure the following information is accurately and concisely conveyed to the EMS Provider and physician:

- ✓ The substance (allergen) the patient was exposed to
- ✓ How long ago the exposure occurred
- ✓ The signs and symptoms the patient experienced (difficulty breathing, tightness in the throat or chest, any swelling, etc.) before the epinephrine was administered
- ✓ The time and dose of the epinephrine administered

- ✓ Did you notice any change(s) in the patient after the epinephrine was administered
- ✓ Other specific information about the patient such as name, age, guardian, physician, medical history, etc.

***Where should I keep the epinephrine auto-injector?***

You will need to keep the epinephrine auto-injector where you can have quick and easy access to it in an emergency. Keep it away from children. Keep it in the plastic carrying tube it comes in.

It is important to remember that the epinephrine needs to be kept at room temperature. It should not be refrigerated, nor should you allow it to be exposed to extreme heat, such as the glove compartment or trunk of a car during the summer. Do not expose the epinephrine auto-injector to direct sunlight; light and heat can cause epinephrine to degrade, turning brown.

***Does the Epinephrine Auto-Injector have an expiration date or need to be replaced?***

As with any medication, the epinephrine auto-injector will have an expiration date, which is printed directly on the unit. It is important to periodically check the expiration date and replace the unit before it expires. When checking the expiration date also check to make sure the fluid is clear and colorless. Replace the unit if the fluid is discolored.

***Can I be injured by the auto-injector unit?***

The auto-injector unit is generally very safe and easy to use. It is important to remember that the unit does have a sharp needle in it. Do not remove the safety cap until you are ready to use the auto-injector. **Never put your fingers over the black tip when removing the safety cap or after the safety cap has been removed.** Do not replace the safety cap once it has been removed. After use carefully re-insert the unit -NEEDLE FIRST - into the carrying tube, then re-cap the carrying tube.

***Who can use an epinephrine auto-injector?***

For many years physicians have prescribed the epinephrine auto-injector to patients with known allergies. Many people carry the unit with them. Recently Governor Pataki signed into law a bill that authorizes the possession and use of an epinephrine auto-injector by certain individuals in children's overnight, summer day or traveling summer day camps and others.

This allows Camp Staff to administer epinephrine to patients with a history of allergies/allergic reactions who has a severe allergic reaction even if the patient doesn't have his/her prescribed auto-injector with them.

To be authorized to possess and use the epinephrine auto-injector an individual or organization (as noted above) must have a written collaborative agreement with a physician "emergency health care provider" which is filed with the local Regional Emergency Medical Services Council and the Department of Health. All participating individuals must complete this or an equivalent training program.

***How is the epinephrine auto-injector obtained?***

The Epinephrine Auto-Injector is available at most pharmacies. To purchase the auto-injector you will need a prescription from your participating physician (Emergency Health Care Provider).

***For more information:***

For more information on the requirements contact the Bureau of Emergency Medical Services:

**New York State Department of Health  
Bureau of Emergency Medical Services  
433 River Street, Suite 303  
Troy, New York 12180  
(518) 402-0996**



# **Web Resources**

Food Allergy Resources <http://www.foodallergy.org>

American Academy of Pediatrics <http://www.aap.org>

American College of Allergy, Asthma & Immunology <http://allergy.mcg.edu>

Center for Healthcare Information <http://www.cmrg.com>

Asthma & Allergy Foundation <http://www.aafaflorida.org>

**New York State Department of Health** <http://www.health.state.ny.us>