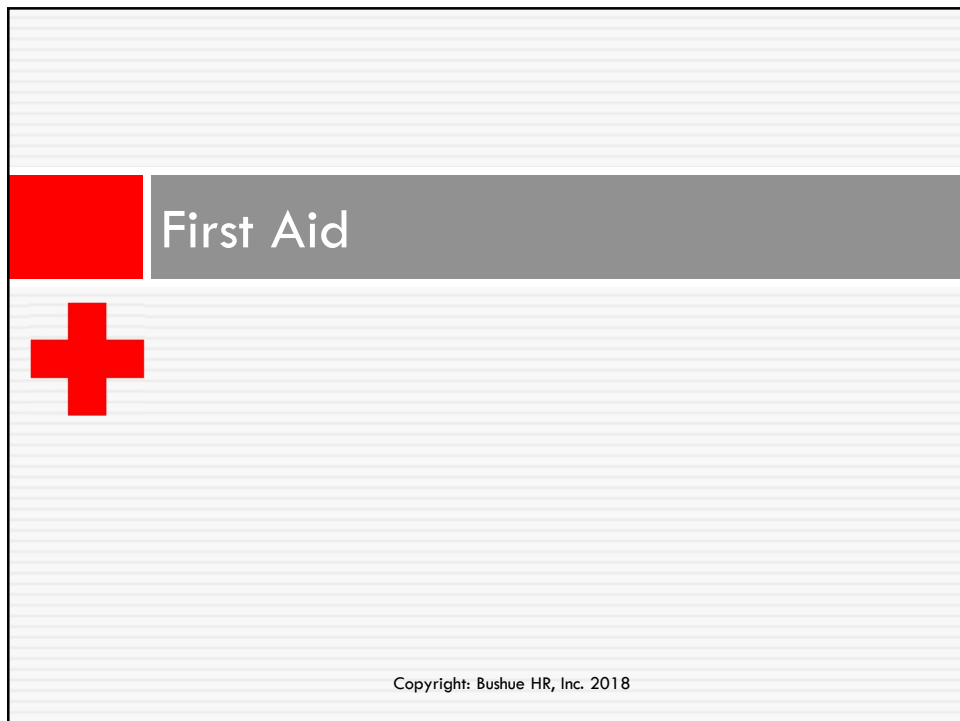


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Outline

- First Aid
- First Aid Situations
- First Aid Kit
- Training

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First Aid Facts

- More than 1.25 million Americans have a first or recurrent heart attack every year.
- 70% of the deaths from heart attack occur before the victim reaches the hospital.
- Stroke is the 3rd leading cause of death in the U.S.
- There are 800,000 strokes each year in the United States.
- The human body contains an average of 10 pints of blood. Loss of two pints may result in shock, loss of five to six pints usually results in death.
- Shock is a life-threatening condition that occurs when the body's organs and tissues do not receive enough oxygenated blood. The most common cause of shock is severe bleeding.
- There are 700,000 work-related eye injuries each year in the United States, 90% of which are preventable with proper safety eyewear.
- There are about 4,500 fire and burn deaths per year, roughly 20,000 more are injured from fires and burns.
- 1,500 people die from excessive heat each year in the U.S.
- Heat related emergencies are usually preventable.

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First Aid

- First aid is emergency care that is provided for injury or sudden illness before emergency medical treatment is available.
- A workplace first aid provider is:
 - Trained in the delivery of initial medical emergency procedures.
 - Expected to use a limited amount of equipment to perform a primary assessment.
 - Involved while awaiting arrival of emergency medical service (EMS) personnel.

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First Aid

- First aid duties can include:
 - Cleaning minor cuts, scrapes, or scratches
 - Treating a minor burn
 - Applying bandages and dressings
 - The use of non-prescription medicine
 - Draining blisters
 - Removing debris from the eyes
 - Massage
 - Drinking fluids to relieve heat stress

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First Aid Situations

Below are a few examples of situations where first aid is necessary:

- Bloodborne pathogens
- Heart attack
- Stroke
- Severe choking
- Bleeding and shock
- Wound infection
- Head injury
- Neck and spine injuries
- Eye injuries
- Dental emergencies
- Chest and abdominal wounds
- Muscle, bone, or joint injury
- Severe burns
- Respiratory emergency
- Asthma attack
- Severe allergic reaction (anaphylaxis)
- A seizure
- Someone who has fainted
- Diabetic emergencies
- Poisoning
- Heat-related emergencies
- Cold-related emergencies
- Poisonous bites and stings

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First Aid Kit

- It is advisable for the employer to give a specific person the responsibility of choosing the types and amounts of first-aid supplies, and of maintaining the supplies.
- The supplies must be adequate, relevant to the kinds of injuries that occur, and stored in an area where they are readily available for emergency access.
- An AED should be considered when selecting first-aid supplies and equipment.

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First Aid Kit Contents

Each workplace should have a first aid kit that contains at least the minimum quantities of the items listed below.

- (1) Absorbent Compress- 32 sq. in.
- (16) Adhesive Bandages 1 x 3 in.
- (1 or 2) Adhesive Tape 2.5 yd
- (6) Antibiotic Treatments 0.14 fl oz.
- (10) Antiseptic Swabs 0.14 fl oz.
- (10) Antiseptic Wipes 1 x 1 in.
- (10) Antiseptic Towelettes 24 sq. in.
- (4) Bandage Compress (2 in.) 2 x 36 in.
- (2) Bandage Compress (3 in.) 3 x 60 in.
- (1) Bandage Compress (4 in.) 4 x 72 in.
- (1) CPR Barrier
- (1) Burn Dressing 4 x 4 in.
- (1) Burn Treatment 1/32 oz. 6
- (1) Cold Pack 4 x 5 in.
- (2) Eye Covering, with means of attachment 2.9 sq. in.
- (1) Eye/Skin Wash 4 fl. oz. total
- (1) Eye/Skin Wash & Covering, with means of attachment 4 fl. oz. total
- (6) Hand Sanitizers (water soluble; at least 61% ethyl alcohol) 1/32 oz.
- (1) Roller Bandage (4 in.) 4 in. x 4 yd.
- (2) Roller Bandages (2 in.) 2 in. x 4 yd.
- (4) Sterile pads 3 x 3 in.
- (1) Triangular Bandage 40 x 40 x 56 in.
- (1) First Aid Guide

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Training

- Training for first aid is offered by the following:

**American Heart
Association**



**American Red
Cross**



**National Safety
Council**



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American Red Cross Training

Question 1: The Cardiac Chain of Survival is a sequence of steps that should be followed during an emergency in which a person suffers sudden cardiac arrest. Each link in the chain is critical. What are the steps of the Cardiac Chain of Survival, in their correct order?

1. **Early recognition and early access** – a bystander recognizes an emergency and called for help.
2. **Early CPR** – keeps oxygenated blood flowing to the brain and other vital organs.
3. **Early defibrillation** – delivers an electrical shot to the heart with an Automated External Defibrillator (AED).
4. **Early advanced medical care** – a team of medical professionals arrives and takes over.

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American Red Cross Training

Question 2: A person is unconscious. What are the correct steps that should be taken if a person is unconscious?

1. **Check the scene for safety**
2. **Tap the person and shout**
3. **Open airway**
4. **Check for signs of life (movement and normal breathing)**

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American Red Cross Training

Question 3: If a choking person is coughing forcefully, what should you do?

- Encourage the person to continue coughing.**

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American Red Cross Training

Question 4: What does CPR consists of:

- Chest compressions**

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American Red Cross Training

Question 5: You come upon a person who has pale or bluish skin color, cold skin, and dull or sunken eyes. These are symptoms of which medical emergency?

- Shock**

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Cardiopulmonary Resuscitation (CPR)



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Hands-only CPR

CARDIOPULMONARY RESUSCITATION

Steps for performing CPR

Before Giving CPR

1. Check the scene and the person. Check to make sure scene is safe, tap the person on the shoulder to see if they're OK, and look for signs of rhythmic, normal breathing.
2. Call 911 for assistance. If there's no response from the victim when asked if he or she is OK, call 911, or ask a bystander to call for help.
3. Begin compressions. If the person is unresponsive, perform hands-only CPR.

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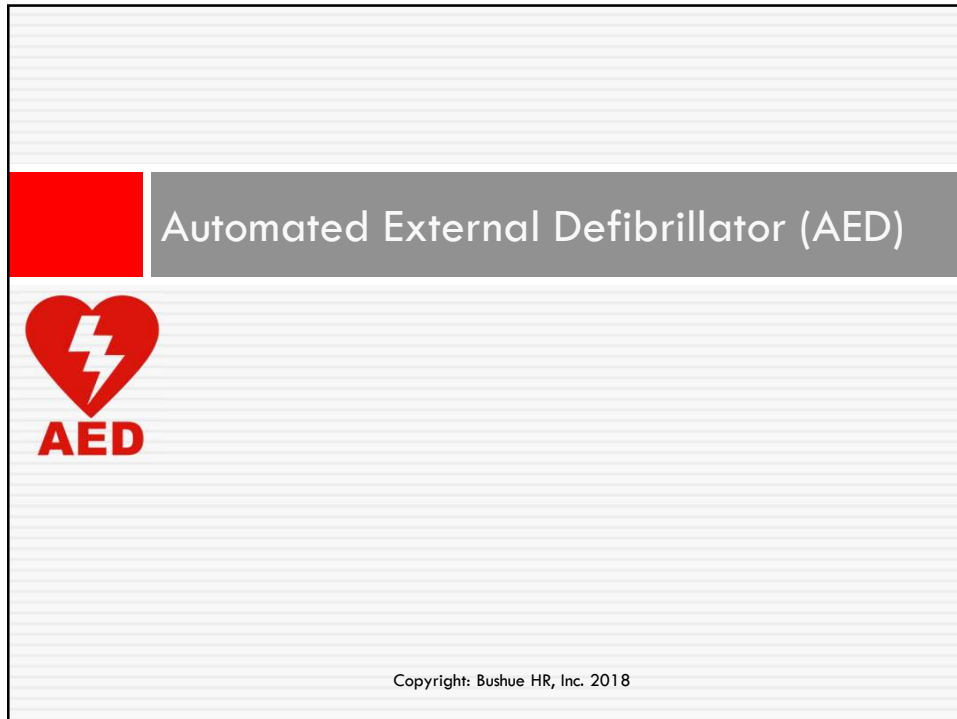
Hands-only CPR

□ How to Perform Hands-only CPR


1. Kneel beside the person who needs help.
2. Place the heel of one hand on the center of the chest.
3. Place the heel of the other hand on top of the first hand, then lace your fingers together.
4. Position your body so that your shoulders are directly over your hands, and keep your arms straight.
5. Push hard, push fast. Use your body weight to help you administer compressions that are at least 2 inches deep and delivered at a rate of at least 100 compressions per minute. (Be sure to let chest rise completely between compressions.)
6. Keep pushing. Continue hands-only CPR: until you see obvious signs of life (like breathing), another trained responder or EMS professional can take over, you're too exhausted to continue, an AED becomes available, or the scene becomes unsafe.

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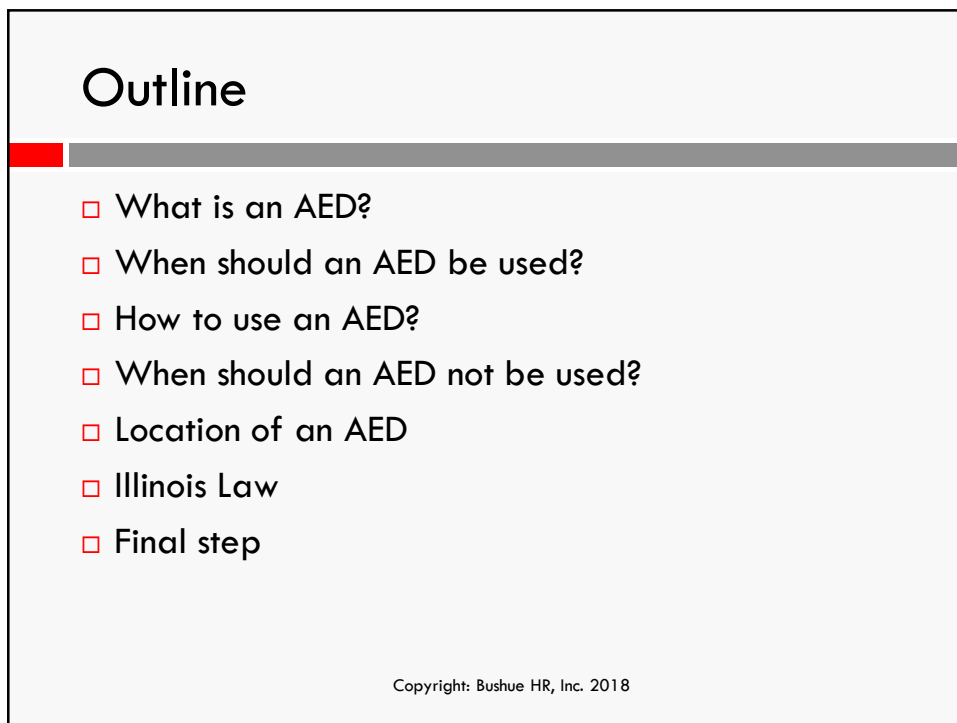
Automated External Defibrillator (AED)



AED

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Outline

- What is an AED?
- When should an AED be used?
- How to use an AED?
- When should an AED not be used?
- Location of an AED
- Illinois Law
- Final step

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What is an AED?

- AED: *Automated External Defibrillator*
- The AED is a computerized medical device that can check a person's heart rhythm.
- An AED is crucial towards regaining the natural rhythm of the heartbeat, as well as restarting the patient's heart.

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When to use an AED?

- An AED is used to help those experiencing sudden cardiac arrest.
- After performing CPR and if the patient is still non-responsive.
- Currently, the only way to restore a regular heart rhythm during cardiac arrest is to use an AED.

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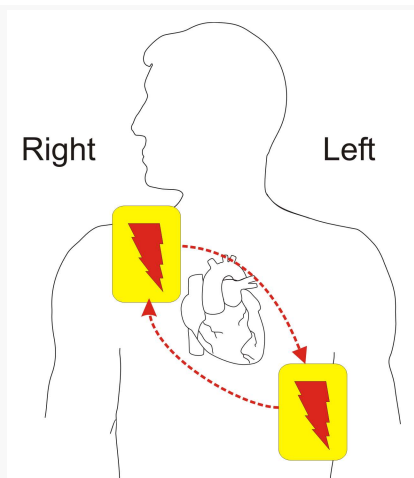
How to use an AED

1. Turn on the AED and follow the visual and/or audio prompts.
2. Open the person's shirt and wipe his or her bare chest dry. If the person is wearing any medication patches, you should use a gloved (if possible) hand to remove the patches before wiping the person's chest.
3. Attach the AED pads, and plug in the connector (if necessary).
4. Make sure no one, including you, is touching the person. Tell everyone to "stand clear."
5. Push the "analyze" button (if necessary) and allow the AED to analyze the person's heart rhythm.
6. If the AED recommends that you deliver a shock to the person, make sure that no one, including you, is touching the person. Tell everyone to "stand clear." Once clear, press the "shock" button.
7. Begin CPR after delivering shock. Or, if no shock is advised, begin CPR. Perform 2 minutes (about 5 cycles) of CPR and continue to follow the AED's prompts. If you notice signs of life, discontinue CPR and monitor breathing for any changes in condition.

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How to use an AED



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When NOT to use an AED

There are certain situations where an AED should not be used. The following situations are:

- ❑ **Do not** use AED if victim is lying in water.
- ❑ **Do not** use AED if chest is covered with sweat or water.
- ❑ **Do not** put an AED pad over a medication patch.
- ❑ **Do not** place AED pad over a pacemaker (hard lump under chest skin).
- ❑ **Do not** touch a victim when AED says to "stand clear" or while delivering a shock.
- ❑ **Do not** use AED on infants less than 12 months unless you are trained to do so.
- ❑ **Do not** use adult pads on children under age 8 (unless child-sized pads aren't available).

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Location of an AED

- ❑ EMS first-response vehicles and ambulances should be equipped with an AED or an additional defibrillation device (semiautomatic or manual defibrillator).
- ❑ Some locations to place AEDs in schools could be:
 - ❑ Fitness Centers
 - ❑ Gymnasium
 - ❑ Cafeteria/Auditorium
 - ❑ Hallways

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Location of an AED

- Notify the local EMS (*Emergency Medical Services*) system where AEDs are located in the school buildings.
- 9-1-1 dispatcher will know if an AED is on the premises.
- Notify the EMS system as well as the responders already on the scene.

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Illinois Law

- To be recognized as a trained AED user, an individual must:
 1. Successfully complete a course of instruction in cardiopulmonary resuscitation (CPR) in accordance with the standards of a nationally recognized organization such as the American Red Cross or the American Heart Association that incorporates instruction in the use of an automated external defibrillator; or
 2. Successfully complete a course of instruction under a recognized training program
 3. Be licensed to practice medicine in all its branches in Illinois in accordance with the Medical Practice Act of 1987

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School Board Policy

- 4.170-AP6: Administrative Procedure – Plan for Responding to a Medical Emergency at a Physical Fitness Facility with an AED
 - Plan for all facility staff members and users
 - Immediately notify the building’s emergency responder(s) whose contact information is posted in the facility. Under life and death circumstances, call 9-1-1 without delay.
 - Bring the first aid equipment and AED to the emergency scene. The AED should only be operated by trained AED users for the intended purpose of the AED, unless the circumstances do not allow time for a trained AED user to arrive.
 - Immediately inform the Building Principal or designee of the emergency.
 - The emergency responder will take charge of the emergency. This person will apply first aid , CPR, and/or the AED, as appropriate.

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School Board Policy Continued

- Plan for all facility staff members and users
 - If necessary, the emergency responder instructs someone to call 9-1-1, providing the location in the building and which entrance to use. This person should make sure someone is sent to open the door for paramedics and guide them to the scene.
 - When paramedics arrive and assume care of the victim, the emergency responder or other staff person notifies the victim’s parent/guardian or relative.
 - If an AED was used, the person using it cooperates and provides any information requested by the local emergency communications or vehicle dispatch, so they can complete the DATA Collection and Submission report about the use of the AED. If appropriate, a supervising staff member completes an accident report.
 - If an adult refuses treatment, the emergency responder documents the refusal and, if possible, asks the adult to sign a statement stating that he or she refused treatment.
- Any Superintendent or designee, Plan Coordinator, Building Principal, School Nurse, or Trained AED user should refer to policy 4.170-AP6 for more details on their responsibilities in an emergency.

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Final Step

- An AED operator must know how to recognize the signs of a sudden cardiac arrest.
- It's important for operators to receive formal training on the AED model they will use so that they become familiar with the device and are able to successfully operate it in an emergency.
- Training also teaches the operator how to avoid potentially hazardous situations.
- Before using an AED, physical training is required.

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Certified Training

- Becoming certified through the American Red Cross
 - www.redcross.org
 - Training & Certification
 - Select a Class Type
 - First Aid, CPR and AED
 - Type in your location
 - Find Classes!
 - *Check for OSHA requirement

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Resources

- National CPR Foundation (2017). Automated External Defibrillator (AED). Retrieved July 3, 2017, from <https://www.nationalcprfoundation.com/courses/standard-cpr-aed-first-aid/aed/>- See more at: <https://www.nationalcprfoundation.com/>
- American Heart Association (2015, June 25). AED Programs Q & A. Retrieved July 3, 2017, from http://www.heart.org/HEARTORG/General/AED-Programs-Q-A_UCM_323111_Article.jsp#.WVqnfBXyvct - See more at: <http://www.heart.org/HEARTORG/>
- American Red Cross (2017). What is AED? Retrieved July 3, 2017, from <http://www.redcross.org/take-a-class/aed/using-an-aed/what-is-aed>- See more at: <http://www.redcross.org/>
- Title 77: Public Health, Chapter I: Department of Public Health, Subchapter f: Emergency Services and Highway Safety, Part 525 Automated External Defibrillator Code, Section 525.400 Recognition of Trained AED Users (2011, February 22) Retrieved July 3, 2017, from <ftp://www.ilga.gov/jcar/admincode/077/077005250004000R.html>- See more at: www.ilga.gov

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Resources

- Occupational Safety and Health Administration (2006). Best Practices Guide: Fundamentals of a Workplace First-Aid Program. Retrieved July 5, 2017, from <https://www.osha.gov/Publications/OSHA3317first-aid.pdf>- See more at: <https://www.osha.gov>
- Illinois High School Association (2013). CPR Training. Retrieved July 5, 2017 from <https://www.ihsa.org/Resources/SportsMedicine/CPRTTraining.aspx> - See more at: <https://www.ihsa.org>
- EMS Safety (2017). First Aid 101: *Facts, history, and how-to of First Aid*. Retrieved July 5, 2017, <http://www.emssafetyservices.com/how-to/first-aid-101/> - See more at: <http://www.emssafetyservices.com>

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