



MEDIC
First Aid

AMERICAN SAFETY &
HEALTH INSTITUTE



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ADULT FIRST AID | CPR AED

instructor guide
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Procedures for Adult First Aid | CPR AED

With this completely revised and updated training program, we have integrated four new procedures. They are:

- Procedure for Adult First Aid, CPR AED
- Procedure for Adult CPR AED
- Procedure for Pediatric CPR AED
- Procedure for Adult First Aid

A procedure is “a particular way of accomplishing something or of acting.”¹⁰ These procedures are simple step-by-step diagrams and instructions that provide guidance for assessing, prioritizing, and performing first aid and CPR. They are modeled after “decision tree” type medical algorithms and are based on scientific evidence, national guidelines, and the consensus of experts.

In analyzing the skill performance of students using previous versions of our training programs, we found that while most students demonstrated proficiency in individual skills, many were less adept at the initial assessment of the scene and the ill or injured person. This is not surprising, as first aid and CPR AED training courses (and the occupational regulations that require them) tend to focus on assessment as more of an individual topic rather than fully integrating assessment and initial decision making throughout the course. However, assessment of the scene and the person is a critical skill that applies in any emergency, and as such, we find it deserves more repetition and emphasis to improve student proficiency in assessing and prioritizing care.

10 “Procedure,” Merriam-Webster.com Dictionary, <https://www.merriam-webster.com/dictionary/procedure> [Retrieved 8/2/2021].

11 Lowery A. Best Practices for Teaching, Focus and Repetition in Learning, 3/23/2020. <https://aplnexted.com/focus-and-repetition-in-learning/>

Figure 1.



“Repetition is a key learning aid because it helps transition a skill from the conscious to the subconscious.”¹¹

There are four separate procedures for first aid and CPR AED, depending on the class and age range taught, but the first steps of assessment are always the same (Fig. 1):

1. Assess scene safety.
2. Take standard precautions.
3. Assess responsiveness.
4. Activate EMS and/or your emergency action plan (EAP).
5. Send someone to get the first aid kit and an AED.
6. Assess breathing for no more than 10 seconds.

These assessment steps are crucial in all but the most minor circumstances. It is important to emphasize that while these steps are listed in sequence, in a real emergency, they may need to be carried out in a different order or performed simultaneously (especially when multiple providers are available). The steps of assessment and the four new procedures are intended as decision-making guidance and not an inflexible sequence of steps that must be strictly adhered to.

BEFORE TEACHING A CLASS

Quality Assurance

By submitting a print or digital application for authorization, all HSI Instructors agree to comply with the terms and conditions of Instructor or Instructor Trainer Authorization as described in the most current version of the HSI Training Center Administrative Manual (TCAM), available at [emergencycare.hsi.com/quality-assurance-compliance](https://www.emergencycare.hsi.com/quality-assurance-compliance).

Preparing for Class

Prepare well for your role as an instructor. It's the key to success for you, for your students, and for anyone they may care for in an emergency, including themselves. Some elements of class preparation will vary depending on the class type, format, and delivery method chosen. See the Lesson Plans in Part Four for the required and optional equipment and materials specific to each class type, format, and delivery method.

Using the Class Presentations

In addition to this Instructor Guide, HSI provides Class Presentations that support and enhance classroom training (Fig. 4). The Class Presentations contain all the necessary elements to teach the nine class types. This includes the elements necessary for initial training and blended learning. Blended Class Presentations contain only the skill lessons required for certification in the face-to-face portion.

To use these tools, download the Class Presentations from Otis for playback on a computer, or live stream them through an internet connection with sufficient bandwidth. While an instructor may opt to teach using a class DVD, we recommend all instructors become familiar with and use the Class Presentations. Instructors using the HSI Class Presentations will benefit by having the most up-to-date class training materials available.

The Class Presentations contain several slides that help pace teaching each lesson. The lesson title slide provides you the opportunity to introduce the lesson, describe the enabling objectives, and tell the students why the topic matters. The next slide contains the video for the lesson and, when available, a "What Would You Do?" exercise. For lessons that include skills, the following slide is a "Student Hands-On Practice" slide. These slides contain skill assets available for the practice, such as a Video-Guided Practice, Skill Sheet, and Scenario Sheet. You choose the element you wish to use. This allows you to select the approach, either standard (video-guided hands-on practice or a small group practice using Skill Sheets) or experienced (guided problem-solving exercise with Scenario Sheets).

Figure 4.

The figure displays five sequential slides from an HSI presentation titled "BONE, JOINT, & MUSCLE INJURIES".

- Title Slide:** Features the HSI logo, the text "lesson twenty-seven BONE, JOINT, & MUSCLE INJURIES", and a background image of a person lying on the ground being attended to.
- Video for the Lesson and WWYD? (when applicable):** Shows a video player interface with a "play" button and a "BONI" label. The video content includes a scene with a person injured and a responder providing first aid. Below the video is a "What Would You Do?" exercise prompt.
- Student Hands-on Practice Slide:** Displays four skill steps for using malleable splints: "1. ASSESS INJURED LIMB", "2. PREPARE TO SPLINT", "3. APPLY SPLINT", and "4. MONITOR LIMB". It also includes a "return of a stairway" section with a "Practice splint. Demonstrate" instruction.
- Lesson Wrap Up Slide:** Features the HSI logo and the text "let's WRAP UP".

performance evaluation one
ADULT – ONE-PROVIDER CPR AED



Student Name _____ Class Date _____

You are a trained CPR AED provider responding to an emergency alert for a person having a seizure in your workplace. As you approach the scene, you see an untrained coworker kneeling next to a motionless person lying on the floor. The bystander says, “He just fainted. His arms and legs were shaking.” You have appropriate PPE. An AED is nearby. You have a CPR mask with a disposable one-way valve with your first aid kit. Demonstrate what actions you would take next.

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Performs Assessment	<ul style="list-style-type: none"> ▸ Assesses scene safety. ▸ Takes standard precautions. ▸ Assesses responsiveness. ▸ Activates EMS and/or EAP. ▸ After activating, and unless they are readily available, sends someone to get the first aid kit and an AED. 	<p><i>“Scene is safe.”</i></p> <p><i>“Person is unresponsive.”</i></p> <p><i>“EMS has been activated.”</i></p> <p><i>“The coworker will get the AED.”</i></p>	
Assesses Breathing	<ul style="list-style-type: none"> ▸ Assesses breathing for no more than 10 seconds. 	<p><i>“The person is gasping slowly.”</i></p>	
Starts High-Quality CPR	<ul style="list-style-type: none"> ▸ Immediately starts CPR, beginning with chest compressions. ▸ Performs 30 high-quality chest compressions. ▸ Positions two hands on the lower half of the breastbone. ▸ Compresses at least 2 inches (5 cm). ▸ Compresses at a rate of 100–120 times per minute (30 compressions in no less than 15 and no more than 18 seconds). ▸ Allows chest to fully recoil at the top of compressions. 		
Gives Rescue Breaths	<ul style="list-style-type: none"> ▸ Seals the CPR mask against the person’s face. ▸ Opens the airway using the head tilt–chin lift maneuver. ▸ Gives two rescue breaths. Ensures each breath is 1 second in length. ▸ Creates visible rise of chest, but no more. ▸ Immediately resumes high-quality chest compressions in less than 10 seconds. 		
Continues High-Quality CPR	<ul style="list-style-type: none"> ▸ Repeats a second CPR cycle of 30:2 compressions-to-breaths. 	<p><i>[Student needs to complete this cycle before “coworker” arrives with AED.]</i></p>	
Operates the AED	<ul style="list-style-type: none"> ▸ Powers on the AED. Bares the chest. ▸ Correctly applies AED pads. ▸ Follows AED prompts. 	<p><i>[Instructor in the role of coworker]</i></p> <p><i>“Here is the AED.”</i></p>	

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Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Clears for Analysis	<ul style="list-style-type: none"> ▶ Makes sure no one is touching the person. 	<i>[AED] “Analyzing.”</i>	
Safely Delivers Shock	<ul style="list-style-type: none"> ▶ Makes sure no one is touching the person. ▶ Presses the shock button. 	<i>[AED] “Shock advised.”</i> <i>[Instructor] “Person’s muscles contract suddenly.”</i>	
Continues High-Quality CPR	<ul style="list-style-type: none"> ▶ Immediately resumes high-quality chest compressions in less than 10 seconds. ▶ Completes a third cycle of 30:2 compressions-to-breaths. 		
Removes PPE	<ul style="list-style-type: none"> ▶ Correctly removes and disposes of gloves. ▶ Verbalizes washing hands immediately after removing gloves. 	<i>[Instructor] “EMS arrives and takes over. Please demonstrate how to remove your PPE and what actions you would take next.”</i>	

END PERFORMANCE EVALUATION

Successfully Completed. Not Successfully Completed. Remediation Required.

Signature of HSI Authorized Instructor _____ HSI Instructor Registry Number: _____

ADULT CPR AED

lesson five

ADULT – SUDDEN CARDIAC ARREST (SCA)

PREPARE



Duration
6 minutes



Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT



Begin the Lesson



What Students Should Learn

After completing this lesson, the student should be able to:

- Describe sudden cardiac arrest (SCA) and its treatment.
- Explain the adult chain of survival concept.



Why This Topic Matters

Cardiac arrest is among the leading causes of death in the United States and worldwide. Sudden cardiac arrest (SCA) can happen with little or no warning.



Play the Video

WRAP UP

**Reinforce Key Points as Needed**

1. Sudden cardiac arrest occurs when the normal electrical impulses in the heart cause it to beat too quickly, inefficiently, or in an unsynchronized manner.
2. Immediate, high-quality CPR and early defibrillation with an AED can more than double the likelihood of survival.
3. The adult “chain of survival” is a series of six interdependent links that describe the best approach to cardiac arrest care.

**Ask a Review Question as Needed**

The most effective way to end pulseless ventricular tachycardia and ventricular fibrillation is _____.

- a. **Defibrillation**
- b. Medication
- c. High-quality CPR
- d. Advanced life support

**Ask For & Answer Questions Before Moving to the Next Lesson****Share a Brief Safety & Health Tip**

Following a heart-healthy lifestyle can help you lower your risk for heart disease, SCA, and other heart problems. A heart-healthy lifestyle includes eating a heart-healthy diet, aiming for a healthy weight, managing stress, engaging in physical activity, and quitting smoking.³⁸

³⁸ The National Heart, Lung, and Blood Institute. Sudden Cardiac Arrest. <https://www.nhlbi.nih.gov/health-topics/sudden-cardiac-arrest> [Retrieved 8/13/21]

ADULT FIRST AID

lesson thirteen

ADULT FIRST AID ASSESSMENT

PREPARE



Duration
6 minutes



Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT



Begin the Lesson



What Students Should Learn

After completing this lesson, the student should be able to:

- Describe the main steps in assessment by the First Aid and/or CPR AED provider for any possible emergency.
- Recall what to do for an unresponsive person who is not breathing or only gasping.
- Recall what to do for an unresponsive person who is breathing normally.
- Explain what to do for a responsive breathing person.
- Correctly demonstrate compression-only CPR on an adult CPR training manikin. (Optional)



Why This Topic Matters

The steps of assessment are crucial in all but the most minor circumstances.



Play the Video [or](#)



Discuss the WWYD? Slide



Instructional Notes

1. This lesson provides a review of the main steps in assessment that apply for a provider trained in CPR AED, first aid, or both (covered in depth in the Introductory Lessons), and introduces the first aid approach to a responsive breathing person.
2. When teaching Adult First Aid only, refer to the *Procedure for Adult First Aid* graphic.
3. An optional student practice is included in the Class Presentation for this lesson. Students practice performing one minute of uninterrupted chest compressions at 100-120 compressions per minute on an adult CPR training manikin.
 - a. This optional practice is appropriate for students who are not trained in conventional CPR.
 - b. This optional practice is also appropriate for trained CPR providers, who at a minimum, should provide compression-only CPR for adults and teens in cardiac arrest (such as when a CPR mask is unavailable).
 - c. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.

PRACTICE & ASSESS

**Conduct a Hands-On Student Practice (Optional)**

- ▶ Explain the hands-on practice method you are using.
- ▶ Run a **Video-Guided Practice** or practice with **Skill Sheet 18: Adult – Compression-Only CPR (Optional)** or **Scenario Sheet 20**.

WRAP UP

**Reinforce Key Points as Needed**

1. The steps of assessment are crucial in all but the most minor circumstances.
 - a. Assess scene safety.
 - b. Take standard precautions.
 - c. Assess responsiveness.
 - d. Activate EMS and/or your emergency action plan.
 - e. Send someone to get the first aid kit and an AED.
 - f. Assess breathing for no more than 10 seconds.
 - g. Even you are not a trained CPR AED provider, bring the AED (if available) with the first aid kit in case someone arrives to help and can operate it if needed.
2. If an unresponsive person is not breathing or only gasping, immediately start CPR.
 - a. For adults and teens in cardiac arrest, untrained bystanders and persons not trained in CPR should perform compression-only CPR, with or without dispatcher assistance.
 - b. If willing and able, trained CPR providers should perform conventional CPR at a ratio of 30 compressions to 2 rescue breaths.
3. Place an uninjured, breathing, unresponsive person on their side in the recovery position to help protect the airway.
4. If the person is breathing and appears responsive, obtain consent.
 - a. Rapidly assess for life-threatening conditions.
 - b. If any life-threatening conditions are present, immediately provide appropriate first aid. If the person shows signs of shock, keep them lying down, face up.
5. Consider performing a secondary assessment to gather more information while waiting for EMS.
 - a. Medical identification jewelry can be a vital source of information in the event the person is unable to speak or becomes unresponsive.
 - b. Visually assess the person from head to toe. Use the DOTS acronym as a guide.
6. The steps of assessment list the actions in sequence, but in a real emergency, they may need to be carried out in a different order or performed simultaneously when multiple providers are available.

Continued on Next Page >

 **Ask a Review Question as Needed**

You are a trained first aid provider responding to [a first aid alert] received [on your smart phone] for a person needing medical assistance. As you approach, a bystander directs you to a person who was struck by [a forklift truck] that was attempting to pass by. The scene is safe. You have taken standard precautions. EMS has been activated. You have a first aid kit. The person is responsive, breathing, and holding their misshapen leg in obvious pain. You ask, “May I help you?” The person angrily says, “No. I’ll be fine.” What would you do?

- a. Encourage the person to try to use the injured limb.
- b. Don’t touch or give first aid to the person without consent.**
- c. Immobilize the injury with the malleable splint from the first aid kit.
- d. Apply a plastic bag filled with a mixture of ice and water to the injury to help decrease pain.

 **Ask For & Answer Questions Before Moving to the Next Lesson**

 **Share a Brief Safety & Health Tip**

Forklift operators and employees working around forklifts are at risk of hazards such as injuries or death caused by being struck by the forklift. Only trained and certified forklift operators may operate a forklift. They should always maintain clear visibility of the work area and ensure they have enough clearance when raising, loading, and operating the equipment.

INFANT CPR AED

lesson twelve

INFANT – ASSESSMENT & CHEST COMPRESSIONS

PREPARE



Duration
5 minutes



Class Format: Initial Training, Blended Learning
Delivery Method: In-Person, Instructor-Led Skills Session or RSV

PRESENT



Begin the Lesson



What Students Should Learn

After completing this lesson, the student should be able to:

- Identify the infant assessment steps.
- Correctly demonstrate high-quality chest compressions on an infant [CPR training manikin].



Why This Topic Matters

Assessment of the scene and the infant is a critical skill that applies in any emergency. The initial steps of assessment are crucial. If an unresponsive infant is not breathing normally or only gasping, immediately start CPR, beginning with chest compressions. High-quality chest compressions are the foundation of high-quality CPR.



Instructional Notes

1. The purpose of this lesson is for students to perform the steps of infant assessment with a focus on an infant who is unresponsive and not breathing normally or only gasping – and then to take immediate action beginning with chest compressions.
 - a. Refer to the *Procedure for Pediatric CPR AED*.
2. Students practice performing 30 high-quality chest compressions on an infant CPR training manikin. Make sure they count out loud.
3. HSI strongly recommends the use of an instrumented directive feedback device that transmits evaluative or corrective information on compression rate, depth, recoil, and hand position during CPR training. The feedback device can be integrated into a manikin or be used as an accessory with it.
4. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.

PRACTICE & ASSESS

**Conduct a Hands-On Student Practice**

- ▶ Explain the hands-on practice method you are using.
- ▶ Run a **Video-Guided Practice** or practice with **Skill Sheet 14: Infant – Assessment & Chest Compressions** or **Scenario Sheet 16**.

**Assess Students**

- Look for correct skill performance by students.
- Use positive coaching and gentle correction to improve student skills.
- Ensure adequate practice time for students to gain skill proficiency.

WRAP UP

**Encourage Constructive Feedback as Needed**

Instructors and students provide specific and constructive feedback to each other and to their peers.

**Reinforce Key Points as Needed**

1. Weak, irregular gasping, snorting, snoring, or gurgling is not normal breathing.
2. High-quality chest compressions are the foundation of high-quality CPR.
3. For infant compressions, use one of three hand-position techniques: the 2-Finger, 2-Thumb Encircling-Hands, or the heel of one hand.
 - a. Whichever technique you use, push hard, straight down, to compress the chest approximately 1½ inches (4 cm). This depth should be at least one-third of the diameter of the infant's chest.
 - b. At the end of each compression, allow complete chest recoil.
 - c. Compress the chest at a rate of 100-120 compressions per minute. Minimize interruptions.
4. If you are alone without a mobile device or unable to activate EMS and/or your EAP right away, give two minutes of CPR before carrying an uninjured infant with you to get an AED and to activate EMS and/or your EAP.

**Ask a Review Question as Needed**

You are a trained CPR provider responding to [_a shout for help_] from the [_customer entry_]. A panicked adult hands you a limp, unresponsive infant. The scene is safe. You have disposable gloves and a CPR mask. You tap the infant and ask loudly, "Are you okay?" There is no response. Your EAP has activated EMS. Another provider is bringing an AED. The infant is not breathing. What would you do?

- a. Give 2 rescue breaths that make the chest rise.
- b. Immediately assess for life-threatening conditions.
- c. **Immediately start CPR, beginning with chest compressions.**
- d. Check for a pulse in the infant's upper arm for more than 30 seconds.

**Ask For & Answer Questions Before Moving to the Next Lesson**

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