hsi | MEDIC First Aid | AMERICAN SAFETY & HEALTH INSTITUTE | EMS SAFETY

ADULT FIRST AID | CPR & AED

instructor guide
Ver 9.0, 2022

Adult First Aid | CPR AED
Instructor Guide, Version 9.0

Purpose of this Guide

This Adult First Aid | CPR AED Instructor Guide, Version 9.0, is solely intended to provide direction for teaching the Adult First Aid | CPR AED course(s) and evaluating student knowledge and skill competency. The information in this book is furnished for that purpose and is subject to change without notice.

Notice of Rights

Health & Safety Institute
1450 Westec Drive
Eugene, OR 97402
800-447-3177
541-344-7099
E-mail: response@hsi.com

Visit our website at hsi.com

First Edition—2021, Revised—12/2022

ISBN 978-1-945991-38-7

HSI Adult First Aid | CPR AED Instructor Guide, Version 9.0

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS BEFORE USING THESE HSI MATERIALS.

BY PURCHASING, DOWNLOADING, OR OTHERWISE USING OR ACCESSING THESE MATERIALS, YOU ACKNOWLEDGE AND HEREBY AGREE TO BE LEGALLY BOUND BY BOTH THESE TERMS AND CONDITIONS AND THE MOST RECENT HSI TRAINING CENTER ADMINISTRATIVE MANUAL (TCAM) AVAILABLE AT emergencycare.hsi.com/quality-assurance-compliance.

Unless otherwise indicated in writing, HSI grants you ("recipient") the limited right to download, print, photocopy, and use the electronic materials, subject to the following restrictions:

- The recipient is prohibited from selling electronic or printed versions of the materials.
- The recipient is prohibited from altering, adapting, revising, or modifying the materials.
- The recipient is prohibited from creating any derivative works incorporating, in part or in whole, the content of the materials.
- The recipient is prohibited from downloading the materials and re-posting them to any website without written permission from HSI.
- Any rights not expressly granted herein are reserved by HSI.

Disclaimer

HSI has used reasonable effort to provide up-to-date, accurate information that conforms to generally accepted treatment recommendations at the time of publication. These recommendations supersede recommendations made in previous HSI programs. Science and technology are constantly creating new knowledge and practice. Like any published material, this material may become out of date over time. Guidelines for safety and treatment recommendations cannot be given that will apply in all cases/scenarios as the circumstances of each incident often vary widely. Local or organizational physician-directed medical protocols may supersede treatment recommendations in this program. Alert emergency medical services (EMS) or activate your occupational emergency action plan (EAP) immediately if you are not sure an emergency exists or when any person is unresponsive, badly hurt, looks or acts very ill, or quickly gets worse.

— SUBJECT TO CHANGE WITHOUT NOTICE —

Acknowledgments

The Health and Safety Institute sincerely appreciates and thanks the following professionals for their contributions to the development of this training program.

HSI Medical Advisory Board

- Geoffrey M. Hersch, DDS
- Jeffrey T. Lindsey, PhD, PM, EFO
- Joe Nelson, DO, MS, FACOEP, FACEP
- Nerina Stepanovsky, PhD, MSN, CTRN, PM
- Marvin Wayne, MD, FACEP, FAAEM, FAHA

HSI Advisory Council

Authorized HSI Instructors:

- Jason A. Fordyce, U.S. Army, Retired
- Mat Giachetti, EMT, MBA
- Louie Liwanag, EMR, CERT
- Kevin McFarland
- Brenda McFarland
- C. Tracy Parmer, EMT-B Retired

NOTICE: *This HSI Training Program has been approved by the HSI Medical Advisory Board and reviewed by the HSI Advisory Council. It reflects the latest first aid and resuscitation science and treatment recommendations of the 2020 International Consensus on Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) Science with Treatment Recommendations (CoSTR) and the 2020 International Consensus on First Aid Science with Treatment Recommendations published by the International Liaison Committee on Resuscitation (ILCOR). It conforms with the 2020 American Heart Association®, Inc. (AHA) Guidelines Update for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC), and the 2020 AHA and American Red Cross (ARC) Focused Update for First Aid the annual Guidelines Update. This HSI Training Program incorporates AHA recommendations regarding resuscitation education science (Cheng 2018) and reflects established models, theories, and principles of instructional design and training development that have been integrated into HSI training program brands for more than 40 years. HSI is a nationally accredited organization of the Commission on Accreditation of Pre-Hospital Continuing Education (CAPCE) and nationally approved by the Academy of General Dentistry (AGD) Program Approval for Continuing Education (PACE) as a continuing dental education (CDE) provider.*

This training program is dedicated to every first aid and/or CPR AED provider who voluntarily chooses to aid another in need. Such an unselfish choice is an inspiring act of human kindness.

For that, we appreciate and admire you.

TABLE OF CONTENTS

ABOUT THIS INSTRUCTOR MANUAL

HSI is in the process of transitioning all our individual health and safety training brands into a single unified one – HSI. This Instructor Guide consolidates the American Safety and Health Institute (ASHI), EMS Safety (EMSS), and MEDIC First Aid first aid and CPR AED training programs into a single, completely revised training program incorporating the most current guidelines and treatment recommendations. To address the risk of confusion in the market and among regulators and others during our brand transition, HSI's certification cards will continue to carry the ASHI, EMS Safety, and MEDIC First Aid logos for a prolonged period until they are slowly phased out.

We have integrated and expanded on the best aspects of each training program while streamlining and harmonizing them. We have defined key terms to provide clarity. We have added important information to amplify core instructional design and resuscitation concepts.

This Instructor Guide provides authorized HSI Instructors with flexibility to offer nine different class types and certifications, depending on what employers or students require or desire.

1	ADULT FIRST AID | ADULT CPR AED
2	ADULT FIRST AID | ADULT, CHILD, AND INFANT CPR AED
3	ADULT FIRST AID | ADULT AND CHILD CPR AED
4	ADULT FIRST AID | ADULT AND INFANT CPR AED
5	ADULT FIRST AID
6	ADULT, CHILD, AND INFANT CPR AED
7	ADULT AND CHILD CPR AED
8	ADULT AND INFANT CPR AED
9	ADULT CPR AED

However, the foundation of this training program is the Adult First Aid and Adult CPR AED class. As such, the primary "route" through this Instructor Guide is the Adult First Aid | Adult CPR AED class type. For details on other class types, please refer to Part Three: Teaching First Aid and CPR AED.

KEYWORDS AND DEFINITIONS

The following keywords and definitions are provided for clarity and quick reference for phrases and concepts included throughout this training program.

1. **Automated External Defibrillator (AED).** A portable, life-saving device designed to treat people experiencing sudden cardiac arrest, a medical condition in which the heart stops beating suddenly and unexpectedly. The combination of CPR and early defibrillation with an AED is effective in saving lives when used in the first few minutes following collapse from sudden cardiac arrest.
2. **Blended Learning.** A mixed-mode approach that uses both online and face-to-face learning. Core knowledge content is provided in video segments and interactive student exercises online, followed by face-to-face skills practice and evaluation.
3. **Challenge.** An evaluation of individuals who wish to earn certification by demonstrating knowledge and skill competency without taking an initial or renewal training class. The instructor's activities are limited to administering the Written Exam and carrying out skill tests using the Performance Evaluation(s).
4. **Classroom.** A place where instructors and students meet face-to-face, in person or virtually.
5. **Class Presentation.** An instructional segment that guides the instructor through the requirements of each lesson, with options for initial or blended training. Streamed through Otis™ or downloaded to the HSI Instructor Desktop Video Player.
6. **Class Roster.** The principal record of training used to verify student completion of the class.
7. **Conventional Cardiopulmonary Resuscitation (CPR).** An emergency procedure performed by a formally trained CPR provider that combines chest compressions with artificial ventilation to circulate oxygenated blood to the brain and heart, increasing the possibility of successful resuscitation. CPR that is started before the arrival of emergency medical services (EMS) providers doubles the likelihood of survival for victims of cardiac arrest.
8. **Compression-Only CPR.** Chest compressions without artificial ventilation. A simplified form of CPR and the preferred adult CPR technique to be performed by the untrained bystander, with or without 911 dispatcher assistance. Compression-only CPR isn't recommended for children. Rescue breaths are extremely important for children because cardiac arrest typically occurs after an interruption of breathing or from inadequate oxygen in the body (asphyxia).
9. **Constructive Feedback.** Generally defined as "helpful information or criticism given to someone to indicate what can be done to improve something."[1] Instructors and students are encouraged to provide specific and constructive feedback to each other during training. Constructive feedback fosters reflection, correction, and improved performance that enhances learning.
10. **Contextual Learning.** Teaching and helping students learn new information or knowledge "in such a way that it makes sense to them in their own frames of reference."[2]
11. **CPR AED Provider.** A person formally trained and certified in conventional cardiopulmonary resuscitation, including the use of an AED.
12. **Deliberate Practice.** Repeated skill practice by the student to improve performance in response to feedback. Deliberate practice is determined by available resources, the duration of the effort, and the student's motivation to improve.[3]
13. **Designated First Aid Provider.** An employee formally trained in first aid and/or CPR AED and identified, expected, or directed by the employer as responsible for rendering medical assistance as part of their job duties.
14. **Distributive or Spaced Practice.** An instructional strategy, where practice is broken up into a number of short, interrupted sessions over a longer period of time leading to better long-term retention. [4,5]

1 "Feedback." https://www.merriam-webster.com/dictionary/feedback [Retrieved8/28/2020]

2 Overview of Contextual Teaching and Learning. Center for Occupational Research and Development. https://www.cord.org/cord_ctl_overview.php [Retrieved 12/22/2020]

3 Ericsson, K. A., The Role of Deliberate Practice in the Acquisition of Expert Performance. http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/DeliberatePractice(PsychologicalReview).pdf [Retrieved 12/22/2020]

4 Distributed practice. https://en.wikipedia.org/wiki/Distributed_practice [Retrieved 8/8/2020]

5 Spacing Effect. APA Dictionary of Psychology https://dictionary.apa.org/spacing-effect [Retrieved 8/8/2020]

15. **Feedback Devices.** Devices that transmit evaluative or corrective information on compression rate, depth, release, and hand position during CPR training. The feedback device can be integrated into a manikin or be used as an accessory with it. HSI strongly recommends the use of an instrumented directive feedback device in all classes that teach the skills of CPR.
16. **First Aid.** The initial care provided for an acute illness or injury. The goals of first aid include preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery. First aid can be initiated by anyone in any situation, including self-care.[6]
17. **First Aid Provider.** Someone formally trained and certified in first aid who should recognize, assess, and prioritize the need for first aid; provide care by using appropriate competencies; recognize limitations; and seek additional care when needed.[7] A first aid provider may perform first aid as a Good Samaritan or as a Designated First Aid Provider and may or may not be trained in conventional CPR.
18. **Good Samaritan.** Someone who renders reasonable aid in an emergency to an injured person on a voluntary basis without expectation of compensation.
19. **Guided Problem-Solving Exercise.** An instructional tool used to develop, improve, or display knowledge and skill. These exercises may take different forms:
    a. Scenario Sheet (see term below).
    b. "What Would You Do?" (WWYD). A hypothetical situation or set of sign/symptoms presented by the instructor that engages a student in applying what they have learned.
20. **High-Quality Cardiopulmonary Resuscitation (HQ-CPR).** A CPR approach recommended to help improve resuscitation outcomes, made up of five key components: 1) minimizing interruptions in chest compressions, 2) providing chest compressions of adequate rate, 3) providing chest compressions of adequate depth, 4) allowing for complete chest recoil between compressions, and 5) avoiding excessive ventilation.
21. **Initial Training.** A traditional classroom or blended learning training class for individuals who have never been certified or whose certification has expired.
22. **Instructional Strategy** (how instruction should be carried out).
    a. Standard Approach. The most common instructional method (route or directed way) that HSI Instructors use to impart knowledge content, practical application, and help students develop proficiency.
    b. Experienced Approach. An instructional method (map, discovery, scenario-based) that a practiced and skilled instructor may use with trained and proficient students who can evaluate their own learning, collaborate with peers, and engage in problem-solving.
23. **Instructor Demonstration.** A qualified HSI Instructor, authorized to teach the program, who is physically or virtually present in a live face-to-face setting showing how to correctly perform the specific steps of a physical task in the proper sequence.
24. **Key Points.** The important and essential information in each lesson, based on the objectives, and emphasized by the instructor as needed.
25. **Learning Environment.** A physically safe, comfortable, and appropriate space for learning.
26. **Mastery Learning.** An instructional strategy that suggests most students can master (become proficient[8]) in what is being taught.[9]
27. **Online Training & Information System (Otis™).** HSI's web-based platform that delivers lesson presentations, organizes Training Center data, schedules and tracks Instructors and students, and provides automated back-office processing. Log in at otis.hsi.com/login.
28. **Performance Evaluation.** A scenario-based formal assessment checklist using a columnized visual guide (sheet[s] of paper and/or an image on a screen) with an imagined, scripted sequence of procedures, actions, and prompts that provides sound, fair, consistent, uniform, objective, and reliable documentation of a student's competency according to the performance criteria.
29. **Rate Your Program.** A class evaluation form available in digital and online format, required to be offered to students completing any HSI training program.
30. **Remediation.** The act or process of remedying; to solve, correct, or improve a problem.
31. **Remote Skill Verification (RSV).** Refers to the use of simultaneous interactive videoconferencing technology to evaluate and verify skill competence in real time when instructor and student(s) are in separate locations.

6 Singletary EM, et al. 2020 International Consensus on First Aid Science with Treatment Recommendations. Circulation. 2020 Oct 20;142(16_suppl_1):S284-S334. [Retrieved 5/10/2021]

7 Singletary EM et al. Part 9: First Aid: 2015 International Consensus on First Aid Science with Treatment Recommendations. Circulation. 2015 Oct 20;132(16 Suppl 1):S269-311. [Retrieved 5/10/2021]

8 "Proficient." https://www.merriam-webster.com/dictionary/proficient [Retrieved 12/22/20]

9 Bloom et al, Handbook on Formative and Summative Evaluation of Student Learning. McGraw-Hill. 1971

32. **Renewal Training.** A traditional classroom with an instructor-led skills session (live, in person or via RSV) class for individuals who wish to refresh skill competency and maintain certification.
33. **Required Training Content.** The essential, minimum knowledge and skills that the instructor is required to present and the student(s) must demonstrate achievement of in order to legitimately earn certification.
34. **Review Question.** A question posed to students that revisits an important and essential point from the lesson, based on the enabling objectives. Used as needed.
35. **Scenario Sheet.** Columnized visual guide (sheet[s] of paper and/or image on a screen) with a description of circumstances (setting) followed by a scripted sequence of procedures, actions, and prompts. Instructors or students may alter the setting of the scenario to better match the student's environment, to make it more realistic and to aid contextual learning.
36. **Skill Guide.** An instructional tool for hands-on skill practices, including graphic procedures, Skill Sheets, and Scenario Sheets.
37. **Skill Sheet.** Visual guide (sheet[s] of paper, and/or image on a screen) combining words and images that show how to correctly perform the specific steps of a physical task in the proper sequence.
38. **Student Book.** A comprehensive resource that covers the required knowledge content of the class as well as supplemental information.
39. **Student Hands-On Practice Methods.** Active physical involvement by students attending a training class, including the use of their hands, to become proficient in a physical task. Methods include video-guided hands-on practice and hands-on practice with a Skill Sheet or Scenario Sheet. Student hands-on practice may take different forms:
    a. Individually,
        i. While watching a video demonstration of the skill.
        ii. While watching the HSI Instructor demonstrate, using the Skill Sheet or Scenario Sheet as a reference.
        iii. Following the instructor demonstration, with the HSI Instructor prompting the students using the Skill Sheet or Scenario Sheet as a reference.
    b. Collectively,
        i. As a whole class, while watching a video demonstration.
        ii. As a whole class, following the instructor demonstration, with the instructor prompting the students using the Skill Sheet or Scenario Sheet as a reference.
        iii. In small groups of two or three, following the instructor demonstration, with students prompting each other using the Skill Sheet or Scenario Sheet as a reference.
        iv. In small groups of two or three, without an instructor demonstration, with students prompting each other using a Scenario Sheet as a reference (experienced approach).
40. **Supplemental Training Content.** Additional knowledge and skill content produced by HSI and supplied in an HSI training program that may be added to the required training content by the instructor as desired or required. Supplemental training content may be needed to tailor a training class to unique conditions or potential hazards of a specific workplace or worksite or to comply with federal or state regulatory requirements.
41. **Third-Party Training Content.** Additional materials not produced by HSI that may be used to enhance a training class at the discretion of the Training Center Director.
42. **Traditional Classroom Training.** Instructor-led, in person, live training approach.
43. **Training Program Standard.** The minimum training requirements for each HSI training program. Training Program Standards include Intended Audience; Instructor Authorization Requirement; Class Length; Participant Prerequisites; Student-to-Instructor Ratios; Student Certification Requirements; Certification Period; Required Class Documentation; and brief comments or explanations specific to the program. Training Program Standards referenced in this Instructor Guide are thoroughly detailed in the HSI Training Center Administrative Manual (TCAM, available at emergencycare.hsi.com/quality-assurance-compliance).
44. **Video Demonstration.** A digital visual recording of a qualified person(s) showing how to correctly perform the specific steps of a physical task in the proper sequence.
45. **Video-Guided Practice (VGP).** A hands-on student practice method where students simultaneously practice skills while watching them performed by a qualified person on a video.
46. **What Students Should Learn.** The knowledge (cognitive) or skill (psychomotor) outcomes that a student should achieve upon completion of a lesson.
47. **Why This Topic Matters.** A motivating statement or rationale for why it's important to cover the information in each lesson.
48. **Written Exam.** A valid assessment tool provided by HSI that reflects the minimum acceptable level of knowledge competency and may be used for informal or formal student assessment, as needed.
49. **Wrap Up.** The concluding part of each lesson. The instructor reinforces key points or asks a review question (as needed) and then answers any questions, before moving on to the next lesson.

part one

UNIVERSAL CONCEPTS

Universal concepts cover broad, principal themes that underlie and influence both first aid and CPR AED instruction as well as actual care.

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.

"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):

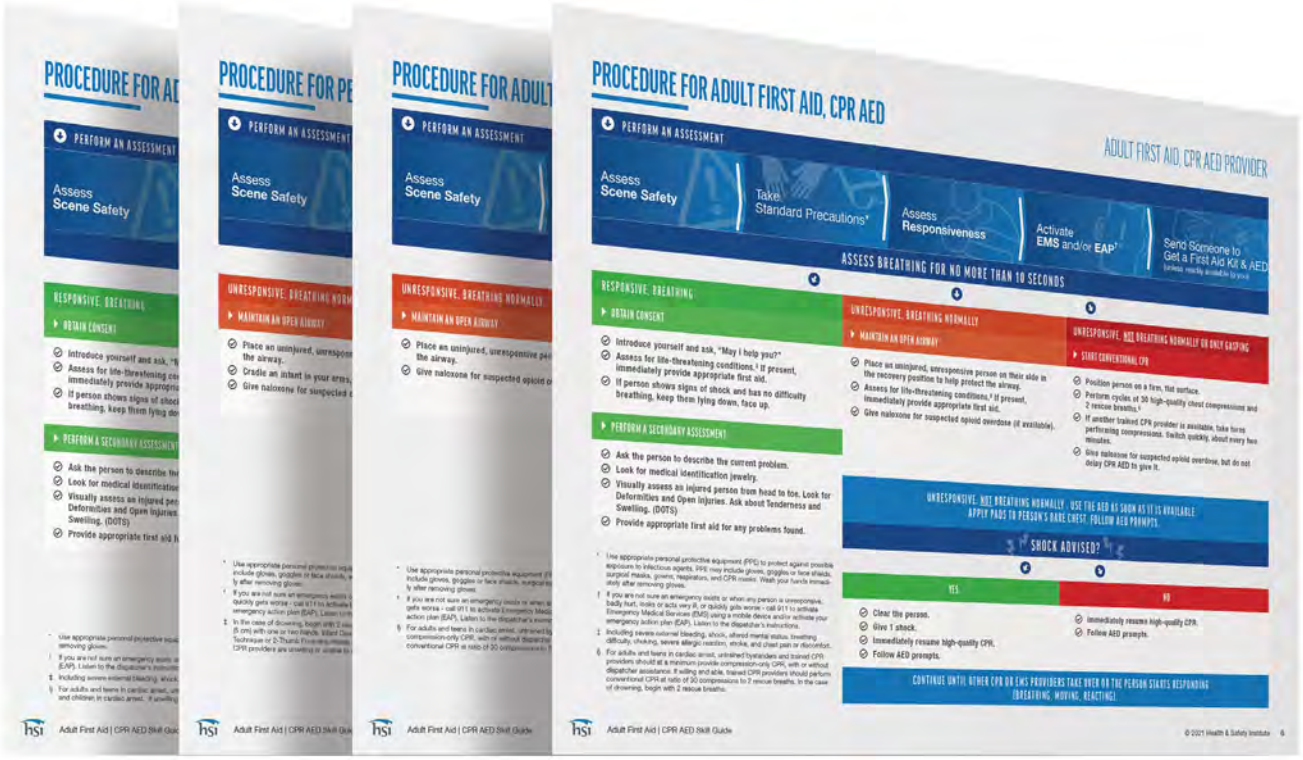
1. Assess scene safety.
2. Take standard precautions.
3. Assess responsiveness.
4. Activate EMS and/or your emergency action plan (EAP).
5. Send someone to get the first aid kit and an AED.
6. Assess breathing for no more than 10 seconds.

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.

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.



Prevention

Medical emergencies can happen anywhere, at any time. There are over 100 million emergency department visits in the United States every year, 35 million for injuries alone. Every year, thousands of workers die on the job. Millions of workplace injuries and illnesses occur in private industry every year. While many of these injuries and illnesses can be treated, prevention of illness and injury is always better. A healthy lifestyle combined with a commitment to safety at work, home, and play can prevent many needless disabling injuries, illnesses, and deaths.

A key part of HSI's mission is making workplaces and communities safer. The goal of this training program is to help students acquire and improve their knowledge and skills to protect and preserve life, alleviate suffering, and promote recovery. Protecting and preserving life undeniably involves prevention; keeping illness and injury from happening in the first place.

First aid training has been shown to enhance participants' motivation to avoid occupational injuries and illnesses and to improve their risk control behavior.[12] To support and hopefully strengthen that finding, as well as to encourage a "culture of prevention" by promoting health and safety, many of the lessons in this program now include a brief preventative safety and health tip relative to the lesson topic. Instructors are encouraged, but not required, to share these brief safety and health tips with their students or to modify or replace them with tips that identify and address specific worksite or community hazards.

Infection Control

This first aid and CPR AED training program was developed during the global pandemic of the coronavirus disease 2019 (COVID-19), which has resulted in widespread infection and death worldwide. COVID-19 and similar coronavirus variants remain an ongoing threat to both life and livelihood. While the introduction of authorized emergency-use vaccines (and subsequent FDA-approved vaccines) in the United States and other countries is an encouraging step to ending this global ordeal, at the time of publication of this training program, scientists do not know how long immunity produced by vaccination lasts, or whether annual surges or more virulent mutations of COVID-19 will continue to occur. With that in mind, infection control practices cannot be overemphasized for all workplace first aid and/or CPR AED providers.

The federal Occupational Safety & Health Administration (OSHA) defines Universal Precautions as "an approach to infection control which treats all human blood and other potentially infectious materials as if they were known to be infectious for the human immunodeficiency virus (HIV), hepatitis B virus (HBV), or other bloodborne pathogens." There are other concepts in infection control that are acceptable alternatives to Universal Precautions, such as Standard Precautions. These methods define all body fluids and substances as infectious and incorporate not only the fluid and materials covered by the OSHA Bloodborne Pathogens Standard (1910.1030) but expand coverage to include all body fluids and substances.[13]

Hand hygiene and the use of appropriate personal protective equipment are fundamental elements of infection control that must be used by designated first aid providers as part of their job duties. The phrase "take standard precautions" is used throughout this program as one of the first and necessary actions of a designated first aid and/or CPR AED provider. To take standards precautions means to use appropriate personal protective equipment (PPE) to protect against possible exposure to infection. This may include gloves, gowns, surgical masks, respirators, eye protection (goggles/face shield), and CPR masks, preferably with a one-way valve incorporating a high-efficiency particulate air (HEPA) filter. Using a CPR mask with a HEPA-rated filter helps keep providers safe by preventing the spread of viruses. It is the employer's responsibility to evaluate the task and the type of exposure expected, and then to select and supply the appropriate PPE. Experience putting on and taking off PPE, also called donning and doffing, is critical for the safety of designated first aid providers and helps to minimize potential delays in first aid. Designated first aid providers should frequently train and practice with their employer-provided PPE and established procedures. The responsibility for providing, laundering, cleaning, repairing, replacing, and disposing of PPE at no cost to employees rests with the employer.[14] Where employers have selected and directed designated first aid providers to use PPE appropriate to a specific occupational setting, instructors are encouraged to integrate that PPE into the practice sessions.

This training program is intended to reinforce infection prevention practices. It is not an infection control training curriculum. It is not intended for meeting any occupational licensing regulations or requirements for infection control training, including the OSHA Bloodborne Pathogens Standard, and should not be used for that purpose. Comprehensive training in infection control is vital to make appropriate decisions in each employee's occupational setting.

12 Lingard H. The effect of first aid training on Australian construction workers' occupational health and safety motivation and risk control behavior. J Safety Res. 2002 Summer;33(2):209-30. doi: 10.1016/s0022-4375(02)00013-0. PMID: 12216447

13 Standard Precautions for All Patient Care. https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html [Retrieved 2/3/2021]

14 OSHA Standard Interpretations. Most frequently asked questions concerning the bloodborne pathogens standard. https://www.osha.gov/laws-regs/standardinterpretations/1993-02-01-0 [Retrieved 5/11/2021]

High-Quality Cardiopulmonary Resuscitation (HQ-CPR)

HQ-CPR is the primary component influencing survival from cardiac arrest.[15] HQ-CPR includes the following:

one
Beginning CPR with chest compressions within 10 seconds of determining cardiac arrest.

two
Compressing fast, at a rate of 100-120 times per minute.

three
Compressing hard, at least 2 inches (5 cm) on an adult, and at least 1/3 the depth of the chest for children and infants.

four
Allowing for complete chest recoil at the top of each compression (not leaning on the chest between compressions).

five
Minimizing any interruptions to compressions to less than 10 seconds.

six
Giving effective rescue breaths that create a visible chest rise, but no more.

15 Meaney, PA et al. Cardiopulmonary Resuscitation Quality: Improving Cardiac Resuscitation Outcomes Both Inside and Outside the Hospital © 2013 American Heart Association®, Inc. Circulation Volume 128, Issue 4, 23 July 2013, Pages 417-435. https://doi.org/10.1161/CIR.0b013e31829d8654 [Retrieved 2/3/2021]

First Aid, CPR AED Continuum

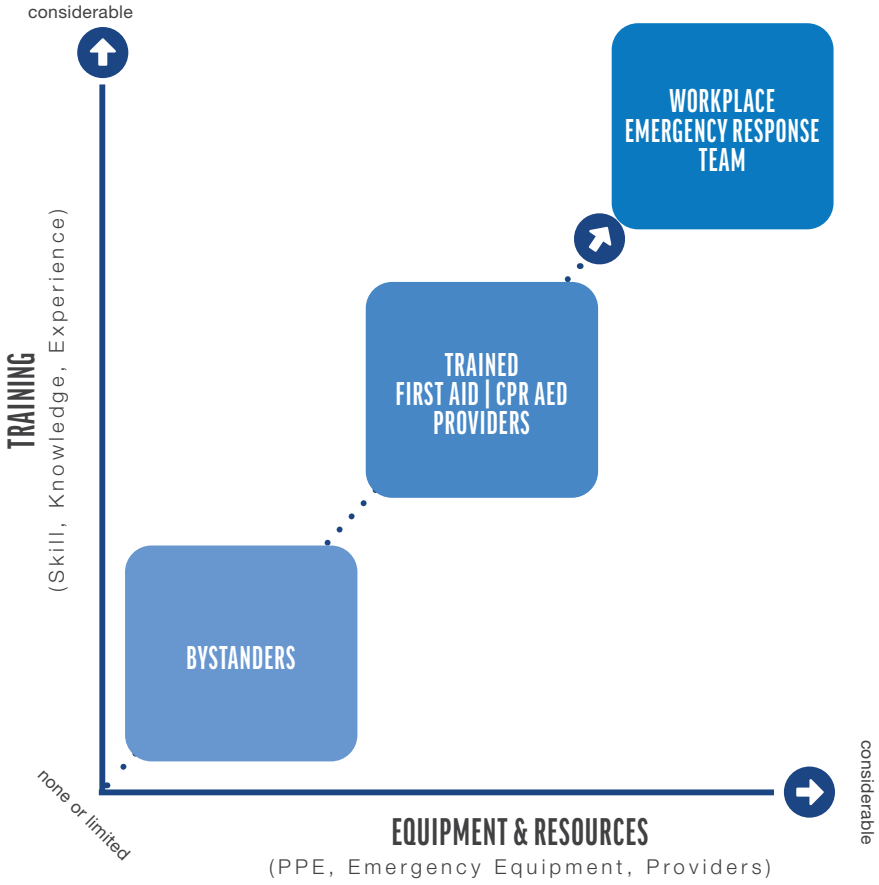
The goals of first aid include preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery. First aid can be initiated by anyone in any situation, including self-care. However, what is done for a suddenly ill or injured person and how it is done often exist on a continuum, "a set of things on a scale, which have a particular characteristic to different degrees."[16] The continuum in first aid, CPR AED can be represented by a linear scale on two axes. On the horizontal axis is equipment and resources. On the vertical axis is training (Fig. 2). Each axis begins at "none or limited" and scales up to "considerable."

On one end of the continuum is an untrained layperson bystander. This person has little or no skill, knowledge, or experience in first aid and/or CPR AED; no PPE; and no emergency equipment. Even so, this person can play a critical role in the EMS system by recognizing an emergency, calling 911, and following the dispatcher's instructions, which typically include encouragement to perform simple first aid, including compression-only CPR.

Trained first aid and/or CPR AED providers represent the middle ground of the continuum and are the primary focus of this training program. Trained first aid and/or CPR AED providers possess the necessary first aid skills, knowledge, and experience to perform assessments and first aid interventions using PPE and a minimal amount of medical equipment including dressings and bandages, tourniquets, epinephrine autoinjectors, CPR masks, and AEDs.

On the high end of the continuum is the Emergency Response Team (ERT), also called Incident Response Team. These are thoroughly trained groups of people with considerable skill, knowledge, and experience. They train, prepare, and are designated to respond to workplace emergencies, such as fires or explosions, medical emergencies, natural disasters, and hazardous material spills. ERT members have well-established communication systems and protocols and site-specific response procedures. ERT members may be trained in the use of various types of fire extinguishers, self-contained breathing apparatus, plant shutdown procedures, chemical spill control procedures, search and emergency rescue procedures, hazardous materials response, first aid, CPR, and basic or advanced life support. ERT members are typically not licensed healthcare providers, though they may be. Wherever a first aid provider is on the continuum, each person possesses the ability to help alleviate suffering, prevent permanent disability, and preserve life, sometimes even their own.

Figure 2.



16 "Continuum." https://www.collinsdictionary.com/us/dictionary/english/continuum [Retrieved 1/5/2021]

Constructive Feedback

Instructors and students are encouraged to provide feedback to each other during training. Instructors must skillfully model both giving and receiving feedback. Feedback is often not easy to give and can be even harder to receive. Feedback in the form of criticism, just pointing out faults, doesn't work. To be effective, feedback needs to be constructive; that is, it should tend towards building up, not tearing down. It should focus on helping students and instructors make the most of their abilities. Constructive feedback should be straightforward and results-focused.

For example, if a student is having trouble performing effective rescue breaths with a CPR mask, the instructor should carefully watch what the student is doing that isn't working.

Is their body position cramped? Is the area around the manikin's head crowded or obstructed by equipment? Are they lifting the chin upward to open the airway or pushing the mask into the face, closing it? Is the mask properly sized? Are they creating an effective seal?

Once an instructor has a good idea of what isn't working, they provide possible solutions in an easy-to-understand manner. Avoid saying, "You're not doing that right." Say, "I noticed you are having some difficulty giving effective rescue breaths. Instead of doing this [with a demonstrating of what they are doing that isn't working], try this instead [with a demonstration of correct technique]."

Use constructive feedback to acknowledge good performance as frequently as possible. Like a good coach, point out students who are performing well and why. Use it as a teaching moment to emphasize high-quality skills. Done properly and with care, sincerity, and respect, constructive feedback fosters reflection, encourages positive change, and inspires a high level of performance.

Importantly, take feedback from your students calmly and professionally, even if with just a simple "thank you." Constructive feedback can help you improve your teaching skills and better meet the expectations of your students. Through constructive criticism, we learn about our weaknesses. Without that, we can't improve.

Contextual Learning

Contextual learning is learning in context. It's helping students learn in such a way that it relates to them and applies to their real-world setting. This means presenting situations and experiences that are familiar to the student; for example, adjusting a training scenario to reflect the student's occupational setting (manufacturing, construction, maritime, office setting, school setting, etc.).

Contextual learning can also mean conducting an occupationally focused scenario in the actual place where an event might take place, like a construction site, office, shipping and receiving department, etc. This can improve realism and help expose situations that require unique problem-solving that cannot be replicated in a typical classroom setting. However, conducting training in a real-life setting often presents logistical, safety, and other challenges that must be carefully addressed and overcome ahead of time.

Incorporating some emotional stress into training in the form of difficulties and distractions (malfunctioning equipment, interfering bystanders, sudden changes in the victim's status, etc.) may also help to improve realism and maximize learning. So, it is reasonable for an experienced instructor to add sensible and appropriate emotional stress to scenarios. However, excessively stressful (or unrealistic) scenarios may overwhelm students and have a negative impact on learning. To be effective, stressors added to contextual learning should not be too easy or too hard, and never punitive. The learning environment must be kept safe and include constructive feedback, not fault-finding criticism. This type of occupationally focused contextual learning is probably not a realistic option in an open enrollment class attended by students from diverse backgrounds and professions.

Deliberate Practice and Mastery Learning

Deliberate practice is repeated skill practice by the student to improve performance in response to feedback. HSI has integrated and emphasized the key principles of deliberate practice—repetition and feedback with sufficient practice to develop skill proficiency—into the instructional design of its training programs from its inception in 1978. This HSI program, like those before, includes numerous instructional tools for developing proficiency via demonstration and prompted practice. This includes scenario-based discovery methods, which are guided problem-solving exercises with feedback. The goal of deliberate practice with these instructional tools is to gain skill competence so that students can successfully complete the class and become certified in adult first aid and/or CPR AED.

Mastery learning is an instructional strategy that suggests most students can master (become proficient) in what is being taught. The basic task is to determine what is meant by mastery and to use effective instructional methods and materials that will help the largest proportion of students to reach it.[17] In this program, mastery means that each student has demonstrated skill competency according to the skill criteria on the first aid and/or CPR AED performance evaluation sheets.

Distributive or Spaced Practice

Distributive or spaced practice is an instructional strategy where practice is broken up into a number of short, interrupted sessions over a longer period of time, which leads to better long-term retention. Without ongoing practice, skills deteriorate rapidly following initial training and certification, within 3 months. When feasible, knowledge and skills training in a single class every two years should be replaced or supplemented with training that focuses on skills-and confidence-building every 3-6 months.[18,19]

Manikins and Feedback Devices for CPR Training

A 2016 study for teaching compression-only CPR featured a brief online CPR video and skill practice on a homemade manikin that was made using a towel, a roll of toilet paper, and a T-shirt.[20] The results of that study showed an improvement in compression-only CPR skills, though researchers observed that participants performed compressions of inadequate depth and that the toilet paper roll began to fatigue after several compressions, producing less recoil. While brief online CPR video and practice with a homemade manikin can teach basic compression-only CPR skills, they do not permit the instructor or students to correctly demonstrate high-quality chest compressions, open the airway, or give effective rescue breaths with a CPR mask. Legitimate training and certification in CPR require the use of commercial adult and infant CPR manikins that allow instructors to demonstrate and evaluate (and students to practice) HQ-CPR.

CPR feedback devices transmit evaluative or corrective information on compression rate, depth, recoil, and hand position during CPR training. The scientific evidence highlighted in the 2020 AHA Guidelines recommended feedback devices as useful, effective, and beneficial.[21] The feedback device can be integrated into a manikin or be used as an accessory with it. HSI strongly recommends CPR feedback devices that measure each student's skill performance in real time be used during CPR training.

17 Bloom et al, Handbook on Formative and Summative Evaluation of Student Learning. McGraw-Hill. 1971

18 Riggs M, Franklin R, Saylany L. Associations between cardiopulmonary resuscitation (CPR) knowledge, self-efficacy, training history and willingness to perform CPR and CPR psychomotor skills: A systematic review. Resuscitation. 2019 May;138:259-272.]

19 Anderson GS, Gaetz M, Masse J. First aid skill retention of first responders within the workplace. Scand J Trauma Resusc Emerg Med. 2011 Feb 8;19:11.

20 Wanner, G. et al. Brief compression-only cardiopulmonary resuscitation training video and simulation with homemade manikin improves CPR skills. BMC Emerg Med. 2016; 16: 45. Published online 2016 Nov 29. doi: 10.1186/s12873-016-0110-5 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5127099/ [retrieved 12/2/2020]

21 Cheng A, et al. Part 6: Resuscitation Education Science: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2020 Oct 20;142(16_suppl_2):S551-S579.

part two

PROGRAM DESCRIPTION

Program Goal

The goal of this training program is to assist our approved Training Centers and Authorized HSI Instructors to positively impact the lives of others by helping students acquire and improve their knowledge and skills to protect and preserve life, alleviate suffering, and promote recovery.

Class Goal

The goal of an adult first aid and/or CPR AED training class is for participants to gain or improve knowledge and skill proficiency in adult first aid and/or CPR AED for the adult, child, and infant.

Class Audience

The intended audience is individuals who are not healthcare providers or professional rescuers who desire, or are occupationally required, to be trained and certified in adult first aid and/or CPR AED for the adult, child, or infant.

> *This program is not designed to meet regulatory requirements for pediatric first aid training in child-care and should not be used for that purpose.*

Terminal Learning Objectives

These objectives identify what participants will know and be able to do upon successful completion of the Adult First Aid and/or CPR AED class. These objectives will vary based on which class type and age range is taught.

- Terminal Cognitive Objectives (Required Knowledge)
- Terminal Psychomotor Objectives (Required Skills)

CPR AED Objectives

- Recognize the main elements to the procedure for adult and/or pediatric CPR AED.
- Recognize the elements of high-quality adult and/or pediatric CPR and their importance on survival from cardiac arrest.
- Identify the links in the adult and/or pediatric chains of survival.
- Recognize when high-quality CPR is required.
- Describe how to perform high-quality adult and/or pediatric CPR.
- Describe how to provide treatment for a choking adult and/or child or infant.
- Correctly demonstrate the removal of contaminated personal protective equipment.
- Correctly demonstrate the adult and/or pediatric CPR procedure.
- Correctly demonstrate how to provide effective rescue breaths using a CPR mask.
- Correctly perform high-quality adult and/or pediatric CPR.
- Correctly demonstrate how to use an AED on an adult and/or child.
- Correctly demonstrate how to provide treatment for a choking infant.

Adult First Aid Objectives

- Summarize the basic legal concepts that apply to providing first aid and CPR AED.
- Recognize the first aid provider's role, responsibilities, and priorities.
- Recognize the main elements to the procedure for first aid and CPR AED.
- Explain the Adult First Aid Procedure.
- Describe how to recognize and provide first aid treatment for injury, medical, and environmental emergencies.
- Recognize the benefits of a healthy lifestyle and a safety-oriented home and workplace culture.
- Correctly demonstrate the removal of contaminated personal protective equipment.
- Correctly demonstrate the Adult First Aid Procedure.
- Correctly demonstrate how to control severe external bleeding.
- Correctly demonstrate how to use an epinephrine autoinjector.

Class Instructor

This class may only be taught by an HSI Instructor currently authorized to teach adult first aid and CPR AED.

6:1 Student-to-Instructor Ratio (SIR)

The recommended Student-to-Instructor Ratio (SIR) is 6 students to 1 instructor (6:1). The maximum SIR is 12 students to 1 instructor (12:1). In a Performance Evaluation, the maximum SIR is 2 students to 1 instructor (2:1).

Program Flexibility

HSI programs are designed to be flexible. Flexibility is "characterized by a ready capability to adapt to new, different, or changing requirements."[22] These requirements include what the student desires to learn for themselves or what the student must learn to comply with regulatory, occupational licensing, or employer requirements. The foundation of this training program is the Adult First Aid | Adult CPR AED class type. However, by adding or subtracting lesson segments from that foundational class type, eight other class types and certifications may be offered, depending on what the training students desire or require.

Class and Certification Types

Use the "At-a-Glance" Class and Certification Type Tables in Part 3 for guidance on delivering the following Class Types and Certifications.

1	ADULT FIRST AID | ADULT CPR AED
2	ADULT FIRST AID | ADULT, CHILD, AND INFANT CPR AED
3	ADULT FIRST AID | ADULT AND CHILD CPR AED
4	ADULT FIRST AID | ADULT AND INFANT CPR AED
5	ADULT FIRST AID
6	ADULT, CHILD, AND INFANT CPR AED
7	ADULT AND CHILD CPR AED
8	ADULT AND INFANT CPR AED
9	ADULT CPR AED

22 "Flexible." Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/flexible. Accessed 13 Jan. 2021.

1:1 Student-to-Manikin Ratio (SMR)

For optimal practice, the recommended Student-to-Manikin Ratio (SMR) is 1 student to 1 manikin (1:1). The maximum SMR is no more than 3 students to 1 manikin (3:1).

Program Design

This program is founded on basic principles of instructional design and learning theory. It has been constructed to provide instructors with the necessary flexibility, format, tools, activities, and materials to teach students with varying needs, knowledge, skills, and experience.

Class Format

There are three formats by which students can gain certification using this training program.

Initial Training: A traditional classroom or blended learning class for individuals who have never been certified or whose certification has expired.

Renewal Training. A traditional classroom or RSV class for individuals who wish to refresh skill competency and maintain certification.

Challenge. A traditional classroom or virtual class for individuals who wish to earn certification by demonstrating both knowledge and skill competency without taking an initial or renewal training class.

Instructional Strategy

There are two factors that contribute significantly to a student gaining or improving their adult first aid and/or CPR AED knowledge and skill proficiency: the role of the instructor and how instruction should be carried out.

1. ***The role of the instructor.***

   The role of the instructor is to facilitate learning. The definition of *facilitate* is "to make easier; help bring about."[23] The instructor's behavior in helping students learn adult first aid and/or CPR AED is designed to be as a coach, helper, guide, encourager, consultant, and resource. This behavior, combined with the opportunity for deliberate practice with constructive feedback (and whenever possible, contextual learning), will help each student develop mastery. Accordingly, the instructor not only has an important and meaningful impact on the students, but also on the ill or injured people that their students may someday care for.

2. ***How instruction should be carried out.***[24]

   The shape that instruction takes should be directly influenced by the student's position on the first aid, CPR AED continuum; this strengthens the learning experience for the student by meeting the student where they are, from novice to highly trained. On the vertical training axis of the continuum, a student's knowledge, skills, and experience can range from "none or limited" to "considerable," or somewhere in between. For example, teaching a class to students who have little or no first aid and/or CPR AED knowledge, skills, and experience requires a different primary strategy than teaching to a group with considerable knowledge, skills, and experience. The knowledge and skill objectives of the class are the same, but the approach is adjusted to address the students' position on the continuum. To address the differences in knowledge, skills, and experience, instruction should be carried with an emphasis on one of two primary approaches: standard or experienced.

   - **Standard Approach.** This is the most common and primary instructional method (route or directed way) for training and certification of providers in the low-to mid range of the first aid, CPR AED continuum. The standard approach includes a video-based lesson presentation to impart the knowledge content. When the lesson involves a skill, the lesson presentation is followed by a video-guided skill practice or instructor skill demonstration followed by instructor-supervised student skill practice and feedback. For an inexperienced or infrequent instructor, we recommend using the standard approach.
   - **Experienced Approach.** This is the primary instructional method (map, discovery, scenario-based) for training and certification of providers in the mid-to-high range of the first aid and/or CPR AED continuum. It may be used by a practiced and skilled instructor with previously trained and proficient students who can evaluate their own learning, collaborate with peers, and engage in problem-solving. The experienced approach uses guided problem-solving exercises that require students to apply their knowledge and skills with instructor feedback and supervised skill practice.

For an experienced instructor, it may be useful to mix the standard and experienced approach. For example, imagine arriving to teach a renewal class for students you have never taught before. The person with whom you scheduled the renewal class assured you that all students were currently certified in Adult First Aid and Adult CPR AED, and only needed "a refresher." So, you decide to use the experienced approach. After describing how the students are to conduct the guided problem-solving exercise on adult CPR as one provider, you direct the students to arrange themselves in small groups of two or three with the appropriate equipment and a Scenario Sheet. Then they begin. And then you quickly realize they need more than a scenario-based opportunity to display their knowledge and skills; what they really need is a lot more work on the quality of their basic skills. So, tactfully, you change to the standard approach and run either a video-guided hands-on practice or a small group practice using Skill Sheets.

In the opposite scenario, imagine arriving to teach an initial adult first aid class for a group of students who you have never taught before. After introductions, you ask about previous training to connect the students' experiences and knowledge to this class. You discover that this is far from the first class they have ever taken. In fact, they tell you they have taken many first aid classes over the years. So, again, you decide to try the experienced approach first. After describing how the students should conduct the guided problem-solving exercise, you direct the students to arrange themselves in small groups of two or three with the appropriate equipment and an Adult First Aid Scenario Sheet. Then they begin, and their skills are quite good! So, you move on to the next lesson. Instead of showing the lesson video, you run a "What Would You Do?" guided problem-solving exercise. The resulting discussion convinces you that the students' knowledge of the topic is solid, with only a few clarifications from you required. As a result, you move on to the next lesson – and the next "What Would You Do?" exercise.

Of course, most classes tend to be a mix of experienced and inexperienced students, and their skill abilities can vary significantly. To address that, the instructional strategy is designed with the flexibility to allow the instructor to adjust the class "on the fly" by selecting and using different approaches and instructional elements as needed.

23 "Facilitate." Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/facilitate. Accessed 12 Jan. 2021.

24 Adapted from Romiszowski AJ, Designing Instructional Systems, Decision making in class planning and curriculum design. Copyright 1981. Published 1983. Routledge pgs. 300–303.

Instructor Proficiency

Just as a first aid and/or CPR AED student's knowledge, skills, and experience exist on a continuum (from limited to considerable), the same is true for an instructor's teaching knowledge, skills, and experience. Effective use of the experienced approach requires an experienced and proficient instructor. Gaining such experience takes time and a commitment to excellence. An experienced and proficient instructor is one who:

- ✓ Teaches often,
- ✓ Has good people skills,
- ✓ Manages time effectively,
- ✓ Has strong subject knowledge,
- ✓ Has outstanding skill competency,
- ✓ Understands adult learning styles,
- ✓ Can teach with or without audiovisual presentations,
- ✓ Is motivated, well-prepared, confident, and patient, and
- ✓ Can effectively use problem-solving scenarios as teaching tools.

Instructional Elements

The instructional elements are the training materials and the medium used to teach this program. These elements include: this instructor guide and its Lesson Plans containing key points, review questions, "What Would You Do?" exercises, online class presentations, skill and scenario sheets for interactive, face-to-face skill practice, performance evaluations, optional written exams to document knowledge competency, and a student book that covers the training program content. Use of these instructional elements is described in Part Three: Teaching Adult First Aid | CPR AED.

Enabling Lesson Objectives

Enabling lesson objectives are found in each lesson and support the terminal objectives of the training program (which vary based on which class type and age range are taught). They describe the knowledge and skills that participants should learn. For example, "Correctly demonstrate high-quality adult chest compressions." Enabling lesson objectives are listed in each lesson under "What Students Should Learn."

Methods

Methods are the plan an instructor uses to achieve the objectives of a lesson. These methods are detailed under the headings "Why This Topic Matters," "Present," "Practice & Assess," and "Wrap Up" in the Lesson Plans.

Evaluation

Evaluation is the measurement of the result of instruction. To receive a certification card, students must complete the required lessons and hands-on student practices for the age ranges taught. They must also successfully complete the associated Performance Evaluations. See Part Three: Teaching Adult First Aid | CPR AED for more.

Required Training Content

The required training content is the minimum knowledge and skill content to be covered in the class type. Content not identified as optional is required training content.

Supplemental Training Content

This is additional knowledge and skill content produced by HSI that may be added to the required training content by the instructor as desired or required. Supplemental training content may be needed to tailor a training class to unique conditions of a specific workplace.

Third-Party Training Content

This is additional material not produced by HSI that may be used to enhance a training program at the discretion of the instructor or Training Center Director. These additional materials may not be used in lieu of HSI training materials and may not be used to shorten or otherwise alter the required training content.

part three

TEACHING ADULT FIRST AID | CPR AED

TRAINING PROGRAM STRUCTURE

To be successful in teaching, instructors need to be familiar with the structure of this training program. This includes, but is not limited to, the main lesson segments, class types, certification options, class format, and delivery methods.

Main Lesson Segments

This training program is divided into six main lesson segments. They are:

- Introductory Lessons
- Adult CPR AED Lessons
- Adult First Aid Lessons
- Child CPR AED Lessons
- Infant CPR AED Lessons
- Conclusion Lesson

These main lesson segments are combined or taught individually depending on the class type and related certification. Each main lesson segment contains Lesson Plans. Each lesson plan provides sequential directions for teaching that lesson (Fig. 3). For example, the main lesson segment, "Introductory Lessons," contains four Lesson Plans titled:

- Introduction
- Legal Concepts
- Roles, Responsibilities, and Priorities
- Assessment

Using Lesson Plans

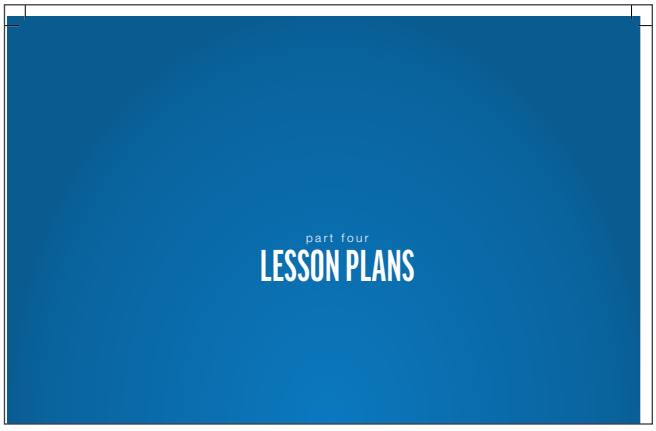


Figure 3.

Lesson Plans are the instructor's guide for running a class. The Lesson Plans are provided in Part Four following the Class Equipment and Materials Checklist for All Class Types, the Required Class Equipment and Materials, and the Optional Class Materials and Equipment.

Follow the Lesson Plan as you teach the class. For example, when using a traditional classroom delivery method for initial training, begin a lesson by introducing it. Your goal is to help the students achieve the enabling objectives of the lesson. These are listed under the heading "What Students Should Learn." Tell the students what they should know or be able to do after the lesson is completed. An effective way to motivate students as to why they should achieve these enabling objectives is to share a brief statement about the importance of the topic, "Why This Topic Matters." Then play the lesson video or select the "What Would You Do?" exercise, depending on which instructional approach you are using, standard or experienced. For topics with skills, conduct a student hands-on practice. Explain the hands-on practice method you will use: Video-Guided Practice or practice with Skill or Scenario Sheets. Assess the students as they practice.

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

Following the skill practice, wrap up the lesson by encouraging specific and constructive feedback, reinforcing key points, and checking their mastery of the material by asking them a review question as needed. Before moving on to the next lesson, ask for and answer any other questions students may have. Finally, share a brief preventative safety and health tip. You may use the ones provided or modify or replace them with fact-based tips that identify and address specific worksite or community hazards.

Lesson Plans for blended learning follow the same sequence as initial training in a traditional classroom but are modified to reflect what students do not need to cover again, including lesson videos that they have previously viewed in the online portion of the blended class.

Using the Procedure Graphics

As described in Part One, "New Procedures for Adult First Aid | CPR AED," trained first aid and CPR providers should follow established procedures for first aid and/or CPR AED. This step-by-step guidance for performing first aid and CPR is based on scientific evidence, national guidelines, and the consensus of experts. In this training program, this guidance is reinforced throughout the training program and represented by four procedure graphics found in the Adult First Aid | CPR AED Skill Guide. Procedure graphics are designed to accompany and complement the class type being taught. An Instructional Note in each appropriate lesson indicates which procedure graphic an instructor should refer to, depending on the class type being taught.

CLASS FORMAT AND DELIVERY METHOD

As described in Part Two, there are three formats for teaching Adult First Aid | CPR AED classes: Initial Training, Renewal Training, and Challenge. There are also several methods to deliver these formats: Traditional Classroom; Blended Learning with In-Person, Instructor-Led Skills Session; and Blended Learning with Remote Skills Verification (RSV). These methods are described below.

> **Instructor Authorization:** *Before teaching and certifying students in Adult First Aid and/or CPR AED, please check with your Training Center Director or log in to Otis at hsi.com/login to verify that your instructor authorization status is current. Make note of your expiration date. HSI will not recognize any certification card issued by an instructor or Instructor Trainer with an expired authorization. Ensuring that each Authorized Instructor or Instructor Trainer affiliated with the Training Center is properly authorized by HSI is the responsibility of the Training Center and/or Instructor or Instructor Trainer, not HSI. The authorization period is one (1) year.*

Traditional Classroom

This is the most familiar format for training; all lessons are delivered by the instructor in a place where instructors and students physically meet in person. See Part Four for Lesson Plans for conducting Initial Training, Renewal Training, and Challenges in the traditional classroom.

Blended Learning with In-Person, Instructor-Led Skills Session

Blended learning (also called "hybrid learning") is a mixed-mode approach that uses self-directed online lessons followed by an in person, instructor-led skills session in a traditional classroom setting.

> *HSI offers a fully integrated blended learning solution for Training Centers through the Otis management system. See Part Four for blended learning Lessons Plans for initial and renewal training.*

Remote Skills Verification (RSV)

Remote skills verification (RSV) is the use of simultaneous interactive videoconferencing technology to practice, evaluate, and verify skill competence in real time when instructor and student(s) are in separate locations. Research has shown RSV to be acceptable and feasible for both class participants and remote skill evaluators.[25, 26, 27, 28] Particularly for individuals working in remote settings, opportunities to get the training and certification necessary to comply with employment policies, occupational regulation, or licensing requirements are often limited by the accessibility and availability of Authorized Instructors. In these settings and others, including public health emergencies like the COVID-19 pandemic, RSV offers a practical and useful alternative to a traditional classroom setting for practice and verification of skill competence.[29, 30, 31]

> *HSI offers a blended learning solution that fully integrates with RSV to provide completely virtual training.*

25 Weeks DL, Molsberry DM. Feasibility and reliability of remote assessment of PALS psychomotor skills via interactive videoconferencing. Resuscitation. 2009 Mar; 80(3):354-8.

26 Okrainec et al. Remote FLS testing in the real world: ready for "prime time". Surg Endosc. 2015 Nov 18.

27 Mikrogianakis A. et al. Telesimulation: an innovative and effective tool for teaching novel intraosseous insertion techniques in developing countries. Acad Emerg Med. 2011 Apr;18(4):420-7.

28 Heffernan R, Brumpton K, Randles D, Pinidiyapathirage J. Acceptability, technological feasibility and educational value of remotely facilitated simulation-based training: A scoping review. Med Educ Online. 2021 Dec;26(1):1972506. doi: 10.1080/10872981.2021.1972506. PMID: 34433385; PMCID: PMC8405121.

29 Jain A, Agarwal R, Chawla D, Paul V, Deorari A. Tele-education vs. classroom training of neonatal resuscitation: a randomized trial. J Perinatol. 2010 Apr 1.

30 Reynolds PA, Eaton KA, Mason R. Seeing is believing: dental education benefits from developments in videoconferencing. Br Dent J. 2008 Jan 26; 204(2):87-92.

31 Gonzales-Zamora JA, Alave J, De Lima-Corvino DF, Fernandez A. Videoconferences of Infectious Diseases: An Educational Tool That Transcends Borders. A Useful Tool Also for the Current COVID-19 Pandemic. Infez Med. 2020 Ahead of print Jun 1;28(2):135-138. https://www.infezmed.it/media/journal/Vol_28_2_2020_2.pdf [Accessed 4/21/20]

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.

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

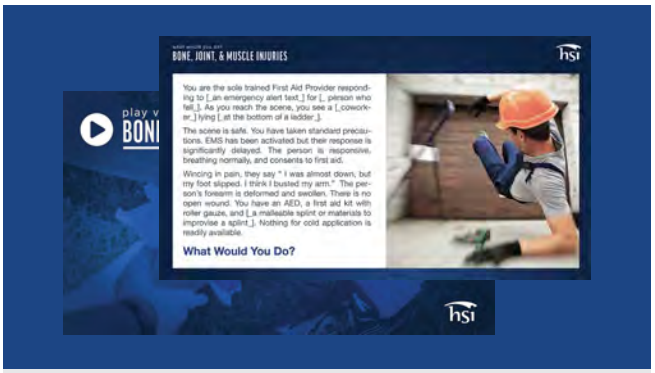
In addition to this Instructor Guide, HSI provides Class Presentations that support and enhance classroom training (Fig. 4). The Class Presentations contain all the necessary elements to teach the nine class types. This includes the elements necessary for initial training and blended learning. Blended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

Title Slide



Video for the Lesson and WWYD? (when applicable)

Student Hands-on Practice Slide

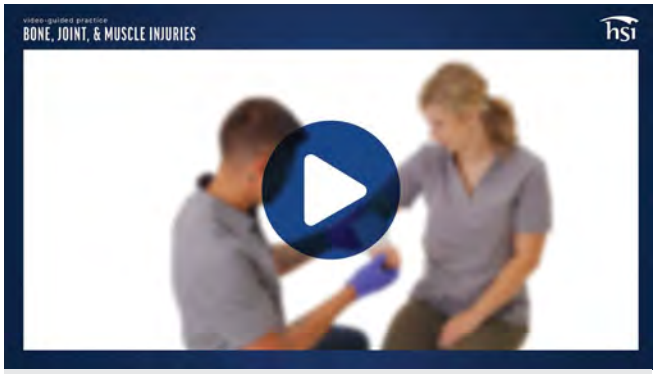
Lesson Wrap Up Slide

Many of the video slides for the Adult First Aid lessons that do not have an associated skill practice include an optional "What Would You Do?" (WWYD?) exercise, which may be presented by the instructor instead of showing the lesson video. The WWYD? slide is primarily intended to be used with experienced students. It is designed to stimulate a brief classroom discussion and challenge students to explain what they would do in a particular first aid situation. The instructor uses the WWYD? slide to reinforce the key points of the lesson and to correct any misperceptions.

Student Hands-On Practice Methods

Student hands-on practice may take different forms depending on what the instructor chooses. That choice may be influenced by several factors, such as the experience level of the instructor and the students, the number of students, the class type, format, and the delivery method.

Conducting Video-Guided Practice



Sample slide image

Video-Guided Practice can only be used in a traditional classroom setting, not via RSV. Optimally, using a 1:1 Student-to-Manikin Ratio, students are arranged in the classroom facing a video monitor or computer projection with a screen large enough that all can easily see it. Instruct students to position themselves with a manikin and/or any other necessary equipment to be ready to practice (see Sample Classroom Adult First Aid | CPR AED Class Floor Plan in the appendix on page 246). Once the students are ready, the instructor plays the video practice. The instructor should be able to directly observe students as they practice on their manikins along with the video. Following the video, instructors provide corrective feedback. If more practice is needed to help students gain or refine skills, instructors should repeat the practice or select another method for repeat skill practice.

Student Hands-On Practice

Example 1: Initial Adult CPR AED Class in a Traditional Classroom Setting. A New Instructor with 6 New Students and a 1:1 Student-to-Manikin Ratio.

In this setting, where both the instructor and the students are inexperienced and each student has their own manikin, we recommend the standard approach to instruction using a video-guided hands-on practice. The instructor plays the Video-Guided Practice from the lesson presentation and the whole class practices along on their manikin with the video demonstration.

Example 2: Renewal Adult CPR AED Class in a Traditional Classroom Setting. An Experienced Instructor with 9 Experienced Students and a 3:1 Student-to-Manikin Ratio.

In this setting, where both the instructor and the students are experienced and there is one manikin for each three students, we recommend first trying the experienced approach. Students are arranged in small groups of three with a manikin. They use the Scenario Sheets to prompt each other through a guided problem-solving scenario. If it becomes clear after the first scenario practice that the students' skills are substandard, we recommend changing to the standard approach to focus on improving their skills using either a Video-Guided Practice or an instructor demonstration followed by small group practice with Skill Sheets.

Example 3: Initial Adult First Aid Blended Class With RSV. An Experienced Instructor with 1 New Student and a 1:1 Student-to-Manikin Ratio.

In this setting, the student has completed the online Adult First Aid lessons of the blended learning initial class and is ready to begin the face-to-face portion via a previously scheduled remote skills session. The instructor and student are in separate locations, so each has a couple pairs of gloves, a 10-pack of sterile 4" x 4" gauze sponges, and an epinephrine autoinjector training device. The student and instructor are each positioned in front of their own device's camera in a way that provides a clear view of skills using the equipment at hand. Here we recommend using a modified standard approach—an instructor demonstration followed by a student demonstration using a Scenario Sheet for reference. The instructor offers prompts and direction as needed for skills practice.

Practicing with Skill Sheets

Students first view the lesson video in the traditional classroom setting or in the online portion of a blended learning class. Then the instructor demonstrates the skill in real time to reinforce what has been presented on the video. A high-quality real-time skill demonstration is essential. Instructors may choose to provide a more detailed demonstration using the WHOLE-PART-WHOLE method:[32]

1. **WHOLE:** The instructor demonstrates the entire skill, beginning to end, while briefly naming each action or step.
2. **PART:** The instructor demonstrates the skill again, step-by-step, explaining each part in detail.
3. **WHOLE:** The instructor demonstrates the entire skill, beginning to end, without interruption and usually without commentary.

Following the demonstration, arrange students in small groups of no more than 3 students. Students assume the role of First Aid and/or CPR AED Provider(s) and Prompter. One student prompts the others by reading the skill steps from the Skill Sheet while another student performs the skills. Students rotate through the roles until all have acted as Prompter and Provider. This role-playing from different perspectives fosters self-discovery and naturally increases the number of repetitions, helping students integrate both knowledge and skill performance.

During small group practice, instructors assess the students' skill competency. The instructor circulates through the classroom, answering questions, correcting errors in technique, providing constructive feedback, and ensuring adequate practice time for students to gain skill proficiency. Skill Sheets can also be used by the instructor for reference during demonstration and/or by the student for practice.

> *Please Note: To provide students the necessary practice in preparation for performance evaluation, there are no Video-Guided Practice or skill sheets for Severe, Life-Threatening External Bleeding or Severe Allergic Reaction. These skills are taught with Scenario Sheets.*

Practicing with Scenario Sheets

Scenario Sheets are practice tools used to help simulate real-world medical emergencies. They provide a description of circumstances (a short scenario) followed by a scripted, standardized sequence of procedures, actions, and prompts to guide the practice. Instructors or students may adjust the scenarios by filling in the blanks in the scenario to reflect the student's occupational setting, presenting situations that are familiar to the student. This helps students learn in such a way that it relates to them and applies to their real-world setting. Brackets of each Scenario Sheet provide an example of how the scenarios can be adjusted.

> *You are a trained CPR provider responding to [_a text from your workplace emergency notification system_] of "a person having a seizure" in [_the storeroom_]. As you approach the scene, you see an untrained coworker kneeling next to a motionless adult lying on the floor. The coworker 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 one-way valve with your first aid kit. Demonstrate what actions you would take next.*
>
> *You are a designated first aid provider responding to [_a wireless emergency alert on your phone_] for a person stung by bees. As you reach the scene, you see [_a building maintenance worker_] sitting on the [_ground next to the back entrance to the building_]. The person, speaking in a hoarse voice, says they were [_changing a burnt-out security light_] and disturbed a beehive [_in the wall_]. They were stung multiple times in the head and face. You have disposable gloves and a first aid kit. Your organization stocks epinephrine autoinjectors and stores them nearby in the [_front main office_], where an AED is also kept. Demonstrate what actions you would take next.*

The instructor should give a demonstration or an explanation of how students use Scenario Sheets to practice. Students are then arranged in small groups of no more than 3 students to 1 manikin (where manikins are required). Students assume the role of first aid and/or

32 2002 National Guidelines for Educating EMS Instructors. Module 17 - Teaching Psychomotor Skills. https://one.nhtsa.gov/people/injury/ems/instructor/instructor_ems/2002_national_guidelines.htm [Accessed 2/1/21]

CPR AED Provider and Prompter. The Prompter starts by reading the scenario aloud.

Once the scenario has been read, the Provider demonstrates what actions they would take next to simulate delivering appropriate emergency care. The Prompter provides directive information about the victim only as needed. For example, when a Provider assesses responsiveness, the Prompter states, "Person is unresponsive."

If the Provider makes a mistake or forgets to do something, the Prompter can assist them by telling them what action is necessary according to the performance criteria on the Scenario Sheet. During the small group practice, instructors assess the students as they practice. The instructor circulates through the classroom, answering questions, correcting errors in technique, and providing constructive feedback. This continues to the end of the scenario. Following the scenario, students should briefly discuss what went right and what needed improvement. Students should rotate through the roles until all have played Prompter and Provider.

Instructors may also play the role of Prompter for a whole class, or as Prompter and as a second Provider when necessary for the class format and delivery method (for example, in the in person skills session of a blended learning class held for a single student).

Please note: Practicing with Scenario Sheets is an imperfect simulation of reality. Real-life emergency care occurs in a complex reality that requires a continuous and constant process of observing and interacting with the ill or injured person, equipment, other providers, and, depending on the provider's occupation, family members or bystanders.

Evaluation

Performance Evaluation Is Required

A certification card may not be issued unless each student demonstrates achievement of the required skills and completes a Performance Evaluation (skill test). There are five Performance Evaluations, and the one(s) that are required vary by the class type and certification offered.

- Performance Evaluation One:
  Adult – One-Provider CPR AED
- Performance Evaluation Two:
  Child – One-Provider CPR AED
- Performance Evaluation Three:
  Infant – One-Provider CPR
- Performance Evaluation Four: Adult First Aid – Severe, Life-Threatening External Bleeding
- Performance Evaluation Five:
  Adult First Aid – Severe Allergic Reaction

To see what Performance Evaluations are required in each class type, see the "At-a-Glance" Class and Certification Type Tables beginning on page 38.

The Instructor has the option to conduct the applicable required Performance Evaluation(s) at the end of the segment, so an evaluation lesson is provided there. Instructors may choose to group Performance Evaluations at the end of the class, however all required evaluations must be conducted and completed for the class type and certification.

The Performance Evaluation Sheets are included on the following pages, which may be duplicated.

Conducting Performance Evaluation

To conduct a Performance Evaluation, the instructor starts by reading the scenario aloud to the student. Once the scenario has been described, the student should begin promptly after the instructor says, "Demonstrate what actions you would take next." The student should do whatever they think is necessary, determining for themselves what actions to take. If they make a mistake or forget to do something, they should do their best to correct the error and keep going. The instructor should not coach the student or answer questions about first aid and/or CPR AED procedures, skills, or actions. The instructor should only offer the information that is in the scenario and Instructor Prompt column when appropriate. A CPR feedback device is strongly recommended for accuracy during CPR performance evaluation.

1. Whenever possible, conduct the Performance Evaluations in private.
2. Carefully watch the actions taken for each procedure to make sure they are correctly performed according to the performance criteria listed.
3. When an action requires feedback to move on, provide the indicated Instructor Prompt.
4. Check off the box in each row of procedures as the student successfully completes it.
5. During Performance Evaluation of adult, child, or infant CPR, use a stopwatch to ensure an accurate chest compression rate of 100–120 times per minute.
6. In the adult CPR AED scenario, the instructor should play the role of a bystander bringing an AED to the student being evaluated (or verbalize bringing the AED if delivering the skill evaluation via RSV).
7. When the scenario is complete, check off either the box stating the student did or did not successfully complete it.
8. If the student did not correctly perform all listed actions (there is at least one unchecked box), the student must receive remediation.
9. Sign the Performance Evaluation and enter your instructor registry number attesting that you have conducted the Performance Evaluation.
10. Conduct each Performance Evaluation in a similar way.

Please note: Performance Evaluations are a secondary record of training. HSI strongly recommends that Training Centers keep the Performance Evaluations for any student who fails to successfully complete them.

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	▸ 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.	***"Scene is safe."*** ***"Person is unresponsive."*** ***"EMS has been activated."*** ***"The coworker will get the AED."***	☐
Assesses Breathing	▸ Assesses breathing for no more than 10 seconds.	***"The person is gasping slowly."***	☐
Starts High-Quality CPR	▸ 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	▸ 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	▸ Repeats a second CPR cycle of 30:2 compressions-to-breaths.	***[Student needs to complete this cycle before "coworker" arrives with AED.]***	☐

Continued on Next Page ›

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Operates the AED	▸ Powers on the AED. Bares the chest. ▸ Correctly applies AED pads. ▸ Follows AED prompts.	***[Instructor in the role of coworker]*** ***"Here is the AED."***	☐
Clears for Analysis	▸ Makes sure no one is touching the person.	***[AED] "Analyzing."***	☐
Safely Delivers Shock	▸ Makes sure no one is touching the person. ▸ Presses the shock button.	***[AED] "Shock advised."*** ***[Instructor] "Person's muscles contract suddenly."***	☐
Continues High-Quality CPR	▸ Immediately resumes high-quality chest compressions in less than 10 seconds. ▸ Completes a third cycle of 30:2 compressions-to-breaths.		☐
Removes PPE	▸ Correctly removes and disposes of gloves. ▸ Verbalizes washing hands immediately after removing gloves.	***[Instructor] "EMS arrives and takes over. Please demonstrate how to remove your PPE and what actions you would take next."***	☐
END PERFORMANCE EVALUATION			

☐ Successfully Completed. ☐ Not Successfully Completed. Remediation Required.

Signature of HSI Authorized Instructor _____

HSI Instructor Registry Number: _____

performance evaluation two

CHILD – ONE-PROVIDER CPR AED

Student Name_____ Class Date_____

You are a trained CPR AED provider responding to an emergency alert for a child passed out on the playground. As you approach the scene, you see an untrained coworker kneeling next to a motionless child lying on the ground. The bystander says, "He was just kicking the soccer ball around and collapsed. He's only seven!" You have appropriate PPE. There is an AED nearby. You have a CPR mask with a 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	▸ 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.	***"Scene is safe."*** ***"Child is unresponsive."*** ***"EMS has been activated."*** ***"The coworker will get the AED."***	☐
Assesses Breathing	▸ Assesses breathing for no more than 10 seconds.	***"The child is not breathing."***	☐
Starts High-Quality CPR	▸ Immediately starts CPR, beginning with chest compressions. ▸ Performs 30 high-quality chest compressions. ▸ Places 1 or 2 hands on the center of the chest. ▸ 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	▸ Seals the CPR mask against the child'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 chest high-quality chest compressions in less than 10 seconds.		☐
Continues High-Quality CPR	▸ Repeats a second CPR cycle of 30:2 compressions-to-breaths.	***[Student needs to complete this cycle before coworker arrives with AED.]***	☐
Operates the AED	▸ Powers on the AED. Bares the chest. ▸ Switches AED to child use (if required by AED). ▸ Correctly applies pediatric AED pads. ▸ Follows AED prompts.	***[Instructor in the role of coworker]*** ***"Here is the AED."***	☐

Continued on Next Page ›

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Clears for Analysis	▸ Makes sure no one is touching the child.	***[AED] "Analyzing."***	☐
Safely Delivers Shock	▸ Makes sure no one is touching the child. ▸ Presses shock button.	***[AED] "Shock advised."*** ***[Instructor] "Child's muscles contract suddenly."***	☐
Continues High-Quality CPR	▸ Immediately resumes high-quality chest compressions in less than 10 seconds. ▸ Completes a third cycle of 30:2 compressions-to-breaths.		☐
Removes PPE	▸ Correctly removes and disposes of gloves. ▸ Verbalizes washing hands immediately after removing gloves.	***[Instructor] "EMS arrives and takes over. Please demonstrate how to remove your PPE and what actions you would take next."***	☐
END PERFORMANCE EVALUATION			

☐ Successfully Completed. ☐ Not Successfully Completed. Remediation Required.

Signature of HSI Authorized Instructor _____

HSI Instructor Registry Number: _____

performance evaluation three

INFANT – ONE-PROVIDER CPR

Student Name_____ Class Date_____

You are a trained CPR AED provider responding to repeated, panic-stricken shouts of "Help!" As you reach the scene, an obviously distraught teenager hands you a limp infant, pleading, "Help me… she's not breathing!" You have appropriate PPE. There is no AED nearby. You have an infant CPR mask with a 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	▸ 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.	***"Scene is safe."*** ***"Infant is unresponsive."*** ***"EMS has been activated.***	☐
Assesses Breathing	▸ Assesses breathing for no more than 10 seconds.	***"The infant is not breathing."***	☐
Starts High-Quality CPR	▸ Immediately starts CPR, beginning with chest compressions. ▸ Performs 30 high-quality chest compressions. ▸ Correctly uses one of three hand-position techniques: 2-Finger, 2-Thumb Encircling-Hands, or heel of one hand. ▸ Does not press the tip of the breastbone. ▸ Compresses at least 1/3 depth of chest or about 1½ inches (4 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	▸ Seals a CPR mask against the infant'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	▸ Repeats a second CPR cycle of 30:2 compressions-to-breaths.		☐
	▸ Completes a third cycle of 30:2 compressions-to-breaths.		☐

Continued on Next Page ›

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Removes PPE	▸ Correctly removes and disposes of gloves. ▸ Verbalizes washing hands immediately after removing gloves.	***"EMS arrives and takes over. Please demonstrate how to remove your gloves and what actions you would take next."***	☐
END PERFORMANCE EVALUATION			

☐ Successfully Completed. ☐ Not Successfully Completed. Remediation Required.

Signature of HSI Authorized Instructor _____

HSI Instructor Registry Number: _____

performance evaluation four

ADULT FIRST AID – SEVERE, LIFE-THREATENING EXTERNAL BLEEDING

Student Name_____ Class Date_____

You are a trained first aid provider responding to a call received over your workplace two-way radio for a "person hit by gunfire." The shooter has fled. The scene is safe. You see a person sitting on the floor holding their hand over a bloody wound on their thigh. You have appropriate PPE and a first aid kit with a 10-pack of sterile 4" x 4" gauze sponges, but no hemostatic dressings or a tourniquet. Demonstrate what actions you would take next.

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Performs Assessment	▸ Assesses scene safety. ▸ Takes standard precautions (at a minimum, puts on disposable gloves). ▸ 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.	***"Shooter has fled. The scene is safe."*** ***"Person is responsive."*** ***"EMS/EAP activated."*** ***"Other first aid providers are on the way, bringing an AED and additional first aid kits."***	☐
Assesses Breathing	▸ Assesses breathing for no more than 10 seconds.	***"Person is breathing normally."***	☐
Obtains Consent	▸ Introduces self and asks, "May I help you?"	***"Person consents."***	☐
Assesses for Life-Threatening Conditions	▸ Quickly scans the person for life-threatening conditions.	***"The person is visibly shaking and pressing their hand over an obvious thigh wound. Blood is leaking around their hand and dripping onto the floor."***	☐
Immediately Provides Appropriate First Aid	▸ Exposes the wound. ▸ Applies a single stack of 10 sterile 4" x 4" gauze pads over wound. ▸ Applies direct manual pressure over the wound using the heel of one hand with the other hand stacked on top of the first or the pads of 3 fingers of each of hand stacked on top of each other.	***"Blood is flowing continuously from the wound."***	☐
Maintains and Increases Pressure	▸ Increases direct pressure over the wound. ▸ Doesn't remove pressure to add more gauze and doesn't remove blood-soaked materials.	***[Instructor, after about another 5 seconds] "The bleeding has stopped."***	☐
Applies Bandage Over Dressing	▸ Wraps an elastic or self-adhesive roller bandage firmly over the gauze to help maintain pressure.		☐

Continued on Next Page ›

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Removes PPE	▸ Correctly removes and disposes of gloves. ▸ Verbalizes washing hands immediately after removing gloves.	***[Instructor] "EMS arrives and takes over. Please demonstrate how to remove your gloves and what actions you would take next."***	☐
END PERFORMANCE EVALUATION			

☐ Successfully Completed. ☐ Not Successfully Completed. Remediation Required.

Signature of HSI Authorized Instructor _____

HSI Instructor Registry Number: _____

performance evaluation five

ADULT FIRST AID – SEVERE ALLERGIC REACTION

Student Name_____ Class Date_____

You are a trained first aid provider responding to a call for help received over your workplace mobile device for a team member with trouble breathing. As you reach the scene, you see a person sitting at a break table. You have appropriate PPE and a first aid kit. Demonstrate what actions you would take next.

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Performs Assessment	▸ Assesses scene safety. ▸ Takes (or verbalizes taking) 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.	***"The scene is safe."*** ***"Person is responsive."*** ***"EMS/EAP activated."*** ***"Other first aid providers are on the way, bringing an AED and an additional first aid kit."***	☐
Assesses Breathing	▸ Assesses breathing for no more than 10 seconds.	***"Person is responsive and breathing."***	☐
Obtains Consent	▸ Introduces self and asks, "May I help you?"	***"Person consents."***	☐
Assesses for Life-Threatening Conditions	▸ Quickly scans the person for life-threatening conditions.	***"The person is in obvious distress - trembling, wheezing, and coughing. You see swelling of their lips, eyelids, and face. With difficulty the person says, "Nut allergies...ate...pretzel bite... had peanut... butter... inside."***	☐
Immediately Provides Appropriate First Aid	▸ Allows the person to find the most comfortable position in which to breathe.	***"Person wants to sit up."***	☐
Performs a Secondary Assessment	▸ Looks for medical identification jewelry.	***"Person is wearing a Medical Alert Bracelet on wrist that states, 'Nut Allergy - Use EpiPen®.'"*** ***[Instructor Note: Hand student an epinephrine autoinjector trainer. Say, "Here's their EpiPen®. They forgot how to use it."***	☐

Continued on Next Page ›

Procedure	Provider Action (Performance Criteria)	Instructor Prompt	Check Off
Correctly Uses Epinephrine Autoinjector Trainer	▸ Grasps epinephrine autoinjector trainer in fist with the orange tip pointing downward. ▸ Removes blue safety release. ▸ Positions trainer near middle of person's outer thigh. ▸ Swings and firmly pushes orange tip at a 90-degree angle against thigh until it clicks. ▸ Holds device firmly on thigh for 3 seconds. ▸ Removes the trainer from the thigh and massages the injection area for 10 seconds.	***[Instructor Note: Use instructions at the left are for the correct use of an EpiPen® epinephrine autoinjector trainer. If using a different manufacturer's training device, students should follow the manufacturer's instructions for use.]***	☐
END PERFORMANCE EVALUATION			

☐ Successfully Completed. ☐ Not Successfully Completed. Remediation Required.

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

Knowledge Evaluation Is Optional

Use of written exam(s) is optional, except when required by an employer, regulatory or occupational licensing agency or when challenging the course. The following exams are available and correspond to the Adult First Aid | CPR AED class types and certifications:

1	ADULT FIRST AID | ADULT CPR AED
2	ADULT FIRST AID | ADULT, CHILD, AND INFANT CPR AED
3	ADULT FIRST AID | ADULT AND CHILD CPR AED
4	ADULT FIRST AID | ADULT AND INFANT CPR AED
5	ADULT FIRST AID
6	ADULT, CHILD, AND INFANT CPR AED
7	ADULT AND CHILD CPR AED
8	ADULT AND INFANT CPR AED
9	ADULT CPR AED

These exams are valid, appropriately matched to content, and consistent with established item writing standards. Subjectively raising the passing score is improper as it may result in a person who has an adequate level of knowledge competence failing the exam.

HSI permits open-book exams. Open-book exams decrease test anxiety and emphasize critical thinking and problem solving over recall of memorized facts. Open-book exams mean that students may use reference materials to take exams. Students should not be allowed to openly discuss the exam with other students or the instructor. Their answers should be their own. Instructors may read aloud the exam to the students as necessary without providing the answers.

Consider the following tips to help prevent cheating in a traditional class setting.

1. Request a photo ID if you suspect someone may be taking the test in place of another student.
2. Before distributing the exams, remind students that those who are caught cheating are not eligible for certification.
3. Inform students that there is no talking among students during the exam. If a student has a question during the exam, ask that student to raise a hand and you will go to them.
4. Walk around the room throughout the exam. Do not do other work while monitoring the exam.

Class Evaluation Is Required

Encouraging class participants to provide feedback and then using that feedback to improve instruction is an essential aspect of any quality educational effort. HSI requires that students be given the opportunity to evaluate their class using the "Rate Your Program" class evaluation form. Completed class evaluations should be promptly delivered to the Training Center responsible for the class. Class participants may also provide feedback directly to HSI at emergencycare.hsi.com/quality-assurance-compliance.

Remediation

Remediation is the act or process of remedying (to solve, correct, or improve) a problem. Informal remediation occurs throughout the class as the instructor provides constructive feedback to help students learn and make the most of their abilities. Making sure students have plenty of time for repeated skill practice during the class will reduce the amount of formal remediation.

Formal remediation takes place directly after a student fails to successfully complete the required Performance Evaluations. Use the performance criteria in the Procedure column to objectively point out where required actions were ineffective or omitted. Review the performance criteria with the student. Ask the student what happened. Share your observations. Summarize the correct actions and what needs to improve.

Depending on the class format and delivery method there may be time for the student to practice the criteria needing improvement with another student or another instructor while other students complete their Performance Evaluations (this does not apply to the Challenge option).

If time allows, repeat the Performance Evaluation for the student following remediation, using a new Performance Evaluation sheet.

If there is a fundamental incompatibility in personalities between the student and the instructor conducting the Performance Evaluation, it may be necessary to have a different instructor conduct the second Performance Evaluation.

If a student requires more informal or formal remediation than can be reasonably provided during a class, recommend the student attend training again and do not issue a certification card.

AFTER THE CLASS

Documentation and Record Keeping

Class Roster

The most current HSI Adult First Aid | CPR AED Class Roster is the principal record of training (see Appendix). The Class Roster must be completed within 30 days of the training class. This time frame may be extended up to 60 days under extenuating circumstances.

A complete, accurate, and legible Class Roster reflecting the actual class date(s) of the training class (signed by the Authorized Instructor or Instructor Trainer or electronically submitted through Otis) is required for every HSI class. Clear, legible, and orderly Class Rosters (paper or electronic) must be kept by the Training Center for no less than three (3) years or as required for compliance with a specific state or federal regulation.

You may use a Class Roster of your own making, but it must contain the exact same data fields and attesting statement as the HSI Adult First Aid | CPR AED Class Roster. Signing or electronically submitting a Class

Roster is confirmation that all participants listed successfully completed the class and the required Performance Evaluations and met the terms and conditions for certification.

These terms and conditions are detailed in the Training Center Administrative Manual (TCAM). The TCAM is available at emergencycare.hsi.com/quality-assurance-compliance.

AT-A-GLANCE CLASS AND CERTIFICATION TYPES TABLES

The following tables provide direction on class and certification types by segment, lesson title, and approximate length, and include a reference to the procedures to be used accompanying that class type. Required lessons and Performance Evaluations are noted by a "•" for each class type. A "•*" (a • with an asterisk) indicates a required Student Hands-On Practice.

Performance Evaluation (skills test) may be done individually at the end of each associated lesson, segment, or collectively at the end of the class.

Adult education guidelines recommend a break for at least 5 minutes each hour. Class timing can vary. Because of this, no specific breaks have been designated in these tables. Class size, class location, Student-to-Instructor Ratios (SIR), and other factors will affect the actual schedule. Breaks should be provided but may be rearranged or combined as required or desired.

Projected times for lessons include brief introductions, video run times, Video-Guided Practice time, and answers to questions. Video-guided practice time is based on a 1:1 Student-to-Manikin Ratio. Lesson times are rounded to the nearest whole minute based on a 6:1 Student-to-Instructor Ratio. Stated class times are based on covering required lessons and practices, and Performance Evaluations at the maximum SIR of 2:1. Plan additional time for optional skill practices. Lesson times are influenced by class preparation, available equipment, skill practice method, instructor efficiency, and number of students, and will vary from course to course. These factors may increase or decrease the time needed to meet the required learning objectives.

At-a-Glance: Initial Training, Traditional Classroom

Class and Certification Types That Include Adult First Aid

* Topic Requires Hands-On Skill Practice

Class and Certification Types				Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Procedure Reference				Procedure for Adult First Aid, Adult CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid
Segment	Lesson Number	Lesson Title	Approx. Length (min.)					
Introductory	1	Introduction	4:00	•	•	•	•	•
	2	Legal Concepts	5:00	•	•	•	•	•
	3	Roles, Responsibilities, & Priorities	3:00	•	•	•	•	•
	4	Assessment	5:00	•*	•*	•*	•*	•*
Adult CPR AED	5	Adult – Sudden Cardiac Arrest (SCA)	6:00	•	•	•	•	
	6	Adult – Assessment & Chest Compressions	6:00	•*	•*	•*	•*	
	7	Adult – Rescue Breathing & Using a CPR Mask	6:00	•*	•*	•*	•*	

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Adult CPR AED	8	Adult – Automated External Defibrillation & Using an AED	6:00	•*	•*	•*	•*	
	9	Adult – One-Provider CPR AED	8:00	•*	•*	•*	•*	
	10	Adult – Additional CPR AED Considerations	7:00	•	•	•	•	
	11	Adult – Suspected Opioid-Associated Emergency (OAE)	6:00	•	•	•	•	
	12	Adult – Relief of Choking	8:00	•	•	•	•	
Adult First Aid	13	Adult First Aid Assessment	6:00	•	•	•	•	•
	14	Severe, Life-Threatening External Bleeding	12:00	•*	•*	•*	•*	•*
	15	Shock	4:00	•	•	•	•	•
	16	Minor Wounds	2:00	•	•	•	•	•
	17	Tooth Injuries	3:00	•	•	•	•	•
	18	Bleeding from the Nose	2:00	•	•	•	•	•
	19	Impaled Objects	3:00	•	•	•	•	•
	20	Eye Injuries (Impaled Objects)	3:00	•	•	•	•	•
	21	Amputation	5:00	•	•	•	•	•
	22	Internal Bleeding	3:00	•	•	•	•	•
	23	Open Chest Wound	4:00	•	•	•	•	•
	24	Open Abdominal Injury	3:00	•	•	•	•	•
	25	Head, Neck, or Spinal Injury	5:00	•	•	•	•	•
	26	Concussion	3:00	•	•	•	•	•
	27	Bone, Joint, & Muscle Injuries	9:00	•	•	•	•	•
	28	Burns	11:00	•	•	•	•	•
	29	Altered Mental Status	3:00	•	•	•	•	•
	30	Poisoning	10:00	•	•	•	•	•

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Adult First Aid	31	Difficulty Breathing	3:00	•	•	•	•	•
	32	Asthma	4:00	•	•	•	•	•
	33	Adult – Relief of Choking	5:00					•
	34	Severe Allergic Reaction	6:00	•*	•*	•*	•*	•*
	35	Heart Attack	6:00	•	•	•	•	•
	36	Stroke	3:00	•	•	•	•	•
	37	Seizure	3:00	•	•	•	•	•
	38	Diabetes & Hypoglycemia	3:00	•	•	•	•	•
	39	Presyncope & Syncope	6:00	•	•	•	•	•
	40	Heat Emergencies	6:00	•	•	•	•	•
	41	Cold Emergencies	7:00	•	•	•	•	•
	42	Bites & Stings	10:00	•	•	•	•	•
Child CPR AED	43	Child – Cardiac Arrest & Pediatric Chain of Survival	4:00		•	•		
	44	Child – Assessment & Chest Compressions	4:00		•*	•*		
	45	Child – Rescue Breathing & Using a CPR Mask	4:00		•*	•*		
	46	Child – Automated External Defibrillation & Using an AED	5:00		•*	•*		
	47	Child – One-Provider CPR AED	7:00		•*	•*		
	48	Child – Additional CPR AED Considerations	4:00		•	•		
	49	Child – Suspected Opioid-Associated Emergency	2:00		Recommended but Optional	Recommended but Optional		
	50	Child – Relief of Choking	6:00		•	•		

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Infant CPR AED	51	Infant – Cardiac Arrest & Pediatric Chain of Survival	3:00		•		•	
	52	Infant – Assessment & Chest Compressions	5:00		•*		•*	
	53	Infant – Rescue Breathing & Using a CPR Mask	6:00		•*		•*	
	54	Infant – Automated External Defibrillation & Using an AED	4:00		•		•	
	55	Infant – One-Provider CPR	9:00		•*		•*	
	56	Infant – Additional CPR AED Considerations	4:00		•		•	
	57	Infant – Suspected Opioid-Associated Emergency	2:00		Recommended but Optional		Recommended but Optional	
	58	Infant – Relief of Choking	6:00		•*		•*	
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•	
	2	Child – One-Provider CPR AED	9:00		•	•		
	3	Infant – One-Provider CPR	9:00		•		•	
	4	Adult First Aid – Severe, Life-Threatening External Bleeding	9:00	•	•	•	•	•
	5	Adult First Aid – Severe Allergic Reaction	9:00	•	•	•	•	•
		Conclusion	10:00	•	•	•	•	•
		Total Breaks		15:00	25:00	20:00	20:00	15:00
		Total Time		4 hrs 30 min.	6 hrs 13 min.	5 hrs 20 min.	5 hrs 23 min.	3 hrs 33 min.

Continued on Next Page ›

At-a-Glance: Initial Training, Traditional Classroom

CPR AED Class and Certification Types

* Topic Requires Hands-On Skill Practice

Class and Certification Types				Adult, Child, and Infant CPR AED	Adult and Child CPR AED	Adult and Infant CPR AED	Adult CPR AED
Procedure Reference				Procedure for Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult CPR AED
Segment	Lesson Number	Lesson Title	Approx. Length (min.)				
Introductory	1	Introduction	4:00	Recommended but Optional	Recommended but Optional	Recommended but Optional	Recommended but Optional
	2	Legal Concepts	5:00	Recommended but Optional	Recommended but Optional	Recommended but Optional	Recommended but Optional
	4	Assessment	5:00	Recommended but Optional	Recommended but Optional	Recommended but Optional	Recommended but Optional
Adult CPR AED	5	Adult – Sudden Cardiac Arrest (SCA)	6:00	•	•	•	•
	6	Adult – Assessment & Chest Compressions	6:00	•*	•*	•*	•*
	7	Adult – Rescue Breathing & Using a CPR Mask	6:00	•*	•*	•*	•*
	8	Adult – Automated External Defibrillation & Using an AED	6:00	•*	•*	•*	•*
	9	Adult – One-Provider CPR AED	8:00	•*	•*	•*	•*
	10	Adult – Additional CPR AED Considerations	7:00	•	•	•	•
	11	Adult – Suspected Opioid-Associated Emergency (OAE)	6:00	•	•	•	•
	12	Adult – Relief of Choking	8:00	•	•	•	•
Child CPR AED	43	Child – Cardiac Arrest & Pediatric Chain of Survival	4:00	•	•		
	44	Child – Assessment & Chest Compressions	4:00	•*	•*		
	45	Child – Rescue Breathing & Using a CPR Mask	4:00	•*	•*		
	46	Child – Automated External Defibrillation & Using an AED	5:00	•*	•*		
	47	Child – One-Provider CPR AED	7:00	•*	•*		

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult, Child, and Infant CPR AED	Adult and Child CPR AED	Adult and Infant CPR AED	Adult CPR AED
Child CPR AED	48	Child – Additional CPR AED Considerations	4:00	•	•		
	49	Child – Suspected Opioid-Associated Emergency	2:00	Recommended but Optional	Recommended but Optional		
	50	Child – Relief of Choking	6:00	•	•		
Infant CPR AED	51	Infant – Cardiac Arrest & Pediatric Chain of Survival	3:00	•		•	
	52	Infant – Assessment & Chest Compressions	5:00	•*		•*	
	53	Infant – Rescue Breathing & Using a CPR Mask	6:00	•*		•*	
	54	Infant – Automated External Defibrillation & Using an AED	4:00	•		•	
	55	Infant – One-Provider CPR	9:00	•*		•*	
	56	Infant – Additional CPR AED Considerations	4:00	•		•	
	57	Infant – Suspected Opioid-Associated Emergency	2:00	Recommended but Optional		Recommended but Optional	
	58	Infant – Relief of Choking	6:00	•*		•*	
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•
	2	Child – One-Provider CPR AED	9:00	•	•		
	3	Infant – One-Provider CPR	9:00	•		•	
		Conclusion	10:00	•	•	•	•
		Total Breaks		10:00	5:00	5:00	5:00
		Total Time		2 hrs 55 min.	2 hrs 2 min.	2 hrs 5 min.	1 hr 17 min.

Continued on Next Page ›

At-a-Glance: Initial Training, Blended Learning

Blended Class and Certification Types That Include Adult First Aid

* Topic Requires Hands-On Skill Practice

Class and Certification Types				Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Procedure				Procedure for Adult First Aid, Adult CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid, Adult CPR AED **and** Procedure for Pediatric CPR AED	Procedure for Adult First Aid
Segment	**Lesson Number**	**Lesson Title**	**Approx. Length (min.)**					
Introductory	1	Assessment	5:00	•*	•*	•*	•*	•*
Adult CPR AED	2	Adult – Assessment & Chest Compressions	6:00	•*	•*	•*	•*	
	3	Adult – Rescue Breathing & Using a CPR Mask	6:00	•*	•*	•*	•*	
	4	Adult – Automated External Defibrillation & Using an AED	6:00	•*	•*	•*	•*	
	5	Adult – One-Provider CPR AED	8:00	•*	•*	•*	•*	
Adult First Aid	6	Severe, Life-Threatening External Bleeding	12:00	•*	•*	•*	•*	•*
	7	Severe Allergic Reaction	6:00	•*	•*	•*	•*	•*
Child CPR AED	8	Child – Assessment & Chest Compressions	4:00		•*	•*		
	9	Child – Rescue Breathing & Using a CPR Mask	4:00		•*	•*		
	10	Child – Automated External Defibrillation & Using an AED	5:00		•*	•*		
	11	Child – One-Provider CPR AED	7:00		•*	•*		

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Infant CPR AED	12	Infant – Assessment & Chest Compressions	5:00		•*		•*	
	13	Infant – Rescue Breathing & Using a CPR Mask	6:00		•*		•*	
	14	Infant – One-Provider CPR	9:00		•*		•*	
	15	Infant – Relief of Choking	6:00		•*		•*	
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•	
	2	Child – One-Provider CPR AED	9:00		•	•		
	3	Infant – One-Provider CPR	9:00		•		•	
	4	Adult First Aid – Severe, Life-Threatening External Bleeding	9:00	•	•	•	•	•
	5	Adult First Aid – Severe Allergic Reaction	9:00	•	•	•	•	•
		Conclusion	10:00	•	•	•	•	•
		Total Breaks		5:00	10:00	5:00	5:00	0:00
		Total Time		1 hr 31 min.	2 hrs 40 min.	2 hrs 0 min.	2 hrs 6 min.	0 hr 51 min.

Continued on Next Page ›

At-a-Glance: Initial Training, Blended Learning

Blended CPR AED Class and Certification Types

Class and Certification Types				Adult, Child, and Infant CPR AED	Adult and Child CPR AED	Adult and Infant CPR AED	Adult CPR AED
Procedure				Procedure for Adult CPR AED and Procedure for Pediatric CPR AED	Procedure for Adult CPR AED and Procedure for Pediatric CPR AED	Procedure for Adult CPR AED and Procedure for Pediatric CPR AED	Procedure for Adult CPR AED
Segment	Lesson Number	Lesson Title	Approx. Length (min.)				
Introductory	1	Assessment	5:00	Recommended but Optional	Recommended but Optional	Recommended but Optional	Recommended but Optional
Adult CPR AED	2	Adult – Assessment & Chest Compressions	6:00	•*	•*	•*	•*
	3	Adult – Rescue Breathing & Using a CPR Mask	6:00	•*	•*	•*	•*
	4	Adult – Automated External Defibrillation & Using an AED	6:00	•*	•*	•*	•*
	5	Adult – One-Provider CPR AED	8:00	•*	•*	•*	•*
Child CPR AED	8	Child – Assessment & Chest Compressions	4:00	•*	•*		
	9	Child – Rescue Breathing & Using a CPR Mask	4:00	•*	•*		
	10	Child – Automated External Defibrillation & Using an AED	5:00	•*	•*		
	11	Child – One-Provider CPR AED	7:00	•*	•*		
Infant CPR AED	12	Infant – Assessment & Chest Compressions	5:00	•*		•*	
	13	Infant – Rescue Breathing & Using a CPR Mask	6:00	•*		•*	
	14	Infant – One-Provider CPR	9:00	•*		•*	
	15	Infant – Relief of Choking	6:00	•*		•*	

Continued on Next Page ›

Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult, Child, and Infant CPR AED	Adult and Child CPR AED	Adult and Infant CPR AED	Adult CPR AED
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•
	2	Child – One-Provider CPR AED	9:00	•	•		
	3	Infant – One-Provider CPR	9:00	•		•	
		Conclusion	10:00	•	•	•	•
		Total Breaks		5:00	5:00	5:00	0:00
		Total Time		1 hr 54 min.	1 hr 19 min.	1 hr 27 min.	0 hr 45 min.

Continued on Next Page ›

At-a-Glance: Challenge

Challenge Certification Types That Include Adult First Aid

Certification Types								
Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult First Aid | Adult CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Infant CPR AED	Adult First Aid
Introductory	1	Introduction to Challenge	5:00	•	•	•	•	•
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•	
	2	Child – One-Provider CPR AED	9:00		•	•		
	3	Infant – One-Provider CPR	9:00		•		•	
	4	Adult First Aid – Severe, Life-Threatening External Bleeding	9:00	•	•	•	•	•
	5	Adult First Aid – Severe Allergic Reaction	9:00	•	•	•	•	•
Written Exam		Written Exam	Varies	•	•	•	•	•
		Conclusion	10:00	•	•	•	•	•
		Total Breaks		0:00	0:00	0:00	0:00	0:00
		Total Time*		0 hr 42 min.	1 hr 0 min.	0 hr 51 min.	0 hr 51 min.	0 hr 33 min.

*Not including time for Written Exam (varies by class type)

At-a-Glance: Challenge

Challenge CPR AED Certification Types

Certification Types							
Segment	Lesson Number	Lesson Title	Approx. Length (min.)	Adult, Child, and Infant CPR AED	Adult and Child CPR AED	Adult and Infant CPR AED	Adult CPR AED
Introductory		Introduction to Challenge	5:00	•	•	•	•
Performance Evaluation	1	Adult – One-Provider CPR AED	9:00	•	•	•	•
	2	Child – One-Provider CPR AED	9:00	•	•		
	3	Infant – One-Provider CPR	9:00	•		•	
Written Exam		Written Exam	Varies	•	•	•	•
		Conclusion	10:00	•	•	•	•
		Total Breaks		0:00	0:00	0:00	0:00
		Total Time*		0 hr 42 min.	0 hr 33 min.	0 hr 33 min.	0 hr 24 min.

*Not including time for Written Exam (varies by class type)

part four

LESSON PLANS

About the Lesson Plans and Class Types

Mixing and matching Lesson Plans provides instructors a great deal of flexibility to meet the needs of students. Instructors may select, omit, or combine the main lesson segments to produce the following class types and certifications:

1	ADULT FIRST AID | ADULT CPR AED
2	ADULT FIRST AID | ADULT, CHILD, AND INFANT CPR AED
3	ADULT FIRST AID | ADULT AND CHILD CPR AED
4	ADULT FIRST AID | ADULT AND INFANT CPR AED
5	ADULT FIRST AID
6	ADULT, CHILD, AND INFANT CPR AED
7	ADULT AND CHILD CPR AED
8	ADULT AND INFANT CPR AED
9	ADULT CPR AED

For a summary of required lessons, see Part Three: Teaching Adult First Aid | CPR AED and the "At-a-Glance" Class and Certification Type Tables, beginning on page 38.

As described in Part Three (Program Flexibility), the foundation of this training program is the Adult First Aid | Adult CPR AED class type.

This Instructor Guide and the Class Presentations place the pediatric lessons after the Adult First Aid lessons. This allows an instructor to teach the foundational Adult CPR AED and Adult First Aid lessons, and then choose to add the pediatric lessons for students who require or desire those ages for certification.

About the Procedure Graphics

Trained first aid and CPR AED providers should follow established procedures for first aid and CPR AED. This step-by-step guidance for performing first aid and CPR AED is based on scientific evidence, national guidelines, and the consensus of experts. In this training program, this guidance is represented by four procedure graphics found in the Adult First Aid | CPR AED Skill Guide:

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

An Instructional Note in each lesson indicates which graphic an instructor should refer to, depending on which class type is being taught. See Part Three: Teaching Adult First Aid | CPR AED and the "At-a-Glance" Class and Certification Type Tables, beginning on page 38.

INITIAL TRAINING, TRADITIONAL CLASSROOM

The following matters apply to initial training in traditional classrooms for all class types.

Learning Environment

The ideal traditional classroom learning environment is comfortable, efficient, and distraction-free with sufficient space, seating, resources, and equipment. Instructors should take reasonable efforts to ensure a physically safe, comfortable, and appropriate learning environment. The room should be well lit, well ventilated, and comfortable in temperature.

Nevertheless, instructors must often create a makeshift classroom out of a noisy shop floor, cafeteria, conference room, and even outdoor spaces. Such challenges should be anticipated, and the learning environment be made as favorable as possible. With personal safety and professionalism in mind, *HSI strongly advises against conducting traditional classroom classes in the instructor's home - particularly private, one-to-one classes*. Whenever possible, training should take place in a professional business or education setting, public meeting space, or via RSV.

Classroom Space and SIR

Allow at least 15 to 17 square feet per student whenever possible.[33] Students should have adequate space for individual and/or small group activities using manikins and equipment. In a maximum capacity traditional initial or renewal class, the room should be large enough to accommodate chairs, tables, and skill practice space for up to 12 students per instructor and no more than 3 students to 1 manikin. Research has shown that as the size of the student group increases, the ability of instructors to detect performance errors decreases. For this reason, *we strongly recommend* a maximum Student-to-Instructor Ratio (SIR) of 6:1 for CPR AED courses.[34]

33 Laird, Holton, Naquin. Approaches to Training and Development: Third Edition Revised and Updated (New Perspectives in Organizational Learning, Performance, and Change) 2003

34 Nabecker S, Huwendiek S, Theiler L, Huber M, Petrowski K, Greif R. The effective group size for teaching cardiopulmonary resuscitation skills - A randomized controlled simulation trial. Resuscitation. 2021 Aug; 165:77-82. doi: 10.1016/j.resuscitation.2021.05.034.

CLASSROOM HEALTH AND SAFETY

Protecting Health

To help prevent the spread of infectious disease, both instructors and students should:

Wash Hands.

Wash hands often with soap and water for at least 20 seconds. Keeping hands clean is one of the most important steps instructors and students can take to avoid getting sick and spreading germs to others. For more information, visit the Centers for Disease Control and Prevention hand washing website at cdc.gov/handwashing/.[35]

Sanitize & Disinfect.

Make alcohol-based hand rubs available during all in person training, to be used by all instructors and students before, during, and after training. Alcohol-based rubs with 60% or more alcohol can reduce germs on hands.[36]

Follow the CDC guidance for "Cleaning and Disinfecting Public Spaces, Workplaces, Businesses, Schools, and Homes"[37] to reduce the risk of exposure to infectious disease, including the virus that causes COVID-19 and similar variants.

Follow all recommendations regarding decontamination, disinfection, and sanitary practice supplied by the manufacturer of the manikins used during training.

Stay Home If Ill.

Reschedule training if ill or if hands, mouth, or lips have uncovered open wounds or sores.

Use PPE.

Train with sanitary personal protective equipment (PPE), including but not limited to disposable face masks, safety glasses, face shields, pocket masks with one-way valves, and gloves.

Having students train with disposable PPE (gloves, face masks, and/or face shields) during this class is strongly recommended. It can improve realism and help expose situations that require unique problem-solving that cannot be replicated in a typical classroom setting.

If the instructor chooses not to train with disposable PPE, students should use the phrase, "I've taken standard precautions," or something similar, to indicate the critical importance of infection prevention practices in all first aid and CPR settings.

Follow Recommendations & Take Reasonable Precautions.

Follow current local, state, and federal recommendations from health authorities regarding physical (often called social) distancing, mask wearing, reducing aerosol transmission, etc. Instructors may adapt training where guidelines from health authorities are in effect. For example, rescue breaths with a CPR mask and one-way valve may need to be simulated.

Students must correctly demonstrate how to place the mask on the manikin, open the airway with a head tilt–chin lift, and then verbalize that they would give 2 breaths, 1 second in length for each, and watch for visible chest rise. Students should not share a CPR mask or valves.

> *Take all other reasonable precautions to minimize the risk of infectious disease transmission.*

35 https://www.cdc.gov/handwashing/

36 https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/hand-sanitizer.html

37 Cleaning and Disinfecting Your Facility. https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html [Retrieved 8/10/2021]

CLASSROOM HEALTH AND SAFETY

Preventing Injury

To help prevent classroom injury, instructors should:

Avoid Harmful Situations.

Warn students to avoid awkward or extreme postures of the body. Improper lifting and moving is a leading cause of back injury.

Encourage students who have a history of back problems or other disabilities to request reasonable accommodations.

Use Training Devices.

Prohibit inappropriate psychomotor skills practice on humans. Examples include but are not limited to abdominal thrusts, rescue breathing, chest compressions, and defibrillation. These skills must be performed on training manikins designed for that purpose.

Use device trainers to simulate attributes of actual devices. *Under no circumstances should actual devices such as a live AED or an actual epinephrine autoinjector be used during training.*

Be Prepared.

Know and share with students:

- The location of the fire/emergency exits, fire alarm pull stations, and emergency evacuation routes.
- The location of a first aid kit, bleeding control kit, AED, and fire extinguisher.
- Pertinent elements of any emergency action plan specific to the worksite/training location.

Use Appropriate Behavior.

Model appropriate behavior. Discourage students from smoking, eating, and engaging in inappropriate behavior in the classroom.

CLASS PREPARATION

About a Month or Two Before Class

- ✓ Secure a classroom with an adequate space and learning environment.
- ✓ Confirm the date, location, and number of students.
- ✓ Reserve training equipment for the class type and age ranges to be taught.
- ✓ Schedule and confirm additional HSI Authorized Instructors as required/preferred.
- ✓ Order from HSI the appropriate certification cards, skill guides, and other training materials as necessary.

About Three Weeks Before Class

- ✓ Send a pre-class letter or email to each student that:
  - › Confirms the class location, agenda, and time.
  - › Encourages them to check with their employer or accrediting, credentialing, or licensing agency to ensure the class will meet their requirements before attending training.
  - › Informs them that the class will involve close contact with other students, resuscitation manikins, and other equipment.
  - › Reviews any pertinent recommendations from local, state, or federal health authorities that affect what participants should expect in the classroom setting.
  - › Requests that they reschedule their training if they may have been exposed to an infectious disease; are experiencing fever, coughing, shortness of breath, diarrhea, fatigue, or muscle aches; or if they have open wounds or sores on their hands or mouth.
  - › Describes the steps you take to protect students and help ensure a safe and healthy learning environment (hand hygiene, cleaning and disinfecting of surfaces and equipment, physical distancing, etc.).
  - › Reminds them to wear loose, comfortable clothing suitable for skill practice.
  - › Advises them to let you know if they have a disability and what reasonable accommodations may be necessary (see Americans with Disabilities Act in the TCAM for more information).
  - › Provides your contact information.

A Few Days Before Class

- ✓ If you may have been exposed to an infectious disease; are experiencing fever, coughing, shortness of breath, diarrhea, fatigue, or muscle aches; or have open wounds or sores on your hands or mouth, find another instructor to teach the class or reschedule it.
- ✓ Make sure you have adequate copies of essential class paperwork (or access to electronic versions).
- ✓ Briefly review the Traditional Classroom, Initial Training Lesson Plans for the class type and age ranges to be taught.
- ✓ Confirm your internet connection will be available to log in to Otis if you plan to stream the Class Presentation(s) or download it to the HSI Instructor Desktop Video Player or Mobile App and verify the media plays as expected.

Day of Class

- ✓ Arrive early. Give yourself plenty of time to get set up and organized.
  - › Greet students as they arrive, introducing yourself to each one.
  - › Be friendly, considerate, respectful, and professional.
  - › Have students sign in on a sign-in sheet or the Class Roster.
- ✓ Have students complete a name tag or tent card and select a seat.
- ✓ Begin class. Start on time.
- ✓ Consider using a short, appropriate icebreaker as a warm-up exercise.
  - › Great ideas for these activities can be found on the internet by searching with the key word “icebreakers.”
- ✓ Establish a connection with the students.
  - › Ask about previous training. Connect the students’ experiences and knowledge to this class.
- ✓ Briefly cover the class goal, agenda, breaks, certification requirements, and facility and classroom safety.
  - › Know and share the locations of the following: bathrooms, fire/emergency exits, fire alarm pull stations, best emergency evacuation route, first aid kits, emergency oxygen, and closest AED.
- ✓ Distribute the HSI Adult First Aid | CPR AED Skill Guide.

CLASS EQUIPMENT AND MATERIALS CHECKLIST FOR ALL CLASS TYPES

The table below lists equipment and materials required for all nine class types.

Required Class Materials

- ✓ Adult First Aid | CPR AED Lesson Plans, Instructor Guide, 1 per instructor
- ✓ Class Roster, 1 copy
- ✓ Adult First Aid | CPR AED Initial Class Presentation for the class type you are teaching (select in Otis)
- ✓ Adult First Aid | CPR AED Skill Guide, minimum 1 for each 3 students
- ✓ Certification Card(s) purchased from HSI for the class type you are teaching (print or digital, 1 per student)

Required Class Equipment

- ✓ Desktop or laptop computer (Windows or Mac), or smartphone or tablet, 1 per instructor
- ✓ Internet connection (for streaming), HSI Instructor Desktop Video Player or HSI Instructor Mobile App with downloaded Class Presentation media
- ✓ Video monitor or computer projector and screen large enough for all students in class to see
- ✓ Disposable gloves (nonlatex), minimum 2 pair for each student

Additional Recommended Tools

In-person traditional classroom format:

- ✓ Pens or pencils, 1 for each student
- ✓ Blankets, kneeling pads, or mats, 1 for each 3 students
- ✓ Name tags or tent cards, 1 for each student
- ✓ Spare projector bulb (as needed)
- ✓ Extension cord(s)
- ✓ Multi-strip power surge protector
- ✓ Whiteboard with dry erase pens and eraser
- ✓ Large black markers for student name tags or tent cards
- ✓ Large envelope for class paperwork

REQUIRED CLASS EQUIPMENT AND MATERIALS

The table below lists required equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR manikins, minimum 1 for each 3 students (1:1 recommended)	• Adult	• Adult/Child	• Infant	
CPR manikin cleaning and disinfecting wipes	•	•	•	
AED Trainer with pads, minimum 1 for each 3 students	• Adult pads	• Adult or pediatric pads	• Pediatric pads	
CPR mask and one-way disposable mouthpiece with valve for CPR mask, 1 for each student	• Adult	• Adult/Child	• Infant	
Stopwatch for CPR AED Performance Evaluation, minimum 1 per instructor (online, smartphone app, or handheld digital)	•	•	•	
Performance Evaluation 1: Adult – One-Provider CPR AED, 1 per student	•			
Performance Evaluation 2: Child – One-Provider CPR AED, 1 per student		•		
Performance Evaluation 3: Infant – One-Provider CPR, 1 per student			•	
Performance Evaluation 4: Adult First Aid – Severe Life-Threatening External Bleeding, 1 per student				•
Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction, 1 per student				•
10-pack of clean 4" x 4" gauze sponges, minimum 1 for each 3 students				•
Clean elastic or self-adhesive roller bandage, minimum 1 for each 3 students				•
Epinephrine autoinjector trainer, minimum 1 for each 3 students				•

OPTIONAL CLASS EQUIPMENT AND MATERIALS

The table below lists optional equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR feedback devices, 1 per manikin (or built in)	•	•	•	•
Naloxone administration training device, minimum 1 for each 3 students	•	•	•	•
Malleable splints. Self-adhesive roller or elastic bandages, or plastic cling film. Minimum 1 set for each 3 students				•
Improvised splints. Materials for improvising, padding, and binding. Minimum 1 set for each 3 students				•
Adult CPR manikins for compression-only CPR practice, minimum 1 each for each 3 students (1:1 recommended) CPR manikin cleaning and disinfecting wipes				•

segment one

INTRODUCTORY

lesson one

INTRODUCTION

PREPARE

Duration
4 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:

- Explain the goal of the class.
- Define first aid, first aid provider, and conventional CPR.

Why This Topic Matters

Understanding the class goal is an important first step toward clearly communicating expectations to students.

Play the Video

Instructional Notes

1. It is helpful to let your students know right at the start of class that your goal is to create a safe learning environment. Mistakes are learning opportunities. You are here to help them make the most of their knowledge and skills in adult first aid and/or CPR AED. This will help students relax and feel more comfortable.
2. If possible, use contextual learning to help students learn in such a way that it relates to them and applies to their real-world setting (manufacturing, construction, maritime, office setting, school setting, etc.).
3. The lessons in this introductory segment are optional when teaching only Adult and/or Child and/or Infant CPR AED; however, these lessons are recommended, as the concepts are relevant for both a first aid provider and/or a CPR AED provider.

WRAP UP

Reinforce Key Points as Needed

1. The goal of this class is for participants to gain or improve knowledge and skill proficiency in adult first aid, conventional adult CPR AED, or both (depending on the class type).
2. First aid is the initial care provided for an acute illness or injury.
3. A first aid provider is someone trained in first aid who can recognize, assess, and prioritize the need for first aid, as well as provide care by using appropriate skill competencies.
4. Conventional CPR is an emergency procedure that combines chest compressions with rescue breaths to circulate oxygenated blood to the brain and heart, increasing the possibility of successful resuscitation.

Ask a Review Question as Needed

First aid is the initial care provided for _____.

a. Conventional CPR
b. Acute illness or injury
c. Prevention of illness and injury
d. Circulating oxygenated blood to the brain and heart

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

A healthy lifestyle combined with a commitment to safety at work, home, and play can prevent many needless disabling injuries, illnesses, and deaths.

lesson two

LEGAL CONCEPTS

PREPARE

Duration
5 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:

- Summarize the basic legal concepts that apply to providing adult first aid and/or CPR AED.

Why This Topic Matters

There are relevant legal concepts that all first aid and/or CPR AED providers should be familiar with.

Play the Video

Instructional Notes

Whenever possible, instructors should provide students a copy of (or an internet link to) the current Good Samaritan laws for the state they are teaching in. Using the following search string will usually produce the best result: “Good Samaritan Act; immunity from civil liability, [state]” – where “[state]” is the state law desired.

WRAP UP

Reinforce Key Points as Needed

1. In the U.S., in general circumstances, there is no duty to rescue.
2. A Good Samaritan is defined as "one who voluntarily renders aid to another in distress although under no duty to do so."
3. Consent means approval or agreement.
   a. Expressed consent can be given verbally, in writing, or non-verbally.
   b. Implied consent usually occurs when you're unable to communicate with the person, such as if they are unresponsive.
4. If you learn confidential medical information in your role as a first aid provider, it is your responsibility to keep it confidential.
5. Stay with an ill or injured person and continue to care for them until someone with equivalent or higher training takes over for you.

Ask a Review Question as Needed

Implied consent usually occurs when _____.

a. Consent is given verbally
b. Consent is given in writing
c. You are unable to communicate with the person
d. You learn confidential medical information in your role as a first aid provider

Ask For & Answer Questions Before Moving to the Next Lesson

lesson three

ROLES, RESPONSIBILITIES, & PRIORITIES

PREPARE

Duration
3 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

Begin the Lesson

This lesson applies to Adult First Aid only.

What Students Should Learn

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

- Recognize the first aid and/or CPR AED provider's role, responsibilities, and priorities.

Why This Topic Matters

A trained first aid provider must be able to recognize, assess, and prioritize the need for first aid. Doing so requires being able to recognize life-threatening conditions. There are situations where time is of the essence and delays can lead to serious, even fatal, consequences.

Play the Video

Instructional Notes

This lesson applies to Adult First Aid only.

WRAP UP

Reinforce Key Points as Needed

1. Life-threatening conditions include unresponsiveness, severe external bleeding, shock, altered mental status, difficult or no breathing, severe allergic reaction, choking, stroke, and chest pain or discomfort.
2. Learning, practicing, and using step-by-step procedures for handling these and other life-threatening conditions will help you develop competency in first aid.
3. Failing to recognize your limitations has the potential to cause harm. Know your limits and seek additional professional help when needed.

Ask a Review Question as Needed

Being able to assess and prioritize the need for first aid requires being able to _____.

a. Diagnose heart disease
b. Recognize life-threatening conditions
c. Avoid seeking additional professional help
d. Go beyond the knowledge and skill competence learned and demonstrated in training

Ask For & Answer Questions Before Moving to the Next Lesson

lesson four

ASSESSMENT

PREPARE

Duration
5 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:

- Identify the assessment steps.
- Correctly demonstrate the assessment steps.
- Correctly demonstrate when and how to place a person in the recovery position. (Optional)
- Correctly demonstrate the removal of contaminated personal protective equipment (gloves).

Why This Topic Matters

Assessment of the scene and the person is a critical skill that applies in any emergency. The steps of assessment are crucial in all but the most minor circumstances. Due to the risk of infection, proper removal of contaminated gloves is imperative.

Play the Video

Instructional Notes

1. It may be helpful to have students take a minute or two on their own to look over the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, refer to the *Procedure for Adult First Aid*.
   c. When teaching Adult CPR AED, use the *Procedure for Adult CPR AED* if choosing to cover these introductory lessons.
2. This lesson focuses on the assessment steps, which help a provider determine what the problem is. These appear on the procedure graphics under "Perform an Assessment." The provider's next actions to perform care are based on the provider's assessment findings of the person's responsiveness and breathing. This is illustrated in the procedure graphics by arrows. The provider's next actions are found in separate lessons that align the provider's findings from the assessment with the appropriate care. For a(n):
   a. Responsive and breathing person – The first aid provider's actions are covered in the Adult First Aid lessons.
   b. Unresponsive person who is breathing normally – The provider's actions are covered in this lesson, with an optional skill practice of the recovery position.
   c. Unresponsive person who is not breathing normally or only gasping – The provider's actions are covered in the Adult CPR AED lessons and in the Adult First Aid Assessment lesson.

3. There are two required and one optional skill practices in this lesson.
4. The first required skill practice is the assessment steps.
    a. Whenever possible, this skill practice should be conducted with one student playing the role of an unresponsive adult who is breathing normally. Another student should play the role of provider. The student playing the role of an unresponsive person should sit slumped or lie still and breathe normally. The first required skill practice has two intended outcomes.
        i. The first intended outcome is to have students practice correctly demonstrating the assessment steps. Each student should perform all the steps, including taking standard precautions (at a minimum, putting on gloves) and simulating the activation of EMS or their workplace emergency action plan (EAP). Where employers provide PPE appropriate to a specific setting, students should integrate that PPE into the skill practice session when possible.
        ii. The second intended outcome is for students to establish a baseline for what represents normal breathing by observation. The student playing the role of provider should assess the person's breathing for no more than 10 seconds, observing normal breathing. It should be effortless, quiet, slow, and regular, without any gasping, panting, or wheezing.
5. An uninjured, breathing, unresponsive person should be placed on their side in the recovery position to help protect the airway. If you wish to conduct this optional skill practice, do so after the above assessment practice is complete. Have students keep their gloves on for the recovery position practice.
6. The second required skill practice is the removal of contaminated gloves.
    a. Where employers have provided PPE appropriate to a specific setting, students should practice taking off their required PPE according to the employer's established procedure in addition to glove removal.

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 1: Adult – Assessment**; **Skill Sheet 2: Recovery Position (Optional)**; and **Skill Sheet 3: Removal of Contaminated Gloves** or **Scenario Sheet 1**, **Scenario Sheet 2 (Optional)**, and **Scenario Sheet 3**.

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.

Continued on Next Page ›

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. The steps of assessment are crucial in all but the most minor circumstances.
2. Normal breathing is effortless, quiet, slow, and regular.
3. Placing an uninjured, breathing, unresponsive person on their side in the recovery position is a simple and effective way to help keep the tongue from blocking the airway and allowing fluids to drain from the mouth.
4. Due to the risk of infection, taking standard precautions and properly removing contaminated gloves after an emergency is essential.
5. 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.

Ask a Review Question as Needed

You should take no longer than ___ second(s) to assess breathing.

a. 1
b. 3
c. 10
d. 20

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Emergency scenes can be dangerous. Your personal safety is the highest priority, even before the safety of an ill or injured person. If the scene is unsafe, do not approach it. Activate EMS and/or your EAP.

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]

lesson six

ADULT – ASSESSMENT & CHEST COMPRESSIONS

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:

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

Why This Topic Matters

Assessment of the scene and the person is a critical skill that applies in any emergency. The steps of assessment are crucial in determining the provider's next actions. If an unresponsive person 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.

Play the Video

Instructional Notes

1. The purpose of this lesson is for students to repeat the steps of assessment with a focus on an adult who is unresponsive and not breathing normally or only gasping, and then to take immediate action beginning with chest compressions.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult CPR AED only, refer to the *Procedure for Adult CPR AED*.
3. Students practice performing 30 high-quality chest compressions on an adult CPR training manikin. Make sure they count out loud.
4. HSI strongly recommends the use of an instrumented directive feedback device that transmits evaluative or corrective information on compression rate, depth, chest recoil, and hand position during CPR training. The feedback device can be integrated into a manikin or be used as an accessory with it.
5. 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 4: Adult – Assessment & Chest Compressions** or **Scenario Sheet 4**.

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 sounds are known as agonal breaths. This is not normal breathing. It is a sign of cardiac arrest.
2. High-quality chest compressions are the foundation of high-quality CPR.
   a. Push hard and deep, straight down, using your upper body weight to compress the chest at least 2 inches (5 cm). Chest compressions are most often performed too shallowly.
   b. At the end of each compression, lift all your weight off the person's chest, allowing it to completely recoil, or rebound, to its normal position, but do not lose contact with the chest.
   c. Push fast. Compress the chest at a rate of 100-120 compressions per minute.
   d. Perform 30 high-quality chest compressions. Count out loud.
   e. Minimize interruption in chest compressions. Fewer and shorter interruptions in chest compressions are associated with better outcomes.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a request for assistance on your two-way radio_] for [_a warehouse associate_] who passed out. You see a motionless person lying face up on the [_fulfillment center floor_]. The scene is safe. You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. Your EAP has activated EMS. Another provider is bringing an AED. The person is making snoring sounds and gasping. What would you do?

a. Give 2 rescue breaths that make the chest rise.
b. Immediately assess for life-threatening conditions.
c. Check the pulse in the neck for no more than 10 seconds.
d. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson seven

ADULT – RESCUE BREATHING & USING A CPR MASK

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:

- Explain the importance of adult rescue breaths.
- Explain how to open the adult airway using a head tilt–chin lift.
- Correctly demonstrate how to give rescue breathing using a CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are critically important in CPR, as they provide life-sustaining oxygen and ventilation directly to the person's lungs.

Play the Video

Instructional Notes

1. Students practice opening the airway and performing rescue breaths on an adult CPR training manikin using an adult CPR mask with a one-way disposable mouthpiece (1 for each student).
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 5: Adult – Using a CPR Mask** or **Scenario Sheet 5**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the person's lungs.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing adult rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. Conventional CPR with rescue breathing should be performed by all trained CPR providers who are willing and able.
6. In the case of drowning, begin with rescue breaths. As soon as the unresponsive victim is removed from the water, open the airway and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a shout for help_] to assist [_a guest_] at the lakefront. Upon arrival, you see a couple bystanders dragging a limp, apparently unconscious person from the water onto the shore. One of the bystanders, catching their breath, says, "Fell off a jet ski." You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. Another CPR provider is bringing an AED. The person is not breathing. What would you do?

a. Place the person on their side in the recovery position.
b. Open the airway. Use the mask to give 2 rescue breaths.
c. Immediately start CPR, beginning with chest compressions.
d. Check the pulse in the neck for no more than 10 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Alcohol is the leading known contributing factor in fatal boating accidents. Where the cause of death was known, 75 percent of fatal boating accident victims drowned, and 86 percent were not wearing a life jacket. Wear a life jacket. Boat sober. [39]

39 U.S. Coast Guard releases 2020 Boating Safety Statistics Report. Maritime Commons. https://mariners.coastguard.blog/2021/06/30/u-s-coast-guard-releases-2020-boating-safety-statistics-report/ [Retrieved 9/13/21]

lesson eight

ADULT – AUTOMATED EXTERNAL DEFIBRILLATION & USING AN AED

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:

- Identify the steps to use an AED [Trainer] on an adult.
- Correctly demonstrate how to use an AED [Trainer] on an adult.

Why This Topic Matters

When indicated, an electrical shock passed through the chest can restore the heart's normal contractions.

Play the Video

Instructional Notes

Always verify that each AED Trainer is not a live AED, and the device is incapable of delivering a real shock.

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 6: Adult – Using an AED** or **Scenario Sheet 6**.

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. If you have an AED in your workplace, be familiar with its operation. AED design varies by model and manufacturer, but they all operate in a similar manner.
2. Use adult AED pads for persons 8 years of age or older.
3. Try to apply the pads within 30 seconds after the AED arrives.
4. Proper AED operation requires direct contact between the pads and the person's skin. Any clothing in the way must be removed.
5. If the AED advises a shock, it will prompt you to clear the person. Loudly say, "Everybody clear," or something similar, then deliver a shock.
6. Once a shock has been delivered, immediately resume CPR starting with chest compressions.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_an alert from the company electronic notification system_] for [_an associate_] who passed out. The scene is safe. You have taken standard precautions. You see an anxious person kneeling next to a motionless adult lying face up on the [_store floor_]. You have disposable gloves, a CPR mask, and an AED. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. The unresponsive person seems to gasp for air now and then. What would you do?

a. Check the person's pulse.
b. Open the airway and provide 2 rescue breaths.
c. Immediately start high-quality CPR, beginning with chest compressions.
d. Power on the AED. Bare the person's chest and apply the AED pads.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The United States Food and Drug Administration (FDA) encourages individuals and organizations to ensure their AED is FDA-approved (and if it is not, to make plans to transition to an FDA-approved AED). The FDA maintains a list of FDA-approved AEDs. Search for "automated external defibrillators" at fda.gov.

lesson nine

ADULT – ONE-PROVIDER CPR AED

PREPARE

Duration
8 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:

- Apply the CPR AED links of the adult chain of survival as one provider.
- Correctly demonstrate high-quality adult CPR AED as one provider.

Why This Topic Matters

The combination of CPR and early defibrillation is effective in saving lives when used in the first few minutes following collapse from sudden cardiac arrest.

Play the Video

Instructional Notes

1. If you are teaching Adult CPR AED only (or with Child CPR AED and/or Infant CPR) and you choose to not cover the optional but recommended Introductory Lessons, it is recommended to cover Removal of Contaminated Gloves as part of this skill practice using Skill Sheet 3 or Scenario Sheet 3; however, covering Removal of Contaminated Gloves can be done elsewhere in a CPR AED class that does not include first aid.
2. The first goal of the skill practice for this lesson is to help students apply the CPR AED links of the adult chain of survival by putting together the knowledge and skills required to take action for adult cardiac arrest as one CPR provider.
3. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 1: Adult – One-Provider CPR AED.
    a. You may conduct the Adult – One-Provider CPR AED Performance Evaluation at the end of this lesson, segment, or at the end of the class.
4. Explain both goals above to the students so they understand what is expected of them and to encourage them to practice accordingly.
5. Each student will need a CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
6. The AED [Trainer] is brought by “an untrained bystander.” The bystander role is played by another student. If there is only one student in the class, the instructor will need to play this role.
7. 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 7: Adult – One-Provider CPR AED** or **Scenario Sheet 7**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an unresponsive [_visitor_] who collapsed [_outside the main building_]. You have taken standard precautions. EMS is on the way. The untrained coworker you sent to get the nearby AED sets it down next to you and says, “Here’s the AED.” What would you do?

a. Power on the AED. Remove any clothing in the way. Apply the pads.
b. Check the person’s breathing and pulse for no more than 30 seconds.
c. Check the person’s breathing and pulse for no more than 10 seconds.
d. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

If you find yourself unexpectedly confronted by a person in cardiac arrest, you have limited or no PPE, and you are unwilling to provide rescue breathing out of fear the person may have an infectious disease, you can still help the person by providing compression-only CPR.

lesson ten

ADULT – ADDITIONAL CPR AED CONSIDERATIONS

PREPARE

Duration
7 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:

- Identify special considerations for the AED.
- Explain special considerations for a pregnant person in cardiac arrest.
- Describe how to give mouth-to-mouth rescue breathing to an adult.

Why This Topic Matters

A CPR provider may face some circumstances that require additional considerations or tasks for effective cardiac arrest care. Act quickly if anything affects AED use to keep this link in the chain strong.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. If chest hair is preventing pad-to-skin contact, use the razor that is typically included with a CPR AED response kit to quickly shave the spots where the pads will be placed.
2. Do not use an AED if the person is immersed in water.
3. Avoid placing an AED pad directly over an implanted device, as it may interfere with shock delivery.
4. Do not place AED electrode pads directly on top of a medication patch.
5. Do not delay chest compressions or defibrillation for a pregnant person. If the person starts breathing, moving, or reacting in other ways, place the person on their left side to improve blood flow.
6. The immediate cause of death in drowning is a lack of oxygen. In the case of drowning, begin resuscitation with 2 rescue breaths.
7. There may be a rare or extraordinary circumstance when a barrier device is not available, and a CPR provider is willing to provide mouth-to-mouth rescue breathing. To give mouth-to-mouth rescue breathing to an adult:
   a. Open the airway with a head tilt–chin lift.
   b. Pinch the nose closed with your thumb and forefinger.
   c. Take a regular-sized breath and seal your lips around the person's mouth.
   d. Give 1 breath over 1 second.

Ask a Review Question as Needed

You are responding to a call for assistance from [_your mobile device_] for [_a customer_] who fainted. You have taken standard precautions. You have a CPR mask, a first aid kit, and an AED. EMS and your EAP have been activated. Upon arrival, you find another trained CPR provider performing CPR on an unresponsive person. You power on the AED and ask the first provider to stop compressions so you can bare the person's chest. That's when you see a noticeable lump in their left right upper chest. What would you do?

a. Firmly press an AED pad directly over the lump.
b. Apply the pads while avoiding placing an AED pad directly over the lump.
c. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.
d. Check the person's breathing and pulse for no more than 10 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson eleven

ADULT – SUSPECTED OPIOID-ASSOCIATED EMERGENCY (OAE)

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 adult CPR AED procedure for a suspected opioid-associated emergency (OAE).

Why This Topic Matters

A quick response to an opioid overdose, including administering naloxone, can prevent brain injury and death.

Play the Video

Instructional Notes

1. It may be helpful to have students take a minute on their own to review where giving naloxone appears in the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult CPR AED, use the *Procedure for Adult CPR AED*.

WRAP UP

Reinforce Key Points as Needed

1. If you suspect an opioid-associated emergency, perform an assessment and follow the procedure based on your findings.
   a. If an unresponsive person is not breathing normally or only gasping, immediately start CPR. If it's available, give naloxone as soon as you can, but do not delay CPR AED to give it.
   b. If an unresponsive person is breathing normally, give naloxone if available. To help protect the airway, place the person in the recovery position.
2. Avoid contact with drug residue, containers, needles, and other paraphernalia.

Ask a Review Question as Needed

You are a trained CPR provider who has responded to a possible overdose in the [_parking lot_] of the [_bus terminal_]. Your EAP has been activated and EMS is on the way. You have a first aid kit, naloxone, and an AED. The scene is safe. The person is lying face up on the [_parking lot floor_], unresponsive and breathing normally. In the nearby vehicle, you notice tiny zip-top plastic bags and a syringe. What would you do?

a. Pick up the syringe to examine it for drug residue.
b. Give the naloxone. Put the person in the recovery position.
c. Immediately start CPR, beginning with chest compressions.
d. Power on the AED. Apply adult pads to person's bare chest.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The U.S. Department of Health and Human Services (HHS) Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline, 1-800-662-HELP (4357), is a confidential, free, 24-hours-a-day/365-days-a-year information service. Available in English and Spanish, this helpline is for individuals and family members facing mental and/or substance use disorders. This service provides referrals to local treatment facilities, support groups, and community-based organizations.

lesson twelve

ADULT – RELIEF OF CHOKING

PREPARE

Duration
8 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 how to recognize and provide treatment for a choking adult.

Why This Topic Matters

When a severe airway obstruction occurs, the person cannot get air in or out of the lungs. This is a life-threatening medical emergency. If the foreign body is not removed, the person will quickly become unresponsive and suffer a secondary cardiac arrest within minutes.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

1. It may be helpful to have students take a minute to review the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult CPR AED, use the *Procedure for Adult CPR AED*.

WRAP UP

Reinforce Key Points as Needed

1. If the person can inhale and exhale, encourage them to continue coughing.
2. Signs of a severe airway obstruction include the inability to speak, a weak cough, or no cough at all.
3. Each abdominal thrust needs to be given with the intent of dislodging and expelling the object.
4. If the person becomes unresponsive, perform an assessment and follow the procedure based on your findings.
    a. If the unresponsive person is not breathing normally or only gasping, begin high-quality CPR starting with compressions.
5. Before opening the airway to provide rescue breaths, open the person's mouth wide. If you see an object, remove it with your fingers.

Ask a Review Question as Needed

You are responding to a request for first aid assistance in the [_lunchroom_]. As you approach, you find a panicky [_assistant manager_] attempting to calm a frightened [_staff member_] who is noticeably wheezing between frequent hard coughs. The [_assistant manager_] shouts, "He's choking on a hot dog! Please help him." The scene is safe. You have taken standard precautions. The facility's EAP has been activated. What would you do?

a. Encourage the person to continue coughing.
b. Give chest thrusts with the intent of dislodging the hot dog.
c. Give abdominal thrusts with the intent of dislodging the hot dog.
d. Open the person's mouth wide. If you see an object, remove it with your fingers.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Not chewing food well before swallowing; talking or laughing while eating; alcohol consumption; advancing age; and poorly fitting dental work are all risk factors for adult choking.

performance evaluation

ADULT – ONE-PROVIDER CPR AED PERFORMANCE EVALUATION

PREPARE

Duration
9 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on Performance Evaluation 1: Adult – One-Provider CPR AED.

Why This Topic Matters

- A certification card may not be issued unless each student demonstrates competency in the required skills and completes a performance evaluation (skill test) for the class type you are teaching.
- For every class type except for Adult First Aid only, this Adult CPR AED Performance Evaluation is required.
- Performance Evaluation 1: Adult – One-Provider CPR AED
- This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a performance evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Only Adult CPR AED – Move to the Conclusion segment on page 183.
   b. Any class including Adult First Aid – Turn to the next lesson to begin the Adult First Aid segment.
   c. Any class including Child CPR AED and/or Infant CPR AED but not Adult First Aid – Skip the Adult First Aid lessons to reach the Child and Infant CPR AED lessons.

segment three

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 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.

lesson fourteen

SEVERE, LIFE-THREATENING EXTERNAL BLEEDING

PREPARE

Duration
12 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 how to recognize and provide first aid treatment for severe external bleeding using direct pressure, a pressure bandage, or a commercial tourniquet.
- Correctly demonstrate how to control severe, life-threatening external bleeding using direct manual pressure and bandaging.

Why This Topic Matters

Trauma is one of the world's leading causes of death and disability. Around 40% of deaths from trauma are due to severe blood loss or shock.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

1. It may be helpful to have students review the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, use the *Procedure for Adult First Aid*.
2. There is no Video-Guided Practice or Skill Sheet for this scenario-based practice.
   a. The first goal of the skill practice for this lesson is to help students apply the knowledge and skills required to take action for severe, life-threatening external bleeding using direct manual pressure and bandaging.
   b. The second goal of this practice to prepare students for successful completion of required Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding.
3. You may conduct the Severe, Life-Threatening External Bleeding Performance Evaluation at the end of this lesson, segment, or at the end of the class.
   a. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
4. The scenario and performance evaluation requires the proper removal of contaminated gloves. Glove removal in the scenario may be verbalized, but proper removal by each student is required in the Performance Evaluation.

PRACTICE & ASSESS

Conduct a Hands-On Student Practice

Practice with Scenario Sheet 8.

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. Consider bleeding to be severe and life-threatening if blood is gushing, spurting, or flowing continuously, or when there is about a half soda can's worth of blood on the ground or pooling on a surface.
2. When a manufactured tourniquet is available, use it as soon as possible after the injury to stop severe, life-threatening bleeding.
3. When a manufactured tourniquet is not immediately available, or when the bleeding is somewhere other than an arm or leg, use direct manual pressure, preferably with a hemostatic dressing.
4. If a hemostatic dressing is not available, use sterile trauma dressings, compressed gauze, or a stack of 10 sterile 4" x 4" gauze sponges.
5. Push down hard onto the wound. Use continuous pressure. If blood soaks through the gauze or other material, press harder. Keep pressing hard until the bleeding stops.
6. Don't remove pressure to add more gauze and don't remove blood-soaked materials. Once the bleeding stops, wrap an elastic or self-adhesive roller bandage firmly over the gauze or other material to help maintain pressure.

Ask a Review Question as Needed

You are a trained first aid provider responding to [_a wireless emergency alert_] for [_an injured person_]. As you reach the scene, you see [_a machinist_] sitting on [_a workbench_] holding their hand over their bloody forearm. The person is responsive and consents to first aid. Blood flows continuously from a deep, irregular, and jagged tear in the forearm. You are wearing safety glasses and disposable gloves. You have a first aid kit with a 10-pack of sterile 4" x 4" gauze sponges, but no hemostatic dressings or a tourniquet. What would you do?

a. Flush the wound with a large volume of rubbing alcohol.
b. Apply the gauze sponges onto the wound. Push down hard.
c. Wrap an elastic or self-adhesive roller bandage firmly over the wound.
d. Wrap your leather belt around the limb, at least 2-3 inches below the wound.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Moving machine parts have the potential to cause severe bleeding, including at work and at home. These injuries can be avoided by following the manufacturer's recommended safety procedures, including maintaining proper machine guarding, wearing all required PPE, and using lockout/tagout procedures (safety procedures that ensure dangerous machines are properly shut off and not able to be started up again prior to the completion of maintenance or repair work).

lesson fifteen

SHOCK

PREPARE

Duration
4 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 how to suspect and provide first aid treatment for shock.

Why This Topic Matters

Shock can get worse very rapidly. As many as 1 in 5 people who suffer shock will die from it.[40]

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Losing about one-fifth or more of the normal amount of blood in the body causes shock. The greater and more rapid the blood loss, the more severe the symptoms of shock.
2. Shock can also result from severe internal bleeding, heart problems, allergic reactions, infections, and damage to the nervous system. Early signs include complaints of nausea and fatigue.
3. Pale, gray/ashen, sweaty, or cool skin, and/or blue-tinged nail beds and lips are a result of not enough circulating red blood cells.
4. If a person shows signs of shock, and there is no difficulty breathing, keep them lying down, face up. Cover them to help maintain body temperature.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_worker_] who was struck by [_construction equipment in a work zone_]. The scene is safe. You have taken standard precautions. You have a first aid kit, but no AED. The person consents to first aid, but says they feel sick to their stomach and need to rest. The person's skin looks grayish and sweaty. There are no other obvious injuries. What would you do?

a. Help the person to a quiet place to rest.
b. Activate EMS and/or EAP and keep the person lying down.
c. Place the person on their side in the recovery position.
d. Encourage the person to drink water or a clear sports drink.

Ask For & Answer Questions Before Moving to the Next Lesson

40 Shock. https://medlineplus.gov/ency/article/000039.htm [Retrieved 9/30/21]

lesson sixteen

MINOR WOUNDS

PREPARE

Duration
2 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 how to provide first aid treatment for non-severe, mild external bleeding from a wound.

Why This Topic Matters

Appropriate first aid for a wound can speed up the healing process and reduce the risk of infection.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Non-severe, mild external bleeding typically stops on its own or with direct manual pressure.
2. Minor wounds or abrasions to the skin surface should be thoroughly flushed with a large volume of warm or room temperature water, with or without soap, until there is no foreign matter in the wound.
3. To control bleeding, including bleeding from the mouth, apply continuous direct manual pressure with a sterile dressing or any clean available material for at least five minutes.
4. Wounds heal better with less infection if they are covered with an antibiotic ointment and a clean, occlusive dressing.

Ask a Review Question as Needed

You are helping a responsive, breathing [_coworker in the first aid room_] who has consented to first aid after tripping and falling. The person has minimal bleeding from scrapes to both elbows. Dirt is embedded in both wounds. The scene is safe. You have taken standard precautions. There are no other obvious injuries. What would you do?

a. Pack the wounds with hemostatic gauze.
b. Call 911 to activate EMS using a mobile device and/or activate your EAP.
c. Flush the wounds with a large volume of warm or room temperature water.
d. Apply a clean occlusive dressing immediately.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson seventeen

TOOTH INJURIES

PREPARE

Duration
3 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 how to provide first aid treatment for tooth injuries.

Why This Topic Matters

A tooth can be knocked out by a blow to the mouth. Proper first aid can save the tooth.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. If a tooth is loose, have the person gently bite down on a folded sterile gauze pad to keep the tooth in place.
2. Handle a knocked-out permanent tooth carefully. Do not touch the root of the tooth, only the chewing surface.
3. If the tooth is dirty, gently rinse it, but do not scrub it. Use only water.
4. Have the injured person try to put the tooth back into its socket right away. If a knocked-out tooth cannot be immediately repositioned, prevent the tooth from drying out.
5. Get the person quickly to a dentist or endodontist, within 30 minutes if possible.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_mountain biker_] who has consented to first aid following [_a crash_]. The person has minor bleeding from their lip and in their mouth. A tooth has been knocked out. A bystander points to the dirty tooth lying in dusty, loose gravel. The scene is safe. You have taken standard precautions. There are no other obvious injuries. What would you do?

a. Wrap the tooth in a cloth. Get the person to the nearest dentist.
b. Pick up the tooth by the chewing surface, gently rinse it with water.
c. Have the person try to put the tooth back into its socket right away.
d. Place the tooth in a mild soap solution. Get the person to the nearest dentist.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Mouth guard use has been shown to reduce the risk of sport-related dental injuries.[41]

41 The American Dental Association. https://www.ada.org/en/member-center/oral-health-topics/mouthguards [Retrieved 8-31-21]

lesson eighteen

BLEEDING FROM THE NOSE

PREPARE

Duration
2 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 how to provide first aid treatment for bleeding from the nose.

Why This Topic Matters

Nosebleeds are common and rarely life-threatening.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Have the person sit up straight with their head tilted forward, chin down.
2. Pinch the soft portion of the nose with your thumb and index finger so the nostrils are closed.
3. If the bleeding does not stop after 20 minutes, call 911 to activate EMS using a mobile device or activate your EAP.
4. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
   b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
   c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_associate_] who has consented to first aid for a spontaneous nosebleed. The scene is safe. You have taken standard precautions. There are no other obvious injuries. What would you do?

a. Have the person lie down.
b. Have the person lean back.
c. Pack the nose with hemostatic or plain gauze.
d. Pinch the soft portion of the nose with your thumb and index finger.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson nineteen

IMPALED OBJECTS

PREPARE

Duration
3 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 how to provide first aid treatment for an impaled object.

Why This Topic Matters

Some, but not all, impaled objects are potentially life-threatening. Proper first aid can minimize further injury.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. As a rule, do not remove an impaled object.
3. Place sterile bulky dressings over the wound and around the object to stabilize it in place.
4. Control bleeding with direct manual pressure, preferably with a hemostatic dressing. Push down on the wound around the base of the object.
5. Consider performing a secondary assessment while waiting for EMS.
    a. Look for medical identification jewelry.
    b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
    c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_coworker_] who has consented to first aid following [_a fall from the 2nd floor_]. The person has been impaled across (not through) the chest by [_a 36 in. (91 cm) iron construction rod_]. The scene is safe. You have taken standard precautions. EMS has been activated. Another coworker is getting the AED and first aid kit. There is slight external bleeding from around the rod. There are no other obvious injuries. What would you do?

a. Quickly but gently remove the rod by pulling it backward.
b. Quickly but gently remove the rod by pulling it forward.
c. Place sterile bulky dressings over the wound and around the object to stabilize it in place.
d. Thoroughly flush the chest wound with a large volume of room temperature water to remove foreign matter.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The most common impalement hazard at a construction site is the steel bar that is used to reinforce concrete. Federal safety and health regulations for construction require that “all protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement” (Occupational Safety & Health Administration, 1926.701(b)).

lesson twenty

EYE INJURIES (IMPALED OBJECTS)

PREPARE

Duration
3 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 how to provide first aid treatment for an impaled object in the eye.

Why This Topic Matters

Impaled objects that cause eye injury are largely preventable events that can cause visually impairment, or partial or total blindness. Proper first aid can minimize further injury.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. Stabilize a large object with clean pads. Place a protective cover over the object, such as a paper cup or cone.
3. With smaller objects, loosely cover the injured eye with an eye pad or sterile gauze dressing.
4. Calm, comfort, and reassure the person to help reduce anxiety.
5. Consider performing a secondary assessment while waiting for EMS.
    a. Look for medical identification jewelry.
    b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
    c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_carpenter_] who has consented to first aid after being struck in the eye by a piece of a stainless-steel staple. The staple piece is embedded in the person's eye. The scene is safe. You have taken standard precautions. Your EAP has been activated. Another coworker is getting the first aid kit. The eye is red, watery, and swollen. There are no other obvious injuries. What would you do?

a. Loosely cover the injured eye with an eye pad or sterile gauze dressing.
b. Gently remove the staple using tweezers from the first aid kit.
c. Apply pressure to impaled object.
d. Encourage the person to gently rub the eye to increase tear production.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

According to the American Academy of Ophthalmology, wearing proper protective eyewear can prevent 90% of eye injuries.

lesson twenty-one

AMPUTATION

PREPARE

Duration
5 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:

- Explain how to recognize and provide first aid treatment for an amputation.

Why This Topic Matters

Amputations are serious, debilitating, and potentially life-threatening injuries.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. If life-threatening bleeding is present from the remaining part of an arm or leg, control it using a manufactured tourniquet.
3. Control minimal bleeding with continuous direct manual pressure for at least five minutes.
4. Save any severed body parts and make sure they stay with the person.
    a. If possible, rinse the amputated part with clean water to remove any dirty material that may contaminate the wound.
    b. Wrap the severed part in a sterile gauze sponge or clean cloth. Place the part in a tightly sealed plastic bag.
    c. Place the bag in a container filled with ice or ice water. Label the container with the person's name, the date, and time.
    d. Give the container to EMS providers for transport with the person to the hospital.
5. Consider performing a secondary assessment while waiting for EMS.
    a. Look for medical identification jewelry.
    b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
    c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_fellow worker_] whose arm was amputated below the elbow after becoming caught in the [_conveyor belt drive sprocket_]. The person has consented to first aid. The scene is safe. You have taken standard precautions. Your EAP has activated EMS. You have an AED and a first aid kit with a manufactured tourniquet. Blood is gushing from the wound and pooling on the [_plant floor_]. What would you do?

a. Power on the AED. Bare the person's chest and apply the AED pads.
b. Immediately control the bleeding using a manufactured tourniquet.
c. Apply direct manual pressure to the wound with a stack of 10 sterile 4" x 4" gauze sponges.
d. Thoroughly flush the amputated limb with a large volume of room temperature water to remove foreign matter.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Amputations occur most often when workers operate unguarded or inadequately safeguarded machinery. Proper machine guarding; placing and enforcing safety rules; and ongoing supervision and employee training can help prevent and control amputation hazards.

lesson twenty-two

INTERNAL BLEEDING

PREPARE

Duration
3 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:

- Explain how to recognize and provide first aid treatment for internal bleeding.

Why This Topic Matters

Internal bleeding can result when the body suffers significant force. Severe internal bleeding is a life-threatening condition.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. If person shows signs of shock and has no difficulty breathing, keep them lying down, face up.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
   b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
   c. Provide appropriate first aid for any problems found.
4. Stay with the person until someone with more advanced training takes over or EMS arrives.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_worker_] who was caught between [_a backhoe and a concrete wall_]. The person has consented to first aid. The scene is safe. You have taken standard precautions. You have an AED and a first aid kit. You notice that the person is sweaty and cool. They have no difficulty breathing, but complain of abdominal pain, and of being cold and thirsty. What would you do?

a. Tell the person to rest and eat bland foods until their nausea is relieved.
b. Have another coworker drive the person to the nearest urgent care center.
c. Encourage the person to drink ice-cold water and take aspirin to relieve the abdominal pain.
d. Activate EMS and/or your EAP. Help the person lie down. Cover them to help maintain body temperature.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Caught-between injuries occur when a person is crushed, pinched, or caught between a moving object and a stationary object, or between two moving objects. These hazards can cause life-threatening injuries including internal bleeding. The hazards can be controlled by using barricades to keep workers out of dangerous areas, training on hazard recognition, and safe work practices such as not standing or passing between swinging equipment, forklifts, or vehicles.

lesson twenty-three

OPEN CHEST WOUND

PREPARE

Duration
4 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:

- Explain how to recognize and provide first aid treatment for an open chest wound.

Why This Topic Matters

A penetrating injury through the chest wall, such as those caused by a knife or gunshot, can trap air between the lung and chest wall, building up pressure and causing a collapsed lung. Severe cases can be life-threatening.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. If necessary and with consent, remove or cut away clothing to get a better look at the chest wound.
3. Check to see if there is an exit injury on the other side of the chest.
   a. Use direct manual pressure, preferably with a hemostatic dressing, to control bleeding.
4. Unless you have training in the use of vented chest seals, it is okay to leave an open chest wound exposed, without a dressing or seal.
5. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
   b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
   c. Provide appropriate first aid for any problems found.
6. Stay with the person until someone with more advanced training takes over or EMS arrives.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_main office receptionist_] who was stabbed in the chest by [_a disgruntled ex-employee_]. The person has consented to first aid. The scene is safe. You have taken standard precautions. You have an AED and a first aid kit. EMS is on the way. The frightened victim is complaining of shortness of breath and chest pain. You expose the wound. There is bloody bubbling around the wound. The person is sweaty and cool. You have not been formally trained in the use of vented chest seals. What would you do?

a. Leave the chest wound exposed, without a dressing or seal.
b. Promptly apply antibiotic ointment and a clean, occlusive dressing to the wound.
c. Cover the wound quickly and completely using an adult-sized AED pad.
d. Thoroughly flush the wound with a large volume of warm or room temperature water.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Federal OSHA believes that a well-written and implemented workplace violence prevention program (combined with engineering controls, administrative controls, and training) can reduce the incidence of workplace violence in both the private sector and federal workplaces.[42]

42 Occupational Safety & Health Administration. Workplace Violence. https://www.osha.gov/workplace-violence [Retrieved 9/13/21]

lesson twenty-four

OPEN ABDOMINAL INJURY

PREPARE

Duration
3 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:

- Explain how to recognize and provide first aid treatment for an open abdominal injury.

Why This Topic Matters

Some penetrating injuries to the abdomen may result in evisceration, a protrusion of the abdominal organs outside the body. Internal bleeding, shock, and infection can be life-threatening.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. Protect any protruding organs with sterile gauze moistened with sterile saline. If sterile dressings and saline are not available, use any available clean material moistened with clean water.
3. Allow the person to lie down in any position of greatest comfort to them.
4. Suspect internal bleeding and watch for signs of shock.
5. Consider performing a secondary assessment while waiting for EMS.
    a. Look for medical identification jewelry.
    b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
    c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_staff member_]. The person has a large deep slash across their abdomen from flying shrapnel following an explosion of [_combustible dust_] in the [_dust collection system_]. Their intestines are sticking out of the wound. The responsive person has consented to first aid. The scene is safe. You have taken standard precautions. Your EAP has been activated. You have an AED, a first aid kit, and clean water. What would you do?

a. Cover the protruding organs with dry, sterile, gauze dressings.
b. Transport the person to the nearest emergency room without delay.
c. Flush the wound and abdominal organs with a large volume of clean water.
d. Cover the protruding organs with sterile gauze moistened with clean water.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Employees closest to the source of a combustible dust hazard must be trained to recognize and prevent hazards. They can be instrumental in recognizing unsafe conditions, taking preventative action, and/or alerting management. [43]

43 Occupational Safety and Health Administration. Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosions. https://www.osha.gov/sites/default/files/publications/shib073105.pdf [Retrieved 9/13/21]

lesson twenty-five

HEAD, NECK, OR SPINAL INJURY

PREPARE

Duration
5 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:

- Explain how to suspect and provide first aid treatment for head, neck, or spinal injury.

Why This Topic Matters

Unstable spinal column injuries can progress to severe nervous system injuries with excessive movement.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. First aid providers should suspect spinal column or cord injury if an injured person:
   a. Is 65 years of age or older; was a driver, passenger, or pedestrian involved in a motor vehicle, motorcycle, or bicycle crash; fell from a greater than standing height; has difficulty breathing; has tingling in the arms and legs; has pain or tenderness in the neck or back; has muscle weakness, or loss of feeling or movement in the arms or legs; has an altered mental status or is intoxicated; has lost bladder and/or bowel control; or has other painful injuries, especially of the head and neck.
2. If you suspect an injured person has a spinal injury, perform an assessment and follow the procedure based on your findings.
3. Have the person remain as still as possible in the position in which they were found while you await the arrival of EMS providers.
   a. Consider performing a secondary assessment while waiting for EMS.
      i. Look for medical identification jewelry.
      ii. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
      iii. Provide appropriate first aid for any problems found.
   b. If leaving the person in the position found is causing their airway to be blocked by vomit or other fluids, or if you need to leave an unresponsive injured person alone to get help, place the person in a recovery position to protect the airway.
4. If the person becomes unresponsive and is not breathing normally or only gasping, start CPR.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_associate_] who fell from [_a ladder_] while [_performing routine maintenance_]. The person has consented to first aid. The scene is safe. You have taken standard precautions. EMS has been activated. You have an AED and a first aid kit. The person complains of back pain and a "stinging feeling" in the arms and legs. What would you do?

a. Have the person remain as still as possible.
b. Place the person in a recovery position to protect the airway.
c. Ask the person if they can move their arms and legs or walk.
d. Place the person in a sitting position. Assess their back, arms, and legs for deformities and open injuries.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Falls from portable ladders (step, straight, combination and extension) are one of the leading causes of occupational fatalities and injuries. Be familiar and comply with safe ladder practices. Read and follow all labels/markings on the ladder before using it.

lesson twenty-six

CONCUSSION

PREPARE

Duration
3 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 how to suspect and provide first aid treatment for a concussion.

Why This Topic Matters

Most concussions are temporary and resolve naturally, but it is possible for one to progress into a life-threatening condition.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Suspect a concussion after a significant blow to the head or body when the affected person is unable to remember what happened just before or after the incident or recall simple facts about it.
2. Additional signs include looking stunned or dazed, headache, nausea, vomiting, dizziness, difficulty in balance and/or coordination, and visual problems.
3. If you suspect a person may have a concussion, the person should be evaluated by a healthcare provider or EMS providers as soon as possible.
4. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
   b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
   c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_team member_] who was hit in the head by a falling [_piece of lumber_] from [_an upper landing on the worksite_]. The scene is safe. You have taken standard precautions. You have an AED and a first aid kit. The person has consented to first aid. The person looks dazed and is a little confused about what happened. They complain of a headache and "some blurriness." There are no open injuries. A supervisor wants to know if the person can return to work. What would you do?

a. Recommend the person return to normal activities.
b. Recommend the person take the rest of the day off.
c. Recommend the person be evaluated by a healthcare provider or EMS providers ASAP.
d. Recommend the person complete the Acute Concussion Evaluation (ACE) form to determine a plan of action.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Head protection is crucial to safety. People working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, must wear proper head protection.

lesson twenty-seven

BONE, JOINT, & MUSCLE INJURIES

PREPARE

Duration
9 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 how to recognize and provide first aid treatment for bone, joint, and muscle injuries.

Why This Topic Matters

Strains, sprains, dislocations, and isolated fractures can be extremely painful but are not usually life-threatening. However, fractures of the pelvic or thigh bones may result in serious internal blood loss and shock.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

1. Splinting is an optional practice for this lesson.
   a. There is no Video-Guided Practice.
2. See Optional Class Equipment and Materials for the class you are teaching for materials necessary for splinting practice (malleable or improvised).
   a. If using Skill Sheets, have students choose a limb to splint.
   b. If using Scenario Sheets, supply malleable splinting material for Scenario Sheet 9 and improvised splinting material for Scenario Sheet 10.

PRACTICE & ASSESS

Conduct a Hands-On Student Practice (optional)

- Practice with **Skill Sheet 8: Using Malleable Splints (Optional) and/**or **Skill Sheet 9: Using Improvised Splints (Optional)** or **Scenario Sheets 9 and/**or **10**.

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

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is responsive and breathing, encourage the person to not move or use the injured limb.
2. Control any bleeding using a clean dressing and firm, continuous, direct manual pressure on the bleeding site.
3. Cold application decreases bleeding, swelling, pain, and disability. It is best accomplished with a plastic bag filled with a mixture of ice and water.
4. In general, it is best to rely on EMS providers to splint.
5. A malleable splint can easily be molded and shaped to create a rigid and stable splint. Splints can also be improvised with commonly available items.
    a. If the hand is involved, place a roller gauze or elastic bandage in the person's hand to keep it in a natural position of function.
    b. Place the rigid material alongside or underneath the injured limb, making sure it extends beyond the joints above and below.
    c. Place padding on the rigid material where tapered surfaces of the limb, like around joints, will rest.
    d. Secure the material tightly enough to provide stabilization, but not tight enough to restrict blood circulation.
6. Consider performing a secondary assessment while waiting for EMS.
    a. Look for medical identification jewelry.
    b. Visually assess an injured person from head to toe. Use the DOTS acronym as a guide.
    c. Provide appropriate first aid for any problems found.

Ask a Review Question as Needed

Cold application decreases bleeding, swelling, pain, and disability associated with bone, joint, and muscle injuries. Cooling is best accomplished with _____.

a. Commercial ice packs
b. Application of ice directly to the skin
c. An ice massage using a thin towel filled with ice
d. A plastic bag filled with a mixture of ice and water

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Slips, trips, and falls cause hundreds of workplace deaths per year and thousands of injuries (U.S. Bureau of Labor Statistics). Here are some preventions tips: Carry only what you can safely handle, especially if the load interferes with your ability to see where you're going. Avoid storing boxes or other items on walking surfaces where people might trip over them. Don't hurry, especially around corners. When ascending or descending stairs, use railings and handrails. Take one step at a time when going up or down stairs. Report worn, broken, or loose stair treads.

lesson twenty-eight

BURNS

PREPARE

Duration
11 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 how to recognize and provide first aid treatment for burns.

Why This Topic Matters

Burns are painful and can be devastating and costly injuries. The majority are preventable.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
2. Take action based on the type of burn you suspect may have occurred.
   a. Thermal burns
      i. Cool minor thermal burns with cold, but not ice-cold, tap water as soon as possible and for at least 10 minutes.
      ii. For severe thermal burns, carefully remove any jewelry and clothing that is not stuck to the skin, then immediately cool the burns with cool running water for at least 20 minutes or until EMS providers take over.
   b. Electrical burns
      i. An electric shock can cause cardiac arrest. If the scene is safe, and the person is unresponsive and not breathing normally or only gasping, start CPR.
      ii. Assess for external electric burns at any suspected points of contact. Cool the burn as you would with a thermal burn.
   c. Chemical skin burns
      i. Brush off any dry chemical powder first.
      ii. Remove clothing contaminated with corrosive liquid chemicals and immediately flood the affected area with large amounts of water for at least 15 minutes.
   d. Chemical eye burns
      i. Immediately flood the eye with large amounts of water. Flush continuously for at least 15 minutes, or until EMS personnel take over.

Ask a Review Question as Needed

You are assisting a responsive, breathing [_apprentice technician_] who was sprayed in the face by caustic liquid while performing maintenance on [_the drain of a liquid chemical storage tank_]. The scene is safe. You have taken standard precautions. EMS has been activated. You have an AED and a first aid kit. The person says, “It’s burning. Help me, I can’t see!” What would you do?

a. Loosely cover the burn with a dry, non-stick sterile or clean dressing.
b. Flood the face and eyes with large amounts of water for at least 5 minutes.
c. Flood the face and eyes with large amounts of water for at least 15 minutes.
d. Keep the person lying down, face up. Cover them to help maintain body temperature.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

According to the American Burn Association, more than 73% of burn injuries occur in the home. Visit their website ameriburn.org/prevention/prevention-resources/ to learn how to make simple environmental and behavioral changes to keep your family safe and save lives.

lesson twenty-nine

ALTERED MENTAL STATUS

PREPARE

Duration
3 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:

- Explain how to recognize and provide first aid treatment for altered mental status.

Why This Topic Matters

An altered mental status is an important warning sign of a potentially life-threatening condition.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. An alteration in mental status refers to a change in awareness, such as confusion, loss of alertness, disorientation, or bizarre, inappropriate, or combative behavior, without a loss of consciousness.
2. Perform an assessment and follow the procedure based on your findings. If the person is breathing and appears responsive, obtain consent.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
4. If a person becomes unresponsive, place them on their side in the recovery position to help protect the airway. If they stop breathing or are only gasping, start CPR.

Ask a Review Question as Needed

You have been asked to assist [_a coworker_] who seems disoriented, is untypically belligerent, and is saying bizarre and inappropriate things. As you reach the scene, the person crumples onto the [_office floor_]. The scene is safe. You have taken standard precautions. The person is unresponsive and breathing normally. EMS has been activated. Another first aid provider is bringing an AED and a first aid kit. What would you do?

a. Obtain consent.
b. Perform a secondary assessment.
c. Put the person on their side in the recovery position.
d. Start conventional CPR, beginning with high-quality chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson thirty

POISONING

PREPARE

Duration
10 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 how to recognize and provide first aid treatment for poisoning.

Why This Topic Matters

The effects of poisoning range from short-term illness to brain damage, coma, and death.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

When teaching Adult First Aid only, refer to the *Procedure for Adult First Aid* graphic for information on giving naloxone for a suspected opioid-associated emergency (OAE).

WRAP UP

Reinforce Key Points as Needed

1. A poison is any substance that can enter the body and cause sickness or death. A poison can be swallowed, inhaled, injected, or absorbed through the skin.
2. Perform an assessment and follow the procedure based on your findings. Take action based on the type of poisoning incident you suspect may have occurred.
   a. Suspected opioid-associated emergency (OAE)
      i. Administering naloxone can prevent brain injury and death.
      ii. Give naloxone as soon as you can, but do not delay CPR to give it.
      iii. If an unresponsive person is breathing normally, give naloxone if available. Place the person in the recovery position.
   b. Swallowed poisons
      i. If the product swallowed is burning, irritating, or caustic, and the person is responsive, not having seizures, and is able to swallow, have them drink a small amount of water or milk immediately.
      ii. Get help from Poison Control (1-800-222-1222).
   c. Inhaled poisons
      i. If the scene appears unsafe, do not approach it.
      ii. If there is an immediate danger to the victim, and you can take action without placing yourself at unreasonable risk, get the victim to the fresh air immediately.
   d. Absorbed or injected poisons
      i. Avoid contact with any drug or poison residue, containers, needles, and other paraphernalia.

Ask a Review Question as Needed

You are a designated first aid provider responding to a call from [_ your workplace emergency alert system_] for [_people passed out in the processing room_]. EMS has been activated. Upon your arrival, you can see several [_cleaning crew members_] lying on the floor, apparently unconscious, in the enclosed space. Two gasoline power washers are running unattended. What would you do?

a. Enter the space. Get the victims to the fresh air immediately.
b. Enter the space. Put each person on their side in the recovery position.
c. Not enter the space, unless properly trained and equipped. Keep others away.
d. Enter the space. Start CPR if the victims are not breathing or only occasionally gasping.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Carbon monoxide (CO) is harmful when breathed because it displaces oxygen in the blood and deprives the heart, brain, and other vital organs of oxygen. Large amounts of CO can overcome you in minutes without warning — causing you to lose consciousness and suffocate. Avoid the use of gas-powered engines, such as those in powered washers as well as heaters and forklifts, while working in enclosed spaces. Find out more at osha.gov/publications/bytopic/carbon-monoxide.

lesson thirty-one

DIFFICULTY BREATHING

PREPARE

Duration
3 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 how to recognize and provide first aid for difficulty breathing.

Why This Topic Matters

Difficulty breathing is almost always a medical emergency.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings. A responsive person having difficulty breathing is likely to be very anxious and agitated; sitting up and breathing rapidly; coughing, wheezing, or making whistling sounds; and having difficulty speaking.
2. Allow the person to find the most comfortable position in which to breathe, typically sitting up. With consent, help them loosen any restrictive clothing.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
4. Be prepared to provide CPR if the person becomes unresponsive and stops breathing or is only occasionally gasping or makes snorting, snoring, or gurgling sounds.

Ask a Review Question as Needed

You are a designated first aid provider responding to a call from the [_worksite emergency notification system_] for a person with trouble breathing in [_the ship center office_]. The scene is safe. You have taken standard precautions. The person is responsive, sweating, frightened, and breathing rapidly. They say, "I feel faint. I think I'm having a heart attack." They consent to first aid. EMS has been activated. Another first aid provider is bringing an AED and a first aid kit. What would you do?

a. Keep them lying down, face up.
b. Place them on their side in the recovery position.
c. Have them drink a small amount of water or milk.
d. Help them loosen any restrictive clothing. Be prepared to provide CPR.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson thirty-two

ASTHMA

PREPARE

Duration
4 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 how to recognize and provide first aid for asthma.

Why This Topic Matters

Asthma is a medical condition in which certain things can trigger a physical reaction in the lungs and make it difficult to breathe. A person with asthma may need help assembling and using their inhaler.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

When teaching Adult First Aid only, remind students to bring an AED when responding to provide first aid, even if they don't have training on how to use it. Another trained provider or bystander may know how to use it.

WRAP UP

Reinforce Key Points as Needed

1. Allow the person to find the most comfortable position in which to breathe, typically sitting up and leaning forward. With consent, help them loosen any restrictive clothing.
2. If necessary, help the person assemble and use their inhaler.
   a. Shake the inhaler hard 10-15 times before each use.
   b. Have the person breathe out all the way; encourage them to push out as much air as they can.
   c. Have the person close their lips around the mouthpiece of the inhaler or spacer to make a tight seal.
   d. Press down on the inhaler one time. Have the person breathe in as slowly and deeply as they can.
   e. Have them hold their breath for a slow count of 10, then breathe out slowly through their mouth.
   f. If more than one dose is needed, repeat the steps.
3. Call 911 to activate EMS using a mobile device or activate your EAP, and get the first aid kit and AED if the person:
   a. Does not have their inhaler,
   b. Gets no better or gets worse after using their inhaler,
   c. Has difficulty speaking, or
   d. Becomes unresponsive.
4. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.

Ask a Review Question as Needed

You are a first aid provider responding to request for assistance [_over your two-way radio_] for [_a team member_] with trouble breathing in [_the break room_]. The scene is safe. You have taken standard precautions. The person is responsive, wheezing, and coughing. They are having some difficulty speaking. “I’m…having…an…an… asthma...flare…up.” They consent to first aid by nodding. They do not have their inhaler. What would you do?

a. Keep them lying down, face up.
b. Get the person to fresh air immediately.
c. Place them on their side in the recovery position.
d. Activate EMS or your EAP and get the first aid kit and AED.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson thirty-three

ADULT – RELIEF OF CHOKING (ADULT FIRST AID ONLY)

PREPARE

Duration
5 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

Begin the Lesson

Skip this lesson if teaching a class type that includes Adult CPR AED.

What Students Should Learn

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

- Describe how to recognize and provide treatment for a choking adult.

Why This Topic Matters

When a severe airway obstruction occurs, the person cannot get air in or out of the lungs. This is a life-threatening medical emergency. If the foreign body is not removed, the person will quickly become unresponsive and suffer a secondary cardiac arrest within minutes.

Play the Video

Instructional Notes

When teaching only Adult First Aid, refer to the *Procedure for Adult First Aid*.

WRAP UP

Reinforce Key Points as Needed

1. If the person can inhale and exhale, encourage them to continue coughing.
2. Signs of a severe airway obstruction include the inability to speak, a weak cough, or no cough at all.
3. Each abdominal thrust needs to be given with the intent of dislodging and expelling the object.
4. If the person becomes unresponsive, perform an assessment and follow the procedure based on your findings.
    a. If the unresponsive person is not breathing normally or only gasping, begin compression-only CPR if untrained in conventional CPR.
5. Before opening the airway to provide rescue breaths, open the person's mouth wide. If you see an object, remove it with your fingers.

Ask a Review Question as Needed

You are responding to a request for first aid assistance in the [_lunchroom_]. As you approach, you find a panicky [_assistant manager_] attempting to calm a frightened [_staff member_] who is noticeably wheezing between frequent hard coughs. The [_assistant manager_] shouts, "He's choking on a hot dog! Please help him." The scene is safe. You have taken standard precautions. The facility's EAP has been activated. What would you do?

a. Encourage the person to continue coughing.
b. Give chest thrusts with the intent of dislodging the hot dog.
c. Give abdominal thrusts with the intent of dislodging the hot dog.
d. Open the person's mouth wide. If you see an object, remove it with your fingers.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Not chewing food well before swallowing; talking or laughing while eating; alcohol consumption; advancing age; and poorly fitting dental work are all risk factors for adult choking.

lesson thirty-four

SEVERE ALLERGIC REACTION

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:

- Explain how to recognize and provide first aid for a severe allergic reaction.
- Explain how to use an EpiPen® epinephrine autoinjector.
- Correctly demonstrate how to use an EpiPen® epinephrine autoinjector.

Why This Topic Matters

A severe allergic reaction can develop rapidly. Without treatment, death can occur within minutes.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

1. It may be helpful to have students take a minute or two on their own to review the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, use the *Procedure for Adult First Aid*.
2. There is no Video-Guided Practice or skill sheet for this scenario-based practice.
   a. The first goal of the skill practice for this lesson is to help students apply the knowledge and skills required to take action for a severe allergic reaction. This includes looking for medical identification jewelry and using an epinephrine autoinjector.
   b. The second goal of this skill practice is to prepare students for successful completion of required Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction.
3. You may conduct the Severe Allergic Reaction Performance Evaluation at the end of this lesson, segment, or at the end of the class.
   a. Explain both goals above to the students so they understand what is expected of them and encourage them practice accordingly.

PRACTICE & ASSESS

Conduct a Hands-On Student Practice

- Practice with **Scenario Sheet 11**.

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. Epinephrine can quickly reverse the effects of a severe allergic reaction and may be lifesaving.
2. Place the orange tip of the EpiPen® autoinjector against the middle of the outer thigh at a right angle to the thigh.
   a. Swing and push the autoinjector firmly until it 'clicks.' Hold firmly in place for 3 seconds.
   b. To avoid an accidental injection, never put your thumb, fingers, or hand over the orange tip.
   c. Massage the injection area for 10 seconds.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
4. Consider giving a second dose with a new epinephrine autoinjector if one is available, symptoms persist, and EMS is still 5-10 minutes away.

Ask a Review Question as Needed

You are a designated first aid provider responding to [_a call for help over your two-way radio_] for [_a tree trimmer_] stung by wasps. The scene is safe. You see a person sitting [_in a bucket truck_]. The person, speaking in a hoarse voice, says they were [_cutting a limb_] and disturbed a wasp nest. They got stung multiple times in the face and throat. The person's eyes, lips, and face are rapidly swelling. They are wheezing and coughing. EMS has been activated. You have disposable gloves and a first aid kit. They carry an Epipen®, but don't remember how to use it. What would you do?

a. Keep the person lying down, face up.
b. Perform a secondary assessment while waiting for EMS.
c. Administer an injection of epinephrine, using the autoinjector.
d. Flood the eyes, lips, and face with large amounts of water for at least 5 minutes.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Up to 75% of people with a history of severe anaphylactic reaction to a sting will experience severe symptoms when stung again.[44] People with a history of severe allergic reactions to insect stings should consider carrying an epinephrine autoinjector and wearing a medical identification bracelet or necklace stating their allergy.

44 Bonifazi F, Jutel M, Biló BM, Birnbaum J, Muller U; EAACI Interest Group on Insect Venom Hypersensitivity. Prevention and treatment of hymenoptera venom allergy: guidelines for clinical practice. Allergy. 2005 Dec;60(12):1459-70. doi: 10.1111/j.1398-9995.2005.00960.x. PMID: 16266376.

lesson thirty-five

HEART ATTACK

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 how to recognize and provide first aid for heart attack.

Why This Topic Matters

A person who is having a heart attack may deny it. Delays to medical care can jeopardize life.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. The most common symptom of heart attack is chest pain or discomfort. Heart attack is different from sudden cardiac arrest (SCA).
   a. SCA results from a problem with the heart's electrical system. With SCA, the heart suddenly and unexpectedly stops beating. A victim of SCA will be unconscious, unresponsive, and not breathing normally or only gasping.
   b. With a heart attack, the heart generally continues to beat, despite a clot or spasm in the artery that blocks blood supply to the heart, and the person remains conscious and responsive.
2. Perform an assessment and follow the procedure based on your findings.
   a. If the person is breathing and responsive, obtain consent.
   b. Allow them to find a comfortable position.
   c. Unless the person has a known allergy to aspirin or has been advised by a healthcare provider not to take aspirin, encourage them to chew and swallow 1 adult 325-mg aspirin tablet, or 2-4 low-dose "baby" aspirins, 81 mg each.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
4. Be prepared for the possibility of sudden cardiac arrest, and the need for CPR and the use of an AED.

Ask a Review Question as Needed

You are a first aid provider responding to [_a worksite emergency alert_] for [_a machine operator_] with chest pain in [_the packaging area_]. The scene is safe. You have taken standard precautions. The responsive, breathing person has consented to first aid. Your EAP has been activated. EMS is on the way. Another first aid provider has arrived with the first aid kit and an AED. The person complains of an achy feeling in the chest and both arms. They also say that they feel lightheaded but strongly reject the idea that they may be having a heart attack. What would you do?

a. Recommend the person take the rest of the day off.
b. Place the person on their side in the recovery position.
c. Power on the AED. Bare the chest. Apply the AED pads within 30 seconds.
d. If they have no aspirin allergy, encourage them to chew and swallow an aspirin tablet.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

To help reduce your risk of heart attack and improve your heart health: Take aspirin as directed by your healthcare professional. Control your blood pressure. Manage your cholesterol. Don't smoke.[45]

45 ABCS of Heart Health. https://millionhearts.hhs.gov/data-reports/factsheets/ABCS.html [Retrieved 09.07.21]

lesson thirty-six

STROKE

PREPARE

Duration
3 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 how to recognize and provide first aid for stroke.

Why This Topic Matters

A stroke can cause lasting brain damage, long-term disability, or even death.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings.
   a. If the person is breathing and responsive, obtain consent. If the person is unable to give consent because of difficulty communicating, consider consent to be implied.
2. Use the memory aid FAST to recognize the warning signs of stroke.
   a. **F**ace: Ask the person to smile. Does one side of the face droop?
   b. **A**rms: Ask the person to raise both arms. Does one arm drift downward?
   c. **S**peech: Ask the person to repeat a simple phrase. Is the speech slurred or strange?
   d. **T**ime: If you see any of these signs, it is time to activate EMS and/or your EAP.
3. Do not give aspirin for a suspected stroke.
4. Do not give supplemental oxygen for a suspected stroke.

Ask a Review Question as Needed

You are a designated first aid provider responding to [_a request for help_] for [_a guest_] complaining of a headache and dizziness in [_the main reception area_]. The scene is safe. You have taken standard precautions. The responsive, breathing person has consented to first aid by nodding agreeably. Another first aid provider is bringing the first aid kit, emergency oxygen, and an AED. The person is unable to describe the current problem other than repeating, "Headache. Dizzy." There is no medical identification jewelry. There is no face droop or arm drift. You ask the person to repeat the phrase, "The grass is green." Their words come out all jumbled. What would you do?

a. Power on the AED. Bare the chest. Apply the pads within 30 seconds.
b. Place the person on their side in the recovery position.
c. Activate EMS and/or your EAP. Stay with the person until EMS arrives.
d. Turn on the emergency oxygen unit, check that oxygen is flowing, and place the mask on the person's face.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Some of the most important treatable risk factors for stroke are high blood pressure, cigarette smoking, history of stroke or brief stroke-like symptoms, diabetes, cholesterol imbalance, physical inactivity, and obesity. Although stroke risk is never zero at any age, by starting early and controlling your risk factors you can lower your risk of death or disability from stroke.[46]

46 Brain Basics: Preventing Stroke. National Institute of Neurological Disorders and Stroke. https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Preventing-Stroke [Retrieved 9/8/21]

lesson thirty-seven

SEIZURE

PREPARE

Duration
3 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 how to recognize and provide first aid for seizures.

Why This Topic Matters

For most seizures, basic seizure first aid is all that is needed.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Perform an assessment and follow the procedure based on your findings.
2. Loosen tight clothes around neck and put something small and soft under the head.
3. Do not put any objects in the person's mouth, including your fingers.
4. Protect the person from injury during the seizure. Time the length of the seizure.
5. Place the person in the recovery position and stay with them until they are awake and alert after the seizure.
6. Activate EMS and/or your EAP if the seizure lasts longer than 5 minutes or if the person is not breathing normally or only gasping; has difficulty breathing; is injured, pregnant, or sick; has repeated seizures; or has never had a seizure before.

Ask a Review Question as Needed

You are a designated first aid provider responding to [_a worksite alert_] for [_a team member_] having a seizure. The scene is safe. You have taken standard precautions. As you arrive, an untrained coworker tells you that the seizure just ended. The person is unresponsive and breathing. There are no life-threatening injuries. A silicone medical ID bracelet states, "EDUARDO LEONARD. EPILEPSY. ON TEGRETOL. ICE 555-559-1883." As you prepare to place the person on their side in the recovery position, their body stiffens, and rhythmic jerking movements begin. What would you do?

a. Hold the person down to prevent injury.
b. Activate EMS and/or your EAP. Time the seizure.
c. Put something small and hard under their head.
d. Put something in the person's mouth so they don't swallow their tongue.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Traumatic brain injuries are a frequent cause of epilepsy. To help prevent traumatic brain injuries, use a vehicle seat belt whenever possible, and a helmet when using a bicycle, motorcycle, or similar vehicles. Be very careful when walking on slippery surfaces. Falls are the leading cause of brain injury. [47]

47 Preventing Epilepsy. https://www.cdc.gov/epilepsy/preventing-epilepsy.htm [Retrieved 09.07.21]

lesson thirty-eight

DIABETES & HYPOGLYCEMIA

PREPARE

Duration
3 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 how to recognize and provide first aid for diabetes and hypoglycemia.

Why This Topic Matters

Hypoglycemia, or low blood sugar, is a diabetic condition that can rapidly develop and become life-threatening.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Signs of dangerously low blood sugar include hunger, shakiness, dizziness, confusion, difficulty speaking, and feeling anxious or weak.
2. Perform an assessment and follow the procedure based on your findings.
3. If the person is breathing and responsive, obtain consent. If they can swallow without difficulty, encourage them to swallow about 20 grams of oral glucose (about 1¼ U.S. tablespoons).
   a. If oral glucose is not available, use something with dietary sugar instead, such as orange juice or jellybeans.
4. It is never appropriate to administer insulin to a diabetic person in an emergency setting.

Ask a Review Question as Needed

You are a responding to [_a text alert_] for [_an associate_] acting strangely. The scene is safe. You have taken standard precautions. The person is responsive and breathing. Your EAP has been activated. You have a first aid kit and an AED. You introduce yourself and ask if you can help. The person is sweating, confused, and saying that an evil spirit plans to harm them. As a designated first aid provider, your employer has previously disclosed to you that the person has type 2 diabetes and might require emergency treatment. What would you do?

a. Place the person on their side in the recovery position.
b. Power on the AED. Bare the chest. Apply the pads within 30 seconds.
c. Encourage the person to swallow about 1¼ U.S. tablespoons (20 gm) oral glucose.
d. Using an insulin pen, inject 5 units of rapid acting insulin into the person's abdomen.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Type 2 diabetes most often develops in people over age 45. Prediabetes is a serious health condition where blood sugar levels are higher than normal but not high enough yet to be diagnosed as type 2 diabetes. You can get a simple blood sugar test to find out if you have prediabetes. If you have prediabetes, losing a small amount of weight if you're overweight and getting regular physical activity can lower your risk for developing type 2 diabetes.[48]

48 Prediabetes - Your Chance to Prevent Type 2 Diabetes. https://www.cdc.gov/diabetes/basics/prediabetes.html [Retrieved 09.07.21]

lesson thirty-nine

PRESYNCOPE & SYNCOPE

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 how to recognize and provide first aid for presyncope and syncope.

Why This Topic Matters

Recognition of the signs and symptoms of presyncope combined with rapid first aid treatment may prevent syncope from occurring.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Presyncope, or near fainting, is the medical term for the feeling of fainting but without an actual loss of consciousness.
2. Syncope is the medical term for fainting, the temporary loss of consciousness due to the sudden decline of blood flow to the brain.
3. A person may complain of suddenly being lightheaded and weak. They may describe feeling warm or having blurry vision. You may notice changes in skin appearance and condition.
4. The priority is to help prevent injury to the person from falling. Help get the person into a safe position, such as squatting, sitting, or lying down.
5. Physical counterpressure maneuvers (PCMs) are movements of a muscle or group of muscles that increase blood pressure. PCMs can relieve the symptoms of presyncope and prevent syncope.
6. PCMS should not be used if more serious warning signs and symptoms are present such as confusion, chest pain or discomfort, accompanying injury, bleeding, signs of stroke, or breathing difficulty.
7. After fainting, a person should quickly regain consciousness. If the person is responsive and breathing normally and there is no evidence of pain or injury, keep them lying down, face up. Consider raising their feet about 6-12 inches.
8. If the person's symptoms do not improve within 1-2 minutes, get worse, or reoccur, activate EMS or your EAP. Perform an assessment and follow the procedure based on your findings.

Ask a Review Question as Needed

You are a trained first aid provider responding to [_a request for passenger assistance_]. Upon arrival at [_the airport security checkpoint_], you are directed to an older adult who has been standing in a long security line. The scene is safe. You have taken standard precautions. The person is responsive and breathing and still standing. You have a first aid kit and an AED. You introduce yourself and ask if you can help. The person consents and says, "Sorry, I'm just feeling really dizzy." They appear hot, clammy, and sweaty. What would you do?

a. Encourage the person to take aspirin.
b. Quickly help them into a safe position.
c. Look for medical identification jewelry.
d. Ask the person to repeat a simple phrase.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Injuries due to syncope are frequent. The risk of major injuries is substantial. Older persons are at higher risk.[49]

49 Jorge JG, Raj SR, Teixeira PS, Teixeira JAC, Sheldon RS. Likelihood of injury due to vasovagal syncope: a systematic review and meta-analysis. Europace. 2021 Jul 18;23(7):1092-1099. doi: 10.1093/europace/euab041. PMID: 33693816. [Retrieved 9.9.21]

lesson forty

HEAT EMERGENCIES

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 how to recognize and provide first aid for heat-related emergencies.

Why This Topic Matters

High temperatures can be dangerous to people at work, home, and play, and can lead to injury, illness, and death.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Heat cramps are the earliest signs of heat illness.
2. Heat exhaustion can occur as a combined result of a rising internal temperature and dehydration.
   a. Early and appropriate first aid includes rest, moving to a cooler location, removing excess clothing (including PPE), and drinking a carbohydrate-electrolyte drink.
   b. Have the person stop any activity and move to a cooler place, preferably an air-conditioned environment.
   c. Spray water on or apply cool, wet cloths to the head and torso. Use a fan to increase the cooling effect.
3. If a person with suspected heat stroke is unresponsive and breathing normally, the most important action a first aid provider can take is to begin immediate cooling with the resources available.
   a. When possible, begin immediate cooling by immersing the person up to the chin in cool to cold water.
   b. If that is not possible or doing so would be unsafe, use other forms of immediate cooling. Apply cold packs to the neck, groin, and armpits.
   c. Provide continuous cooling until the person is alert and responsive or until EMS providers take over.

Ask a Review Question as Needed

You are a trained first aid provider responding to a call [_over your two-way radio_] to assist [_a grounds maintenance worker_] who is feeling ill after heavy physical work in extremely hot and humid weather. A coworker has sent the person to rest under a tree. The scene is safe. You have taken standard precautions. The person is unresponsive and breathing with difficulty. Their body, arms, and legs are all jerking, and they have lost bladder control. Your EAP and EMS have been activated. You have a first aid kit and an AED. What would you do?

a. Hold the person down to prevent injury.
b. Immediately start CPR, beginning with chest compressions.
c. Begin immediate cooling with the resources available to you.
d. Power on the AED. Bare the chest. Apply the pads within 30 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

For those exposed to high temperatures, preventing heat-related emergencies can be achieved with three very simple actions early on: water, rest, and shade.

lesson forty-one

COLD EMERGENCIES

PREPARE

Duration
7 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 how to recognize and provide first aid for cold-related emergencies.

Why This Topic Matters

A cold or cool, wet environment can result in a lowering of internal body temperature. Hypothermia and frostbite are the most dangerous cold-related conditions.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Frost-nipped skin feels numb to the person and looks white.
   a. Rewarm the area as soon as possible using skin-to-skin contact.
2. Early signs of severe frostbite include burning, numbness, and tingling skin that appears white and frozen.
   a. Get the person to a warmer place. Remove any wet clothing from the affected area and dry the skin. Remove any constrictive jewelry.
   b. If you are more than 2 hours from professional medical care, immerse the frostbitten area in warm water (98.6-102.2° F or 37-39° C) for 20 to 30 minutes.
   c. Keep the warm water at the recommended temperature. Expect severe pain, substantial swelling, blistering, and tissue color changes.
3. Hypothermia frequently accompanies frostbite and can be fatal. Perform an assessment and follow the procedure based on your findings.
   a. If the person is unresponsive and not breathing normally or only gasping, start CPR (unless there are obvious fatal injuries or if the chest is too stiff to compress).
   b. If the person is breathing and responsive, keep them lying flat, face up. Handle them gently.
   c. If you are far from professional medical care, begin actively rewarming the person.

Ask a Review Question as Needed

You are a trained first aid provider assisting [_a fellow utility crew person_] who is complaining of painfully numb fingers after working in cold, snowy weather for several hours in a rural area. The scene is safe. You have taken standard precautions. EMS has been activated. EMS response time is estimated at about 15 minutes. The person is responsive and breathing. They consent to first aid. Their fingers look frozen, white, and feel very hard. You have a first aid kit and an AED. What would you do?

a. Rewarm the area using skin-to-skin contact.
b. Encourage the person to briskly rub their hands with snow.
c. Begin rapid rewarming with warm water or chemical warmers.
d. Get them to a warmer place. Dry the skin. Remove constrictive jewelry.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

To prevent frostbite injuries, use gloves to handle all equipment; never use bare hands. Metal accelerates freezing.

lesson forty-two

BITES & STINGS

PREPARE

Duration
10 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 how to recognize and provide first aid for bites and stings.

Why This Topic Matters

Many insects such as bees, wasps, and fire ants may sting when agitated or in defense of their nests or territories. It is possible for a life-threatening allergic reaction to develop.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. *Stinging Insects*
   a. If a stinger is present in the skin, remove it as quickly as possible. There is no need to find and use a dull-edged scraping device, such as a credit card. [50]
   b. Remove jewelry from the affected area. Cover the area with an adhesive bandage or a pad.
   c. Place a bag of ice and water wrapped in a towel over the area for up to 20 minutes to help reduce swelling and pain.
   d. Epinephrine can quickly reverse the effects of a severe allergic reaction and may be lifesaving.
2. *Venomous Snakebite*
   a. Signs and symptoms of a pit viper bite include bite-site puncture marks; significant and spreading bite-site redness, swelling, and tenderness; bite-site pain, numbness, and bruising; fear and anxiety; and nausea and vomiting.
   b. Signs and symptoms of a coral snake bite are often delayed, up to 13 hours. When they do appear, symptoms can include nausea, vomiting, abnormal sensations, slurred speech, double vision, muscle twitching, weakness, and paralysis.
   c. Anticipate swelling. Remove jewelry or constrictive clothing near the bite.
   d. Flush the skin surface with warm or room temperature water. If there are no known allergies, apply antibiotic ointment or cream and a clean, occlusive dressing.

50 Lee JA, Singletary E, Charlton N. Methods of Honey Bee Stinger Removal: A Systematic Review of the Literature. Cureus. 2020 May 12;12(5):e8078. doi: 10.7759/cureus.8078.

3. *Venomous Spider Bites and Scorpion Stings*
    a. Tenderness, swelling, pain, itchiness, and redness at the venomous spider bite site can develop. Scorpions inflict severely painful stings.
    b. Appropriate first aid for spider bites and scorpion stings is the same. Anticipate swelling. Remove jewelry or constrictive clothing near the bite. Wash the area well with soap and water.
    c. Apply a bag of ice and water wrapped in a towel to reduce pain and swelling.
4. *Tick Bites*
    a. To remove a tick, grasp it close to the skin with fine-tipped tweezers or a tick removal tool.
    b. Pull straight up with a steady, slow motion. Twisting or jerking can cause the mouth of the tick to break off.
    c. Clean the bite site well with soap and water or an antiseptic wipe.
5. *Marine Animal Stings*
    a. Wash the sting site liberally with household vinegar as soon as possible for at least 30 seconds to deactivate the venom and prevent further stinging.
    b. To help reduce pain, immerse the sting site in hot water for at least 20 minutes or until the pain subsides.
6. *Stingray Stings*
    a. Signs and symptoms of a stingray injury include immediate, severe pain at the sting site with a bleeding, often discolored wound. Control bleeding with direct manual pressure.
    b. To control pain and inactivate the venom, immerse the injured area in water as hot as the person can tolerate for at least 30 minutes.
7. *Animal and Human Bites*
    a. Pain, puncture wounds, bleeding, bruising, numbness, and tingling can occur with any bite.
    b. Control bleeding with direct manual pressure. Wash the area well with soap and water for 3-5 minutes.
    c. Place a bag of ice and water wrapped in a towel over the area for up to 20 minutes to help reduce swelling and pain.
    d. Medical evaluation as soon as possible and within 24 hours is necessary for all bites that break the skin.

Ask a Review Question as Needed

You are a designated first aid provider who has been called to assist an injured [_marine researcher_]. The scene is safe. You have taken standard precautions. The person is responsive and breathing. They consent to first aid. They complain of severe pain after accidentally stepping on a stingray. A barb-like spine is stuck in the top of the person's foot. Some minor bleeding has stopped on its own. You have a first aid kit and an AED. What would you do?

a. Wash the area well with soap and water. Give naloxone if available.
b. Wash the sting site liberally with household vinegar for at least 30 seconds.
c. Immerse the foot in water as hot as the person can tolerate for at least 30 minutes.
d. Apply a commercially manufactured tourniquet at least 2-3 inches above the wound.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Practice caution in snake-prone environments. Wear protective clothing and use a stick to scare away snakes hiding in tall grass. Never touch or handle a snake.

performance evaluation

ADULT FIRST AID SKILL EVALUATION

PREPARE

Duration
9 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on the Performance Evaluations for Adult First Aid.

Why This Topic Matters

- A certification card may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test) for the class type you are teaching.
- Any class type that includes Adult First Aid requires the following Performance Evaluations.
  - Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding
  - Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction
- These Performance Evaluations may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Only Adult First Aid or Adult First Aid, Adult CPR AED – Move to the Conclusion segment on page 183.
   b. Any class including Child CPR AED and/or Infant CPR AED – Turn to the next lesson to begin the pediatric CPR AED lessons.

segment four

CHILD CPR AED

lesson forty-three

CHILD – CARDIAC ARREST & PEDIATRIC CHAIN OF SURVIVAL

PREPARE

Duration
4 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:

- Recognize the difference between secondary and sudden cardiac arrest.
- Explain the pediatric chain of survival concept.

Why This Topic Matters

In cardiac arrest, the child's heart stops beating. Fortunately, most children have healthy hearts and cardiac arrest in children is rare. When it does happen, it is most commonly a result of asphyxia, a lack of oxygen that occurs when breathing slows or stops.

Play the Video

WRAP UP

Reinforce Key Points as Needed

1. Secondary cardiac arrest occurs when the heart stops secondary to a lack of oxygen and not from a problem with the heart itself.
   a. Causes of secondary cardiac arrest include airway obstruction, lung infections or diseases, drowning, choking, and shock resulting from injuries such as motor vehicle accidents, burns, falls, and child abuse.
   b. Prevention of these causes is critical in reducing pediatric cardiac arrest from asphyxia.
2. Sudden cardiac arrest occurs when the normal electrical impulses in the heart cause it to beat too quickly, inefficiently, or in an unsynchronized manner.
3. Sudden cardiac arrest is also known as primary cardiac arrest because it is a problem with the heart itself.
   a. While uncommon, sudden cardiac arrest can and does occur in children of all ages.
   b. Immediate, high-quality CPR and early defibrillation with an AED can more than double the likelihood for survival.
4. In this CPR AED class, a child is defined as 1 year of age until the onset of puberty.
   a. Puberty can be identified by breast development in females and the presence of armpit hair in males. For those with signs of puberty, provide adult CPR AED.
5. The pediatric chain of survival consists of a series of six interdependent links that describe the best approach to cardiac arrest care.
   a. Each link in the chain is essential for the most positive outcome. If a single link is missing, the chances for survival are greatly reduced.

Ask a Review Question as Needed

Which of the following is critical in reducing pediatric cardiac arrest from asphyxia?

a. Prevention
b. Medication
c. Defibrillation
d. High-quality CPR

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The American Academy of Pediatrics (AAP) recommends several ways parents can help keep children safe around home swimming pools and hot tubs. Pool fencing is the most effective, proven way to prevent drowning of young children. Pool alarms, door and gate alarms, and pool covers provide added safety. Additional precautions include assigning a water watcher to watch all children swimming or playing in or near water, putting children in a properly fitted U.S. Coast Guard approved life jacket, swimming lessons, and of course, all parents, caregivers, and pool owners should know how to perform CPR.[51]

51 "Pool Dangers and Drowning Prevention-When It's Not Swimming Time." https://www.healthychildren.org/English/safety-prevention/at-play/Pages/Pool-Dangers-Drowning-Prevention-When-Not-Swimming-Time.aspx [Retrieved 9/20/21]

lesson forty-four

CHILD – ASSESSMENT & CHEST COMPRESSIONS

PREPARE

Duration
4 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:

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

Why This Topic Matters

Assessment of the scene and the child is a critical skill that applies in any emergency. The steps of assessment are crucial in determining the provider's next actions. If an unresponsive child 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.

Play the Video

Instructional Notes

1. The purpose of this lesson is for students to perform the steps of child assessment with a focus on a child 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 adult or child CPR training manikin. Make sure they count out loud.
   a. An adult training manikin simulates a child older than 8 years of age.
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 10: Child – Assessment & Chest Compressions** or **Scenario Sheet 12**.

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.
   a. Push hard and deep, straight down, using your upper body weight to compress the chest at least 2 inches (5 cm). Chest compressions are most often performed too shallowly.
   b. At the end of each compression, lift all your weight off the child's chest, allowing it to completely recoil, or rebound, to its normal position but do not lose contact with the chest.
   c. Push fast. Compress the chest at a rate of 100-120 compressions per minute.
   d. Perform 30 high-quality chest compressions. Count out loud.
   e. Minimize interruption in chest compressions. Fewer and shorter interruptions in chest compressions are associated with better outcomes.
3. 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 leaving the child (or if the child is uninjured, carrying them 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_] for a limp, unresponsive child. You see a motionless child lying face up on the [_nature center floor_]. The scene is safe. You have disposable gloves and a CPR mask. You tap the child and ask loudly, "Are you okay?" There is no response. Your EAP has activated EMS. Another provider is bringing an AED. The child is making snoring sounds and gasping. What would you do?

a. Give 2 rescue breaths that make the chest rise.
b. Immediately assess for life-threatening conditions.
c. Check the pulse in the neck for no more than 10 seconds.
d. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson forty-five

CHILD – RESCUE BREATHING & USING A CPR MASK

PREPARE

Duration
4 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:

- Explain the importance of child rescue breaths.
- Explain how to open a child's airway using a head tilt–chin lift.
- Correctly demonstrate how to give rescue breaths using an adult/child CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are extremely important for children because cardiac arrest typically results from asphyxia.

Play the Video

Instructional Notes

1. Students practice opening the airway and giving rescue breaths on an adult or child CPR training manikin using an adult/child CPR mask with one-way disposable mouthpiece (1 for each student).
   a. An adult training manikin simulates a child older than 8 years of age.
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 11: Child – Using a CPR Mask** or **Scenario Sheet 13**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the child's lungs. Conventional CPR with rescue breathing should be performed on a child by all trained CPR providers who are willing and able.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. In the case of drowning, begin with rescue breaths.[52] As soon as the unresponsive victim is removed from the water, open the airway, and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a shout for help_] to assist [_a guest_] at the lakefront. Upon arrival, you see a couple of bystanders dragging a limp, apparently unconscious child from the water onto the shore. One of the bystanders, catching their breath, says, "…under…the…water for a couple…minutes." The scene is safe. You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. Another CPR provider is bringing an AED. The child is not breathing. What would you do?

a. Place the child on their side in the recovery position.
b. Open the airway. Use the mask to give 2 rescue breaths.
c. Immediately start CPR, beginning with chest compressions.
d. Check the pulse in the neck for no more than 10 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Drowning is the leading cause of unintentional death among children ages 1 to 4 years old.[53] Close, constant, and attentive supervision of young children in or around any water is essential to prevent drowning.[54]

52 Vanden Hoek TL, et al. Part 12: cardiac arrest in special situations: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. Circulation. 2010;122(suppl 3):S829 –S861.

53 U.S. Consumer Product Safety Commission. https://www.poolsafely.gov/blog/news/new-cpsc-report-finds-steady-rise-in-fatal-child-drownings/ [Retrieved 7-12-21]

54 Prevention of Drowning. Denny SA, et al. Pediatrics May 2019, 143 (5) e20190850; DOI: https://doi.org/10.1542/peds.2019-0850 [Retrieved 7-15-21]

lesson forty-six

CHILD – AUTOMATED EXTERNAL DEFIBRILLATION & USING AN AED

PREPARE

Duration
5 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:

- Identify the steps to use an AED [Trainer] on a child.
- Correctly demonstrate how to use an AED [Trainer] on a child.

Why This Topic Matters

When indicated, an electrical shock passed through the chest can restore the heart's normal contractions.

Play the Video

Instructional Notes

Always verify that each AED Trainer is not a live AED and that the device is incapable of delivering a real shock.

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 12: Child – Using an AED** or **Scenario Sheet 14**.

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. If you have an AED in your workplace, be familiar with its operation. AED design varies by model and manufacturer, but they all operate in a similar manner.
2. Pediatric pads are recommended for children under 8 years of age. If the child pads are not available, use the adult pads.
3. Proper AED operation requires direct contact between the pads and the child's skin. Any clothing in the way must be removed.
4. If the AED advises a shock, it will prompt you to clear the person. Loudly say, "Everybody clear," or something similar, then deliver a shock.
5. Once a shock has been delivered, immediately resume CPR starting with chest compressions.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_an alert from the company electronic notification system_] for an unresponsive child [_in the onsite daycare center_]. The scene is safe. You have taken standard precautions. You see a very anxious childcare worker performing poor quality compression-only CPR on a motionless child on the [_daycare center floor_]. The worker says, "He's not breathing. Please help me!" You have disposable gloves, a CPR mask, and an AED. You tap the child and ask loudly, "Are you okay?" There is no response. EMS has been activated. The unresponsive child seems to gasp for air now and then. What would you do?

a. Check the child's pulse.
b. Open the airway and provide 2 rescue breaths.
c. Power on the AED. Bare the child's chest and apply the AED pads.
d. Immediately start high-quality CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The United States Food and Drug Administration (FDA) encourages individuals and organizations to ensure their AED is FDA-approved (and if it is not, to make plans to transition to an FDA-approved AED). The FDA maintains a list of FDA-approved AEDs. Search for "automated external defibrillators" at fda.gov.

lesson forty-seven

CHILD – ONE-PROVIDER CPR AED

PREPARE

Duration
7 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:

- Apply the CPR AED links of the pediatric chain of survival as one provider.
- Correctly demonstrate high-quality child CPR AED as one provider.

Why This Topic Matters

One pediatric CPR provider can provide high-quality child CPR by putting together all the skills of assessment, chest compressions, airway, breathing, and AED use.

Play the Video

Instructional Notes

1. The first goal of the skill practice for this lesson is to help students apply the CPR AED links of the pediatric chain of survival by putting together the knowledge and skills required to take action for child cardiac arrest as one CPR provider.
2. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 2: Child – One-Provider CPR AED.
   a. You may conduct the Child – One-Provider CPR AED Performance Evaluation at the end of this lesson, segment, or at the end of the class.
3. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
4. Each student will need an adult/child CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
5. The AED [Trainer] is brought by “an untrained bystander.” The bystander role is played by another student. If there is only one student in the class, the instructor will need to play this role.
6. 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 13: Child – One-Provider CPR AED** or **Scenario Sheet 15**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an unresponsive child who collapsed [_on the athletic field_] after [_being struck in the chest by a baseball_]. The scene is safe. You have taken standard precautions. EMS is on the way. The untrained coworker you sent to get the nearby AED sets it down next to you and says, "Here's the AED." What would you do?

a. Power on the AED. Remove any clothing in the way. Apply the pads.
b. Check the child's breathing and pulse for no more than 30 seconds.
c. Check the child's breathing and pulse for no more than 10 seconds.
d. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Commotio cordis is caused by a blow to the chest over the region of the heart by a blunt object (like a baseball, hockey puck, or fist) that does not penetrate the body and that usually results in ventricular fibrillation leading to sudden cardiac death if treatment by defibrillation is not immediately given.[55] Research has shown that some chest protectors may reduce the incidence of commotio cordis.[56]

55 "Commotio cordis." Merriam-Webster.com Medical Dictionary, Merriam-Webster, https://www.merriam-webster.com/medical/commotio%20cordis. Accessed 21 Sep. 2021.

56 Kumar K, Mandleywala SN, Gannon MP, Estes NA 3rd, Weinstock J, Link MS. Development of a Chest Wall Protector Effective in Preventing Sudden Cardiac Death by Chest Wall Impact (Commotio Cordis). Clin J Sport Med. 2017 Jan;27(1):26-30. doi: 10.1097/JSM.0000000000000297. PMID: 27014942; PMCID: PMC5181132.

lesson forty-eight

CHILD – ADDITIONAL CPR AED CONSIDERATIONS

PREPARE

Duration
4 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:

- Identify special considerations for the AED.
- Describe how to give mouth-to-mouth rescue breathing to a child.

Why This Topic Matters

A CPR provider may face some circumstances that require additional considerations or tasks for effective cardiac arrest care. Act quickly if anything is affecting AED use to keep this link in the chain strong.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. Do not use an AED if the child is immersed in water.
2. If the child is in a wet setting, such as lying on snow or ice, in rain, on a wet floor or deck, or in a small puddle, it is safe to use the AED. If the child's chest is wet, quickly dry it before applying pads.
3. AEDs can be used safely on metal surfaces, such as gratings or stairwells.
4. If the AED pads are not in contact with metal jewelry, the jewelry does not have to be removed.
5. CPR providers should routinely take standard precautions during resuscitation, including using a CPR mask with a HEPA filter when available.
6. The immediate cause of death in drowning is a lack of oxygen. In the case of drowning, begin resuscitation with 2 rescue breaths.
7. There may be a rare or extraordinary circumstance when a barrier device is not available, and a CPR provider is willing to provide mouth-to-mouth rescue breathing. To give mouth-to-mouth rescue breathing to a child:
   a. Open the airway with a head tilt–chin lift.
   b. Pinch the nose closed with your thumb and forefinger.
   c. Take a regular-sized breath and seal your lips around the child's mouth.
   d. Give enough air to make the chest visibly rise, but no more than that.

Ask a Review Question as Needed

A child has just been pulled unresponsive from a swimming pool. The scene is safe. You have taken standard precautions. EMS is on the way. The child is not breathing. The child is lying on the pool deck in a small puddle. The child's chest is wet. You have given 2 rescue breaths using a CPR mask. You have an AED. What would you do?

a. Do not use an AED if the child is in a wet setting.
b. Give another rescue breath that is 1 second in length.
c. Power on the AED. Bare and quickly dry the chest. Apply the AED pads.
d. Start conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson forty-nine

CHILD – SUSPECTED OPIOID-ASSOCIATED EMERGENCY (OAE) (OPTIONAL)

PREPARE

Duration
2 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 child CPR AED procedure for suspected opioid-associated emergency (OAE).

Why This Topic Matters

Prescription opioid misuse has become a leading cause of unintentional injury and death among adolescents and young adults in the United States.

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

It may be helpful to have students take a minute on their own to review where giving naloxone appears in the *Procedure for Pediatric CPR AED* graphic in the Skill Guide.

WRAP UP

Reinforce Key Points as Needed

1. If you suspect an opioid-associated emergency, perform an assessment and follow the procedure based on your findings.
   a. If an unresponsive child is not breathing normally or only gasping, immediately start CPR. If it's available, give naloxone as soon as you can, but do not delay CPR AED to give it.
   b. If an unresponsive person is breathing normally, give naloxone if available. To help protect the airway, place the child in the recovery position.
2. Avoid contact with drug residue, containers, needles, and other paraphernalia.

Ask a Review Question as Needed

You are a trained CPR provider who has responded to a possible overdose in [_bedroom six_] of the [_residential care home_]. Your EAP has been activated and EMS is on the way. You have a first aid kit, naloxone, and an AED. The scene is safe. A four-year-old child is lying face up on the [_bedroom_] floor, unresponsive and breathing normally. You notice an open prescription bottle nearby labeled "oxycodone." What would you do?

a. Pick up the bottle and count the remaining pills.
b. Give the naloxone. Put the child in the recovery position.
c. Immediately start CPR, beginning with chest compressions.
d. Power on the AED. Apply pediatric pads to child's bare chest.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Protect children from accidental overdose by always relocking the safety cap on medicine bottles and storing all medications out of reach.

lesson fifty

CHILD – RELIEF OF CHOKING

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 how to recognize and provide treatment for a choking child.

Why This Topic Matters

When a severe airway obstruction occurs, the child cannot get air in or out of the lungs. This is a life-threatening medical emergency. If the foreign body is not removed, the child will quickly become unresponsive and suffer a secondary cardiac arrest within minutes.

Play the Video or **Discuss the WWYD? Slide**

WRAP UP

Reinforce Key Points as Needed

1. If the child can inhale and exhale, encourage them to continue coughing.
2. Signs of a severe airway obstruction include the inability to speak, a weak cough, or no cough at all.
3. Ask, “Are you choking?” If the child nods yes, or is unable to speak or cough, act quickly.
4. Stand behind the child. If needed, kneel behind a smaller child.
    a. Each abdominal thrust needs to be given with the intent of dislodging and expelling the object.
5. If the child becomes unresponsive, perform an assessment and follow the pediatric procedure based on your findings.
    a. Call 911 to activate EMS using a mobile device or activate your EAP if you have not done so already.
    b. If the unresponsive child is not breathing normally or only gasping, begin high-quality CPR starting with compressions.
6. Before opening the airway to provide rescue breaths, open the child’s mouth wide. If you see an object, remove it with your fingers. Do not stick your finger blindly in a child’s throat and attempt to sweep out an object.

Ask a Review Question as Needed

You are responding to a request for first aid assistance in [_the lunchroom_]. As you approach, you find an anxious [_food service worker_] attempting to calm a frightened young child who is noticeably wheezing between frequent hard coughs. The [_food service worker_] shouts, “She’s choking on a hot dog! Please help her.” The scene is safe. You have taken standard precautions. The EAP has been activated. What would you do?

a. Encourage the child to continue coughing.
b. Give chest thrusts with the intent of dislodging the hot dog.
c. Give abdominal thrusts with the intent of dislodging the hot dog.
d. Open the child’s mouth wide. If you see an object, remove it with your fingers.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

You can help reduce children’s risk of choking when eating by cutting food into small pieces. Cut tube-shaped foods such as hot dogs into short strips rather than round pieces. Avoid serving foods that are as wide around as a nickel, which is about the size of a young child’s throat.[57]

57 Choking Hazards. https://www.cdc.gov/nutrition/InfantandToddlerNutrition/foods-and-drinks/choking-hazards.html [Retrieved 9/21/21]

performance evaluation

CHILD – ONE-PROVIDER CPR AED PERFORMANCE EVALUATION

PREPARE

Duration
9 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on Performance Evaluation 2: Child – One-Provider CPR AED.

Why This Topic Matters

- An HSI certification card that includes Child CPR AED in combination with Adult CPR AED may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test).
  - Performance Evaluation 2: Child – One-Provider CPR AED.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Only Adult First Aid | Adult and Child CPR AED – Move to the Conclusion segment on page 183.
   b. Any class including Infant CPR AED – Turn to the next lesson to begin the Infant CPR AED lessons.

segment five

INFANT CPR AED

lesson fifty-one

INFANT – CARDIAC ARREST & PEDIATRIC CHAIN OF SURVIVAL

PREPARE

Duration
3 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:

- Recognize the difference between secondary and sudden cardiac arrest.
- Explain the pediatric chain of survival concept.

Why This Topic Matters

In cardiac arrest, the infant's heart stops beating. Fortunately, most children have healthy hearts and cardiac arrest in children is rare. When it does happen, it is most commonly a result of asphyxia, a lack of oxygen that occurs when breathing slows or stops.

Play the Video

WRAP UP

Reinforce Key Points as Needed

1. Secondary cardiac arrest occurs when the heart stops secondary to a lack of oxygen and not from a problem with the heart itself.
   a. Causes of secondary cardiac arrest include airway obstruction, lung infections or diseases, drowning, choking, and shock resulting from injuries such as motor vehicle accidents, burns, falls, and child abuse.
   b. Prevention of these causes is critical in reducing pediatric cardiac arrest from asphyxia.
2. Sudden cardiac arrest occurs when the normal electrical impulses in the heart cause it to beat too quickly, inefficiently, or in an unsynchronized manner.
3. Sudden cardiac arrest is also known as primary cardiac arrest because it is a problem with the heart itself.
   a. While uncommon, sudden cardiac arrest can and does occur in children of all ages.
   b. Immediate, high-quality CPR and early defibrillation with an AED can more than double the likelihood for survival.
4. In this CPR AED class, an infant is defined as younger than 1 year of age, excluding newly born infants.
   a. The pediatric chain of survival consists of a series of six interdependent links that describe the best approach to cardiac arrest care.
5. Each link in the chain is essential for the most positive outcome. If a single link is missing, the chances for survival are greatly reduced.

Ask a Review Question as Needed

Which of the following is critical in reducing pediatric cardiac arrest from asphyxia?

a. Prevention
b. Medication
c. Defibrillation
d. High-quality CPR

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

More children ages 1–4 die from drowning than any other cause of death except birth defects. Among infants under 1 year old, two-thirds of all drownings occur in bathtubs.[58] Always keep a young child within arm's reach in a bathtub. If you must leave, take the child with you. Don't leave a baby or toddler in a bathtub under the care of another young child.[59]

58 https://www.cdc.gov/drowning/facts/index.html

59 Children Do Drown in Bathtubs – And You Can Prevent It. https://onsafety.cpsc.gov/blog/2010/09/30/children-do-drown-in-bathtubs-%E2%80%93-and-you-can-prevent-it/ [Retrieved 10/15/2021]

lesson fifty-two

INFANT – ASSESSMENT & CHEST COMPRESSIONS

PREPARE

Duration
5 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:

- 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.

Play the Video

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 are 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

lesson fifty-three

INFANT – RESCUE BREATHING & USING A CPR MASK

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:

- Explain the importance of infant rescue breaths.
- Explain how to open an infant's airway using a head tilt–chin lift.
- Describe how to give mouth-to-mouth-and-nose rescue breathing to an infant.
- Correctly demonstrate how to give rescue breathing using an infant-sized CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are extremely important for children because cardiac arrest typically results from asphyxia.

Play the Video

Instructional Notes

1. Students practice opening the airway and giving rescue breaths on an infant CPR training manikin using an infant-sized CPR mask with one-way disposable mouthpiece (1 for each student).
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 15: Infant – Using a CPR Mask** or **Scenario Sheet 17**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the infant's lungs. Conventional CPR with rescue breathing should be performed on an infant by all trained CPR providers who are willing and able.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. In the case of drowning, begin with rescue breaths.[60] As soon as the unresponsive victim is removed from the water, open the airway, and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).
6. To give mouth-to-mouth-and-nose rescue breathing to an infant:
    a. Open the airway with a head tilt–chin lift. Maintain a neutral "sniffing" position. Take a regular-sized breath and place your mouth over the infant's mouth and nose, creating an airtight seal. Give 1 breath over 1 second. Give enough air to make the chest visibly rise, but no more than that.
    b. If the chest does not rise, repeat the head tilt–chin lift to make a better seal, and try again. It may be necessary to move the infant's head through a range of positions to provide effective rescue breathing.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_shout for help_] from [_a caregiver_] in the [_storage area_]. Upon arrival, you see the horrified [_caregiver_] holding an almost year-old, limp, unconscious infant. "He fell into the water in the mop bucket!" 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. EMS has been activated. No AED is available. The infant is not breathing. What would you do?

a. Check the pulse in the upper arm for no more than 10 seconds.
b. Cradle the infant in your arms, with their head tilted downwards.
c. Place infant on a firm flat surface. Open the airway. Use the mask to give 2 rescue breaths.
d. Place infant on a firm flat surface. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Small children can drown within thirty seconds, in as little as two inches of liquid. Bathtubs, buckets, diaper pails, wading pools, and other open containers of water should be emptied immediately after use.[61] Close, constant, and attentive supervision of young children in or around any water is essential to prevent drowning.[62] Keep swimming or bathing children within arm's reach and in sight at all times.

60 Vanden Hoek TL, et al. Part 12: cardiac arrest in special situations: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. Circulation. 2010;122(suppl 3):S829 –S861.

61 American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs. 4th ed. Itasca, IL: American Academy of Pediatrics; 2019. Standard 6.3.5.2: Water in Containers. https://nrckids.org/CFOC/Database/6.3.5.2 [Retrieved 9/27/21]

62 Prevention of Drowning. Denny SA, et al. Pediatrics May 2019, 143 (5) e20190850; DOI: https://doi.org/10.1542/peds.2019-0850 [Retrieved 7-15-21]

lesson fifty-four

INFANT – AUTOMATED EXTERNAL DEFIBRILLATION & USING AN AED

PREPARE

Duration
4 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:

- Identify the steps to use an AED [Trainer] on an infant.

Why This Topic Matters

When indicated, an electrical shock passed through the chest can restore the heart's normal contractions.

Play the Video or **Discuss the WWYD? Slide**

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. If you have an AED in your workplace, be familiar with its operation. AED design varies by model and manufacturer, but they all operate in a similar manner.
2. Pediatric pads are recommended for children under 8 years of age. If the child pads are not available, use the adult pads.
3. The front-and-back pad position is common for infants.
4. Proper AED operation requires direct contact between the pads and the infant's skin. Any clothing in the way must be removed.
5. If the AED advises a shock, it will prompt you to clear the infant. Loudly say, "Everybody clear," or something similar, then deliver a shock.
6. Once a shock has been delivered, immediately resume CPR starting with chest compressions.

Ask a Review Question as Needed

You are performing conventional CPR on an unresponsive infant who was found [_in a hot car_] and was not breathing normally. The scene is safe. You have taken standard precautions. EMS is on the way. The untrained coworker you sent to get the nearby AED sets it down next to you and says, "Here's the AED." What would you do?

a. Power on the AED. Remove any clothing in the way. Apply the pads.
b. Check the infant's breathing and pulse for no more than 30 seconds.
c. Check the infant's breathing and pulse for no more than 10 seconds.
d. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The United States Food and Drug Administration (FDA) encourages individuals and organizations to ensure their AED is FDA-approved (and if it is not, to make plans to transition to an FDA-approved AED). The FDA maintains a list of FDA-approved AEDs. Search for *"Automated External Defibrillators"* at fda.gov.

lesson fifty-five

INFANT – ONE-PROVIDER CPR

PREPARE

Duration
9 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:

- Apply the CPR links of the pediatric chain of survival as one provider.
- Correctly demonstrate high-quality infant CPR as one provider.

Why This Topic Matters

One pediatric CPR provider can provide high-quality infant CPR by putting together all the skills of assessment, chest compressions, airway, and breathing.

Play the Video

Instructional Notes

1. The first goal of the skill practice for this lesson is to help students apply the links of the pediatric chain of survival by putting together the knowledge and skills required to take action for infant cardiac arrest as one CPR provider.
2. The second goal of this practice to prepare students for successful completion of required Performance Evaluation 3: Infant – One-Provider CPR.
   a. You may conduct the Infant – One-Provider CPR Performance Evaluation at the end of this lesson, segment, or at the end of the segment or class.
3. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
4. Each student will need an infant-sized CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
5. 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 16: Infant – One-Provider CPR** or **Scenario Sheet 18**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an infant found unresponsive in a crib. The scene is safe. You have taken standard precautions. EMS is on the way. Following your first set of compressions, you open the airway and give a rescue breath. You feel considerable resistance to the flow of air and the infant's chest does not rise. What would you do?

a. Immediately begin chest compression-only CPR.
b. Give up to 5 back slaps between the infant's shoulder blades.
c. Repeat the head tilt – chin lift, make a better seal, and try again.
d. Stop CPR. Keep the infant's head in a neutral "sniffing" position.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Sudden Infant Death Syndrome (SIDS) is the leading cause of death among babies 1 month to 1 year of age. Babies who sleep on their backs are much less likely to die of SIDS than babies who sleep on their stomachs or sides. For more about SIDS and safe infant sleep, visit the U.S. Department of Health and Human Services Safe to Sleep® campaign at safetosleep.nichd.nih.gov/.

lesson fifty-six

INFANT – ADDITIONAL CPR AED CONSIDERATIONS

PREPARE

Duration
4 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:

- Identify special considerations for the AED.

Why This Topic Matters

A CPR provider may face some circumstances that require additional considerations or tasks for effective cardiac arrest care.

Play the Video

WRAP UP

Reinforce Key Points as Needed

1. Do not use an AED if the infant is immersed in water.
2. If the infant is in a wet setting, such as lying on snow or ice, in rain, on a wet floor or deck, or in a small puddle, it is safe to use the AED. If the infant's chest is wet, quickly dry it before applying pads.
3. AEDs can be used safely on metal surfaces, such as gratings or stairwells.
4. If the AED pads are not in contact with metal jewelry, the jewelry does not have to be removed.
5. CPR providers should routinely take standard precautions during resuscitation, including using a CPR mask with a HEPA filter when available.
6. The immediate cause of death in drowning is a lack of oxygen. In the case of drowning, begin resuscitation with 2 rescue breaths.

Ask a Review Question as Needed

An infant has just been pulled unresponsive from a bathtub. The scene is safe. You have taken standard precautions. EMS is on the way. The infant is not breathing, and the chest is wet. You have given 2 rescue breaths using a CPR mask. You have an AED. What would you do?

a. Do not use an AED if the child is in a wet setting.
b. Give another rescue breath that is 1 second in length.
c. Power on the AED. Dry the chest. Apply the AED pads.
d. Start conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson fifty-seven

INFANT – SUSPECTED OPIOID-ASSOCIATED EMERGENCY (OAE) (OPTIONAL)

PREPARE

Duration
2 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 infant CPR AED procedure for a suspected opioid-associated emergency (OAE).

Why This Topic Matters

Accidental opioid ingestions occur in infants and very young children, mirroring the opioid epidemic in adolescents and adults. [63]

Play the Video or **Discuss the WWYD? Slide**

Instructional Notes

It may be helpful to have students take a minute on their own to review where giving naloxone appears in the *Procedure for Pediatric CPR AED* graphic in the Skill Guide.

63 Crane, EH. Emergency department visits involving the accidental ingestion of opioid pain relievers by children aged 1 to 5. https://www.samhsa.gov/data/sites/default/files/report_3398/ShortReport-3398.html [Retrieved 10/26/2021]

WRAP UP

Reinforce Key Points as Needed

1. If you suspect an opioid-associated emergency, perform an assessment and follow the procedure based on your findings.
   a. If an unresponsive infant is not breathing normally or only gasping, immediately start CPR. If it's available, give naloxone as soon as you can, but do not delay CPR AED to give it.
   b. If an unresponsive infant is breathing normally, give naloxone if available.
      i. To help protect the airway, place the infant in the recovery position. Cradle the infant in your arms, with their head tilted downwards.
2. Avoid contact with drug residue, containers, needles, and other paraphernalia.

Ask a Review Question as Needed

You are a trained CPR provider who has responded to a possible overdose in [_bedroom four_] of the [_family childcare home_]. The scene is safe. Your EAP has been activated and EMS is on the way. You have a first aid kit, naloxone, and an AED. A 7-month-old infant is lying face up on the [_bedroom_] floor, unresponsive and breathing. A distraught young adult says, "I think he got into my dope!" Nearby you notice an open food storage container containing white powder. What would you do?

a. Examine the container for drug residue.
b. Give the naloxone. Put the infant in the recovery position.
c. Immediately start CPR, beginning with two rescue breaths.
d. Power on the AED. Apply pediatric pads to infant's bare chest.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson fifty-eight

INFANT – RELIEF OF CHOKING

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 how to recognize and provide treatment for a choking infant.
- Correctly demonstrate how to provide treatment for a choking infant.

Why This Topic Matters

When a severe airway obstruction occurs, the infant cannot get air in or out of the lungs. This is a life-threatening medical emergency. If the foreign body is not removed, the infant will quickly become unresponsive and suffer a secondary cardiac arrest within minutes.

Play the Video

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 17: Infant – Relief of Choking** or **Scenario Sheet 19**.

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. If an infant appears to be choking but is responsive, watch for signs of the obstruction becoming severe.
2. With a severe airway obstruction, the infant may cough weakly, be unable to cry, or be unable to make any sound at all.
3. Give 5 back slaps and 5 chest thrusts.
   a. Give each back slap and chest thrust forcefully with the intent of dislodging and expelling the object.
4. If the infant becomes unresponsive, begin CPR starting with compressions.
   a. Before opening the airway to provide rescue breaths, open the mouth wide. If you see an object, carefully remove it with your finger.
   b. Do not stick your finger blindly in an infant's throat and attempt to sweep out an object.
5. If you are alone without a mobile device or are unable to activate EMS and/or your EAP right away, give two minutes of CPR before carrying the infant with you to get an AED and to activate EMS and/or your EAP.

Ask a Review Question as Needed

You are responding to a shout for help from [_the play area_]. As you approach, you find a distraught teen holding a 6-month-old infant. The baby is blue around the mouth. "He was just crawling around. I think he's choking on a piece of that teether. Oh please - please - help him." The scene is safe. You have taken standard precautions. You activate your EAP by [_telling the receptionist to call 911_]. The infant is coughing weakly and making a whistling sound when inhaling. Demonstrate what actions you would take next. What would you do?

a. Give mouth-to-mouth-and-nose rescue breathing.
b. Give 5 back slaps with the intent of dislodging the object.
c. Give 5 abdominal thrusts with the intent of dislodging the object.
d. Open the infant's mouth wide. If you see an object, remove it with your fingers.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Injury and death in infants and children from choking on small parts is well-documented. Eliminating small parts from children's environments will greatly reduce the risk.[64]

64 Caring for Our Children. Standard 6.4.1 Selected Toys © 2021 - National Resource Center for Health and Safety in Child Care and Early Education. https://nrckids.org/CFOC/Database/6.4.1.2 [Retrieved 9/22/21]

performance evaluation

INFANT CPR SKILL EVALUATION

PREPARE

Duration
9 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on the Performance Evaluation 3: Infant – One-Provider CPR.

Why This Topic Matters

- An HSI certification card that includes Infant CPR AED in combination with Adult CPR AED may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test).
  - Performance Evaluation 3: Infant – One-Provider CPR.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson.
   a. Move to the Conclusion segment on the next page.

segment six

CONCLUSION

lesson fifty-nine

CLASS EVALUATION, DOCUMENTATION, & CERTIFICATION

PREPARE

Duration
10 minutes

Class Format: Initial Training
Delivery Method: Traditional Classroom

PRESENT

Why This Topic Matters

HSI's quality assurance procedures and processes are used to continually improve the validity, defensibility, and effectiveness of HSI and its approved Training Centers and Authorized Instructors and Instructor Trainers.

Instructional Notes

1. Congratulate and thank students who successfully completed the class!
2. Ask if any students would like to briefly share what they learned or how they feel they benefited from participating in the class.
3. Provide opportunity for Class Evaluation.
    a. HSI requires that students be given the opportunity to evaluate their class using the "Rate Your Program" class evaluation form (print or digital).
        i. Completed print class evaluations should be promptly delivered to the Training Center responsible for the class (available in Otis).
        ii. Students can visit emergencycare.hsi.com/quality-assurance-compliance to provide an online evaluation.
4. Complete your documentation.
    a. A complete, accurate, and legible Class Roster reflecting the actual class date(s) of the training class signed by the Authorized Instructor or Instructor Trainer or electronically submitted through Otis is required for every HSI class (see Appendix).
5. Issue certification to those who completed certification requirements.
    a. The Authorized Instructor is required to legitimately issue an authentic HSI print or digital certification card to each student who successfully completed this course.
        i. The certification card must be current, complete, accurate, and legible. It must contain the name of the participant and the Authorized Instructor, the Instructor's Registry Number, the Class Completion Date, the Expiration Date, the Training Center Phone Number, and the Training Center Identification Number (TCID).
6. HSI's compete quality assurance standards, including all requirements for instructor authorization, conduct, and student certification, are in the most recent HSI Training Center Administrative Manual (TCAM) available at emergencycare.hsi.com/quality-assurance-compliance.

INITIAL TRAINING, BLENDED LEARNING

Blended learning is a mixed-mode approach that uses both online and face-to-face learning. Core knowledge content is provided in video segments and interactive student exercises online, followed by face-to-face skills practice and evaluation.

There are two methods for initial Adult First Aid | CPR AED training and certification using a blended learning approach: 1) blended learning with an in person, instructor-led skills session in a classroom setting, and 2) blended learning with remote skills verification (RSV). To learn how to create and manage blended and/or RSV classes, log in to the HSI platform at otis.hsi.com/login. From the main dashboard menu, select "Video Help," then click on the "topic" search field and search for "blended" and/or "RSV." There are also extensive frequently asked questions (FAQs) on RSV available on the web at emergencycare.hsi.com/remote-skills-verification.

The Online Portion of Blended Learning

The online portion of a blended training class covers the essential cognitive (knowledge) content for the class using video segments and interactive exercises. The online portion is designed to allow students to learn at their own pace. Individual times to complete it may vary. When a student successfully completes the online portion of the class scheduled through Otis, a "Recognition of Completion" certificate will be available to the student for printing, and the completion will be recorded within Otis. HSI also offers our emergency care courses directly online for individuals or groups at online.hsi.com. Successful completion of an online course results in an "HSI Certificate of Online Training." Once the online portion is complete, we recommend that a skills session with an Authorized Instructor be scheduled within 60 days.

The Face-to-Face Portion of Blended Learning

Successful completion of the online portion of blended learning (via Otis or online.hsi.com) is required to attend the face-to-face portion of blended learning for skill practice and evaluation with an Authorized Instructor. The face-to-face portion may be completed in person or via RSV. When a student successfully completes the face-to-face portion, the instructor may issue the appropriate HSI certification card.

CLASS PREPARATION

About a Month or Two Before Class

If scheduling blended learning through the HSI platform, log in to Otis to purchase blended learning credits, and create and schedule the online portion of the blended learning class.

If using RSV for the face-to-face portion of the blended learning class, log in to Otis to purchase RSV credits and to set up an RSV session.

If using the in person, traditional classroom format for the practical skills session, secure a classroom with an adequate space and learning environment.

- ✓ Confirm the date, location, and number of students.
- ✓ Reserve training equipment for the class.
- ✓ Schedule and confirm additional HSI Authorized Instructors as required/preferred.
- ✓ Order from HSI the appropriate certification cards, skill guides, and other training materials as necessary.

A Few Days Before Class

If using the in person traditional classroom format for the practical skills session and evaluation:

- ✓ If you may have been exposed to an infectious disease; are experiencing fever, coughing, shortness of breath, diarrhea, fatigue, or muscle aches; or have open wounds or sores on your hands or mouth, find another instructor to teach the practical skills session or reschedule it.

If conducting the face-to-face portion in person or via RSV:

- ✓ Make sure you have adequate copies of essential paperwork (or access to electronic versions) for the Adult First Aid | CPR AED class type you are teaching.
  - › Please refer to the "At-a-Glance Class and Certification Type Tables" in Part 3.
- ✓ Briefly review the Initial Training, Blended Learning Lesson Plans (Face-to-Face Portion).
- ✓ Verify each student has successfully completed the online portion of the class scheduled through Otis or holds a "Certificate of Online Training" from online.hsi.com.

About Three Weeks Before Class

If using the in person traditional classroom format for the practical skills session and evaluation, send an email (via Otis, if you wish) to each student that:

- ✓ Confirms the class location, agenda, and time for the face-to-face skills portion of the blended learning class.
- ✓ Informs them that the class will involve close contact with other students, resuscitation manikins, and other equipment.
- ✓ Reviews any pertinent recommendations from local, state, or federal health authorities that affects what participants should expect in the classroom setting.
- ✓ Requests that they reschedule their training if they may have been exposed to an infectious disease; are experiencing fever, coughing, shortness of breath, diarrhea, fatigue, or muscle aches; or if they have open wounds or sores on their hands or mouth.
- ✓ Describes the steps you take to protect students and help ensure a safe and healthy learning environment (hand hygiene, cleaning and disinfecting of surfaces and equipment, etc.).
- ✓ Reminds them to wear loose, comfortable clothing suitable for skill practice.
- ✓ Advises them to let you know if they have a disability and what reasonable accommodations may be necessary (see Americans with Disabilities Act in the TCAM for more).
- ✓ Provides your contact information.

Day of Class

If using the in person traditional classroom format for the face-to-face blended learning practical skills session and evaluation:

- ✓ Arrive early. Give yourself plenty of time to get set up and organized.
- ✓ Greet students as they arrive, introducing yourself to each one.
  - › Be friendly, considerate, respectful, and professional.
  - › Have students sign in on a sign-in sheet.
  - › Have students complete a name tag or tent card and select a seat.
  - › Ask students to present their "Recognition of Completion" or "Certificate of Online Training" if not previously verified.
- ✓ Begin class. Start on time.
- ✓ Consider using a short, appropriate icebreaker as a warm-up exercise.
  - › Great ideas for these activities can be found on the internet by searching with the keyword "icebreakers."
- ✓ Establish a connection with the students.
  - › Ask about previous training. Connect the students' experiences and knowledge to this class.
- ✓ Briefly cover class goal, agenda, breaks, certification requirements, facility, and classroom safety.
  - › Know and share the locations of the following: bathrooms, fire/emergency exits, fire alarm pull stations, best emergency evacuation route, first aid kits, emergency oxygen, and closest AED.
- ✓ Distribute the HSI Adult First Aid | CPR AED Skill Guide.

If using RSV for the face-to-face portion of the blended learning class:

- ✓ Arrive early. Give yourself plenty of time to get set up and organized.
  - › Confirm you have the proper equipment to demonstrate required skills for the class you are conducting.
  - › Ensure proper lighting in the room to maximize student ability to see your demonstrations.
  - › Arrange manikin(s) with your camera situated to maximize student ability to see your demonstrations.
- ✓ Greet students as they arrive, introducing yourself to each one.
  - › Be friendly, considerate, respectful, and professional.
  - › Confirm with students that they completed the online portion of the course and verify that they received the proper material and equipment to complete the skill verification for the class you are conducting.
- ✓ Begin class. Start on time.
- ✓ Consider using a short, appropriate icebreaker as a warm-up exercise.
- ✓ Great ideas for these activities can be found on the internet by searching with the keyword "icebreakers."
- ✓ Establish a connection with the students.
  - › Ask about previous training. Connect the students' experiences and knowledge to this class.
  - › Ask if the students have any questions about the online portion of the course.
- ✓ Briefly cover class goal and agenda.

CLASS EQUIPMENT AND MATERIALS CHECKLIST FOR ALL CLASS TYPES, BLENDED LEARNING

The table below lists equipment and materials required for all nine class types.

Required Class Materials	Required Class Equipment
In-Person (Classroom)	
✓ Adult First Aid | CPR AED Lesson Plans, Instructor Guide, 1 per instructor ✓ Class Roster, 1 copy ✓ Adult First Aid | CPR AED Initial Class Presentation for the class type you are teaching (select in Otis) ✓ Adult First Aid | CPR AED Skill Guide, minimum 1 for each 3 students ✓ Certification Card(s) purchased from HSI for the class type you are teaching (print or digital, 1 per student)	✓ Desktop or laptop computer (Windows or Mac), or smartphone or tablet, 1 per instructor ✓ Internet connection (for streaming), HSI Instructor Desktop Video Player or HSI Instructor Mobile App with downloaded Class Presentation media ✓ Video monitor or computer projector and screen large enough for all students in class to see ✓ Disposable gloves (nonlatex), minimum 2 pair for each student
RSV	
✓ Adult First Aid | CPR AED Lesson Plans. Instructor Guide, 1 per instructor ✓ Adult First Aid | CPR AED Skill Guide, minimum 1 for each instructor ✓ Certification Card(s) purchased from HSI for the class type you are teaching (digital, delivered via RSV completion, 1 per student)	✓ Desktop or laptop computer (Windows or Mac), or smartphone or tablet, 1 per instructor ✓ Internet connection, for access to the RSV platform ✓ Disposable gloves (nonlatex), minimum 2 pair for each student
Additional Recommended Tools, In-Person (Classroom)	
In-person traditional classroom format: ✓ Pens or pencils, 1 for each student ✓ Blankets, kneeling pads, or mats, 1 for each 3 students ✓ Name tags or tent cards, 1 for each student ✓ Spare projector bulb (as needed) ✓ Extension cord(s) ✓ Multi-strip power surge protector ✓ Whiteboard with dry erase pens and eraser ✓ Large black markers for student name tags or tent cards ✓ Large envelope for class paperwork	

REQUIRED CLASS EQUIPMENT AND MATERIALS, BLENDED LEARNING

The table below lists required equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR manikins, minimum 1 for each 3 students (1:1 recommended)	• Adult	• Adult/Child	• Infant	
CPR manikin cleaning and disinfecting wipes for each student	•	•	•	
AED Trainer with pads, minimum 1 for each 3 students	• Adult pads	• Adult or pediatric pads	• Pediatric pads	
CPR mask and one-way disposable mouthpiece with valve for CPR mask, 1 for each student	• Adult	• Adult/Child	• Infant	
Stopwatch for CPR AED Performance Evaluation, minimum 1 per instructor (online, smartphone app, or handheld digital)	•	•	•	
Performance Evaluation 1: Adult – One-Provider CPR AED, 1 per student	•			
Performance Evaluation 2: Child – One-Provider CPR AED (1 per student)		•		
Performance Evaluation 3: Infant – One-Provider CPR (1 per student)			•	
Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding, 1 per student				•
Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction, 1 per student				•
10-pack of clean 4" x 4" gauze sponges, minimum 1 for each 3 students				•
Clean elastic or self-adhesive roller bandage, minimum 1 for each 3 students				•
Epinephrine autoinjector trainer, minimum 1 for each 3 students				•

OPTIONAL CLASS EQUIPMENT AND MATERIALS, BLENDED LEARNING

The table below lists optional equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR feedback devices, 1 per manikin (or built in)	•	•	•	•
Naloxone administration training device, minimum 1 for each 3 students	•	•	•	•
Malleable splints. Self-adhesive roller or elastic bandages, or plastic cling film. Minimum 1 set for each 3 students	•			
Improvised splints. Materials for improvising, padding, and binding. Minimum 1 set for each 3 students	•			
Adult CPR manikins for compression-only CPR practice, minimum 1 each for each 3 students (1:1 recommended) CPR manikin cleaning and disinfecting wipes	•			

segment one

INTRODUCTORY SKILLS

lesson one

ASSESSMENT

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 assessment steps.
- Correctly demonstrate the assessment steps.
- Correctly demonstrate when and how to place a person in the recovery position. (Optional)
- Correctly demonstrate the removal of contaminated personal protective equipment (gloves).

Why This Topic Matters

Assessment of the scene and the person is a critical skill that applies in any emergency. The steps of assessment are crucial in all but the most minor circumstances. Due to the risk of infection, proper removal of contaminated gloves is imperative.

Instructional Notes

1. It may be helpful to have students take a minute or two on their own to look over the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, refer to the *Procedure for Adult First Aid*.
   c. When teaching Adult CPR AED, use the *Procedure for Adult CPR AED* if choosing to cover these introductory lessons.
2. This lesson focuses on the assessment steps, which help a provider determine what the problem is. These appear on the procedure graphics under "Perform an Assessment." The provider's next actions to perform care are based on the provider's assessment findings of the person's responsiveness and breathing. This is illustrated in the procedure graphics by arrows. The provider's next actions are found in separate lessons that align the provider's findings from the assessment with the appropriate care. For a(n):
   a. Responsive and breathing person – The first aid provider's actions are covered in the Adult First Aid lessons.
   b. Unresponsive person who is breathing normally – The provider's actions are covered in this lesson, with an optional skill practice of the recovery position.
   c. Unresponsive person who is not breathing normally or only gasping – The provider's actions are covered in the Adult CPR AED lessons.

3. There are two required and one optional skill practices in this lesson.
4. The first required skill practice is the assessment steps.
    a. Whenever possible, this skill practice should be conducted with one student playing the role of an unresponsive adult who is breathing normally. Another student should play the role of provider. The student playing the role of unresponsive person should sit slumped or lie still and breathe normally. The first required skill practice has two intended outcomes.
        i. The first intended outcome is to have students practice correctly demonstrating the assessment steps. Each student should perform all the steps, including taking standard precautions (at a minimum, putting on gloves) and simulating the activation of EMS or their workplace emergency action plan (EAP). Where employers provide PPE appropriate to a specific setting, students should integrate that PPE into the skill practice session when possible.
        ii. The second intended outcome is for students to establish a baseline for what represents normal breathing by observation. The student playing the role of provider should assess the person's breathing for no more than 10 seconds, observing normal breathing. It should be effortless, quiet, slow, and regular, without any gasping, panting, or wheezing.
5. An uninjured, breathing, unresponsive person should be placed on their side in the recovery position to help protect the airway. If you wish to conduct this optional skill practice, do so after the above assessment practice is complete. Have students keep their gloves on for the recovery position practice.
6. The second required skill practice is the removal of contaminated gloves.
    a. Where employers have provided PPE appropriate to a specific setting, students should practice taking off their required PPE according to the employer's established procedure in addition to glove removal.

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 1: Adult – Assessment**; **Skill Sheet 2: Recovery Position (Optional)**; and **Skill Sheet 3: Removal of Contaminated Gloves** or **Scenario Sheet 1**, **Scenario Sheet 2 (Optional**), and **Scenario Sheet 3**.

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.

Continued on Next Page ›

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. The steps of assessment are crucial in all but the most minor circumstances.
2. Normal breathing is effortless, quiet, slow, and regular.
3. Placing an uninjured, breathing, unresponsive person on their side in the recovery position is a simple and effective way to help keep the tongue from blocking the airway and allowing fluids to drain from the mouth.
4. Due to the risk of infection, taking standard precautions and properly removing contaminated gloves after an emergency are essential.
5. 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.

Ask a Review Question as Needed

You should take no longer than ___ second(s) to assess breathing.

a. 1
b. 3
c. 10
d. 20

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Emergency scenes can be dangerous. Your personal safety is the highest priority, even before the safety of an ill or injured person. If the scene is unsafe, do not approach it. Activate EMS and/or your EAP.

segment two

ADULT CPR AED SKILLS

lesson two

ADULT – ASSESSMENT & CHEST COMPRESSIONS

PREPARE

Duration
6 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 assessment steps.
- Correctly demonstrate high-quality chest compressions on an adult [CPR training manikin].

Why This Topic Matters

Assessment of the scene and the person is a critical skill that applies in any emergency. The steps of assessment are crucial in determining the provider's next actions. If an unresponsive person 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 repeat the steps of assessment with a focus on an adult who is unresponsive and not breathing normally or only gasping, and then to take immediate action beginning with chest compressions.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult CPR AED only, refer to the *Procedure for Adult CPR AED*.
2. Students practice performing 30 high-quality chest compressions on an adult 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, chest 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 4: Adult – Assessment & Chest Compressions** or **Scenario Sheet 4**.

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 sounds are known as agonal breaths. This is not normal breathing. It is a sign of cardiac arrest.
2. High-quality chest compressions are the foundation of high-quality CPR.
   a. Push hard and deep, straight down, using your upper body weight to compress the chest at least 2 inches (5 cm). Chest compressions are most often performed too shallowly.
   b. At the end of each compression, lift all your weight off the person's chest, allowing it to completely recoil, or rebound, to its normal position, but do not lose contact with the chest.
   c. Push fast. Compress the chest at a rate of 100-120 compressions per minute.
   d. Perform 30 high-quality chest compressions. Count out loud.
   e. Minimize interruption in chest compressions. Fewer and shorter interruptions in chest compressions are associated with better outcomes.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a request for assistance on your two-way radio_] for [_a warehouse associate_] who passed out. You see a motionless person lying face up on the [_fulfillment center floor_]. The scene is safe. You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. Your EAP has activated EMS. Another provider is bringing an AED. The person is making snoring sounds and gasping. What would you do?

a. Give 2 rescue breaths that make the chest rise.
b. Immediately assess for life-threatening conditions.
c. Check the pulse in the neck for no more than 10 seconds.
d. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson three

ADULT – RESCUE BREATHING & USING A CPR MASK

PREPARE

Duration
6 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:

- Explain the importance of adult rescue breaths.
- Explain how to open the adult airway using a head tilt–chin lift.
- Correctly demonstrate how to give rescue breathing using a CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are critically important in CPR, as they provide life-sustaining oxygen and ventilation directly to the person's lungs.

Instructional Notes

1. Students practice opening the airway and performing rescue breaths on an adult CPR training manikin using an adult CPR mask with a one-way disposable mouthpiece (1 for each student).
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 5: Adult – Using a CPR Mask** or **Scenario Sheet 5**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the person's lungs.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing adult rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. Conventional CPR with rescue breathing should be performed by all trained CPR providers who are willing and able.
6. In the case of drowning, begin with rescue breaths. As soon as the unresponsive victim is removed from the water, open the airway, and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a shout for help_] to assist [_a guest_] at the lakefront. Upon arrival, you see a couple bystanders dragging a limp, apparently unconscious person from the water onto the shore. One of the bystanders, catching their breath, says, "Fell off a jet ski." You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. Another CPR provider is bringing an AED. The person is not breathing. What would you do?

a. Place the person on their side in the recovery position.
b. Open the airway. Use the mask to give 2 rescue breaths.
c. Immediately start CPR, beginning with chest compressions.
d. Check the pulse in the neck for no more than 10 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Alcohol is the leading known contributing factor in fatal boating accidents. Where the cause of death was known, 75 percent of fatal boating accident victims drowned, and 86 percent were not wearing a life jacket. Wear a life jacket. Boat sober. [65]

65 U.S. Coast Guard releases 2020 Boating Safety Statistics Report. Maritime Commons. https://mariners.coastguard.blog/2021/06/30/u-s-coast-guard-releases-2020-boating-safety-statistics-report/ [Retrieved 9/13/21]

lesson four

ADULT – AUTOMATED EXTERNAL DEFIBRILLATION & USING AN AED

PREPARE

Duration
6 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 steps to use an AED [Trainer] on an adult.
- Correctly demonstrate how to use an AED [Trainer] on an adult.

Why This Topic Matters

When indicated, an electrical shock passed through the chest can restore the heart's normal contractions.

Instructional Notes

Always verify that each AED Trainer is not a live AED and the device is incapable of delivering a real shock.

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 6: Adult – Using an AED** or **Scenario Sheet 6**.

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. If you have an AED in your workplace, be familiar with its operation. AED design varies by model and manufacturer, but they all operate in a similar manner.
2. Use adult AED pads for persons 8 years of age or older.
3. Try to apply the pads within 30 seconds after the AED arrives.
4. Proper AED operation requires direct contact between the pads and the person's skin. Any clothing in the way must be removed.
5. If the AED advises a shock, it will prompt you to clear the person. Loudly say, "Everybody clear," or something similar, then deliver a shock.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_an alert from the company electronic notification system_] for [_an associate_] passed out. The scene is safe. You have taken standard precautions. You see an anxious person kneeling next to a motionless adult lying face up on the [_store floor_]. You have disposable gloves, a CPR mask, and an AED. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. The unresponsive person seems to gasp for air now and then. What would you do?

a. Check the person's pulse.
b. Open the airway and provide 2 rescue breaths.
c. Immediately start CPR, beginning with chest compressions.
d. Power on the AED. Bare the person's chest and apply the AED pads.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The United States Food and Drug Administration (FDA) encourages individuals and organizations to ensure their AED is FDA-approved (and if it is not, to make plans to transition to an FDA-approved AED). The FDA maintains a list of FDA-approved AEDs. Search for "automated external defibrillators" at fda.gov.

lesson five

ADULT – ONE-PROVIDER CPR AED

PREPARE

Duration
8 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:

- Apply the CPR AED links of the adult chain of survival as one provider.
- Correctly demonstrate high-quality adult CPR AED as one provider.

Why This Topic Matters

The combination of CPR and early defibrillation is effective in saving lives when used in the first few minutes following collapse from sudden cardiac arrest.

Instructional Notes

1. If you are teaching Adult CPR AED only (or with Child CPR AED and/or Infant CPR) and you choose to not cover the recommended Assessment Lesson, it is recommended to cover Removal of Contaminated Gloves as part of this skill practice using Skill Sheet 3 or Scenario Sheet 3; however, covering Removal of Contaminated Gloves can be done elsewhere in a CPR AED class that does not include first aid.
2. The first goal of the skill practice for this lesson is to help students apply the CPR AED links of the adult chain of survival by putting together the knowledge and skills required to take action for adult cardiac arrest as one CPR provider.
3. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 1: Adult – One-Provider CPR AED.
   a. You may conduct the Adult – One-Provider CPR AED Performance Evaluation at the end of this lesson, segment, or at the end of the class.
4. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
5. Each student will need a CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
6. The AED [Trainer] is brought by “an untrained bystander.” The bystander role is played by another student. If there is only one student in the class, the instructor will need to play this role, or verbalize the arrival of the AED when conducting the face-to-face portion via RSV.
7. 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 7: Adult – One-Provider CPR AED** or **Scenario Sheet 7**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an unresponsive [_visitor_] who collapsed [_outside the main building_]. You have taken standard precautions. EMS is on the way. The untrained coworker you sent to get the nearby AED sets it down next to you and says, “Here it is.” What would you do?

a. **Power on the AED. Remove any clothing in the way. Apply the pads.**
b. Check the person’s breathing and pulse for no more than 30 seconds.
c. Check the person’s breathing and pulse for no more than 10 seconds.
d. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

If you find yourself unexpectedly confronted by a person in cardiac arrest, you have limited or no PPE, and you are unwilling to provide rescue breathing out of fear the person may have an infectious disease, you can still help the person by providing compression-only CPR.

performance evaluation

ADULT CPR AED SKILL EVALUATION

PREPARE

Duration
9 minutes

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

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on required Performance Evaluations for the class you are teaching.

Why This Topic Matters

- A certification card may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test) for the class type you are teaching.
  - Adult CPR AED
    - Performance Evaluation 1: Adult – One-Provider CPR AED.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more information.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Adult CPR AED – Move to the Conclusion segment on page 229.
   b. Any class including Adult First Aid - Turn to the next lesson to begin the Adult First Aid lessons for Blended Learning.
   c. Any class including Child CPR AED and/or Infant CPR AED but not Adult First Aid – Skip the Adult First Aid Blended lessons to reach the pediatric CPR AED lessons for Blended Learning.

ADULT FIRST AID SKILLS

lesson six

SEVERE, LIFE-THREATENING EXTERNAL BLEEDING

PREPARE

Duration
12 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:

- Describe how to recognize and provide first aid treatment for severe external bleeding using direct pressure, a pressure bandage, or a commercial tourniquet.
- Correctly demonstrate how to control severe, life-threatening external bleeding using direct manual pressure and bandaging.

Why This Topic Matters

Trauma is one of the world's leading causes of death and disability. Around 40% of deaths from trauma are due to severe blood loss or shock.

Instructional Notes

1. It may be helpful to have students review the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, use the *Procedure for Adult First Aid*.
2. There is no Video-Guided Practice or Skill Sheet for this scenario-based practice.
   a. The first goal of the skill practice for this lesson is to help students apply the knowledge and skills required to take action for severe, life-threatening external bleeding using direct manual pressure and bandaging.
   b. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding.
3. You may conduct the Severe, Life-Threatening External Bleeding Performance Evaluation at the end of this lesson, or at the end of the class.
   a. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
4. The scenario and Performance Evaluation requires the proper removal of contaminated gloves. Glove removal in the scenario may be verbalized, but proper removal by each student is required in the Performance Evaluation.

PRACTICE & ASSESS

Conduct a Hands-On Student Practice

- Practice with **Scenario Sheet 8**.

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. Consider bleeding to be severe and life-threatening if blood is gushing, spurting, or flowing continuously, or when there is about a half soda can's worth of blood on the ground or pooling on a surface.
2. When a manufactured tourniquet is available, use it as soon as possible after the injury to stop severe, life-threatening bleeding.
3. When a manufactured tourniquet is not immediately available, or when the bleeding is somewhere other than an arm or leg, use direct manual pressure, preferably with a hemostatic dressing.
4. If a hemostatic dressing is not available, use sterile trauma dressings, compressed gauze, or a stack of 10 sterile 4" x 4" gauze sponges.
5. Push down hard onto the wound. Use continuous pressure. If blood soaks through the gauze or other material, press harder. Keep pressing hard until the bleeding stops.
6. Don't remove pressure to add more gauze and don't remove blood-soaked materials. Once the bleeding stops, wrap an elastic or self-adhesive roller bandage firmly over the gauze or other material to help maintain pressure.

Ask a Review Question as Needed

You are a trained first aid provider responding to [_a wireless emergency alert_] for [_an injured person_]. As you reach the scene, you see [_a machinist_] sitting on [_a workbench_] holding their hand over their bloody forearm. The person is responsive and consents to first aid. Blood flows continuously from a deep, irregular, and jagged tear in the forearm. You are wearing safety glasses and disposable gloves. You have a first aid kit with a 10-pack of sterile 4" x 4" gauze sponges, but no hemostatic dressings or a tourniquet. What would you do?

a. Flush the wound with a large volume of rubbing alcohol.
b. Apply the gauze sponges onto the wound. Push down hard.
c. Wrap an elastic or self-adhesive roller bandage firmly over the wound.
d. Wrap your leather belt around the limb, at least 2-3 inches below the wound.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Moving machine parts have the potential to cause severe bleeding, including at work and at home. These injuries can be avoided by following the manufacturer's recommended safety procedures, including maintaining proper machine guarding, wearing all required PPE, and using lockout/tagout procedures (safety procedures that ensure dangerous machines are properly shut off and not able to be started up again prior to the completion of maintenance or repair work).

lesson seven

SEVERE ALLERGIC REACTION

PREPARE

Duration
6 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:

- Explain how to recognize and provide first aid for a severe allergic reaction.
- Explain how to use an EpiPen® epinephrine autoinjector.
- Correctly demonstrate how to use an EpiPen® epinephrine autoinjector.

Why This Topic Matters

A severe allergic reaction can develop rapidly. Without treatment, death can occur within minutes.

Instructional Notes

1. It may be helpful to have students take a minute or two on their own to review the appropriate procedure graphic in the Adult First Aid | CPR AED Skill Guide for the class you are teaching.
   a. When teaching Adult First Aid, Adult CPR AED, refer to the *Procedure for Adult First Aid, Adult CPR AED*.
   b. When teaching Adult First Aid only, use the *Procedure for Adult First Aid*.
2. There is no Video-Guided Practice or skill sheet for this scenario-based practice.
   a. The first goal of the skill practice for this lesson is to help students apply the knowledge and skills required to take action for a severe allergic reaction. This includes looking for medical identification jewelry and using an epinephrine autoinjector.
   b. The second goal of this skill practice is to prepare students for successful completion of required Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction.
3. You may conduct the Severe Allergic Reaction Performance Evaluation at the end of this lesson, segment, or at the end of the class.
   a. Explain both goals above to the students so they understand what is expected of them and encourage them practice accordingly.

PRACTICE & ASSESS

Conduct a Hands-On Student Practice

- Practice with Scenario Sheet 11.

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. Epinephrine can quickly reverse the effects of a severe allergic reaction and may be lifesaving.
2. Place the orange tip of the EpiPen® autoinjector against the middle of the outer thigh at a right angle to the thigh.
   a. Swing and push the autoinjector firmly until it 'clicks.' Hold firmly in place for 3 seconds.
   b. To avoid an accidental injection, never put your thumb, fingers, or hand over the orange tip.
   c. Massage the injection area for 10 seconds.
3. Consider performing a secondary assessment while waiting for EMS.
   a. Look for medical identification jewelry.
4. Consider giving a second dose with a new epinephrine autoinjector if one is available, symptoms persist, and EMS is still 5-10 minutes away.

Ask a Review Question as Needed

You are a designated first aid provider responding to [_a call for help over your two-way radio_] for [_a tree trimmer_] stung by wasps. The scene is safe. You see a person sitting [_in a bucket truck_]. The person, speaking in a hoarse voice, says they were [_cutting a limb_] and disturbed a wasp nest. They got stung multiple times in the face and throat. The person's eyes, lips, and face are rapidly swelling. They are wheezing and coughing. EMS has been activated. You have disposable gloves and a first aid kit. They carry an Epipen®, but don't remember how to use it. What would you do?

a. Keep the person lying down, face up.
b. Perform a secondary assessment while waiting for EMS.
c. Administer an injection of epinephrine, using the autoinjector.
d. Flood the eyes, lips, and face with large amounts of water for at least 5 minutes.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Up to 75% of people with a history of severe anaphylactic reaction to a sting will experience severe symptoms when stung again.[66] People with a history of severe allergic reactions to insect stings should consider carrying an epinephrine autoinjector and wearing a medical identification bracelet or necklace stating their allergy.

66 Bonifazi F, Jutel M, Biló BM, Birnbaum J, Muller U; EAACI Interest Group on Insect Venom Hypersensitivity. Prevention and treatment of hymenoptera venom allergy: guidelines for clinical practice. Allergy. 2005 Dec;60(12):1459-70. doi: 10.1111/j.1398-9995.2005.00960.x. PMID: 16266376.

performance evaluation

ADULT FIRST AID SKILL EVALUATION

PREPARE

Duration
9 minutes

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

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on required Performance Evaluations for the class you are teaching.

Why This Topic Matters

- A certification card may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test) for the class type you are teaching.
  - Any class type that includes Adult First Aid requires the following Performance Evaluations.
    - Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding.
    - Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Only Adult First Aid or Adult First Aid, Adult CPR AED – Move to the Conclusion lesson on page 229.
   b. Any class including Child CPR AED and/or Infant CPR AED – Turn to the next lesson to begin the pediatric CPR AED lessons in Blended Learning.

segment four

CHILD CPR AED

lesson eight

CHILD – ASSESSMENT & CHEST COMPRESSIONS

PREPARE

Duration
4 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 child assessment steps.
- Correctly demonstrate high-quality chest compressions on an adult or child [CPR training manikin].

Why This Topic Matters

Assessment of the scene and the child is a critical skill that applies in any emergency. The steps of assessment are crucial in determining the provider's next actions. If an unresponsive child 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 child assessment with a focus on a child 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 adult or child CPR training manikin. Make sure they count out loud.
   a. An adult training manikin simulates a child older than 8 years of age.
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 10: Child – Assessment & Chest Compressions** or **Scenario Sheet 12**.

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.
   a. Push hard and deep, straight down, using your upper body weight to compress the chest at least 2 inches (5 cm). Chest compressions are most often performed too shallowly.
   b. At the end of each compression, lift all your weight off the child's chest, allowing it to completely recoil, or rebound, to its normal position but do not lose contact with the chest.
   c. Push fast. Compress the chest at a rate of 100-120 compressions per minute.
   d. Perform 30 high-quality chest compressions. Count out loud.
   e. Minimize interruption in chest compressions. Fewer and shorter interruptions in chest compressions are associated with better outcomes.
3. 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 leaving the child (or if the child is uninjured, carrying them 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_] for a limp, unresponsive child. You see a motionless child lying face up on the [_nature center floor_]. The scene is safe. You have disposable gloves and a CPR mask. You tap the child and ask loudly, "Are you okay?" There is no response. Your EAP has activated EMS. Another provider is bringing an AED. The child is making snoring sounds and gasping. What would you do?

a. Give 2 rescue breaths that make the chest rise.
b. Immediately assess for life-threatening conditions.
c. Check the pulse in the neck for no more than 10 seconds.
d. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

lesson nine

CHILD – RESCUE BREATHING & USING A CPR MASK

PREPARE

Duration
4 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:

- Explain the importance of child rescue breaths.
- Explain how to open a child's airway using a head tilt–chin lift.
- Correctly demonstrate how to give rescue breathing using an adult/child CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are extremely important for children because cardiac arrest typically results from asphyxia.

Instructional Notes

1. Students practice opening the airway and giving rescue breaths on an adult or child CPR training manikin using an adult/child CPR mask with one-way disposable mouthpiece (1 for each student).
   a. An adult training manikin simulates a child older than 8 years of age.
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 11: Child – Using a CPR Mask** or **Scenario Sheet 13**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the child's lungs. Conventional CPR with rescue breathing should be performed on a child by all trained CPR providers who are willing and able.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. In the case of drowning, begin with rescue breaths.[67] As soon as the unresponsive victim is removed from the water, open the airway, and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a shout for help_] to assist [_a guest _] at the lakefront. Upon arrival, you see a couple of bystanders dragging a limp, apparently unconscious child from the water onto the shore. One of the bystanders, catching their breath, says, "…under…the…water for a couple…minutes." The scene is safe. You have disposable gloves and a CPR mask. You tap the person and ask loudly, "Are you okay?" There is no response. EMS has been activated. Another CPR provider is bringing an AED. The child is not breathing. What would you do?

a. Place the child on their side in the recovery position.
b. Open the airway. Use the mask to give 2 rescue breaths.
c. Immediately start CPR, beginning with chest compressions.
d. Check the pulse in the neck for no more than 10 seconds.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Drowning is the leading cause of unintentional death among children ages 1 to 4 years old.[68] Close, constant, and attentive supervision of young children in or around any water is essential to prevent drowning.[69]

67 Vanden Hoek TL, et al. Part 12: cardiac arrest in special situations: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. Circulation. 2010;122(suppl 3):S829 –S861.

68 U.S. Consumer Product Safety Commission. https://www.poolsafely.gov/blog/news/new-cpsc-report-finds-steady-rise-in-fatal-child-drownings/ [Retrieved 7-12-21]

69 Prevention of Drowning. Denny SA, et al. Pediatrics May 2019, 143 (5) e20190850; DOI: https://doi.org/10.1542/peds.2019-0850 [Retrieved 7-15-21]

lesson ten

CHILD – AUTOMATED EXTERNAL DEFIBRILLATION & USING AN AED

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 steps to use an AED [Trainer] on a child.
- Correctly demonstrate how to use an AED [Trainer] on a child.

Why This Topic Matters

When indicated, an electrical shock passed through the chest can restore the heart's normal contractions.

Instructional Notes

Always verify that each AED Trainer is not a live AED and that the device is incapable of delivering a real shock.

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 12: Child – Using an AED** or **Scenario Sheet 14**.

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. If you have an AED in your workplace, be familiar with its operation. AED design varies by model and manufacturer, but they all operate in a similar manner.
2. Pediatric pads are recommended for children under 8 years of age. If the child pads are not available, use the adult pads.
3. Proper AED operation requires direct contact between the pads and the child's skin. Any clothing in the way must be removed.
4. If the AED advises a shock, it will prompt you to clear the person. Loudly say, "Everybody clear," or something similar, then deliver a shock.
5. Once a shock has been delivered, immediately resume CPR starting with chest compressions.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_an alert from the company electronic notification system_] for an unresponsive child [_in the onsite daycare center_]. The scene is safe. You have taken standard precautions. You see a very anxious childcare worker performing poor quality compression-only CPR on a motionless child on the [_daycare center floor_]. The worker says, "He's not breathing. Please help me!" You have disposable gloves, a CPR mask, and an AED. You tap the child and ask loudly, "Are you okay?" There is no response. EMS has been activated. The unresponsive child seems to gasp for air now and then. What would you do?

a. Check the child's pulse.
b. Open the airway and provide 2 rescue breaths.
c. Power on the AED. Bare the child's chest and apply the AED pads.
d. Immediately start high-quality CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

The United States Food and Drug Administration (FDA) encourages individuals and organizations to ensure their AED is FDA-approved (and if it is not, to make plans to transition to an FDA-approved AED). The FDA maintains a list of FDA-approved AEDs. Search for "Automated External Defibrillators" at fda.gov.

lesson eleven

CHILD – ONE-PROVIDER CPR AED

PREPARE

Duration
7 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:

- Apply the CPR AED links of the pediatric chain of survival as one provider.
- Correctly demonstrate high-quality child CPR AED as one provider.

Why This Topic Matters

One pediatric CPR provider can provide high-quality child CPR by putting together all the skills of assessment, chest compressions, airway, breathing, and AED use.

Instructional Notes

1. The first goal of the skill practice for this lesson is to help students apply the CPR AED links of the pediatric chain of survival by putting together the knowledge and skills required to take action for child cardiac arrest as one CPR provider.
2. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 2: Child – One-Provider CPR AED.
   a. You may conduct the Child – One-Provider CPR AED Performance Evaluation at the end of this lesson, segment, or at the end of the class.
3. Explain both goals above to the students so they understand what is expected of them and encourage them practice accordingly.
4. Each student will need an adult/child CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
5. The AED [Trainer] is brought by “an untrained bystander.” The bystander role is played by another student. If there is only one student in the class, the instructor will need to play this role, or verbalize the arrival of the AED when conducting the face-to-face portion via RSV.
6. 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 13: Child – One-Provider CPR AED** or **Scenario Sheet 15**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an unresponsive child who collapsed [_on the athletic field_] after [_being struck in the chest by a baseball_]. The scene is safe. You have taken standard precautions. EMS is on the way. The untrained coworker you sent to get the nearby AED sets it down next to you and says, "Here's the AED." What would you do?

a. Power on the AED. Remove any clothing in the way. Apply the pads.
b. Check the child's breathing and pulse for no more than 30 seconds.
c. Check the child's breathing and pulse for no more than 10 seconds.
d. Continue conventional CPR at a ratio of 30 compressions to 2 rescue breaths.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Commotio cordis is caused by a blow to the chest over the region of the heart by a blunt object (like a baseball, hockey puck, or fist) that does not penetrate the body and that usually results in ventricular fibrillation leading to sudden cardiac death if treatment by defibrillation is not immediately given.[70] Research has shown that some chest protectors may reduce the incidence of commotio cordis.[71]

70 "Commotio cordis." Merriam-Webster.com Medical Dictionary, Merriam-Webster, https://www.merriam-webster.com/medical/commotio%20cordis. Accessed 21 Sep. 2021.

71 Kumar K, Mandleywala SN, Gannon MP, Estes NA 3rd, Weinstock J, Link MS. Development of a Chest Wall Protector Effective in Preventing Sudden Cardiac Death by Chest Wall Impact (Commotio Cordis). Clin J Sport Med. 2017 Jan;27(1):26-30. doi: 10.1097/JSM.0000000000000297. PMID: 27014942; PMCID: PMC5181132.

performance evaluation

CHILD CPR AED SKILL EVALUATION

PREPARE

Duration
9 minutes

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

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on Performance Evaluation 2: Child – One-Provider CPR AED.

Why This Topic Matters

- An HSI certification card that includes Child CPR AED in combination with Adult CPR AED may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test).
  - Performance Evaluation 2: Child – One-Provider CPR AED.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson. If teaching:
   a. Only Adult and Child CPR AED or Adult First Aid | Adult and Child CPR AED – Move to the Conclusion segment on page 229.
   b. Any class including Infant CPR AED – Turn to the next lesson to begin the Infant CPR AED lessons in Blended Learning.

segment five

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

lesson thirteen

INFANT – RESCUE BREATHING & USING A CPR MASK

PREPARE

Duration
6 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:

- Explain the importance of infant rescue breaths.
- Explain how to open an infant's airway using a head tilt–chin lift.
- Describe how to give mouth-to-mouth-and-nose rescue breathing to an infant.
- Correctly demonstrate how to give rescue breathing using an infant-sized CPR mask with a one-way disposable mouthpiece.

Why This Topic Matters

Rescue breaths are extremely important for children because cardiac arrest typically results from asphyxia.

Instructional Notes

1. Students practice opening the airway and giving rescue breaths on an infant CPR training manikin using an infant-sized CPR mask with one-way disposable mouthpiece (1 for each student).
2. Remind students to routinely decontaminate their hands with an alcohol-based hand sanitizer and to clean and disinfect the manikin after each student practices.
3. The immediate cause of death in drowning is a deficiency of oxygen. Lifeguards and other well-trained professional rescuers may provide rescue breathing for a submersion victim while they are being brought to the pool deck, shore, or boat. This "in-water resuscitation" can lead to an improved likelihood of survival over delaying ventilation until the victim is out of the water. Procedures for in-water resuscitation should be based on local medical protocol, organizational guidelines, and professional training standards.

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 15: Infant – Using a CPR Mask** or **Scenario Sheet 17**.

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. Rescue breaths are critically important, as they provide life-sustaining oxygen and ventilation directly to the infant's lungs. Conventional CPR with rescue breathing should be performed on an infant by all trained CPR providers who are willing and able.
2. To give rescue breaths, there must be an open airway. The airway is the only path for getting air into the lungs.
3. Take standard precautions when providing rescue breaths. Use a CPR mask in addition to other appropriate PPE. Masks with HEPA filters can trap airborne virus particles.
4. Avoid giving too many breaths or a large volume during rescue breathing because it can be harmful. It can force air into the stomach, causing regurgitation of food, liquids, or vomit into the airway.
5. In the case of drowning, begin with rescue breaths.[72] As soon as the unresponsive victim is removed from the water, open the airway and assess breathing. If there is no breathing, give 2 rescue breaths that make the chest rise (if this was not done previously in the water).
6. To give mouth-to-mouth-and-nose rescue breathing to an infant:
    a. Open the airway with a head tilt–chin lift. Maintain a neutral "sniffing" position. Take a regular-sized breath and place your mouth over the infant's mouth and nose, creating an airtight seal. Give 1 breath over 1 second. Give enough air to make the chest visibly rise, but no more than that.
    b. If the chest does not rise, repeat the head tilt–chin lift to make a better seal, and try again. It may be necessary to move the infant's head through a range of positions to provide effective rescue breathing.

Ask a Review Question as Needed

You are a trained CPR provider responding to [_a shout for help_] from [_a caregiver_] in the [_storage area_]. Upon arrival, you see the horrified [_caregiver_] holding an almost year-old, limp, unconscious infant. "He fell into the water in the mop bucket!" 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. EMS has been activated. No AED is available. The infant is not breathing. What would you do?

a. Check the pulse in the upper arm for no more than 10 seconds.
b. Cradle the infant in your arms, with their head tilted downwards.
c. Place infant on a firm flat surface. Open the airway. Use the mask to give 2 rescue breaths.
d. Place infant on a firm flat surface. Immediately start CPR, beginning with chest compressions.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Small children can drown within thirty seconds, in as little as two inches of liquid. Bathtubs, buckets, diaper pails, wading pools, and other open containers of water should be emptied immediately after use.[73] Close, constant, and attentive supervision of young children in or around any water, is essential to prevent drowning.[74] Keeping swimming or bathing children within arm's reach and in sight at all times.

72 Vanden Hoek TL, et al. Part 12: cardiac arrest in special situations: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. Circulation. 2010;122(suppl 3):S829 –S861.

73 American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs. 4th ed. Itasca, IL: American Academy of Pediatrics; 2019. Standard 6.3.5.2: Water in Containers. https://nrckids.org/CFOC/Database/6.3.5.2 [Retrieved 9/27/21]

74 Prevention of Drowning. Denny SA, et al. Pediatrics May 2019, 143 (5) e20190850; DOI: https://doi.org/10.1542/peds.2019-0850 [Retrieved 7-15-21]

lesson fourteen

INFANT – ONE-PROVIDER CPR

PREPARE

Duration
9 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:

- Apply the CPR links of the pediatric chain of survival as one provider.
- Correctly demonstrate high-quality infant CPR as one provider.

Why This Topic Matters

One pediatric CPR provider can provide high-quality infant CPR by putting together all the skills of assessment, chest compressions, airway, and breathing.

Instructional Notes

1. The first goal of the skill practice for this lesson is to help students apply the links of the pediatric chain of survival by putting together the knowledge and skills required to take action for infant cardiac arrest as one CPR provider.
2. The second goal of this practice is to prepare students for successful completion of required Performance Evaluation 3: Infant – One-Provider CPR.
   a. You may conduct the Infant – One-Provider CPR Performance Evaluation at the end of this lesson, segment, or at the end of the segment or class.
3. Explain both goals above to the students so they understand what is expected of them and encourage them to practice accordingly.
4. Each student will need an infant-sized CPR mask with a one-way disposable mouthpiece. Other PPE, including disposable gloves and safety glasses, are recommended but may be verbalized.
5. 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 16: Infant – One Provider CPR** or **Scenario Sheet 18**.

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. If another CPR provider is available, take turns providing chest compressions. Switch providers about every two minutes, or sooner if they get tired. Try to minimize interruptions to compressions to less than 10 seconds.

Ask a Review Question as Needed

You are performing conventional CPR on an infant found unresponsive in a crib. The scene is safe. You have taken standard precautions. EMS is on the way. Following your first set of compressions, you open the airway and give a rescue breath. You feel considerable resistance to the flow of air and the infant's chest does not rise. What would you do?

a. Immediately begin chest compression-only CPR.
b. Give up to 5 back slaps between the infant's shoulder blades.
c. Repeat the head tilt – chin lift, make a better seal, and try again.
d. Stop CPR. Keep the infant's head in a neutral "sniffing" position.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Sudden Infant Death Syndrome (SIDS) is the leading cause of death among babies 1 month to 1 year of age. Babies who sleep on their backs are much less likely to die of SIDS than babies who sleep on their stomachs or sides. For more about SIDS and safe infant sleep, visit the U.S. Department of Health and Human Services Safe to Sleep® campaign at safetosleep.nichd.nih.gov/.

lesson fifteen

INFANT – RELIEF OF CHOKING

PREPARE

Duration
6 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:

- Describe how to recognize and provide treatment for a choking infant.
- Correctly demonstrate how to provide treatment for a choking infant.

Why This Topic Matters

When a severe airway obstruction occurs, the infant cannot get air in or out of the lungs. This is a life-threatening medical emergency. If the foreign body is not removed, the infant will quickly become unresponsive and suffer a secondary cardiac arrest within minutes.

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 17: Infant – Relief of Choking** or **Scenario Sheet 19**.

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. If an infant appears to be choking but is responsive, watch for signs of the obstruction becoming severe.
2. With a severe airway obstruction, the infant may cough weakly, be unable to cry, or unable to make any sound at all.
3. Give 5 back slaps and 5 chest thrusts.
   a. Give each back slap and chest thrust forcefully with the intent of dislodging and expelling the object.
4. If the infant becomes unresponsive, begin CPR starting with compressions.
   a. Before opening the airway to provide rescue breaths, open the mouth wide. If you see an object, carefully remove it with your finger.
   b. Do not stick your finger blindly in an infant's throat and attempt to sweep out an object.
5. If you are alone without a mobile device or are unable to activate EMS and/or your EAP right away, give two minutes of CPR before carrying the infant with you to get an AED and to activate EMS and/or your EAP.

Ask a Review Question as Needed

You are responding to a shout for help from [_the play area_]. As you approach, you find a distraught teen holding a 6-month-old infant. The baby is blue around the mouth. "He was just crawling around. I think he's choking on a piece of that teether. Oh please - please - help him." The scene is safe. You have taken standard precautions. You activate your EAP by [_telling the receptionist to call 911_]. The infant is coughing weakly and making a whistling sound when inhaling. Demonstrate what actions you would take next. What would you do?

a. Give mouth-to-mouth-and-nose rescue breathing.
b. Give 5 back slaps with the intent of dislodging the object.
c. Give 5 abdominal thrusts with the intent of dislodging the object.
d. Open the infant's mouth wide. If you see an object, remove it with your fingers.

Ask For & Answer Questions Before Moving to the Next Lesson

Share a Brief Safety & Health Tip

Injury and death in infants and children from choking on small parts is well-documented. Eliminating small parts from children's environments will greatly reduce the risk.[75]

75 Caring for Our Children. Standard 6.4.1 Selected Toys © 2021 - National Resource Center for Health and Safety in Child Care and Early Education. https://nrckids.org/CFOC/Database/6.4.1.2 [Retrieved 9/22/21]

performance evaluation

INFANT CPR SKILL EVALUATION

PREPARE

Duration
9 minutes

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

PRESENT

What Students Should Learn

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

- Demonstrate skill competency as indicated by the skill criteria on the Performance Evaluation 3: Infant – One-Provider CPR.

Why This Topic Matters

- An HSI certification card that includes Infant CPR AED in combination with Adult CPR AED may not be issued unless each student demonstrates competency in the required skills and completes a Performance Evaluation (skill test).
  - Performance Evaluation 3: Infant – One-Provider CPR.
  - This Performance Evaluation may be conducted at the end of class if desired.

Instructional Notes

1. Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation for each student.
2. If a student fails to successfully complete the required Performance Evaluations, formal remediation is required. Please see “Part Three, Remediation” for more.
3. Please refer to the “At-a-Glance” Class and Certification Type Tables at the end of Part 3 or this quick guide to direct you to your next lesson.
   a. Move to the Conclusion segment on the next page.

segment six

CONCLUSION

lesson sixteen

CLASS EVALUATION, DOCUMENTATION, & CERTIFICATION

PREPARE

Duration
10 minutes

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

PRESENT

Why This Topic Matters

HSI's quality assurance procedures and processes are used to continually improve the validity, defensibility, and effectiveness of HSI and its approved Training Centers and Authorized Instructors and Instructor Trainers.

Instructional Notes

1. Congratulate and thank students who successfully completed the class!
2. Ask if any students would like to briefly share what they learned or how they feel they benefited from participating in the class.
3. Provide opportunity for class evaluation.
    a. HSI requires that students be given the opportunity to evaluate their class using the "Rate Your Program" class evaluation form (print or digital).
        i. Completed print class evaluations should be promptly delivered to the Training Center responsible for the class (available in Otis).
        ii. Students can visit emergencycare.hsi.com/quality-assurance-compliance to provide an online evaluation.
4. Complete your documentation.
    a. A complete, accurate, and legible Class Roster reflecting the actual class date(s) of the training class signed by the Authorized Instructor or Instructor Trainer or electronically submitted through Otis is required for every HSI class (see Appendix).
5. Issue certification to those who completed certification requirements.
    a. The Authorized Instructor is required to legitimately issue an authentic HSI print or digital certification card to each student who successfully completed this course.
        i. The certification card must be current, complete, accurate, and legible. It must contain the name of the participant and the Authorized Instructor, the Instructor's Registry Number, the Class Completion Date, the Expiration Date, the Training Center Phone Number, and the Training Center Identification Number (TCID).
6. HSI's compete quality assurance standards, including all requirements for instructor authorization, conduct, and student certification are in the most recent HSI Training Center Administrative Manual (TCAM) available at emergencycare.hsi.com/quality-assurance-compliance.

RENEWAL TRAINING

To renew means to repeat. To recertify is the process of being certified again. The Renewal Class is both retraining and recertification. It is for individuals who are currently certified and desire (or are required) to refresh Adult First Aid | CPR AED knowledge and skill competency to maintain certification. Individuals with expired certification (beyond the current 2-year standard) may not participate in a renewal class.

The Renewal Class is a repetition of the full Initial Training and Instructors use the Initial Training Lesson Plans for the class type being taught. The learning environment, classroom space, SIR, classroom health and safety, and class preparation are all the same for renewal training.

Renewal Instructional Strategy

When teaching a traditional classroom renewal class, we recommend first trying the experienced approach. This means instead of showing the lesson video, the instructor uses the lesson review questions or the WWYD? slides to "test" the students' recall of the information. For skill practice sessions, instead of showing the Video-Guided Practice or using Skill Sheets, the instructor has students arrange themselves in small groups, using the Scenario Sheets to prompt each other through a guided problem-solving scenario with the necessary equipment. Using the experienced approach, particularly with spaced practice, has the potential to reduce the class time because it focuses on recall of knowledge and skill and the video time is eliminated. However, if it becomes clear that the students' skills or knowledge recall is substandard, we recommend changing back to the standard approach, using the video-based lesson presentation to impart the knowledge content and video-guided or instructor skill demonstration followed by instructor-supervised practice for skills.

Renewal with Spaced Practice

It is well established that skills deteriorate in 3 to 6 months after training.[76,77] For that reason, we recommend that renewal training not be offered as a single class near the end of the 2-year certification period, but rather, be broken up into several shorter, interrupted, scenario and skill-focused training sessions over a longer period (spaced practice). This has been shown to improve both skill retention and performance.[78] When it is feasible, retraining and recertification in a single class every 2 years (Full Renewal Class, Example 1) should be replaced or supplemented with training that focuses on knowledge, skills, and confidence building every 3-6 months (Semi-Annual Renewal, Example 2).[79] Whenever possible, instructors should use contextual learning to adjust the lessons to reflect the known and anticipated risks of the specific work environment.

For spaced practice renewal training, the instructor will need to divide up the class segments and their lessons like the example provided in Example 2: 2-Year Semi-Annual Renewal. To keep track of the students over time, and to document their participation in each session, we recommend the instructor use the Spaced Practice Sessions, Attendance Sheet (see Appendix).

Adult First Aid | Adult CPR AED Renewal Training (Foundational Class)

Example 1: 2-Year Biennial Renewal – Adult First Aid and Adult CPR AED

Month Year	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
January 2024	Renewal Class, Traditional Classroom or Blended Learning	All

Example 2: 2-Year Semi-Annual Renewal (spaced practice) – Adult First Aid and Adult CPR AED

Month	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
July 2022	Partial Renewal Class, Traditional Classroom	Introductory Lessons
January 2023	Partial Renewal Class, Traditional Classroom	Adult CPR AED Lessons • Performance Evaluation 1: Adult CPR AED
July 2023	Partial Renewal Class, Traditional Classroom	Injury Emergencies • Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding
January 2024	Partial Renewal Class, Traditional Classroom	Medical and Environmental Emergencies • Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction

76 Kovács E, et al. The timing of testing influences skill retention after basic life support training: a prospective quasi-experimental study. BMC Med Educ. 2019 Dec 4;19(1):452. doi: 10.1186/s12909-019-1881-7

77 Anderson GS, Gaetz M, Masse J. First aid skill retention of first responders within the workplace. Sand J Trauma Resusc Emerg Med. 2011 Feb 8;19:11. doi: 10.1186/1757-7241-19-11. PMID: 21303536; PMCID: PMC3044091.

78 Cheng A, et al. Resuscitation Education Science: Educational Strategies to Improve Outcomes from Cardiac Arrest: A Scientific Statement From the American Heart Association. Circulation. 2018 Aug 7;138(6):e82-e122. doi: 10.1161/CIR.0000000000000583.

79 Riggs M, Franklin R, Saylany L. Associations between cardiopulmonary resuscitation (CPR) knowledge, self-efficacy, training history and willingness to perform CPR and CPR psychomotor skills: A systematic review. Resuscitation. 2019 May; 138:259-272.]

Adult, Child, and Infant CPR AED Renewal Training

Example 1: 2-Year Biennial Renewal – Adult, Child, and Infant CPR AED

Month Year	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
January 2024	Renewal Class, Traditional Classroom or Blended Learning	All

Example 2: 2-Year Semi-Annual Renewal (spaced practice) – Adult, Child, and Infant CPR AED

Month Year	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
July 2022	Partial Renewal Class, Traditional Classroom	Adult CPR AED Lessons • Performance Evaluation 1: Adult – One-Provider CPR AED
January 2023	Partial Renewal Class, Traditional Classroom	Child CPR AED Lessons • Performance Evaluation 2: Child – One-Provider CPR AED
July 2023	Partial Renewal Class, Traditional Classroom	Infant CPR AED Lessons • Performance Evaluation 3: Infant – One-Provider CPR
January 2024	Partial Renewal Class, Traditional Classroom	Adult, Child, and Infant Written Exam*

**The Written Exam is not required for certification In spaced practice, the instructor may use the exam as an active learning tool That is, the exam may be given open book, or the instructor may read the questions out loud to the class and engage students in choosing the correct answer and discussing the reasoning behind it. Scoring of individual exams is not necessary unless it is required by a regulatory agency.*

Adult First Aid Only Renewal Training

Example 1: 2-Year Biennial Renewal – Adult First Aid

Month Year	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
January 2024	Renewal Class, Traditional Classroom or Blended Learning	All

Example 2: 2-Year Semi-Annual Renewal (spaced practice) – Adult First Aid

Month Year	Class Format	Segments Taught
January 2022	Initial Class, Traditional Classroom or Blended Learning	All
July 2022	Partial Renewal Class, Traditional Classroom	Introductory Lessons
January 2023	Partial Renewal Class, Traditional Classroom	Injury Emergencies • Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding
July 2023	Partial Renewal Class, Traditional Classroom	Medical and Environmental Emergencies • Performance Evaluation 5: Adult First Aid– Severe Allergic Reaction
January 2024	Partial Renewal Class, Traditional Classroom	Adult First Aid Written Exam*

**The Written Exam is not required for certification (except in a Challenge). In spaced practice, we recommend the instructor use the exam as an active learning tool. That is, the exam may be given open book, or the instructor may read the questions out loud to the class and engage students in choosing the correct answer and discussing the reasoning behind it. Scoring of individual exams is not necessary unless it is required by a regulatory agency.*

CHALLENGE

A Challenge is for individuals who wish to earn Adult First Aid | CPR AED certification by demonstrating knowledge and skill competency without taking an initial or renewal class. Anyone is eligible to participate in a Challenge regardless of certification status. There are no lessons or teaching in a Challenge. Participants are solely responsible to be prepared to take a Written Exam and to complete the required Performance Evaluations.

Delivery Method

A Performance Evaluation in a challenge is delivered either in person in a traditional classroom or virtually. Knowledge evaluation via Written Exam is required in Challenge for all class types. The Written Exam for HSI Adult First Aid | CPR AED class type being challenged may be completed either before or after the Performance Evaluation. Please refer to the "At-a-Glance Class and Certification Types Tables" in Part 3 for guidance on the required Performance Evaluations for all class types.

> *Note: Only the HSI Adult First Aid | CPR AED exams may be used for certification in each class type. It is a violation of HSI quality assurance standards to use any other exam, including exams created by the Training Center or Instructor, or to post the exam to an intranet or the Internet. Using any other exam invalidates the certification card and is grounds for suspension or revocation of Training Center approval and/or instructor authorization.*

Challenge Preparation

Other than the absence of practice sessions, the learning environment, classroom space and SIR, classroom health and safety, and class preparation are the same for the Traditional Classroom and are not repeated here.

CLASS EQUIPMENT AND MATERIALS CHECKLIST FOR ALL CLASS TYPES, CHALLENGE

The table below lists equipment and materials required for all nine class types.

Required Class Materials In-Person (Classroom)	Required Class Equipment In-Person (Classroom)
✓ Adult First Aid | CPR AED Lesson Plans, Instructor Guide, 1 per instructor ✓ Class Roster, 1 copy ✓ Certification Card(s) purchased from HSI for the class type you are teaching (print or digital, 1 per student)	✓ Disposable gloves (nonlatex), minimum 2 pair for each student

Additional Recommended Tools, In-Person (Classroom)
In-person traditional classroom format: ✓ Blankets, kneeling pads, or mats, 1 for each 3 students

REQUIRED CLASS EQUIPMENT AND MATERIALS, CHALLENGE

The table below lists required equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR manikins, minimum 1 for each 3 students (1:1 recommended)	• Adult	• Adult/child	• Infant	
CPR manikin cleaning and disinfecting wipes for each student	•	•	•	
AED Trainer with pads, minimum 1 for each 3 students	• Adult pads	• Adult or pediatric pads	• Pediatric pads	
CPR mask and one-way disposable mouthpiece with valve for CPR mask, 1 for each student	• Adult	• Adult/Child	• Infant	
Stopwatch for CPR AED Performance Evaluation, minimum 1 per instructor (online, smartphone app, or handheld digital)	•	•	•	
Performance Evaluation 1: Adult – One-Provider CPR AED, 1 per student	•			
Performance Evaluation 2: Child – One-Provider CPR AED (1 per student)		•		
Performance Evaluation 3: Infant – One-Provider CPR (1 per student)			•	
Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding, 1 per student				•
Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction, 1 per student				•
10-pack of clean 4" x 4" gauze sponges, minimum 1 for each 3 students				•
Clean elastic or self-adhesive roller bandage, minimum 1 for each 3 students				•
Epinephrine autoinjector trainer, minimum 1 for each 3 students				•

OPTIONAL CLASS EQUIPMENT AND MATERIALS, CHALLENGE

The table below lists optional equipment and materials for all class types by main lesson segment.

Equipment/Materials	Adult CPR AED	Child CPR AED	Infant CPR AED	Adult First Aid
CPR feedback devices, 1 per manikin (or built in)	•	•	•	•

segment one

INTRODUCTION

lesson one

INTRODUCTION TO CHALLENGE

PREPARE

Duration
5 minutes

Class Format: Challenge
Delivery Method: Traditional Classroom or Virtual

PRESENT

Begin the Lesson

What Students Should Learn

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

- Describe the expectations of the Challenge.

Why This Topic Matters

Though there is no teaching or coaching in a Challenge, a friendly introduction can help the individual relax and feel more comfortable.

Instructional Notes

1. Arrive early. Give yourself plenty of time to get set up and organized.
2. Greet the participant(s) as they arrive.
3. Introduce yourself. Be friendly, considerate, respectful, and professional.
4. Have participants sign in on a sign-in sheet or the HSI Adult First Aid | Adult CPR AED Class Roster.
5. Establish a connection with the participant(s). Ask about previous training.
6. If possible, use contextual learning to apply the Performance Evaluation to the participants' real-world setting.
7. Regulatory agencies may require certain individuals to complete a specific number of classroom hours of instruction to comply with occupational licensing requirements. Challenging the course in these circumstances may be prohibited and invalidate certification earned in this manner.

Ask For & Answer Questions Before Moving to the Next Lesson

segment two

REQUIRED SKILL EVALUATIONS

lesson two

KNOWLEDGE & PERFORMANCE EVALUATION

PREPARE

Duration
Varies

Class Format: Challenge
Delivery Method: Traditional Classroom or Virtual

PRESENT

Begin the Lesson

What Students Should Learn

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

- Demonstrate knowledge competency by obtaining a passing score on the Written Exam for the class type being challenged, as indicated on the Answer Key of the Written Exam.
- Demonstrate skill competency as indicated by the skill criteria on required Performance Evaluations for the class type being challenged.

Why This Topic Matters

A certification card may not be issued unless the participant demonstrates competency in the required skills and completes a Performance Evaluation (skill test) for the Challenge class type you are offering.

- Performance Evaluation 1: Adult – One-Provider CPR AED
- Performance Evaluation 2: Child – One-Provider CPR AED
- Performance Evaluation 3: Infant – One-Provider CPR
- Performance Evaluation 4: Adult First Aid – Severe, Life-Threatening External Bleeding
- Performance Evaluation 5: Adult First Aid – Severe Allergic Reaction

Certification Type	Written Exam – Required Knowledge Evaluation	Required Performance Evaluation
Adult First Aid | Adult CPR AED	Adult First Aid | Adult CPR AED	1, 4, and 5
Adult First Aid | Adult, Child, and Infant CPR AED	Adult First Aid | Adult, Child, and Infant CPR AED	1, 2, 3, 4, and 5
Adult First Aid | Adult and Child CPR AED	Adult First Aid | Adult and Child CPR AED	1, 2, 4, and 5
Adult First Aid | Adult and Infant CPR AED	Adult First Aid | Adult and Infant CPR AED	1, 3, 4, and 5
Adult First Aid	Adult First Aid	4 and 5
Adult, Child, and Infant CPR AED	Adult, Child, and Infant CPR AED	1, 2, and 3
Adult and Child CPR AED	Adult and Child CPR AED	1 and 2
Adult and Infant CPR AED	Adult and Infant CPR AED	1 and 3
Adult CPR AED	Adult CPR AED	1

Instructional Notes

Please refer to “Part Three, Evaluation” for instructions on conducting a Performance Evaluation.

segment three

CONCLUSION

lesson three

DOCUMENTATION & CERTIFICATION

PREPARE

Duration
10 minutes

Class Format: Challenge
Delivery Method: Traditional Classroom or Virtual

PRESENT

Instructional Notes

1. Congratulate the successful participant. If unsuccessful, assist them in scheduling a full initial or renewal class, as applicable.
2. Complete your documentation.
    a. A complete, accurate, and legible Class Roster reflecting the actual class date(s) of the training class signed by the Authorized Instructor or Instructor Trainer or electronically submitted through Otis is required for every HSI Adult First Aid | CPR AED class type (see Appendix).
3. Issue certification to those who completed certification requirements.
    a. The Authorized Instructor is required to legitimately issue an authentic HSI Adult First Aid | CPR AED print or digital certification card to each person who successfully challenged the course.
        i. The certification card must be current, complete, accurate, and legible. It must contain the name of the participant and the Authorized Instructor, the Instructor's Registry Number, the Class Completion Date, the Expiration Date, the Training Center Phone Number, and the Training Center Identification Number (TCID).
4. HSI's compete quality assurance standards, including all requirements for instructor authorization, conduct, and participant certification are located in the most recent HSI Training Center Administrative Manual (TCAM) available at emergencycare.hsi.com/quality-assurance-compliance.

part five

APPENDIX

ADULT FIRST AID | CPR AED CLASS ROSTER

Class Type (check one)

- ☐ Adult First Aid | Adult CPR AED
- ☐ Adult First Aid | Adult, Child, and Infant CPR AED
- ☐ Adult First Aid | Adult and Child CPR AED
- ☐ Adult First Aid | Adult and Infant CPR AED
- ☐ Adult First Aid
- ☐ Adult, Child, and Infant CPR AED
- ☐ Adult and Child CPR AED
- ☐ Adult and Infant CPR AED
- ☐ Adult CPR AED

Class Format

- ☐ Initial
- ☐ Renewal
- ☐ Challenge

Delivery Method

- ☐ Traditional Classroom
- ☐ Blended Learning, Online & Classroom
- ☐ Blended Learning, Online & RSV

Instructor & Training Center (TC) Information	
Primary Instructor:	TCID#:
Primary Instructor Registry #:	Address:
Primary Instructor Authorization Exp. Date:	City, State:
TC Name:	Class Location:

Class Information	
Class Start Date:	# of Certification Cards Issued:
Class End Date:	Issue Date of Certification Cards:
Total Hours of Instruction:	Student to Manikin Ratio:

Assisting Instructors

Instructor Name	Registry #	Author. Expiration Date	Instructor Name	Registry #	Author. Expiration Date

Students checked "complete" on the following page(s) successfully completed the required lessons and Performance Evaluations for the Class Type indicated above. This class was taught in accordance with the Training Center Standards as described in the most recent version of the HSI Training Center Administrative Manual (TCAM).

Primary Instructor Signature: _____ Date: _____

ADULT FIRST AID | CPR AED CLASS ROSTER

Class Participants				
#	Student Info (Please Print Clearly)		Complete?	Remediation Date
1	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
2	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
3	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
4	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
5	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
6	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
7	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
8	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
9	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		
10	Participant Name:	Mailing Address:	☐	
	Email:	Phone:		

renewal training

SPACED PRACTICES SESSIONS, ATTENDANCE SHEET

		Renewal Session Dates (Check Box for Attendance)								Complete
	Participant Name									
1		☐	☐	☐	☐	☐	☐	☐	☐	☐
2		☐	☐	☐	☐	☐	☐	☐	☐	☐
3		☐	☐	☐	☐	☐	☐	☐	☐	☐
4		☐	☐	☐	☐	☐	☐	☐	☐	☐
5		☐	☐	☐	☐	☐	☐	☐	☐	☐
6		☐	☐	☐	☐	☐	☐	☐	☐	☐
7		☐	☐	☐	☐	☐	☐	☐	☐	☐
8		☐	☐	☐	☐	☐	☐	☐	☐	☐
9		☐	☐	☐	☐	☐	☐	☐	☐	☐
10		☐	☐	☐	☐	☐	☐	☐	☐	☐
11		☐	☐	☐	☐	☐	☐	☐	☐	☐
12		☐	☐	☐	☐	☐	☐	☐	☐	☐
13		☐	☐	☐	☐	☐	☐	☐	☐	☐
14		☐	☐	☐	☐	☐	☐	☐	☐	☐
15		☐	☐	☐	☐	☐	☐	☐	☐	☐
16		☐	☐	☐	☐	☐	☐	☐	☐	☐
17		☐	☐	☐	☐	☐	☐	☐	☐	☐
18		☐	☐	☐	☐	☐	☐	☐	☐	☐
19		☐	☐	☐	☐	☐	☐	☐	☐	☐
20		☐	☐	☐	☐	☐	☐	☐	☐	☐
	Instructor Name									
1		☐	☐	☐	☐	☐	☐	☐	☐	☐
2		☐	☐	☐	☐	☐	☐	☐	☐	☐

SAMPLE CLASS FLOOR PLAN

Maximum Student-to-Instructor Ratio 12:1 (6:1 Strongly Recommended)

Maximum Student-to-Manikin Ratio 3:1 (1:1 Strongly Recommended)[80]

80 See the Class Equipment and Materials Checklist for All Class Types, the Required Class Equipment and Materials, and the Optional Class Equipment and Materials in the lessons plans for the class type, format, and delivery method.

Health & Safety Institute
1450 Westec Drive
Eugene, OR 97402
800-447-3177
541-344-7099
E-mail: response@hsi.com

Visit our website at hsi.com

First Edition—2021, Revised—12/2022

ISBN 978-1-945991-38-7

HSI Adult First Aid | CPR AED Instructor Guide, Version 9.0

MEDIC First Aid AMERICAN SAFETY & HEALTH INSTITUTE EMS SAFETY

hsi Health & Safety Institute