CPR and AED

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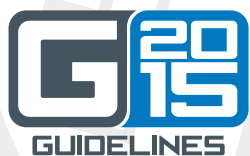
AMERICAN SAFETY & HEALTH INSTITUTE

CPR and AED
Instructor Guide, *Version 8.0*

Purpose of this Guide

This ASHI *CPR and AED Version 8.0 Instructor Guide* is solely intended to give information on the presentation and administration of ASHI CPR and AED certified training classes. The information in this book is furnished for that purpose and is subject to change without notice.

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CPR AND **AED** *(CONTINUED)*

PART 1:
PROGRAM DESIGN AND INSTRUCTIONAL TOOLS

PREVIEW

Program Design

Program Overview

The ASHI CPR and AED training program is intended for individuals who are not healthcare providers or professional rescuers but desire or are required to be certified in CPR and the use of an AED. There are no class prerequisites.

To provide flexibility in meeting the needs of students, the ASHI CPR and AED training program has the following certification options:

Adult Only — Common to meet workplace compliance

Adult and Child — When narrowly specified training is required

Adult, Child, and Infant — Broad training for all applications

The goal of this training program is to help students develop the knowledge, skills, and confidence to respond in a medical emergency. Founded in basic principles of instructional design and learning theory, ASHI promotes a "toolbox" approach to learning. This approach gives Instructors flexibility in both presentation strategies and materials in order to reach students with widely varying abilities in the countless instructional settings that exist in the real world. CPR and AED is designed to include a significant amount of hands-on skill practice.

Combining ASHI Programs

It is a common approach to combine the ASHI CPR and AED program with the ASHI Basic First Aid program to do an integrated CPR, AED, and first aid class. Program videos include play options for a combined class. A combination Student Book and certification card are available, but Instructors will still use both Instructor Guides.

Program Structure

ASHI CPR and AED contains both core and supplemental training content.

Core Training Content

The core training content is the minimum knowledge and skill content that is required for certification in ASHI CPR and AED.

Supplemental Content

In addition to the core training content required for certification, ASHI CPR and AED contains supplemental knowledge and skill content that may be added by the instructor as desired or required.

Supplemental training content is clearly identified and appropriately located throughout this Instructor Guide.

Third-Party Training Content

Additional training materials that are not produced by HSI may also be used to enhance ASHI CPR and AED at the discretion of the training center director. These additional materials may not be used in lieu of ASHI CPR and AED materials and may not be used to shorten or otherwise alter the core training content required for certification.

> **Important:**
> REGULATORY AGENCIES AND OTHER APPROVERS MAY REQUIRE SPECIFIC HOURS OF INSTRUCTION OR OTHER PRACTICES. INSTRUCTORS MUST BE FAMILIAR WITH AND COMPLY WITH ALL APPLICABLE LOCAL, STATE, PROVINCIAL, FEDERAL LAWS AND ADMINISTRATIVE RULES AS THEY PERTAIN TO THE APPROVAL, DELIVERY, AND ADMINISTRATION OF THIS TRAINING. HSI MAINTAINS A DATABASE OF ALL REGULATORY APPROVALS IN OTIS.

Class Types

There are 3 different class types for ASHI CPR and AED: Initial, Renewal, and Challenge.

Initial Class

A classroom or blended learning training class for individuals who have never been certified or whose certification has expired.

Renewal Class

A classroom training class for individuals who wish to refresh skill competency and maintain certification.

Challenge

A classroom evaluation for individuals who wish to earn certification by demonstrating knowledge and skill competency without taking an initial or renewal class.

Class Methods

There are 2 main methods to teaching and certifying students in ASHI CPR and AED: instructor-led classroom training and blended learning.

Classroom Training

This is an instructor-led, in-person, classroom-based approach where the core knowledge content is provided using scenario-based video segments or a slide presentation, followed by demonstration of skills and the opportunity for instructor-facilitated student practice. There is a maximum student to instructor ratio of 10:1. The recommended ratio is 6:1.

Blended Learning

This is a mixed-mode approach using both online and in-person learning; core knowledge content is provided in video segments and interactive student exercises online, followed by in-person skills practice.

Training Content

Initial Classroom Class

The content of the initial class is divided into sections. Sections are further divided into lessons. Each lesson provides an approximate length, skill and/or knowledge objectives (What Students Should Learn), provides an encouraging reason for learning (Why This Topic Matters), lists required equipment, and describes the necessary instructor activities. The outline and time frame for the Initial Instructor-Led Class are provided in Part 3.

ASHI promotes a "toolbox" approach to learning. This means that various presentation methods and tools may be used by the instructor to meet the knowledge and skill objectives of the course, including skill guides, video, slides, scenario sheets, and performance evaluations. The focus is on gaining the skills and building the confidence to handle an emergency situation. Skills are best learned and retained by repeat practice. Instructors can make the most of class time by limiting lectures to essential knowledge, and focusing on hands-on skill practice.

Four-step Instructional Approach

In general, ASHI follows a basic four-step instructional approach (some lessons may include fewer or additional steps).

Step 1: Present the Knowledge Content

The program video and the program slide presentation are the primary tools provided to deliver knowledge content for the class.

Featuring scenario-based video segments, the program video provides you with a simple, engaging, and consistent approach to deliver content.

The program slide presentation allows more experienced Instructors to take an active role in presenting content. Slides focus on the key points of information and allow Instructors to highlight content using other delivery methods. Slide notes provide more detail on content. Instructors can use stated video-times as a guide for pacing lesson times when using the presentation.

Key points are also included for each lesson in this Instructor Guide and can be used to emphasize key content throughout the class.

Step 2: Demonstrate Skills

When demonstrating skills, a high-quality performance is essential because students will tend to copy it.

When giving a demonstration, consider using the WHOLE-PART-WHOLE method:

WHOLE: Demonstrate the entire skill, beginning to end, briefly naming each action or step.

PART: Demonstrate the skill again, step-by-step, integrating information and facts while pointing out common errors in technique. Present only the knowledge necessary to for the student to adequately perform the skill. To help, have students look at the appropriate Skill Guide as you demonstrate.

WHOLE: Demonstrate the entire skill again — in real-time — without comment. Perform it without remarks, interruption, or explanation. This helps students get a feel for the tempo of the skill and the opportunity to observe the sequence of actions before they practice.

Step 3: Allow Adequate Time for Students to Practice the Skills

Break students into small groups with the required equipment for the practice. Have one student act as a coach by reading the skill steps from the Skill Guide while another student performs the skill on a manikin or on another student who is playing the role of the ill or injured person. Have students rotate through the roles until all have played each role.

An Instructor should circulate through the classroom, answering questions, correcting errors in technique, and providing constructive feedback and positive reinforcement. Avoid anxiety-producing, perfection-oriented skill checks. A stimulating, but non-threatening, environment is best for learning.

More experienced or returning students may enjoy a scenario- or problem-based learning approach. Scenario sheets are available to support this approach.

Optional Video Guided Practice

Instructors have the option to use video guided practices for chest compressions, rescue breaths, and CPR. Video guided practices allow students to practice skills in tandem with a video demonstration.

Video segments for these guided practices are provided. Each student must have a manikin when conducting a video guided practice. Instructor notes are located in this Instructor Guide where video guided practices are available.

Optional LOOP Learning System Integration

Instructors have the option to integrate the use of the LOOP Learning System during hands-on practices for chest compression, CPR, and high-performance CPR. The LOOP can engage students in learning and help students to improve performance as they practice skills.

The LOOP Learning System (sold separately) is a CPR practice aid that can provide real-time feedback to a student on compression rate and depth, and overall timing of performance. Real-time performance feedback allows for the immediate correction and reinforcement of skills. Feedback devices are recommended for the development of high-quality CPR skills.

Step 4: Wrap It Up

Ask for and answer questions as briefly and concisely as you can. If available, finish with a short problem-solving scenario to help students recall key information.

The initial class proceeds lesson by lesson until its conclusion. ASHI CPR and AED certification cards are issued to those students who have earned them.

Certification Requirements

Instructors must be current and properly authorized as an ASHI CPR and AED instructor to issue CPR and AED certification cards.

The certification requirement for an initial class requires students to demonstrate skill competency using skill guides, Scenario Sheets, or performance evaluations. A Written Exam is not required for certification unless required by a regulatory agency or if a student is seeking certification using the Challenge option.

> **Important:**
> WHEN NOT REQUIRED, THE WRITTEN EXAM MAY BE USED AS A PRE-, POST-, OR IN-CLASS ACTIVE LEARNING TOOL. THE INDIVIDUAL'S SCORE ON AN OPTIONAL EXAM MAY NOT BE USED TO WITHHOLD A PROPERLY EARNED CERTIFICATION CARD. WHEN A WRITTEN EXAM IS NOT USED OR REQUIRED, INSTRUCTORS CAN MEASURE COGNITIVE UNDERSTANDING BY INFORMAL OBSERVATION AND QUESTIONING USING THE KNOWLEDGE CHECK FEATURE.

Combining ASHI CPR and AED with ASHI Basic First Aid

Because there are different versions of the same lessons in both Instructor Guides, it is important to understand which lesson versions to use in a combined class.

Affected lessons are identified in this Instructor Guide along with Instructor Notes indicated as Combo Class Alerts to help you select the appropriate lesson version for a combined class.

When doing a standalone CPR and AED class:

- Present the lessons as provided in this Instructor Guide.

When doing a combined class:

- Start with the Introduction lesson from Basic First Aid
- Then, use the entire Preparing to Help segment from Basic First Aid
- Next, present all of the lessons from CPR and AED, skipping the Preparing to Help segment within CPR and AED

- When finished with CPR and AED, return to Basic First Aid starting with the Primary Assessment — Responsive Person lesson
- Skip the Choking lesson in Basic First Aid
- Complete the remainder of the Basic First Aid lessons
- If using the supplemental Emotional Support lesson, use the Basic First Aid version.
- Wrap up the class using the Evaluation, and Documentation and Certification from Basic First Aid

Initial Blended Class

About Blended Learning

Blended learning combines the convenience of online learning with face-to-face, in-class skill practice and evaluation by an authorized instructor. The platform used for the online portion of the Initial Blended Class is Otis. This web-based learning system allows for a variety of sensory interactions to provide users with a low-stress, easy-to-use, and convenient way to learn the required information. The management of blended training, including scheduling online and face-to-face sessions, is also done through Otis. Students are notified by email of enrollment in the online class. Student progress can be monitored online. For information on system requirements and how to register students for the online portion of the class contact your training center director or email customerservice@hsi.com.

Online Portion

The online portion of a blended training class covers the essential cognitive content for the class using program video segments and interactive exercises. When a student successfully completes the online portion of the class, a Recognition of Completion certificate will be made available to the student for printing and the completion will be recorded within Otis. Successful completion of the online portion is required to attend the face-to-face portion of the class for skills practice and evaluation with an instructor.

> **Important:**
> COMPLETION OF THE ONLINE PORTION ALONE DOES NOT RESULT IN CERTIFICATION. THE ONLINE PORTION IS USEFUL FOR KNOWLEDGE ACQUISITION, BUT IT DOES NOT PROVIDE ANY BENEFIT IN THE PERFORMANCE OF SKILLS.[1] ONLINE TRAINING ALONE DOES NOT MEET THE FIRST AID AND CPR REQUIREMENTS OF THE US DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) STANDARDS.[2] ONLINE TRAINING MUST BE SUPPLEMENTED WITH HANDS-ON PRACTICE.

Face-to-Face Portion

The face-to-face portion of a blended class focuses on the development of competent skills through hands-on practice. Required activities of the face-to-face portion of the Initial Blended Class include performing instructor demonstrations and student practices, completed just as in an Initial Instructor-Led Classroom Class.

Instructor Demonstration

The instructor performs a demonstration of the skill, using the Whole-Part-Whole method.

Student Practice

Following the instructor demonstration, allow adequate time for students to practice the skill.

Optional video guided practices and LOOP Learning System integrations can be considered.

> **Important:**
> THE FACE-TO-FACE PORTION OF THE BLENDED CLASS IS NOT INTENDED TO BE A SIMPLE SKILLS CHECK OFF. THIS PORTION OF THE CLASS INCLUDES BOTH PRACTICE AND EVALUATION. FOR STUDENTS WHO ARE ALREADY COMPETENT IN THEIR KNOWLEDGE AND SKILLS, CONSIDER USING THE CHALLENGE OPTION.

The outline and time frame for the Initial Blended Class are provided in Part 4. The class proceeds lesson by lesson until its conclusion. ASHI CPR and AED certification cards are issued to those students who have earned them.

Certification Requirements

The certification requirements for the Initial Blended Class are the same as for an Initial Instructor-Led Classroom Class.

Renewal Class

The Renewal Class is designed for individuals who are currently certified and want (or are required) to refresh skill competency and maintain certification. Individuals without current certification may not participate in a Renewal Class.

CPR and AED skills, and the confidence to use them, deteriorate rapidly following initial training and certification, in as few as 30 to 90 days.[3,4] Consider doing renewal training more frequently to refresh and maintain skills.

Lessons in the renewal class focus on the development of competent skills through hands-on practice. Required activities of a Renewal Class include performing instructor demonstrations and student practices, completed just as in the Initial Instructor-Led Classroom Class.

Optional video guided practices and the integration of the LOOP Learning System can be considered.

The outline and time frame for the Renewal Class are provided in Part 5. The Renewal Class proceeds lesson by lesson until its conclusion. ASHI CPR and AED certification cards are issued to those students who have earned them.

Certification Requirements

The Renewal Class focuses on skill competency. If new certification cards will be issued, use of the Written Exam before, during, or after skills practice is necessary to refresh students on core knowledge content not covered in the skill sessions. The instructor should 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 all students in choosing the correct answer and discussing the reasoning behind it. Scoring individual exams is not necessary unless it is required by a regulatory agency. Using an alternative method to the Written Exam that adequately covers all core knowledge content is acceptable.

Challenge

A Challenge is an instructor-led evaluation for individuals who wish to earn ASHI CPR and 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 and must be prepared to take a Written Exam and skill test. The required instructor activities are limited to administering the Written Exam and carrying out skill tests using the performance evaluation.

The outline and time frame for the Challenge are provided in Part 6. ASHI CPR and AED certification cards are issued to those individuals who have earned them.

Instructional Tools

This ASHI CPR and AED Instructor Guide, (integrated with pages from the CPR and AED Student Book), video segments, slides, scenario sheets, performance evaluations, and online training provides the materials necessary for a properly qualified and authorized instructor to conduct the Initial, Blended, Renewal, and Challenge classes. Lesson plans are located in Parts 3 through 6.

Instructor/Training Center Portal in Otis

The instructor/training center portal in Otis provides access to the most current support documents, including performance evaluations, exams, supplemental skill sheets, errata sheets, and more. Please see Otis for the most up-to-date information. Login to Otis at otis.hsi.com/login. If you need assistance logging into Otis, call 877-440-6049 to speak with technical support.

Student Book

The ASHI CPR and AED Student Book is an up-to-date resource that covers the core knowledge and skill content required for certification. Each participant should have a current print or digital Student Book readily available during and after the class.

Program Video

The ASHI CPR and AED program video is a scenario-based visual learning tool. Video segments cover all core and supplemental training content. The video is available on digital video disc (DVD), online as a component of the blended class, and as an Otis-powered desktop or mobile application.

Program Slide Presentation

A PowerPoint slide presentation is provided as an alternative visual tool to the program video. Designed for more experienced Instructors, the presentation highlights the key points of the program content to help guide Instructors in class. The program slide presentation file is available in Otis.

Skill Guides

Skill guides combine words and photographs of the correct steps of a skill in the proper sequence. They are visual, easy-to-use, instructional tools to be used by the instructor as a teaching aid and by students during skill practice. Skill guides are included in the Student Book and integrated into this Instructor Guide.

Scenario Sheets

Scenario Sheets are student practice tools used to help students learn how to apply skills and make reasoned judgments and decisions in a realistic, simulated setting. An alternative to skill guides, Scenario Sheets are more suited to experienced students. Scenario Sheets and instructions for their use are available in Otis.

Performance Evaluation Sheets

Instructors can use performance evaluation sheets for a more formal approach to evaluating required skills. Performance evaluation is a scenario-based assessment process that provides sound, fair, consistent, uniform, objective, and reliable documentation of a student's competency according to the skill criteria. Performance evaluation sheets and instructions for their use are available in Otis and are included in the Otis-powered desktop or mobile application.

Written Exam

Unless required by a regulatory agency, it is not required for students to take and pass the Written Exam. However, the Written Exam documents are provided as an instructional tool and can be used to check student learning and effective retention of knowledge objectives.

Two Written Exam versions, an answer sheet, and answer keys are included in the program documents in Otis.

LOOP Learning System

The LOOP Learning System (sold separately) is a CPR practice aid that can increase the level of engagement of students during training.

The LOOP Learning System uses a LOOP CPR Controller, placed on a manikin chest to measure compression depth and rate, and overall timing for CPR.

The LOOP system also comes with two software programs: LOOP Rhythm and LOOP Metrics. LOOP Rhythm enhances training by using music, video, competitive scoring and other gaming concepts to create a compelling fast-paced and fun experience.

LOOP Metrics is designed for use in the hands-on practice sessions of a training class. It provides real-time performance feedback that allows for the immediate correction and improvement of skills. Skill performance is also recorded so Instructors can review the results with students at the end of a practice session. The optional use of the LOOP Learning System has been integrated into the compressions, CPR, and high-performance CPR practices in this training program.

The 2015 American Heart Association Guidelines Update for CPR and ECC recommend the use of a corrective CPR feedback device during CPR training to improve skill performance.

If LOOP or a similar CPR feedback device is not available, it is recommended to use a metronome to at least provide auditory guidance on compression rate. Many free or low-cost metronome apps are available for use on mobile tablets or phones.

The ASHI CPR and AED slide presentation was created using PowerPoint® presentation graphics program. PowerPoint® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

PART 2:
CLASS REQUIREMENTS AND ADMINISTRATION

PREVIEW

Class Requirements

Before Class

A few days before the class, confirm the date, location, and number of students. Ensure you have the following materials (see Equipment List for detailed information):

- CPR and AED Instructor Guide
- CPR and AED Student Books
- CPR manikins and AED trainers
- Gloves
- Audio visual equipment and cables
- Class paperwork

Review this Instructor Guide, paying particular attention to the outline and time frame for the class you are teaching (Initial, Blended, Renewal, or Challenge). Review the video or slides and key points for each lesson, including any supplemental content to be added. Review all of the included Instructor Notes to see if you need to adjust your approach to training. Familiarize yourself with the student book.

Learning Environment

The ideal 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. Avoid cramped classroom setups where possible. Instructors must often create a makeshift classroom out of a noisy shop floor, poorly lit cafeteria, or cramped conference room. Such challenges should be anticipated and the learning environment be made as favorable as possible.

Classroom Space

CPR and AED has been developed for a maximum class size of 10 students to 1 instructor; the recommended class size is 6 students to 1 instructor. Personal supervision is necessary to ensure effective facilitation, assistance, guidance, and supervision. Additional equipment and the assistance of other authorized instructors are recommended for all skill sessions where possible.

The room should be large enough to accommodate chairs, tables, and skill practice space for up to 10 students. CPR and AED requires hands-on practice and evaluation of skills. Ensure that adequate and appropriate space for these activities is provided. Allow 15 to 17 square feet per student whenever possible.[5] Avoid lecture hall type of arrangements. A sample classroom layout is available in Otis.

Classroom Safety

Make sure there are no obvious hazards in the classroom, such as extension cords that can be tripped over. Discourage students from smoking, eating, or engaging in disruptive or inappropriate behavior. Have an emergency response plan in case of serious injury or illness, including evacuation routes from the classroom. Be aware of and share with students the location of the nearest bathrooms, exit, phone, first aid kit, AED, fire alarm pull station, and fire extinguisher.

NOTICE:

WARN STUDENTS TO AVOID AWKWARD OR EXTREME POSTURES OF THE BODY. IMPROPER LIFTING AND MOVING IS A LEADING CAUSE OF BACK INJURY. ALL STUDENTS MUST PAY ATTENTION TO PROPER LIFTING AND MOVING TECHNIQUES DURING PRACTICE.

Warn students that classroom activities involving lifting and moving that may aggravate previous back injuries and they should not practice moving simulated victims if they have a history of back problems.

Student Illness and Other Emergencies

Advise students to not attend class if they have an illness such as influenza or a fever. Training centers should provide reasonable accommodation to students to make up class time or skill sessions. If a student has a medical emergency, instructors should provide the appropriate first aid care and activation of EMS.

Equipment and Materials List

Some equipment and materials are required for teaching, while other materials are optional (like the Written Exam). Some materials and equipment are recommended but not required. Use the lists below to prepare the right materials and equipment for the training you are delivering. The maximum student-to-manikin/AED trainer ratio for CPR skills practice is 3:1. When using a video guided practice for CPR skills, the required student-to-manikin ratio is 1:1.

Core Content

Required

- Television with DVD player, or computer with speakers, large monitor, or projection screen
- CPR training manikins for the age groups (adult, child, infant) being covered, 1 for each group of 2 to 3 students
- AED training devices and pads, 1 for each manikin
- Manikin decontamination supplies (ex: manikin cleaning wipes, 70% ethyl alcohol)
- CPR overlay shields, 1 for each student, or adult CPR masks, 1 for each group of 2 to 3 students, with 1 separate one-way valve for each student
- Nonlatex disposable gloves, 1 pair for each student
- CPR and AED Instructor Guide (print or digital), 1 for each instructor
- CPR and AED Student Books, 1 for each student (print or digital)
- CPR and AED program video, DVD or Otis-powered desktop, mobile application or CPR and AED slide presentation, 1 for each class
- CPR and AED certification cards, 1 for each student who fulfills the requirements (print or digital)
- Class roster, 1 for each class (print or digital)

May Be Required (Regulatory Agency/Challenge)

- Written exams A and B, 1 version for each student (print)
- Written exams answer sheets, 1 for each student (print)
- Written exams answer keys, A and B, 1 for each instructor/assistant (print)
- Performance evaluations for the ages groups being covered, 1 set for each student (print or digital)
  – Caring for Cardiac Arrest

Recommended

- Scenario Sheets for the age groups being covered, 1 set for each group of 2 to 3 students (print or digital)
  – Caring for Cardiac Arrest

- Metronome/audio prompting device
- Pens and pencils, 1 for each student when Written Exam is administered
- Blankets or mats
- Name tags or tent cards, 1 for each student
- Spare projector bulb (as needed)
- Extension cord (as needed)
- Whiteboard with dry erase pens and eraser, if available
- Large black markers for student name tags or tent cards
- Large envelope for class paperwork, including Written Exam answer sheets when required

Supplemental Content

If you choose to teach supplemental topics in addition to core content, additional materials may be required. Details of what equipment is required for each topic are described at the top of each topic page.

Dependent on topic
- LOOP Learning System
- Naloxone delivery device

Conducting a Class

1. Arrive early. Give yourself plenty of time to get organized.
2. Circulate a sign-in sheet or the Class Roster. Be sure all students sign-in.

During Class

1. Start on time. Briefly cover class expectations: class goal, certification requirements, classroom safety, facilities, mobile phone use, and breaks.
2. Stay on track. Keep lessons within their time limits. End discussions when they are not productive or lead off class.
3. At the beginning of each lesson, briefly communicate the knowledge and skill objectives, and explain why this topic matters.
4. Show the video or slide presentation (where required) and emphasize the key points as needed. Ask for and briefly answer any questions.
5. Facilitate student practices. Answer questions and offer constructive guidance and positive feedback as appropriate.
6. Upon class completion, issue CPR and AED certification cards to those individuals who earned them.
7. Offer and collect students' Rate Your Program evaluations.

After Class

Complete and sign the Class Roster. If used, complete and sign performance evaluations.

Administration

Skill Evaluation

The instructor must evaluate each student for skill competency — the ability of the individual to do the skill adequately. Each student must be able to demonstrate the skills in the proper sequence according to the skill criteria as it appears in a skill guide, Scenario Sheet, performance evaluation sheet, or program standard.

Skill Remediation

As time permits, the remediation, or the correction of inadequate skill performance, should be offered to students who are experiencing skill difficulties.

Generally, address student skill problems throughout the class using the gentle correction of skills and positive coaching. If possible, assist students privately during breaks, lunch, or at the end of the class.

Be polite, considerate, encouraging and professional when remediating skills.

If the student is unable or unwilling to perform skills, you can issue the student a Recognition of Participation document, especially in cases where knowledge or experience is a greater goal than certification for the student.

If a student needs certification and requires more remediation than can be provided during a class, recommend the student attend another training class.

Written Exam

A Written Exam is not required for certification unless required by a regulatory agency or if a student is seeking certification using the Challenge option.

Evaluation of the core knowledge objectives in CPR and AED is normally accomplished by informal observation and questioning throughout a training class.

When a Written Exam is required, adequate time must be added to the class to complete the exam. Two versions of the Written Exam, along with instructions for their use are included online in Otis. An exam answer sheet is also available to help minimize the amount of paper used. Exam answer keys are provided for both exam versions to aid in exam correction.

Each student must obtain a passing score of 75% or better. If a student does not pass the first Written Exam, he or she must take the alternative version. If a student does not pass the alternative version, he or she must retake the class.

ASHI is implementing open-book exams with the G2015 training programs. Open-book exams emphasize critical thinking and problem solving over recall of memorized facts and decrease test anxiety. Open-book exams mean that students may use reference materials to take exams when they are required. Reference materials include any notes taken during the class as well as the print or digital ASHI Student Book.

Although students may use reference materials while taking the exam, they 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 prevent cheating if students take the Written Exam.

1. Before distributing the exams, remind students those who are caught cheating will not receive certification cards.
2. Request a photo ID if you suspect someone may be taking the test in place of a student. Taking an exam for someone else constitutes cheating.
3. Inform students there is to be no talking during the exam. If a student has a question during the exam, ask that student to raise a hand and you will go to him or her.
4. For extra precaution, use both versions of the exam, alternating them between students to make copying from another student more difficult.
5. Walk around the room throughout the exam. Do not do other work while monitoring the exam.

Criteria for Certification

When the instructor determines a student has demonstrated adequate knowledge and skill competency, the instructor may issue a certification card (print or digital).

Certification means verification that on the indicated class completion date the student demonstrated achievement of the required knowledge and hands-on skill objectives to the satisfaction of a currently authorized ASHI instructor or instructor trainer.

Certification does not guarantee future performance, or imply licensure or credentialing. Certification is documented by the legitimate issuance of a correctly completed ASHI certification card.

Class Documentation

All of the class documentation forms used in the ASHI CPR and AED training program are available for download in the documents section of Otis. A complete list of those forms can be found in the Appendix of this Instructor Guide.

There may be periodic revisions or updates to the class documentation forms. Refer to Otis for the most current version.

Class Roster

The Class Roster is the principal record of training. The roster verifies student completion of the class. It also documents the results of the Written Exam and remediation, if used during training. A complete, accurate, and legible Class Roster signed by the authorized instructor or submitted online through Otis is required for every training class. The Class Roster must be promptly delivered to the training center responsible for the class or submitted online through Otis. The training center is required to keep clear, legible and orderly class records (paper or digital) for no less than 3 years.

Performance Evaluation Sheet

Instructors can use performance evaluation sheets for a more formal approach to evaluating required skills. Performance evaluation is a scenario-based assessment process that provides sound, fair, consistent, uniform, objective, and reliable documentation of a student's competency according to the skill criteria.

A student's performance evaluation sheet signed by the instructor should be considered important potential evidence demonstrating instructor evaluation of each student's skill competency. Although a secondary record of training, a performance evaluation sheet may be required by state regulation or organizational policy.

When used, signed performance evaluation sheets must be promptly delivered to the training center responsible for the class.

Rate Your Program Course Evaluation

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 any ASHI class using the Rate Your Program course evaluation form.

When used, course evaluations must be promptly delivered to the training center responsible for the class.

Additionally, class participants may provide Rate Your Program feedback directly to HSI http://www.hsi.com/rateyourprogram. All information obtained by HSI through this process is reviewed and shared with the training center, instructor, or instructor trainer as appropriate.

PART 3:
INITIAL TRAINING, CLASSROOM

PREVIEW

Initial Class Outline and Time Frame

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
Introduction		*Describe the purpose of the program, health and safety precautions, and conduct a warm up exercise.*		5

CARDIAC ARREST

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
1	Cardiac Arrest	Explain the main components and function of the respiratory and circulatory system. Describe how to suspect and provide first aid treatment for sudden cardiac arrest. Name and explain the links in the chain of survival. Describe how to suspect and provide first aid treatment for secondary cardiac arrest. Describe how to recognize and provide first aid treatment for opioid overdose.		Adult-only 11 All Ages 14

PREPARING TO HELP

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
2	CPR and AED Provider	Describe the role of the CPR and AED provider. Describe how to recognize an emergency. Explain why it's important to protect yourself and the priority of personal safety. Describe reasons to decide to help.		6
3	Protecting Yourself	Explain the importance of standard precautions and using protective barriers.	(Optional: Correctly demonstrate the removal of contaminated gloves.)	5
4	Legal Considerations	Describe the purpose and basic definition of Good Samaritan laws.		5
5	Calling for Help	Identify how to activate emergency medical services (EMS).		5

CPR AND AED

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
6	*Supplemental Topic* CPR Feedback Devices	Explain what a CPR feedback device is and how to use the LOOP Learning System		4
7	Chest Compressions	Describe how to perform high-quality chest compressions.	Correctly demonstrate high-quality chest compressions (for each age group covered).	Adult-only 12 All Ages 30
8	Rescue Breaths	Describe how to perform high-quality rescue breaths using a CPR mask or shield.	Correctly demonstrate high-quality rescue breaths using a CPR mask or shield (for each age group covered).	Adult-only 14 All Ages 32
9	Automated External Defibrillation	Explain the steps to use an AED.	(*Optional:* Correctly demonstrate how to use an AED, for each age group covered.)	Adult-only 6 All Ages 8
10	Primary Assessment — Unresponsive Person	Describe the steps of a primary assessment for an unresponsive person. Describe how to place an unresponsive, breathing person into a side-lying recovery position.		Adult-only 5 All Ages 9
11	Caring for Cardiac Arrest	Describe the steps for performing high-quality CPR and using an AED as a single provider.	Correctly demonstrate how to conduct a primary assessment, perform high-quality CPR, and use an AED as a single provider (for each age group covered).	Adult-only 26 All Ages 50
12	Multiple Provider Approach to CPR	Describe the techniques for performing CPR and using an AED with multiple providers	(*Optional:* Correctly demonstrate how to perform CPR and use an AED with multiple providers.)	3

Supplemental Topics are highlighted with a gray background.

Lesson	Lesson Title	Knowledge Objectives	Skill Objectives	Approximate Length (min)
CPR AND AED *(CONTINUED)*				
13	*Supplemental Topic* High-Performance CPR	Describe how to perform high-quality CPR and early defibrillation with an AED in a team.	Correctly demonstrate high-quality CPR and early defibrillation as a part of a team.	30–60
14	*Supplemental Topic* Administration of Naloxone with Prefilled Syringe	Explain how to administer naloxone intranasally using a prefilled syringe and mucosal atomizer device.	Correctly demonstrate the administration of naloxone using a prefilled syringe and mucosal atomizer device.	10
15	*Supplemental Topic* Administration of Naloxone with Narcan Nasal Spray	Explain how to administer naloxone intranasally using Narcan Nasal Spray.	Correctly demonstrate the administration of naloxone using Narcan Nasal Spray.	10
16	*Supplemental Topic* Administration of Naloxone with Evzio Auto-Injector	Explain how to administer naloxone intramuscularly using the Evzio auto-injector.	Correctly demonstrate the administration of naloxone using the Evzio auto-injector.	10
17	Choking	Describe how to recognize and provide first aid treatment for choking.	Correctly demonstrate first aid treatment for a choking infant (if age group is covered).	Adult-only 6 All Ages 17
ADDITIONAL CONSIDERATIONS				
18	*Supplemental Topic* Emotional Considerations	Identify emotional issues that may affect a CPR and AED provider and strategies to manage them.		3
EVALUATION				
Skill and Performance Evaluation		*Skill evaluation, required. Performance evaluation, optional, unless required.[a]*		0–60
Written Exam		*Optional, unless required.[b]*		20–40
CONCLUSION				
Documentation and Certification		*Verify class documentation and issue certification cards to students who earned them.*		5+
			Total Breaks[c]	5–15
			Total Time[d]	Adult-only 115 All Ages 205

[a] At a minimum, skill competency is visually evaluated by instructors during the required student practices for the class. A performance evaluation can be used to provide a more formal approach to skill evaluation. When a performance evaluation is not required by a regulatory agency, it is optional.

[b] When a Written Exam is not required by a regulatory agency, it is optional. The optional exam may be used before, during or after class as an active learning tool; however, the participant's score on an optional exam may not be used to withhold a properly earned certification card. See Written Exam on page 10.

[c] Adult education guidelines recommend a break for at least 5 minutes each hour. Class timing can vary widely depending on the age groups covered. Because of this, no specific breaks have been designated in this class outline. Class size, class location, instructor-to-student ratios, and other factors will affect the actual schedule. Breaks periods should be provided, but may be rearranged or combined as required or desired.

[d] Projected times for lessons take into account video run times, brief introductions and answers to questions, demonstrations, and student practices with up to 3 students. Stated class times are indicated as Adult-only or for All ages. If only one time is indicated, there is no difference based on age group covered. Stated class times are based on covering core lessons only, the minimum content required for certification. Lesson times are influenced by class preparation, available equipment, and instructor efficiency. These could increase the time needed to meet the core learning objectives.

Introduction

Class Type: Initial
Class Method: Classroom
Length: 5 minutes

> **Combo Class Alert:**
> When conducting a combination CPR, AED, and first aid class, use the Introduction lesson from the Basic First Aid Instructor Guide instead of this one.

Why This Topic Matters

The class introduction is important, whether the students and instructor know each other or are meeting for the first time. The introduction helps everyone to relax, and to feel less inhibited and comfortable. The introduction sets the tone for the entire class.

Equipment

- Sign-in sheet or Class Roster, name tags or tent cards (optional), large black markers (optional)

Instructor Activities

1 **Greet Students**

- Arrive early. Give yourself plenty of time to get set up and organized
  - ✓ Greet students as they arrive and introduce yourself. Have them sign in on the roster.
  - ✓ Be friendly, considerate, respectful, and professional.
  - ✓ Have students complete a name tag or tent card and select a seat.

2 **Begin Class**

- Start on time.
  - ✓ Consider using an appropriate icebreaker as a warm-up exercise. FYI: Great ideas for these activities can be found on the internet by searching with the key word *icebreaker*.
  - ✓ Establish a connection with the students. Ask about previous training. Connect the students' experiences and knowledge to this class.
- Briefly cover class goal, agenda, certification requirements, facility and classroom safety.
  - ✓ Class goal: Develop the knowledge, skills, and confidence to respond in a medical emergency.
  - ✓ Describe the agenda, including breaks.
  - ✓ Outline the minimum requirements for certification. Correctly demonstrate the following required skills for the age groups (adult, child, infant) being covered.
    1. High-quality chest compressions
    2. High-quality rescue breaths using a CPR mask or shield
    3. Primary assessment for an unresponsive person, high-quality CPR, and use of an AED as a single provider
    4. Choking care for an infant (if covering infant age group)
  - ✓ Review facility safety features. Know and share the locations of the following:
    1. Bathrooms, fire/emergency exits, fire alarm pull stations, best emergency evacuation route
    2. First aid kits, emergency oxygen, and AEDs
  - ✓ Distribute the ASHI CPR and AED Student Book.

3 **Wrap It Up**

- Ask for and answer any questions before moving on to the next lesson.

Cardiac Arrest

Class Type: Initial

Class Method: Classroom

Length: 11 minutes, Adult-only; 14 minutes, All Ages

Why This Topic Matters

Cardiac arrest is a life-threatening condition in which the heart stops moving blood. Without immediate recognition and help from a bystander, survival is unlikely.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

• The main components and function of the respiratory and circulatory systems

• How to suspect and provide first aid treatment for sudden cardiac arrest

• The links in the cardiac arrest chain of survival

• How to suspect and provide first aid treatment for secondary cardiac arrest

• How to recognize and provide first aid treatment for opioid overdose

Equipment

• Television with DVD player or computer/tablet with speakers, large monitor, or projection screen. (Will be used throughout class.)

Instructor Activities

1 Present Knowledge Content — Video (8:08) or Slides

• Emphasize key points as needed.

  ✓ Oxygen and the Human Body

  – The body does not store oxygen so it must continuously supply it through the combined actions of the respiratory and circulatory systems. If this process is interrupted, brain cell death will occur within minutes.

  ✓ Sudden Cardiac Arrest

  – Sudden cardiac arrest occurs when the electrical system of the heart malfunctions and results in ventricular fibrillation. Forward movement of blood stops. An affected person abruptly becomes unresponsive and stops breathing.

  ✓ Cardiopulmonary Resuscitation (CPR)

  – CPR — a combination of chest compressions and rescue breaths — can restore limited blood flow and oxygen to the brain, but it does not address the underlying problem with the heart.

  ✓ Early Defibrillation

  – Defibrillation is the most effective way to end ventricular fibrillation and restore a normal heartbeat. The quicker defibrillation can occur, the greater the chance for survival. An AED allows a bystander to defibrillate much sooner than EMS.

  ✓ Chain of Survival

  – The chain of survival describes the most effective approach to manage a sudden cardiac arrest. All links in the chain must be strong in order for a person to survive.

- ✓ Secondary Cardiac Arrest
  - – Secondary cardiac arrest occurs as the end result of a loss of an airway or breathing. Without oxygen, the heart gets progressively weaker until it stops. CPR, with an emphasis on effective rescue breaths, may be the only chance to help.
- ✓ Opioid Overdose
  - – The abuse of opioid is a serious health problem. Opioids can depress and stop breathing, resulting in secondary cardiac arrest. Naloxone is a medication that can quickly reverse opioid effects and is being made more available to those likely to be in contact with someone who may have an opioid overdose.
- ✓ Children and Infants
  - – When describing ages in relation to CPR:
  - – An infant is younger than 1 year of age
  - – A child is 1 year of age until the onset of puberty
  - – An adult is from the onset of puberty and older
  - – Children are more likely to experience a secondary cardiac arrest instead of a sudden one. An emphasis on delivering high-quality rescue breaths during CPR is important.
- Ask for and briefly answer any questions.
- Refer students to pages 1–4 of the Student Book.
- Use the Knowledge Check activity to evaluate and increase retention.

Instructor Note:

Related supplemental lessons on the administration of naloxone are included in the curriculum immediately after Caring for Cardiac Arrest.

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2 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

Knowledge Check

The chain of survival is often used to describe the best approach for treating sudden cardiac arrest. The first three links of the chain are typically the responsibility of a trained CPR provider. Describe those links.

1. *Early recognition of cardiac arrest and activation of EMS*
2. *Immediate CPR with high-quality chest compressions*
3. *Rapid defibrillation, or electrical shock, to the heart with an AED*

NEXT CORE LESSON:
CPR and AED Provider

CARDIAC ARREST

Cardiac Arrest

Because the human body cannot store oxygen, it must continually supply tissues and cells with oxygen through the combined actions of the respiratory and circulatory systems.

Oxygen and the Human Body

The respiratory system includes the lungs and the airway, the passage from the mouth and nose to the lungs. Expansion of the chest during breathing causes suction, which pulls outside air containing oxygen through the airway and into the lungs. Relaxation of the chest increases the pressure within and forces used air to be exhaled from the lungs.

The circulatory system includes the heart and a body-wide network of blood vessels. Electrical impulses stimulate contractions of the heart to create pressure that pushes blood throughout the body. Blood vessels in the lungs absorb oxygen from inhaled air. The oxygen-rich blood goes to the heart, then out to the rest of the body.

Large vessels called arteries carry oxygenated blood away from the heart. Arteries branch down into very small vessels that allow oxygen to be absorbed directly into body cells so it can be used for energy production. Veins return oxygen-poor blood back to the heart and lungs, where the cycle repeats.

The brain is especially sensitive to a lack of oxygen. When oxygen is cut off, brain cell damage and death can occur within a matter of minutes.
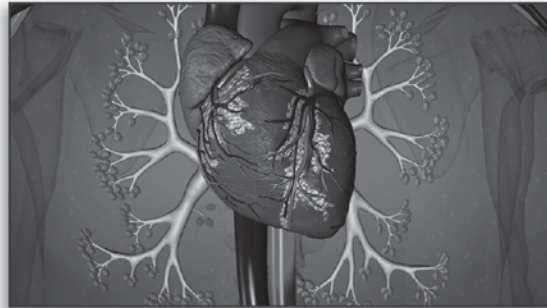
Sudden Cardiac Arrest (SCA)

Cardiac arrest is the loss of the heart's ability to pump blood to the body. The most dramatic occurrence, sudden cardiac arrest, can happen with little or no warning. Victims abruptly become unresponsive and collapse. Abnormal gasping can occur. Breathing may stop completely.

The most likely cause of sudden cardiac arrest is an unexpected disruption to the heart's electrical system, in which normally organized electrical pulses within the heart become disorganized and a chaotic quivering condition known as ventricular fibrillation occurs. Blood flow to the body, along with the oxygen it carries, stops. Without blood flow, brain damage occurs rapidly and quickly leads to death.

Cardiopulmonary Resuscitation (CPR)

Cardiopulmonary resuscitation (CPR) is the immediate treatment for a suspected cardiac arrest. CPR allows a bystander to restore limited oxygen to the brain through a combination of chest compressions and rescue breaths. However, CPR alone is not enough.

Early Defibrillation

The most effective way to end fibrillation is defibrillation, using a defibrillator and electrode pads applied to the chest. A controlled electrical shock is sent through the heart to stop ventricular fibrillation, allowing the heart's normal electrical activity to return and restore blood flow.

Successful defibrillation is highly dependent on how quickly defibrillation occurs. For each minute in cardiac arrest, the chance of survival goes down by about 10%. After as few as 10 minutes, survival is unlikely.

Simply activating EMS will not help. Even in the best EMS systems, the amount of time it takes from recognition of the arrest to EMS arriving at the side of the injured or ill person is usually longer than 10 minutes.

An automated external defibrillator (AED) is a small, portable, computerized device that is simple for anyone to operate. Bystander use of AEDs has been growing steadily, with common placements of the devices in public locations such as airports and hotels, and workplaces in general.

Turning on an AED is as simple as opening a lid or pushing a power button. Once it is on, an AED provides voice instructions to guide you through its attachment and use.

An AED automatically analyzes the heart rhythm, determines if a shock is needed, and charges itself to be ready to defibrillate. An operator simply pushes a button to deliver the shock when prompted by the AED.

Chain of Survival

Sudden cardiac arrest can strike at any age, but primarily affects adults. The chain of survival is often used to describe the best approach for treating sudden cardiac arrest. Each link in the chain is essential for a person to survive. If a single link is weak or missing, the chances for survival are greatly reduced. The greatest chance for survival exists when all the links are strong:

- Early recognition of cardiac arrest and activation of EMS
- Immediate CPR with high-quality chest compressions
- Rapid defibrillation, or electrical shock, to the heart
- Effective basic and advanced EMS care and transport
- Effective post-cardiac arrest care at a hospital

Secondary Cardiac Arrest

Unlike sudden cardiac arrest, in which the heart is the primary problem, cardiac arrest can also be the end result of the loss of an airway or breathing. This is secondary cardiac arrest.

Problems such as hazardous breathing conditions in a confined space, drowning, and drug overdoses can result in secondary cardiac arrest. With no incoming oxygen, the heart progressively becomes weaker until signs of life become difficult or impossible to assess.

If the heart is simply too weak to create obvious signs of life, immediate CPR, with an emphasis on effective rescue breaths, may be the only chance to restore them.

Opioid Overdose

The abuse of opioid drugs to get a euphoric high is a serious and growing health problem. Increasing prescriptions for opioid pain relievers, such as hydrocodone and oxycodone, have made them more commonly available. The use of heroin, a highly addictive opioid, also contributes to the problem.
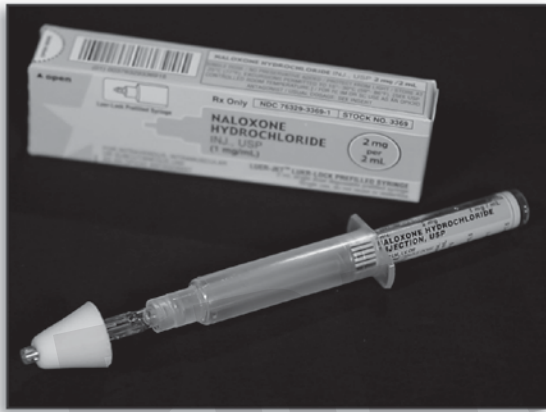
As a result, the number of overdoses and deaths from prescription opioids and heroin has increased dramatically. Opioids, taken in excess, can depress and stop breathing. Opioid overdose is a clear cause of secondary cardiac arrest.

Naloxone, also known as Narcan, is a medication that can temporarily reverse the life-threatening effects of opioids. It is easy to administer, either through an auto-injector device or through an aerosol that is sprayed into the nose. Naloxone is becoming more readily available to lay providers.

It is reasonable to provide education and training on responding to suspected opioid overdoses, including the administration of naloxone, to those most likely to be involved with this type of emergency. Laws regarding first aid administration of naloxone vary by city and state. As with Good Samaritan laws, know the laws in your area.

Children and Infants

Children are more likely to experience secondary cardiac arrest instead of a primary one. This is an important consideration in how you approach a child or infant you think may have arrested.

When describing age groups in relation to CPR, an infant is younger than 1 year of age. A child is 1 year of age until the onset of puberty. Puberty can be estimated by breast development in females and the presence of armpit hair in males. An adult is from the onset of puberty and older.

The chain of survival for children and infants includes the following links:

- Prevention of airway and breathing emergencies
- Early CPR, with an emphasis on effective rescue breaths, and, if needed, defibrillation with an AED
- Prompt activation of EMS
- Effective basic and advanced EMS care and transport
- Effective post-cardiac arrest care at a hospital

Knowledge Check

The chain of survival is often used to describe the best approach for treating sudden cardiac arrest. The first three links of the chain are typically the responsibility of a trained CPR provider. Describe those links.

Heart Disease

Heart disease, resulting in heart attacks and strokes, is the leading cause of death in the U.S., attributing to about 1 in every four deaths. This affects women and men almost evenly. A healthy lifestyle can lower the risk of heart disease:

- Eat a healthy diet
- Maintain a healthy weight
- Get enough physical activity
- Don't smoke or use other forms of tobacco
- Limit alcohol use

- Manage your medical conditions:
  - Check your cholesterol
  - Control high blood pressure
  - Monitor your diabetes

Heart Attack

Someone experiencing a heart attack typically has pain, pressure, or discomfort in the chest. Women often do not experience pain, but may describe indigestion, weakness, or fatigue. Shortness of breath, nausea, and lightheadedness can also occur. Pain in the arms or back may be present. The skin may become pale, cool, and sweaty.

A person who has had previous heart problems is at risk for reoccurrence.

Do not try to transport someone you suspect may be having a heart attack to a hospital. Activate EMS immediately. While waiting for EMS, follow these guidelines:

- If an AED is available, have someone get it so that it's nearby.
- Allow the person to find the most comfortable position in which to breathe.
- Loosen tight clothing.
- Calm, comfort, and reassure the person.
- A person who is having a heart attack may deny it. This is a common occurrence. Accept it, but never let it alter your approach to care.
- Encourage the person to chew and swallow 1 adult (325 mg), or 2 to 4 low-dose (81 mg) "baby" aspirin.
- Do not encourage aspirin use if the person has an allergy to aspirin, evidence of a stroke, a recent bleeding problem, the pain does not appear to be related to the heart, or if you are uncertain or uncomfortable with giving the aspirin.
- Someone with a heart condition may carry a prescribed medication known as nitroglycerin. If so, assist the person in taking it.
- Be prepared for the possibility of sudden cardiac arrest, and the need for CPR and the use of an AED.

Stroke

A stroke, or brain attack, occurs when the blood supply to a portion of the brain is suddenly interrupted by a blocked or damaged blood vessel.

Signs of a stroke can vary and tend to show up quickly:

- Numbness or weakness on one side of the body
- Confusion
- Difficulty in speech

- Changes in sight and balance
- A severe, sudden headache

Medications are available at hospitals that can limit the severity of a stroke. The earlier they are given the better. Early bystander recognition, along with rapid transport to a hospital, is critical for limiting damage, or even for survival.

A simple stroke assessment, such as FAST, helps decrease the time it takes to get a person treated in a hospital.

- Face droop: Ask person to smile. Look to see if smile is uneven.
- Arm drift: Ask person to raise both arms. Look to see if one drifts back down.
- Speech difficulty: Ask person to speak a simple sentence. Listen for slurring or difficulty.
- Time to activate EMS: If person has trouble with any of these, activate EMS immediately.

Do not give anything to eat or drink. Be prepared for the possibility of sudden cardiac arrest, and the need for CPR and the use of an AED. Stay close. Calm, comfort, and reassure the person until EMS personnel take over.

Protecting Yourself

When caring for someone, you can be exposed to blood or other potentially infectious body fluids. While the risk of contracting a disease is very low, it is wise to take simple measures to avoid exposure in the first place.

Infectious Bloodborne Diseases

Infectious bloodborne diseases and pathogens include hepatitis B, hepatitis C, and HIV, the virus that causes AIDS.

Exposure can occur through the direct contact of infectious material with an open wound or sore, or by absorption through the membranes of the mouth, nose, and eyes. Exposure can also occur through a skin puncture with a contaminated, sharp object. Immediately report any exposure to your supervisor. Follow your company's written exposure control plan for additional care and advice.

Standard Precautions

Reducing exposure lowers the chance of infection. Standard precautions is a set of protective practices used whether or not an infection is suspected. To be effective, your approach is the same for everyone, regardless of relationship or age.

OSHA Bloodborne Pathogens Standard

In 1991, the Occupational Safety and Health Administration (OSHA) released the Bloodborne Pathogens Standard to protect workers from the risk of exposure to bloodborne infectious diseases. The standard applies to anyone who has occupational exposure to blood or other potentially infectious materials and provides information on how to reduce the risk of exposure in the workplace.

Employees should review their company's exposure control plan for site-specific information on how to reduce exposure. More information can be found at www.osha.gov and www.cdc.gov.

Personal Protective Equipment

Personal protective equipment (PPE) describes protective barriers worn to prevent exposure to infectious diseases.

Disposable gloves are the most commonly used protective barrier. Make sure they are readily available, and always use them.

Inspect gloves for damage or tears when you put them on. If damaged, replace them immediately.

After providing care, always remove contaminated gloves carefully.

Even after using gloves, use soap and water to clean your hands and any exposed skin. Use an alcohol-based hand sanitizer if soap and water are not available.

When performing rescue breaths, use a CPR mask or overlay shield with a one-way valve as a barrier to prevent skin-to-skin contact.

Latex Allergy

Natural rubber latex allergy is a serious medical problem. Anyone who uses latex gloves frequently is at risk for developing it. Simple measures such as the use of nonpowdered latex gloves or nonlatex alternatives can stop the development of latex allergy and new cases of sensitization.[1]

Knowledge Check

True or false? You are caring for a coworker who has collapsed and is not breathing. Since she is a close friend it is not important to use personal protective equipment when doing CPR to protect yourself from possible exposure to an infectious disease.

Removing Contaminated Gloves

Grasp First Glove

- After providing care, always remove contaminated gloves carefully.
- Avoiding bare skin, pinch the glove at either palm with the gloved fingers of the opposite hand.

Remove Inside Out

- Gently pull the glove away from the palm and toward the fingers, turning the glove inside out without snapping.
- Gather the glove you just removed with your gloved hand.

Slide Finger under Second Glove

- Carefully slide your bare index finger inside the wrist band of the gloved hand.

Remove Inside Out

- Gently pull outwards and down, inverting the glove and trapping the first glove inside.
- Throw away gloves in an appropriate container to prevent any further contact.
- Use soap and water to clean your hands and any exposed skin. Use an alcohol-based hand sanitizer if soap and water are not available.

Legal Considerations

Class Type: Initial

Class Method: Classroom

Length: 5 minutes

Combo Class Alert:

When conducting a combination CPR, AED, and first aid class, use the entire Preparing to Help segment from the Basic First Aid Instructor Guide instead of this one.

Why This Topic Matters

Understanding your legal protections as a CPR and AED provider can help you be more confident in your decision to get involved in a medical emergency.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

• The purpose and basic definition of Good Samaritan laws

Instructor Activities

1 **Present Knowledge Content — Video (1:30) or Slides**

• Emphasize key points as needed.

  ✓ Implied Consent

   – When a person is unresponsive, consent is implied.

  ✓ Abandonment

   – Once you start, remain with the person until you can transfer care.

  ✓ Good Samaritan Laws

   – Good Samaritan laws help protect you legally in your role as a CPR and AED provider.

   – Laws vary from state to state so be familiar with the laws where you live and work.

• Ask for and briefly answer any questions.

• Refer students to pages 10–11 of the Student Book.

• Use the Knowledge Check activity to evaluate and increase retention.

Instructor Note:

Instructors should provide students a copy of the current Good Samaritan laws for their state whenever possible.

2 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

Knowledge Check

You return from your lunchbreak to your work area and discover a coworker who appears to have collapsed and does not respond to your voice or touch. You immediately begin to help. What legal concept related to emergency care applies in this situation?

Implied consent, which assumes your coworker would agree to be helped given the circumstances, applies in this situation.

NEXT CORE LESSON:
Calling for Help

PREVIEW

Legal Considerations

There are some basic legal considerations to be aware of as a CPR provider.

Implied Consent

When a person is unresponsive, the legal concept of implied consent assumes a person would agree to be helped given the circumstances.

Abandonment

Once care has begun, remain with the person until someone with equal or greater emergency medical training takes over. If you are alone, and unable to use a mobile phone, you may need to leave to get help. Return to the person as soon as you can.

Good Samaritan Laws

Some people fear being sued as a result of incorrectly performing care in an emergency. In almost every case, this fear is unwarranted.

All states have passed what are known as Good Samaritan laws to help encourage bystanders to assist those in need.

These laws help protect anyone who

- voluntarily provides assistance, without expecting or accepting compensation;
- is reasonable and prudent;
- does not provide care beyond the training received; and
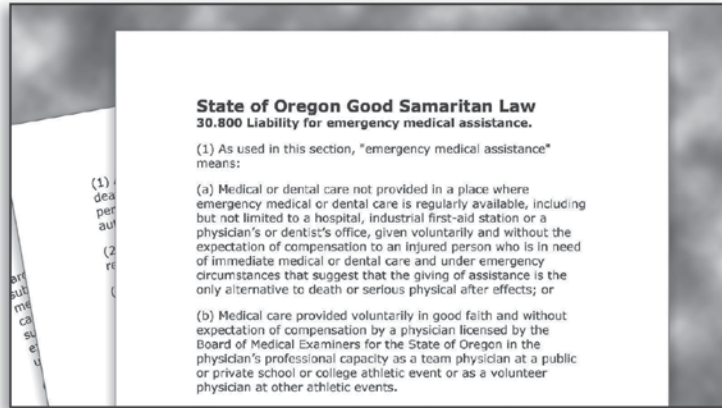- is not grossly negligent, or completely careless, in delivering emergency care.

Good Samaritan laws vary from state to state. Become familiar with the laws in your state and other states where you work or travel.

Regardless of location, it is always appropriate to use common sense:

- Activate EMS or an occupational emergency action plan (EAP) immediately.

- If the scene is unsafe, do not enter!

- Ask a responsive person for permission before giving care.

- Never attempt skills that exceed your training.

- And, once you have started, don't stop until someone with equal or greater training relieves you.

State of Oregon Good Samaritan Law
30.800 Liability for emergency medical assistance.

(1) As used in this section, "emergency medical assistance" means:

(a) Medical or dental care not provided in a place where emergency medical or dental care is regularly available, including but not limited to a hospital, industrial first-aid station or a physician's or dentist's office, given voluntarily and without the expectation of compensation to an injured person who is in need of immediate medical or dental care and under emergency circumstances that suggest that the giving of assistance is the only alternative to death or serious physical after effects; or

(b) Medical care provided voluntarily in good faith and without expectation of compensation by a physician licensed by the Board of Medical Examiners for the State of Oregon in the physician's professional capacity as a team physician at a public or private school or college athletic event or as a volunteer physician at other athletic events.

Other Legal Considerations

Duty to Act — A predetermined requirement to provide care, typically by job description (such as firefighter, police officer, or lifeguard) or by relationship (such as parent or guardian). In general, a trained person is encouraged, but not required by duty, to act.

Negligence — Occurs when someone is caused further harm due to care that did not meet the expected standard of someone with a duty to act.

Assault and Battery — Placing a person in fear of bodily harm. Forcing care on a person against his or her wishes may be considered grounds for this.

Knowledge Check

You return from your lunchbreak to your work area and discover a coworker who appears to have collapsed and does not respond to your voice or touch. You immediately begin to help. What legal concept related to providing first aid care applies in this situation?

Calling for Help

Class Type: Initial

Class Method: Classroom

Length: 5 minutes

Combo Class Alert:

When conducting a combination CPR, AED, and first aid class, use the entire Preparing to Help segment from the Basic First Aid Instructor Guide instead of this one.

Why This Topic Matters

Knowing how to activate and get advanced medical resources is fundamental to providing effective emergency care.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

• How to activate emergency medical services (EMS)

Instructor Activities

1 **Present Knowledge Content — Video (1:41) or Slides**

• Emphasize key points as needed.

   ✓ Emergency Medical Services

     – Emergency medical services (EMS) is an integrated network of resources that provide community-wide communication, response, treatment, and transportation for medical emergencies.

     – Activating EMS usually consists of calling a simple emergency number, such as 911, and talking to a trained dispatcher who will guide you through your call.

     – Mobile phones allow you to stay with an ill or injured person, and the speakerphone function allows you to listen to a dispatcher and provide care at the same time.

• Ask for and briefly answer any questions.

• Refer students to page 12 of the Student Book.

• Use the Knowledge Check activity to evaluate and increase retention.

2 **Wrap It Up**

• Ask for and answer any questions before moving on to the next lesson.

Knowledge Check

You enter a warehouse door to get to your work area and discover one of your coworkers lying motionless on the floor. He does not respond to your voice or touch. Should you activate EMS?5

Yes. EMS activation is appropriate when someone is found to be unresponsive.

NEXT CORE LESSON:

Chest Compressions

Calling for Help

An essential role of the CPR and AED provider is recognizing when additional help is needed and knowing how to get it.

Emergency Medical Services (EMS)

Emergency medical services (EMS) describes the prehospital emergency medical response system developed within a community. An EMS system uses specialized emergency communication equipment to gather information and dispatch appropriate emergency resources.

Trained EMS providers within the system respond directly to emergency scenes, provide advanced medical care, and transport ill or injured people to a hospital.

Activating the EMS system usually consists of calling an easy-to-remember emergency number, such as 911.

When you make a phone call to activate EMS, a trained dispatcher will guide you through the call. EMS dispatchers may be trained to guide you in the care you provide, especially with CPR.

The dispatcher will ask for basic information, such as the type of emergency, location, and what care is being provided. Answer questions as clearly and concisely as you can. Appropriate resources will be notified to respond while you are on the line.

The majority of emergency calls in the United States are now made on mobile phones. With a mobile phone, you can quickly activate EMS while staying in place next to the affected person. The speaker function of a phone allows you to listen to the dispatcher and provide care at the same time.

Knowledge Check

You enter a warehouse door to get to your work area and discover one of your coworkers lying motionless on the floor. He does not respond to your voice or touch. Should you activate EMS?

CPR Feedback Devices

Class Type: Initial

Class Method: Classroom

Length: 4 minutes

Why This Topic Matters

Using a CPR feedback device in training can help develop high-quality CPR skills by measuring performance and providing immediate feedback.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

- What a CPR feedback device is and how to use the LOOP Learning System

Instructor Activities

1 Present Knowledge Content — Video (1:53) or Slides

- Emphasize key points as needed.
  - ✓ CPR Feedback Devices
    - CPR feedback devices that provide real-time measurement of skill performance can help in the development of high-quality CPR skills.
    - The LOOP Learning System is a CPR feedback device for training. It has a controller that connects to a computer running the LOOP software. CPR compressions are done directly on the controller that has been placed on a manikin chest. Performance is displayed on the computer screen.
- Ask for and briefly answer any questions.
- Use the Knowledge Check activity to evaluate and increase knowledge retention.

> ***Instructor Note:***
>
> This lesson is recommended when you are integrating the LOOP Learning System into your class. It will quickly introduce students to the LOOP device and how to use it.
>
> If you do not have the LOOP Learning System, consider using a metronome as an auditory guide to set the required compression rate. Free or low-cost metronome apps are available for your mobile phone or tablet.

2 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

✔ Knowledge Check

How does a CPR feedback device help someone develop high-quality CPR skills during training?

CPR feedback devices can help improve high-quality CPR skill training by measuring performance, providing real-time feedback, and allowing for immediate adjustments in technique.

Chest Compressions

Class Type: Initial

Class Method: Classroom

Length: 12 minutes, Adult-only; 30 minutes, All Ages

Why This Topic Matters

Knowing how to perform high-quality chest compressions is necessary for CPR to be effective for cardiac arrest.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

• How to perform high-quality chest compressions for the age groups being covered

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

• High-quality chest compressions for the age groups being covered

Equipment

• Disposable gloves, CPR manikins for each age group covered, metronome/audio prompting device (optional), LOOP Learning System (optional)

Instructor Activities

1 Present Knowledge Content — Video (2:13 Adult; 1:33 Child/Infant) or Slides

• Emphasize key points as needed.
  - ✓ Chest Compressions
    – External compression of the chest increases pressure inside the chest and heart, forcing blood to move from the chest to the rest of the body.
    – Quality matters. The better you compress, the greater the influence on survival.
    – Compress deeply.
    – Compress fast.
    – Allow the chest wall to fully recoil between compressions.
    – **Children and Infants** — Chest compressions on children and infants are similar to adults except for hand positioning and the depth of the compressions.
• Ask for and briefly answer any questions.
• Refer students to pages 13–15 of the Student Book.
• Use the Knowledge Check activity to evaluate and increase retention.

2 Demonstrate Skills

• Dependent on the age groups being covered, provide WHOLE-PART-WHOLE demonstration of Skill Guide 2 — **Chest Compressions — Adults** and Skill Guide 3 — **Chest Compressions — Children and Infants.**
• Demonstrate whole skill with brief comments, demonstrate again step-by-step with comments, and demonstrate whole skill again without comment.

3 Student Practice

- Arrange students into pairs or small groups. Have one student act as a coach by reading the skill steps from the skill guide while another student performs chest compressions on a manikin.
- Have students rotate through the roles until all have played each role.
- Circulate through the groups looking for competent performance. Use positive coaching and gentle correction to improve student skills.
- Repeat practice for each age group covered.

> **Instructor Note:**
>
> Have students practice at least 2 sets of 30 chest compressions each during the practice for each age group being covered.
>
> Consider using a metronome as an auditory guide to set the required compression rate. Free or low-cost metronome apps are available for your mobile phone or tablet.

Optional — Integrating the LOOP Learning System

- When available, the LOOP Learning System can be integrated into the chest compression practice to help improve the quality of compression skills.
  - ✓ Instructors can simply have students use LOOP devices when going through the practice as described above and allow for the real-time feedback and correction of skills. Practice sessions are recorded for review.
  - ✓ An alternative is to use LOOP devices after the described practice to provide additional practice with feedback, correction, and review.

Optional — Video Guided Practice

- Instructors have the option to use Video Guided Practice: Chest Compressions instead of the student practice described above.
  - ✓ Arrange students so each has a manikin and a clear view of the video screen.
  - ✓ Explain to students that they will perform skills along with the video demonstration.
  - ✓ When everyone is ready, play the video.
  - ✓ Circulate through the students looking for competent performance. Use positive coaching and gentle correction to improve skills.
  - ✓ If you feel additional practice is needed, run the practice again.

4 Evaluation

- Confirm each student demonstrates the correct steps and decision-making tasks in the proper sequence as defined by the skill criteria in the skill guides for the age groups being covered.

5 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

Knowledge Check

What are the 3 measures of high-quality chest compressions for an adult?

4. *Compress deeply, more than 2 inches.*
5. *Compress fast, between 100 and 120 times per minute.*
6. *Get close but do not lean on chest, and allow the chest to fully recoil.*

NEXT CORE LESSON:
Rescue Breaths

Chest Compressions

External compression of the chest increases pressure inside the chest and directly compresses the heart, forcing blood to move from the chest to the lungs, brain, and the rest of the body.

Quality matters. The better you compress, the greater the influence on survival. Focus on high-quality techniques:

- Compress deeply, more than 2 inches. It is likely you will not compress deep enough. While injury could occur from deeper compressions, do not let the fear of this affect compression depth.
- Compress fast, between 100 and 120 times per minute. Do not let a higher compression speed result in shallower compression depth.
- Allow the chest wall to fully recoil, or rebound, between compressions. Avoid leaning on the chest at the top of each compression.

When compressing properly, you may hear and feel changes in the chest wall. This is normal. Forceful external chest compressions may cause chest injury, but are critical if the person is to survive. Reassess your hand positioning and continue compressions.

Children and Infants

The compression technique for children is similar to that of adults. You can use the heel of one hand on the lower half of the breastbone to compress the chest of a child. If this is difficult, or you are getting tired, use two hands to perform compressions.

Use the tips of two fingers on the breastbone, just below the nipple line, to compress the chest of an infant.

Knowledge Check
What are the 3 measures of high-quality chest compressions for an adult?

Chest Compressions — Adults

Position Your Hands

- Position person face up on a firm, flat surface. Kneel close to chest.
- Place heel of one hand on center of chest, on lower half of breastbone.
- Place heel of your other hand on top of and parallel to first. You can interlace your fingers to keep them off chest.

Position Your Body

- Bring your body up and over chest so your shoulders are directly above your hands. Straighten your arms and lock your elbows.

Compress

- Bending at the waist, use upper body weight to push straight down at least 2 inches.
- Lift hands and allow chest to fully return to its normal position. Move immediately into downstroke of next compression.
- Avoid leaning on chest at the top of each compression.
- Continue compressions at a rate of 100–120 times per minute.

Chest Compressions — Children and Infants

Child

Positioning

- Position child face up on a firm, flat surface. Kneel close to chest.
- Place heel of one hand on lower half of breastbone, just above point where ribs meet. Use both hands if needed.
- Bring your body up and over chest so your shoulders are directly above your hand. Straighten your arm and lock your elbow.

Compress

- Bending at waist, use upper body weight to push straight down $1/3$ depth of chest, or about 2 inches.
- Lift your hand and allow chest to return fully to its normal position. Move immediately into downstroke of next compression.
- Avoid leaning on chest at top of each compression.
- Continue compressions at a rate of 100–120 times per minute.

Infant

Positioning

- Position infant face up on a firm, flat surface.
- Place 2 fingertips on breastbone just below nipple line.

Compress

- Compress at least $1/3$ depth of chest, or about $1\frac{1}{2}$ inches.
- Lift fingers and allow chest to return fully to its normal position. Move immediately into downstroke of next compression.
- Continue compressions at a rate of 100–120 times per minute.

Primary Assessment — Unresponsive Person

Class Type: Initial

Class Method: Classroom

Length: 5 minutes, Adult-only; 9 minutes, All ages

Why This Topic Matters

The primary assessment helps a CPR and AED provider quickly identify immediate life-threatening problems.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

- The steps of a primary assessment for an unresponsive person
- How to place an unresponsive, breathing person into a side-lying recovery position

Instructor Activities

1 Present Knowledge Content — Video (2:49 Adult; 3:02 Child/Infant) or Slides

- Emphasize key points as needed.
  - ✓ Primary Assessment—Unresponsive Person
    - A primary assessment is a simple way to quickly identify if a life-threatening condition is present
    - The basic steps of a primary assessment are as follows:
      a. Check for responsiveness.
      b. If unresponsive, activate EMS and get an AED, if one is available.
      c. Assess for normal breathing.
    - Provide the care indicated by the assessment:
      a. If not breathing or only gasping, perform CPR beginning with compressions.
      b. If breathing normally and uninjured, place the person in a side-lying recovery position to protect the airway.
        i. Keep head, neck, and torso aligned during roll; end with face and torso angled forward. Use arms and legs to provide stability.
    - Weak, irregular gasping can occur early in cardiac arrest; this provides no usable oxygen and is not normal.
- Ask for and briefly answer any questions.
- Refer students to pages 25–28 of the Student Book.
- Use the Knowledge Check activity to evaluate and increase retention.

2 Demonstrate Skills

- Provide WHOLE-PART-WHOLE demonstration of Skill Guide 8 — Primary Assessment — Unresponsive Person.
- Demonstrate whole skill with brief comments, demonstrate again step-by-step with comments, and demonstrate whole skill again without comment.

> ***Instructor Note:***
>
> The student practice for Primary Assessment — Unresponsive Person is incorporated in Caring for Cardiac Arrest.
>
> Although there is not an associated skill practice, a skill sheet is provided to detail the steps of the Recovery Position.

3 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

✓ Knowledge Check

A fellow employee collapses near you during a staff meeting. As a trained provider you move to help. You kneel next to him, squeeze his shoulder, and loudly ask, "Are you all right?" He is unresponsive, so you direct other employees to activate EMS and get the company's AED. You look closely at the face and chest for breathing; he makes a brief gasping snort, but then remains still. What do you do next?

Perform CPR immediately, starting with compressions. Irregular gasping, snorting, or gurgling sounds do not provide oxygen and do not indicate normal breathing.

NEXT CORE LESSON:
Caring for Cardiac Arrest

Primary Assessment — Unresponsive Person

The primary assessment is a simple way to quickly identify if a life-threatening condition is present. It is the initial approach to anyone suspected of being ill or injured.

The steps of the primary assessment are always the same:

- If it is safe to provide care, check for responsiveness.
- If unresponsive, activate EMS and get an AED, if one is available.
- Check for normal breathing.

If you determine a person is unresponsive, send a bystander to activate EMS and get an AED. If you are alone, do this yourself and quickly return to the person.

When alone with an unresponsive child or infant, provide about 2 minutes of CPR before leaving to call for EMS and get an AED.

If you have a mobile phone, use it to activate EMS. The speaker function will allow you to follow instructions from an EMS dispatcher while providing care.

To check for normal breathing, quickly look at the face and chest. Take no longer than 10 seconds. Normal breathing is effortless, quiet, and regular. If you are unsure, assume breathing is not normal.

Weak, irregular gasping, snorting, or gurgling sounds can occur early in cardiac arrest. These actions provide no usable oxygen. This is not normal breathing.

If the person is not breathing, or only gasping, perform CPR, beginning with compressions.

When an unresponsive person is breathing normally, and uninjured, place him or her in a side-lying recovery position to help protect the airway.

Recovery Position

The recovery position helps protect the airway by using gravity to drain fluids from the mouth and keep the tongue from blocking the airway.

Frequently assess the breathing of anyone placed in the recovery position. The person's condition could quickly become worse and require additional care.

When a head, neck, or back injury is suspected, it is best to leave the person in the position found. However, if the airway is threatened, quickly roll the person as needed to clear and protect it. Keep the head, shoulders, and torso from twisting as best you can.

Always perform a primary assessment anytime you suspect someone is ill or has been injured to quickly determine the need for CPR.

Knowledge Check

A fellow employee collapses near you during a staff meeting. As a trained CPR provider, you move to help. You kneel next to him, squeeze his shoulder, and loudly ask, "Are you all right?" He is unresponsive, so you direct other employees to activate EMS and get the company's AED. You look closely at the face and chest for breathing; he makes a brief gasping snort, but then remains still. What do you do next?

Primary Assessment — Unresponsive Person

Assess Scene

- Pause and assess scene for safety.
- If unsafe, or if it becomes unsafe at any time, GET OUT!

Check for Response

- Tap or squeeze shoulder and ask loudly, "Are you all right?"
- If unresponsive, have someone activate EMS and get an AED.

Look for Normal Breathing

- Position person face-up on a firm, flat surface.
- Look at face and chest for normal breathing. Take no longer than 10 seconds. If unsure, assume breathing is not normal.
- Weak, irregular gasping, snorting, or gurgling is not normal breathing.
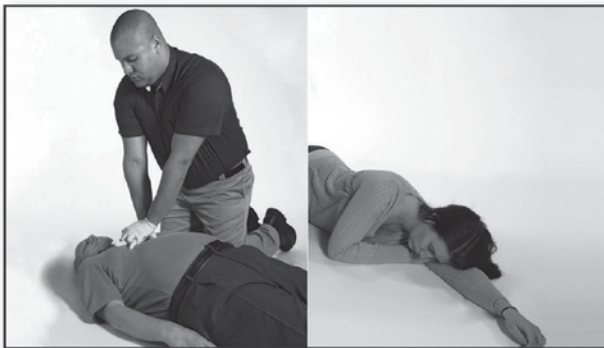
Provide Indicated Care

- If person is not breathing, or only gasping, perform CPR, beginning with compressions.
- If normal breathing is found, place an uninjured person in recovery position.

Recovery Position

Prepare

- Place arm nearest you up alongside head.
- Bring far arm across chest and place back of hand against cheek.
- Grasp far leg just above knee and pull it up so the foot is flat on ground.

Roll

- Grasping shoulder and hip, roll person toward you in a single motion, keeping head, shoulders, and body from twisting.
- Roll far enough for face to be angled toward ground.

Stabilize

- Position elbow and legs to stabilize head and body. Ensure there is no pressure on chest that restricts breathing.
- Make sure head ends up resting on extended arm and head, neck, and body are aligned.
- If person has been seriously injured, do not move unless fluids are in airway, or you need to leave to get help.

CPR AND AED

SKILL GUIDE 9

28   CPR and AED — Student Book

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62   *CPR and AED*

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Choking

Class Type: Initial

Class Method: Classroom

Length: 6 minutes, Adult-only; 17 minutes, All ages

Instructor Notes:
Although there are not associated skill practices, skill sheets have been provided to detail the steps of caring for a choking adult and child.

Why This Topic Matters

If not relieved, an obstructed airway due to choking on a foreign object will quickly result in a life-threatening condition.

What Students Should Learn

After completing this lesson, the student should be able to state or identify the following:

• How to recognize and provide first aid treatment for choking for the age groups being covered.

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

• How to perform first aid treatment for a choking infant

Equipment

• (If covering infant age group) Infant CPR manikins, disposable gloves

Instructor Activities

1 **Present Knowledge Content — Video (3:26 Adults; 2:31 Child/Infant) or Slides**

• Emphasize key points as needed.

  ✓ Choking
    – Choking occurs when a solid object, such as a piece of food, enters a narrowed part of the airway and becomes stuck
  ✓ Mild Obstruction
    – With a mild blockage, there is some ability to inhale and an affected person can cough up the object on his or her own.
  ✓ Severe Obstruction
    – With a severe blockage, a person cannot inhale air and create an effective cough.
    – A forceful thrust beneath the ribs and up into the diaphragm can increase the pressure in the chest and pop an obstruction out of the airway
    – Thrust should be repeated until the person can breathe normally. If the person becomes unresponsive, perform CPR and look for an object in the mouth prior to giving sets of rescue breaths.
    – When someone is clearly pregnant or obese, use chest thrusts.
    – If you are alone and choking, press your abdomen quickly against a rigid surface, such as the back of a chair.
  ✓ Children and Infants
    – The care for choking on a child is very similar to an adult.
    – For infants, repeating cycles of 5 back blows and 5 chest thrusts is recommended.

• Ask for and briefly answer any questions.
• Refer students to pages 37–41 of the Student Book.
• Use the Knowledge Check activity to evaluate and increase retention.

2 Demonstrate Skills (If covering infant age group)

- Provide WHOLE-PART-WHOLE demonstration of Skill Guide 16 — **Choking — Infants.**
- Demonstrate whole skill with brief comments, demonstrate again step-by-step with comments, and demonstrate whole skill again without comment.
- If necessary, demonstrate again with explanation.

3 Student Practice (If covering infant age group)

- Arrange students into pairs or small groups. Have one student act as a coach by reading the skill steps from the skill guide while another student performs first aid for choking on a manikin.
- Have students rotate through the roles until all have played each role.
- Circulate through the groups looking for competent performance. Use positive coaching and gentle correction to improve student skills.

> ***Instructor Note***
> Have students practice at least 2 sets of 5 back blows and 5 chest thrusts during the practice.

4 Evaluation (If covering infant age group)

- Confirm each student demonstrates the correct steps and decision-making tasks in the proper sequence as defined by the skill criteria in the skill guide.

5 Wrap It Up

- Ask for and answer any questions before moving on to the next lesson.

Knowledge Check

You are in the company cafeteria eating lunch with a coworker. He is laughing at something you said when he suddenly stops, grasps his throat with his hands, and stands up quickly. He clearly looks distressed so you stand up next to him and ask, "Are you choking?" He is unable to answer you and completely silent. You decide to perform abdominal thrusts. Describe how to perform them.

Stand behind him. Reach around and locate his navel with your finger. Make a fist with your other hand and place the thumb side against the abdomen, just above your finger and below his ribs. Grasp your fist with the other hand and give a quick inward and upward thrust to expel the obstruction. Repeat thrusts until he can breathe normally.

**END OF CORE
SKILL SESSION**

CPR AND AED

Choking

Choking can occur when a solid object, such as a piece of food, or a small object, enters a narrowed part of the airway and becomes stuck. On inhalation, the object can be drawn tighter into the airway and block air from entering the lungs.

A forceful thrust beneath the ribs and up into the diaphragm can pressurize the air in the chest and pop an obstruction out of the airway. Compression of the chest over the breastbone can also create enough pressure to expel an object.

Mild Obstruction

To provide the appropriate care, you must first be able to recognize the difference between a mild blockage and a severe blockage.

With a mild blockage, a person can speak, cough, or gag. This type of blockage is typically cleared naturally through forceful coughing. Allow someone with a mild blockage to try and resolve the problem on his or her own. Stay close and be ready to take action if things worsen.

Severe Obstruction

When a severe blockage occurs, a person cannot take in enough air to dislodge the object. Signs of severe obstruction include very little or no air exchange, lack of sound, and the inability to speak or cough forcefully. The person may hold his or her hands to the throat while attempting to clear the obstruction.

A person without any air exchange requires your help to survive.

Children and Infants

Young children are particularly at risk for choking because of the small size of their air passages, inexperience with chewing, and a natural tendency to put objects in their mouths.

For a choking child, the approach is nearly the same as for adults. It might be easier to kneel behind a choking child to deliver thrusts. Use less force on your thrusts.

Since infants do not speak, it may be more difficult to recognize choking. A sudden onset differentiates it from other breathing emergencies. Signs include weak, ineffective coughs, and the lack of sound, even when an infant is clearly attempting to breathe.

Pregnant or Obese

When someone is clearly pregnant or obese, use chest thrusts instead of abdominal thrusts. Position yourself directly behind the person. Reach under the armpits and place the thumb side of your fist on the center of the chest. Grasp your fist with your other hand and thrust straight backward. Try to not put pressure on the ribs.

Self-Care

If you are choking and alone, try pressing your abdomen quickly against a rigid surface, such as falling onto the back of a chair. If one is not available, attempt abdominal thrusts on yourself.

Knowledge Check

You are in the company cafeteria eating lunch with a coworker. He is laughing at something you said when he suddenly stops, grasps his throat with his hands, and stands up quickly. He clearly looks distressed, so you stand up next to him and ask, "Are you choking?" He is unable to answer you and completely silent. You decide to perform abdominal thrusts. Describe how to perform them.

Choking — Adults

Assess Person

- Ask, "Are you choking?"
- If person nods yes, or is unable to speak or cough, act quickly.
- If available, have a bystander activate EMS.

Position Yourself

- Stand behind person. Reach around and locate navel.
- Make a fist with other hand and place thumb side against abdomen, just above navel and below ribs.
- Grasp fist with other hand.

Give Thrusts

- Quickly thrust inward and upward into abdomen.
- Repeat. Each thrust needs to be given with intent of expelling object.
- Continue until person can breathe normally.
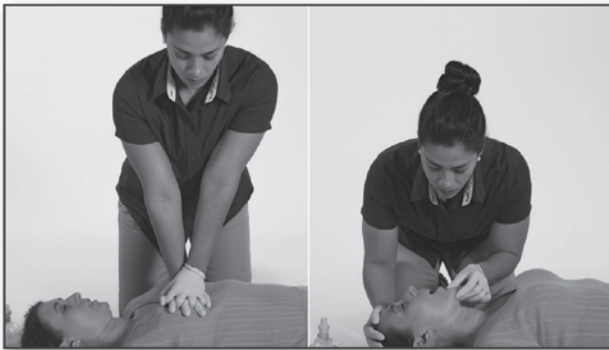
If Person Becomes Unresponsive

- Carefully lower person to ground.
- If not already done, activate EMS and get an AED, if one is available.
- Begin CPR, starting with compressions.
- Look in mouth for an object before giving rescue breaths. Remove any object seen.
- Continue CPR until person shows obvious signs of life, or another provider or EMS personnel take over.

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CPR and AED

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