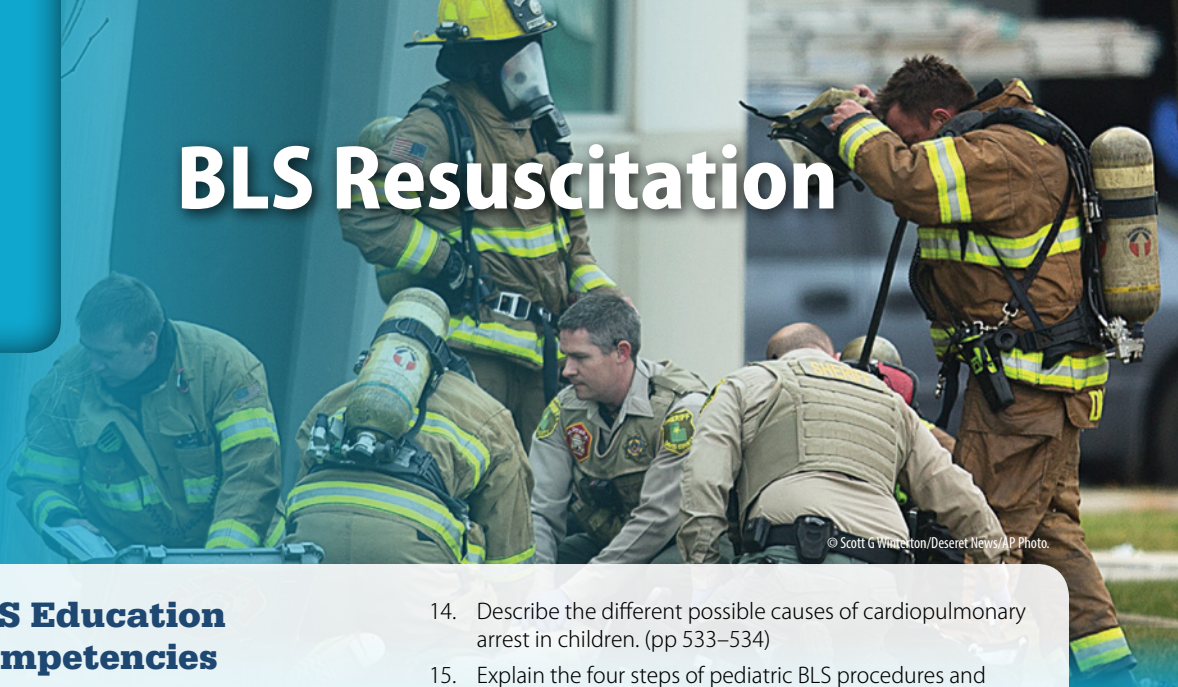


BLS Resuscitation



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National EMS Education Standard Competencies

Shock and Resuscitation

Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management.

Knowledge Objectives

1. Explain the elements of basic life support (BLS), how it differs from advanced life support (ALS), and why BLS must be applied rapidly. (pp 514–515)
2. Explain the goals of cardiopulmonary resuscitation (CPR) and when it should be performed on a patient. (p 515)
3. Explain the components of CPR, the five links in the American Heart Association (AHA) chain of survival, and how each one relates to maximizing the survival of a patient. (pp 515–516)
4. Discuss guidelines for circumstances that require the use of an automated external defibrillator (AED) on both adult and pediatric patients experiencing cardiac arrest. (pp 517–518)
5. Explain three special situations related to the use of an AED. (p 518)
6. Describe the proper way to position an adult patient to receive BLS care. (p 519)
7. Describe the purpose of external chest compressions. (p 519)
8. Describe the two techniques EMTs may use to open an adult patient's airway and the circumstances that would determine when each technique would be used. (pp 522–523)
9. Describe the recovery position and circumstances that would warrant its use as well as situations in which it would be contraindicated. (pp 523–524)
10. Describe the process of providing artificial ventilations to an adult patient, ways to avoid gastric distention, and modifications required for a patient with a stoma. (pp 524–526)
11. Explain the steps in providing single-rescuer adult CPR. (pp p 526)
12. Explain the steps in providing two-rescuer adult CPR, including the method for switching positions during the process. (p 526)
13. Describe the different mechanical devices that are available to assist emergency care providers in delivering improved circulatory efforts during CPR. (pp 529, 531–533)
14. Describe the different possible causes of cardiopulmonary arrest in children. (pp 533–534)
15. Explain the four steps of pediatric BLS procedures and how they differ from BLS procedures used in an adult patient. (pp 533–538)
16. Describe the ethical issues related to patient resuscitation, including examples of when not to start CPR on a patient. (pp 539–540)
17. Explain the various factors involved in the decision to stop CPR after it has been started on a patient. (pp 540–541)
18. Explain common causes of foreign body airway obstruction in both children and adults and how to distinguish mild or partial airway obstruction from complete airway obstruction. (pp 541–542)
19. Describe the different methods for removing a foreign body airway obstruction in an infant, child, and adult, including the procedure for a patient with an obstruction who becomes unresponsive. (pp 541–548)
20. Discuss how to provide grief support for a patient's family members and loved ones after resuscitation has ended. (pp 548–550)
21. Discuss the importance of frequent CPR training for EMTs, as well as public education programs that teach compression-only CPR. (p 550)

Skills Objectives

1. Demonstrate how to position an unresponsive adult for CPR. (p 519)
2. Demonstrate how to check for a pulse at the carotid artery in an unresponsive child or adult. (p 519)
3. Demonstrate how to perform external chest compressions on an adult. (pp 520–521, Skill Drill 13-1)
4. Demonstrate how to perform a head tilt–chin lift maneuver on an adult. (pp 522–523)
5. Demonstrate how to perform a jaw-thrust maneuver on an adult. (pp 522–523)
6. Demonstrate how to place a patient in the recovery position. (pp 523–524)
7. Demonstrate how to perform rescue breathing in an adult. (p 524)
8. Demonstrate how to perform one-rescuer adult CPR. (pp 526–527, Skill Drill 13-2)
9. Demonstrate how to perform two-rescuer adult CPR. (pp 526, 528, Skill Drill 13-3)

10. Demonstrate the use of mechanical devices that assist emergency responders in delivering improved circulatory efforts during CPR. (pp 531–533)
11. Demonstrate how to check for a pulse at the brachial artery in an unresponsive infant. (p 534)
12. Demonstrate how to perform external chest compressions on an infant. (p 535, Skill Drill 13-4)
13. Demonstrate how to perform CPR on a child who is between 1 year of age and the onset of puberty. (pp 535–537, Skill Drill 13-5)
14. Demonstrate how to perform a head tilt–chin lift maneuver on a pediatric patient. (p 537)
15. Demonstrate how to perform a jaw-thrust maneuver on a pediatric patient. (p 537)
16. Demonstrate how to perform rescue breathing on a child. (p 538)
17. Demonstrate how to perform rescue breathing on an infant. (p 538)
18. Demonstrate how to remove a foreign body airway obstruction in a responsive adult patient using abdominal thrusts (Heimlich maneuver). (p 543)
19. Demonstrate how to remove a foreign body airway obstruction in a responsive pregnant or obese patient using chest thrusts. (p 543)
20. Demonstrate how to remove a foreign body airway obstruction in a responsive child older than 1 year using abdominal thrusts (Heimlich maneuver). (pp 545–546)
21. Demonstrate how to remove a foreign body airway obstruction in an unresponsive child. (pp 546–547, Skill Drill 13-6)
22. Demonstrate how to remove a foreign body airway obstruction in an infant. (pp 546, 548)

Introduction

The principles of basic life support (BLS) were introduced in 1960. Since then, the specific techniques for the management of cardiac arrest and the delivery of emergency and cardiac care have been reviewed and revised every 5 to 6 years. The goal is to produce the best recommendations possible given the available scientific evidence. The updated guidelines are published in peer-reviewed journals: *Circulation* in the United

States and *Resuscitation* in Europe. The most recent review was conducted by the International Liaison Committee on Resuscitation (ILCOR). This revision occurred as a result of a rigorous and systematic review of the newest scientific evidence surrounding the treatment of cardiac arrest and the provision of emergency and cardiac care, using validated, transparent, and scientifically rigorous methodology to produce the best recommendations possible given the available evidence.

This chapter begins with a definition and general discussion of BLS. It then reviews methods for opening and maintaining a patent (open) airway, providing artificial ventilation to a person who is not breathing, providing artificial circulation to a person with no pulse, and removing a foreign body airway obstruction. Each of these topics is followed by a review of the changes in technique that are necessary to treat infants and children. Chapter 2, *Workforce Safety and Wellness*, discusses the methods of preventing the transmission of infectious diseases during cardiopulmonary resuscitation (CPR). Chapter 6, *The Human Body*, discusses the anatomy and physiology of the respiratory and cardiovascular systems. Chapter 41, *The Team Approach to Health Care*, discusses how to work as an effective team in the health care setting. During any emergency, working as a team is critical to give the patient the best chance for a successful outcome.

Words of Wisdom

Although your chances of contracting a disease during CPR training or actual CPR on a patient are very low, both common sense and Occupational Safety and Health Administration guidelines demand that you take reasonable precautions to prevent unnecessary exposure to an infectious disease. Use standard safety precautions to decrease the risk of contracting a disease during CPR, as discussed in Chapter 2, *Workforce Safety and Wellness*.

YOU are the Provider

PART 1

At 1445 hours, you and your partner respond to a local supermarket at 123 Wilshire Avenue where a middle-aged man reportedly collapsed in the parking lot. While you are en route to the scene, dispatch advises you that bystander CPR is in progress. Your response time is less than 5 minutes.

1. What should you immediately do on receiving this update from dispatch?
2. What should be your initial actions on arriving at this scene?