

Part

5

Team Dynamics

As a BLS provider, you may be involved in a multirescuer resuscitation attempt. Effective team dynamics increase the chances of a successful resuscitation. Everyone on the team must understand not just *what* to do in a resuscitation attempt but *how* to communicate and perform effectively as part of a multirescuer team.

Learning Objectives

At the end of this Part, you will be able to

- Describe the importance of teams in multirescuer resuscitation
- Perform as an effective team member during multirescuer CPR

Elements of Effective Team Dynamics

A successful resuscitation attempt depends on high-quality resuscitation skills, good communication, and effective team dynamics. All rescuers on the team must be able to respond rapidly and effectively in an emergency situation. Effective multirescuer team dynamics help give victims the best chance of survival.

Team dynamics during a resuscitation attempt include 3 elements:

- Roles and responsibilities
- Communication
- Debriefing

Roles and Responsibilities

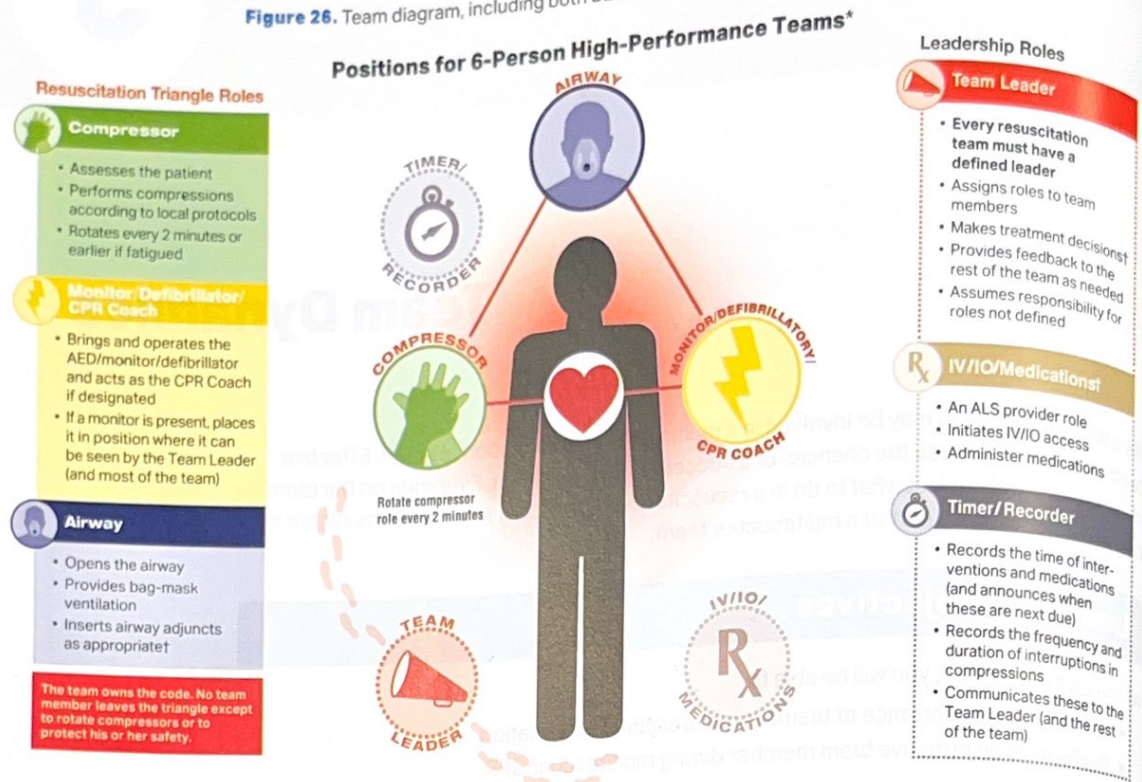
Because every second matters during a resuscitation attempt, it is important to define clear roles and responsibilities as soon as possible.

Assign Roles and Responsibilities

When all team members know their jobs and responsibilities, the team functions more smoothly. Rescuers should clearly define roles as soon as possible and delegate tasks according to each team member's skill level. As soon as the victim is identified as *pulseless*, the CPR Coach will identify themselves and prompt the Compressor to begin chest compressions.

Figure 26 shows an example of a team formation with assigned roles.

Figure 26. Team diagram, including both BLS and advanced provider roles.



*This is a suggested team formation. Roles may be adapted to local protocol.
†Roles and tasks are performed by advanced providers.

Know Your Limitations

All team members should know their limitations. The Team Leader needs to be aware of them as well. For example, advanced life support providers may be able to perform tasks that BLS providers would not be permitted to do. Some of these tasks are administering medications and performing intubation. Each team member should ask for assistance and advice early, before a situation starts to get worse.

Offer Constructive Intervention

Whether you are a team member or the Team Leader, there may be times when you need to point out another team member's incorrect or inappropriate actions. When this happens, it is important to intervene in a tactful and constructive way. This is especially important if someone is about to make a mistake on a drug, a dose, or an intervention.

Anyone on the team should speak up to stop someone else from making a mistake, regardless of role.

Communication

Share Knowledge

Knowledge sharing is important for effective team performance. Not only can it help ensure that everyone fully understands the situation, but it can also help the team treat patients more efficiently and effectively. Team Leaders should frequently ask for observations and feedback. This includes asking for good ideas about managing a resuscitation attempt as well as for observations about possible oversights.

Summarize and Reevaluate

Summarizing information aloud is helpful during a resuscitation attempt because it

- Provides an ongoing record of treatment
- Is a way to reevaluate the victim's status, the interventions, and the team's progress within the algorithm of care
- Helps team members respond to the victim's changing condition

Use Closed-Loop Communication

Closed-loop communication is an important technique used to prevent misunderstandings and treatment errors. It consists of the sender giving the message, the receiver repeating it back, and the sender then confirming it was heard correctly. To practice closed-loop communication, the Team Leader and team members should do the following:

Team Leader

- Call each team member by name and make eye contact when giving an instruction.
- Do not assign additional tasks until you are sure the team member understands the instruction.

Team members

- Confirm that you understand each task the Team Leader assigns to you by verbally acknowledging that task.
- Tell the Team Leader when you have finished a task.

Give Clear Messages

To help prevent misunderstandings and keep everyone focused, all team members should

- Use clear, concise language
- Speak loudly enough to be heard
- Speak in a tone that's both calm and confident

Show Mutual Respect

All team members should display mutual respect and a professional attitude, regardless of each rescuer's skill level or training. Emotions can run high during a resuscitation attempt. It's especially important for the Team Leader to speak in a friendly, controlled voice and avoid shouting or aggression.

Coaching and Debriefing

Coaching and debriefing are important in every resuscitation attempt. During the event, the CPR Coach will help improve performance of compressions and ventilation by ongoing coaching. They also will work with the Team Leader to minimize pauses in compressions during defibrillation and placement of an advanced airway.

After the resuscitation event, debriefing is an opportunity for the team to discuss how the resuscitation went, identify why the team took certain actions, and discuss whether anything can be improved in future events. Debriefing can occur immediately with the entire team or be scheduled at a later time with the team and others. It is an opportunity for education, quality improvement, and processing of emotions after participation in a stressful event.

Debriefing has been shown to

- Help individual team members perform better
- Aid in identifying system strengths and deficiencies

Implementing debriefing programs may improve patient survival after cardiac arrest.

Review Questions

1. After performing high-quality CPR for 5 minutes, the Team Leader frequently interrupts chest compressions to check for a pulse. Which action demonstrates constructive intervention?
 - a. Ask another rescuer what he thinks should be done.
 - b. Say nothing that contradicts the Team Leader.
 - c. Suggest resuming chest compressions without delay.
 - d. Wait until the debriefing session afterward to discuss it.
 2. The Team Leader asks you to perform bag-mask ventilation during a resuscitation attempt, but you have not perfected that skill. What would be an appropriate action to acknowledge your limitations?
 - a. Pick up the bag-mask device and give it to another team member.
 - b. Pretend you did not hear the request and hope the Team Leader chooses someone else to do it.
 - c. Tell the Team Leader you are not comfortable performing that task.
 - d. Try to do it as best you can and hope another team member will see you struggling and take over.
 3. What is the appropriate action to demonstrate closed-loop communication when the Team Leader assigns you a task?
 - a. Repeat back to the Team Leader the task assigned to you.
 - b. Nod your head as an acknowledgment of the assigned task.
 - c. Start performing the assigned tasks, but do not speak, to minimize noise.
 - d. Wait for the Team Leader to address you by name before you acknowledge the task.
- See Answers to Review Questions in the Appendix.

Part

6

BLS for Infants and Children

This section describes BLS for infants and children. In this course, *infants* are younger than 1 year of age (excluding the newly born), and *children* range from 1 year of age to puberty.

Learning Objectives

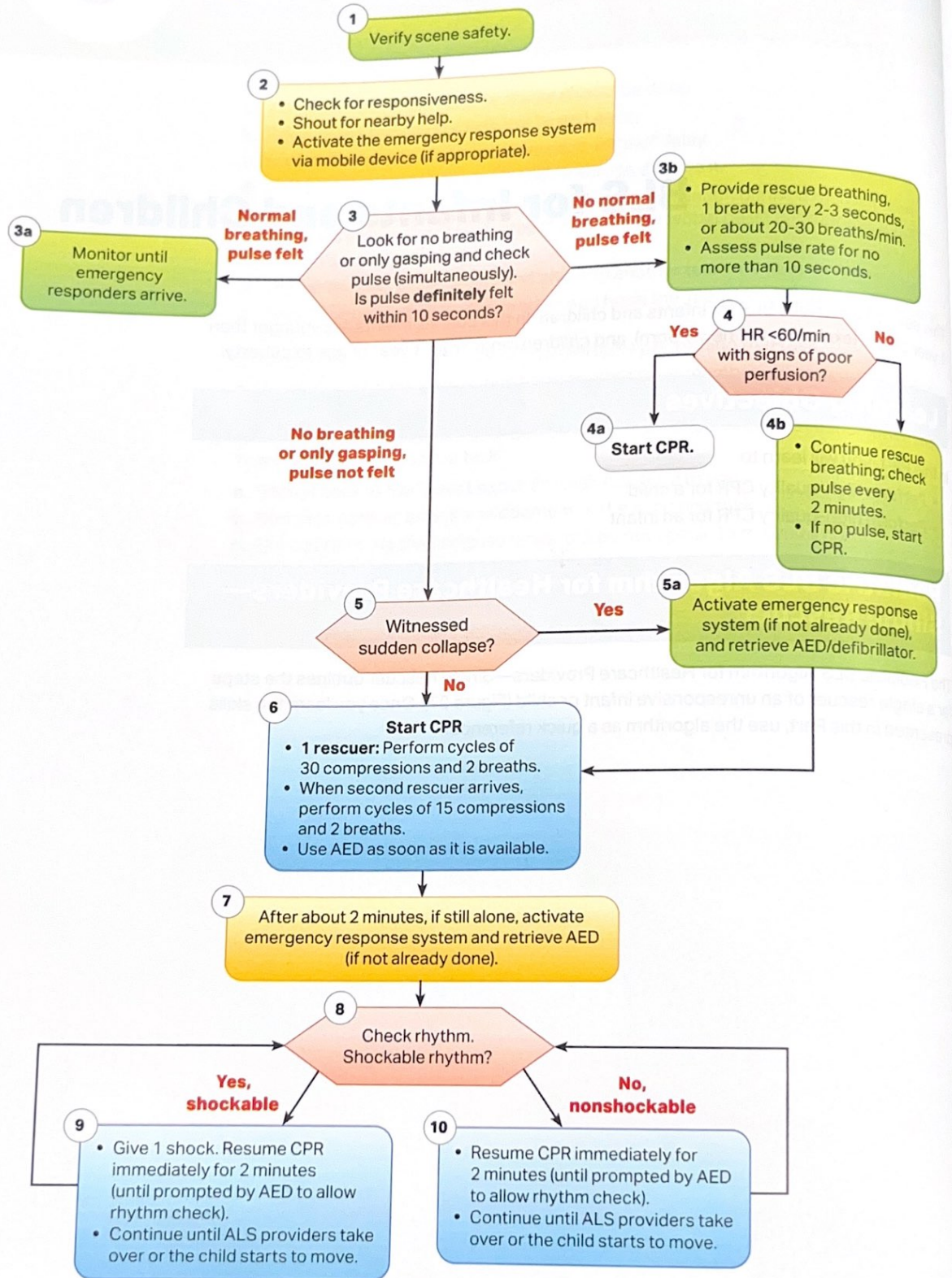
In this Part, you will learn to

- Perform high-quality CPR for a child
- Perform high-quality CPR for an infant

Pediatric BLS Algorithm for Healthcare Providers—Single Rescuer

The Pediatric BLS Algorithm for Healthcare Providers—Single Rescuer outlines the steps for a single rescuer of an unresponsive infant or child (Figure 27). Once you learn the skills presented in this Part, use the algorithm as a quick reference.

Figure 27. Pediatric BLS Algorithm for Healthcare Providers—Single Rescuer.



The first rescuer who arrives at the side of an infant or child who may be in cardiac arrest should follow these sequential steps on the algorithm:

Step 1: Verify scene safety.

Make sure the scene is safe for you and the victim.

Step 2: Check for responsiveness and get help.

Tap the child's shoulders. Shout, "Are you OK?" If the victim is not responsive, shout for help and activate the emergency response system via mobile device if appropriate.

Step 3: Assess for breathing and a pulse. Check for a pulse to determine next actions. To minimize delay in starting CPR, you should assess breathing and pulse at the same time. This should take no more than 10 seconds.

Steps 3a and 3b: Determine next actions based on whether breathing is normal and if a pulse is felt:

- **If the victim is breathing normally and a pulse is felt:**
 - Activate the emergency response system (if not already done).
 - Monitor the victim until emergency responders arrive.
- **If the victim is not breathing normally but a pulse is felt:**
 - Provide rescue breathing, with 1 breath every 2 to 3 seconds, or 20 to 30 breaths per minute.
 - Assess the pulse rate for 10 seconds.

Steps 4, 4a, and 4b: Is the heart rate less than 60/min (fewer than 6 beats in 10 seconds) with signs of poor perfusion?

- If yes, start CPR.
- If no, continue rescue breathing. Check for a pulse about every 2 minutes. If no pulse, start CPR.

Steps 5 and 5a: Was the sudden collapse witnessed?

If yes, activate the emergency response system (if not already done), and get the AED.

Step 6: If the collapse wasn't witnessed:

Start CPR with cycles of 30 compressions and 2 breaths. Use an AED as soon as it is available.

Step 7: After about 2 minutes, if you are still alone, activate the emergency response system and get an AED if not already done.

Step 8: Use the AED as soon as it is available.

Follow the AED directions to check the rhythm.

Step 9: If the AED detects a shockable rhythm, give 1 shock. Resume CPR immediately until prompted by the AED to allow a rhythm check, about every 2 minutes. Continue CPR and using the AED until advanced life support providers take over or the victim begins to breathe, move, or otherwise react.

Step 10: If the AED detects a nonshockable rhythm, resume high-quality CPR until prompted by the AED to allow a rhythm check, about every 2 minutes. Continue CPR and using the AED until advanced life support providers take over or the victim begins to breathe, move, or otherwise react.

For a complete explanation of each step, see the Infant and Child 1-Rescuer BLS Sequence in the Appendix.

High-Quality CPR Skills: Infants and Children

Mastering all the skills outlined in this section will prepare you to provide high-quality CPR to an unresponsive infant or child.

Assess for Breathing and a Pulse

Checking the infant or child for normal breathing and a pulse will help you determine the next appropriate actions. You should assess breathing and pulse at the same time. Take no more than 10 seconds to check both so that you can start CPR quickly, if necessary.

Breathing

To check for breathing, scan the victim's chest for rise and fall for *no more than 10 seconds*.

- **If the victim is breathing:** Monitor the victim until additional help arrives.
- **If the victim is not breathing or is only gasping:** The victim has respiratory arrest or (if no detectable pulse) cardiac arrest. (Gasping is not normal breathing and is a sign of cardiac arrest. See Critical Concepts: Agonal Gasps in Part 3.)

Pulse

Infant: To perform a pulse check in an infant, feel for a brachial pulse (Figure 28A). Here is how to check the brachial artery pulse:

1. Place 2 or 3 fingers on the inside of the upper arm, midway between the infant's elbow and shoulder.
2. Press your fingers down and attempt to feel the pulse for *at least 5 but no more than 10 seconds*.

Child: To perform a pulse check in a child, feel for a carotid or femoral pulse (Figure 28B and Figure 28C). Check the carotid pulse for a child by using the same technique as for an adult (see Part 3). Here is how to check the femoral artery pulse:

1. Place 2 or 3 fingers in the inner thigh, midway between the hip bone and the pubic bone and just below the crease where the leg meets the torso.
2. Feel for a pulse for at least 5 but no more than 10 seconds.

It can be difficult for BLS providers to determine the presence or absence of a pulse in any victim, particularly in an infant or child. If you do not *definitely feel a pulse within 10 seconds*, start high-quality CPR, beginning with chest compressions.

Figure 28. Pulse check. **A**, In an infant, feel for a brachial pulse. **B**, In a child, feel for a carotid pulse, or **C**, a femoral pulse.

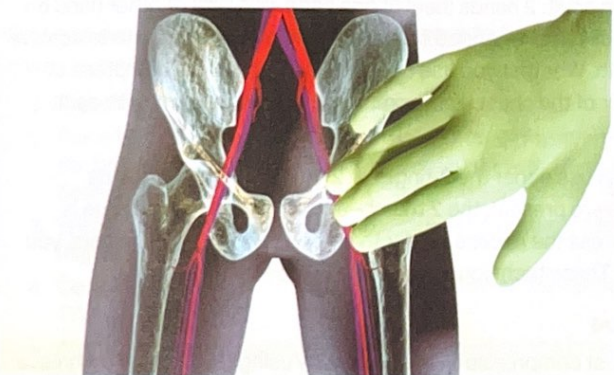
A



B



C



Signs of Poor Perfusion

Perfusion is the flow of oxygenated blood from the heart through the arteries to the body's tissues. To identify signs of poor perfusion, assess the following:

- **Temperature:** Cool extremities
- **Altered mental state:** Continued decline in consciousness/responsiveness
- **Pulses:** Weak pulses
- **Skin:** Paleness, mottling (patchy appearance), and, later, cyanosis (blue lips or skin)

Perform High-Quality Chest Compressions

High-quality chest compressions are the foundation of CPR. Perform compressions as described here to give an infant or child victim of cardiac arrest the best chance of survival.

Compression-to-Ventilation Ratio

The compression-to-ventilation ratio for single rescuers is the same in adults, children, and infants: **30:2**.

However, when 2 rescuers are attempting to resuscitate an infant or child, they should use a compression-to-ventilation ratio of **15:2**.

Compression Rate

The universal rate for compressions in all cardiac arrest victims is 100 to 120/min.

Compression Depth

For an infant, compress at least one third the AP diameter of the infant's chest (approximately 1½ inches, or 4 cm). For a child, compress at least one third the AP diameter of the chest (approximately 2 inches, or 5 cm) with each compression.

Chest Recoil

During CPR, chest recoil (reexpansion of the chest) allows blood to flow into the heart. Incomplete chest recoil reduces the filling of the heart between compressions and reduces the blood flow that chest compressions create. To help ensure complete recoil, avoid leaning on the chest between compressions. Chest compression and chest recoil times should be about equal.

Interruptions in Chest Compressions

Minimize interruptions in chest compressions. Shorter duration of interruptions in chest compressions is associated with better outcomes.

Chest Compression Techniques

For child chest compressions, use 1 or 2 hands. For most children, the compression technique is the same as for an adult: 2 hands (heel of one hand with heel of other hand on top of the first hand). For a small child, 1-handed compressions may be adequate to achieve the desired compression depth. Whether you use one hand or both hands, compress at least one third the AP diameter of the chest (approximately 2 inches, or 5 cm) with each compression.

For infants, single rescuers can use either the 2-finger or 2 thumb–encircling hands technique. If multiple rescuers are present, the 2 thumb–encircling hands technique is preferred. If you cannot compress the necessary depth on an infant with your fingers, you can use the heel of one hand. These techniques are described below.

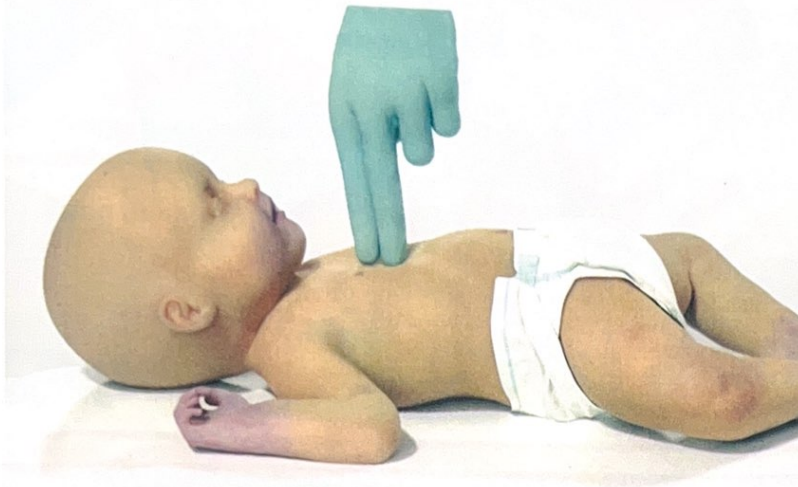
Infant: 2-Finger Technique

Follow these steps to give chest compressions to an infant by using the 2-finger technique:

1. Place the infant on a firm, flat surface.
2. Place 2 fingers in the center of the infant's chest, just below the nipple line, on the lower half of the breastbone. Do not press the tip of the breastbone (Figure 29).
3. Give compressions at a rate of 100 to 120/min.
4. Compress at least one third the AP diameter of the infant's chest (approximately 1½ inches, or 4 cm).
5. At the end of each compression, make sure you allow the chest to completely recoil (reexpand); do not lean on the chest. Chest compression and chest recoil times should be about equal. Minimize interruptions in compressions (eg, to give breaths) to less than 10 seconds.

6. After every 30 compressions, open the airway with a head tilt–chin lift and give 2 breaths, each over 1 second. The chest should rise with each breath.
7. After about 5 cycles or 2 minutes of CPR, if you are alone and no one has activated the emergency response system, leave the infant (or carry the infant with you) and activate the emergency response system and get the AED.
8. Continue compressions and breaths at a ratio of 30 compressions to 2 breaths. Use the AED as soon as it is available. Continue until advanced life support providers take over or the infant begins to breathe, move, or otherwise react.

Figure 29. Two-finger chest compression technique for an infant.



Infant: 2 Thumb–Encircling Hands Technique

The 2 thumb–encircling hands technique is the preferred technique when 2 rescuers provide CPR, but it can be used by 1 rescuer as well. This technique

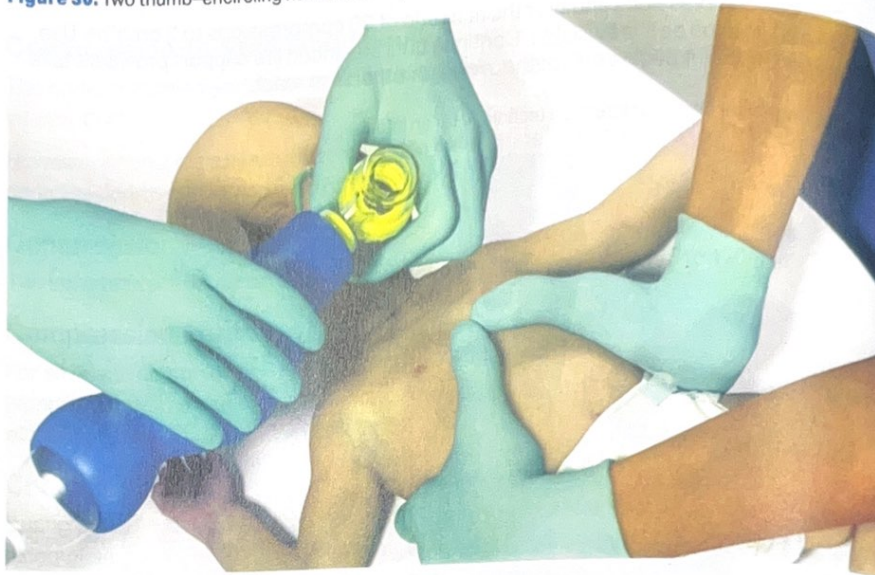
- Produces better blood supply to the heart muscle
- Helps ensure consistent depth and force of chest compressions
- May generate higher blood pressures

Follow these steps to give chest compressions to an infant by using the 2 thumb–encircling hands technique:

1. Place the infant on a firm, flat surface.
2. Place both thumbs side by side in the center of the infant's chest, on the lower half of the breastbone. Your thumbs may overlap on very small infants. With the fingers of both hands, encircle the infant's chest and support the infant's back.
3. With your hands encircling the chest, use both thumbs to depress the breastbone (Figure 30) at a rate of 100 to 120/min.
4. Compress at least one third the AP diameter of the infant's chest (approximately 1½ inches, or 4 cm).
5. After each compression, release all pressure on the breastbone and allow the chest to recoil completely.
6. After every 15 compressions, pause briefly for the second rescuer to open the airway with a head tilt–chin lift and give 2 breaths, each over 1 second. The chest should rise with each breath. Minimize interruptions in compressions (eg, to give breaths) to less than 10 seconds.
7. Continue compressions and breaths at a ratio of 15 compressions to 2 breaths (for 2 rescuers). The rescuer providing chest compressions should switch roles with another provider about every 5 cycles or 2 minutes to avoid fatigue so that chest compressions remain effective. Continue CPR until the AED arrives, advanced life support providers take over, or the infant begins to breathe, move, or otherwise respond.

An additional alternative for compressions on an infant or child is to use the heel of one hand. This technique may be useful for larger infants or if the rescuer has difficulty compressing to the appropriate depth with their fingers or thumbs.

Figure 30. Two thumb-encircling hands technique for an infant (2 rescuers).



Critical Concepts:
Compression Depth in Infants and Children vs Adults and Adolescents

- *Infants: At least one third the AP diameter of the chest, or approximately 1½ inches (4 cm)*
- *Children: At least one third the AP diameter of the chest, or approximately 2 inches (5 cm)*
- *Adults and adolescents: At least 2 inches, or 5 cm*

Give Breaths

Breaths Are Important for Infants and Children in Cardiac Arrest

When cardiac arrest occurs suddenly, the blood's oxygen content is typically adequate to meet the body's oxygen demands for the first few minutes after the arrest. Thus, for witnessed *sudden* cardiac arrest, chest compressions alone can be an effective way of distributing oxygen to the heart and brain.

However, cardiac arrest in infants and children may not be sudden and is often caused by respiratory complications. Infants and children who develop cardiac arrest often have respiratory failure or shock that reduces the oxygen content in the blood even before cardiac arrest occurs. As a result, for most infants and children in cardiac arrest, giving chest compressions alone does not deliver oxygenated blood to the heart and brain as effectively as giving both compressions and breaths. *Thus, it is vitally important that infants and children receive both compressions and breaths during high-quality CPR.*

Opening the Airway

As discussed in Opening the Airway in Part 3, for rescue breaths to be effective, the airway must be open. Two methods for opening the airway are the head tilt–chin lift and the jaw-thrust maneuver.

As with adults, if you suspect a neck injury, use the jaw-thrust maneuver. If the jaw thrust does not open the airway, use the head tilt–chin lift.



Critical Concepts: **Keep Infant's Head in the Neutral Position**

If you tilt (extend) an infant's head beyond the neutral (sniffing) position, the infant's airway may become blocked. Maximize an open airway by positioning the infant with the neck in a neutral position so that the external ear canal is level with the top of the infant's shoulder.

Ventilation With a Barrier Device

Use a barrier device (eg, a pocket mask or face shield) or a bag-mask device for delivering breaths to an infant or child. See Barrier Devices for Giving Breaths and Bag-Mask Devices in Part 3 for detailed instructions.

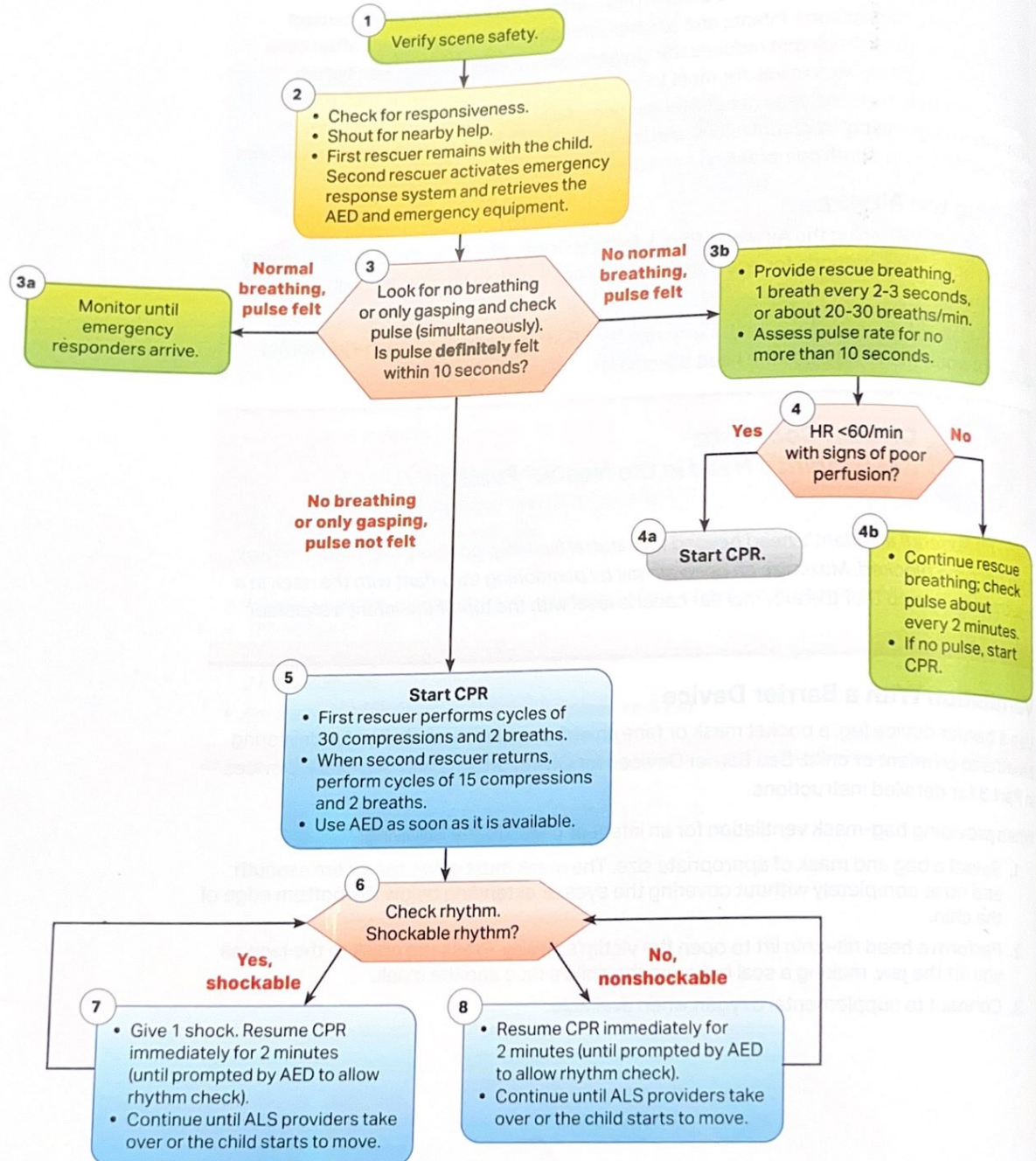
When providing bag-mask ventilation for an infant or child, do the following:

1. Select a bag and mask of appropriate size. The mask must cover the victim's mouth and nose completely without covering the eyes or extending below the bottom edge of the chin.
2. Perform a head tilt–chin lift to open the victim's airway. Press the mask to the face as you lift the jaw, making a seal between the child's face and the mask.
3. Connect to supplemental oxygen when available.

Pediatric BLS Algorithm for Healthcare Providers—2 or More Rescuers

The Pediatric BLS Algorithm for Healthcare Providers—2 or More Rescuers outlines steps for a multirescuer team assisting an unresponsive infant or child (Figure 31).

Figure 31. Pediatric BLS Algorithm for Healthcare Providers—2 or More Rescuers.



Infant and Child 2-Rescuer BLS

The first rescuer who arrives at the side of an unresponsive infant or child should quickly perform the first 2 steps on the algorithm. As more rescuers arrive, assign roles and responsibilities. As a multirescuer team, follow the algorithm's sequential steps. When more rescuers are available for a resuscitation attempt, they can perform some tasks at the same time.

Step 1: Verify scene safety.

Make sure that the scene is safe for you and the victim.

Step 2: Check for responsiveness and get help.

Tap the child's shoulders. Shout, "Are you OK?" If the victim is not responsive, shout for help and activate the emergency response via mobile device if appropriate. The first rescuer remains with the victim while the second rescuer activates the emergency response system and retrieves the AED and emergency equipment.

Step 3: Assess for breathing and a pulse.

Check for a pulse to determine next actions. To minimize delay in starting CPR, you should assess breathing and pulse at the same time. This should take no more than 10 seconds.

Steps 3a and 3b: Determine next actions based on whether breathing is normal and if a pulse is felt:

- **If the victim is breathing normally and a pulse is felt,** activate the emergency response system. Monitor the victim until emergency responders arrive.
- **If the victim is not breathing normally but a pulse is felt:**
 - Provide rescue breathing, with 1 breath every 2 to 3 seconds, or 20 to 30 breaths per minute.
 - Assess the pulse rate for 10 seconds.

Steps 4, 4a, and 4b: Is the heart rate less than 60/min (less than 6 beats in 10 seconds) with signs of poor perfusion?

- If yes, start CPR.
- If no, continue rescue breathing. Check for a pulse about every 2 minutes. If no pulse, start CPR.

Step 5: The first rescuer starts cycles of CPR with 30 compressions and 2 breaths. When the second rescuer returns, continue cycles of CPR with 15 compressions and 2 breaths. Use the AED as soon as it is available.

Step 6: Follow the AED directions to check the rhythm.

Step 7: If the AED detects a shockable rhythm, give 1 shock. Resume CPR immediately until prompted by the AED to allow a rhythm check, about every 2 minutes. Continue CPR and using the AED until advanced life support providers take over or the victim begins to breathe, move, or otherwise react.

Step 8: If the AED detects a nonshockable rhythm, resume high-quality CPR until prompted by the AED to allow a rhythm check, about every 2 minutes. Continue CPR and using the AED until advanced providers take over or the victim begins to breathe, move, or otherwise react.

For a complete explanation of each step, see Infant and Child 2-Rescuer BLS Sequence in the Appendix.

Review Questions

1. What is the correct compression-to-ventilation ratio for a single rescuer of a 3-year-old child?
 - a. 15 compressions to 1 breath
 - b. 15 compressions to 2 breaths
 - c. 20 compressions to 2 breaths
 - d. 30 compressions to 2 breaths
2. What is the correct compression-to-ventilation ratio for a 7-year-old child when 2 or more rescuers are present?
 - a. 15 compressions to 1 breath
 - b. 15 compressions to 2 breaths
 - c. 20 compressions to 2 breaths
 - d. 30 compressions to 2 breaths
3. For what age victim is the 2 thumb-encircling hands technique recommended?
 - a. A child younger than 3 years of age
 - b. A child older than 3 years of age
 - c. An infant older than 1 year
 - d. An infant younger than 1 year
4. What is the correct chest compression depth for a child?
 - a. At least one fourth the depth of the chest, or approximately 1 inch (2.5 cm)
 - b. At least one third the depth of the chest, or approximately 1½ inches (4 cm)
 - c. At least one third the depth of the chest, or approximately 2 inches (5 cm)
 - d. At least one half the depth of the chest, or approximately 3 inches (7.6 cm)
5. What is the correct chest compression depth for an infant?
 - a. At least one fourth the depth of the chest, or approximately 1 inch (2.5 cm)
 - b. At least one third the depth of the chest, or approximately 1½ inches (4 cm)
 - c. At least one third the depth of the chest, or approximately 2 inches (5 cm)
 - d. At least one half the depth of the chest, or approximately 2½ inches (6.4 cm)

See Answers to Review Questions in the Appendix.

Part

7

Automated External Defibrillator for Infants and Children Younger Than 8 Years of Age

Rescuers may use an AED when attempting to resuscitate infants and children younger than 8 years of age. This Part will help you understand how to use an AED for victims in this age range.

Learning Objectives

In this Part, you will learn

- The importance of using an AED as early as possible for infants and children younger than 8 years of age
- How to use an AED for infants and children younger than 8 years of age

Know Your AED

Although all AEDs operate in basically the same way, AED equipment varies according to model and manufacturer. You should be familiar with the AED used in your setting.

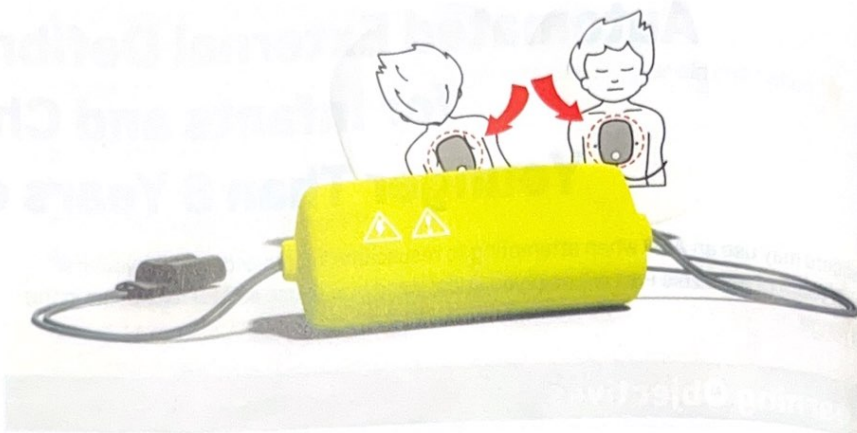
See Operating an AED: Universal Steps in Part 4.

Pediatric-Capable AEDs for Reduced Shock Doses

Most AED models are designed for both pediatric and adult resuscitation attempts. These AEDs deliver a reduced shock dose when pediatric pads are used.

One common way to reduce a shock dose is by attaching a pediatric dose attenuator to the AED (Figure 32). An attenuator reduces the shock dose by about two thirds. Typically, an attenuator delivers the reduced shock via child pads. A pediatric dose attenuator frequently comes preconnected to the pediatric pads.

Figure 32. A pediatric dose attenuator reduces the shock dose an AED delivers. This attenuator uses child pads.

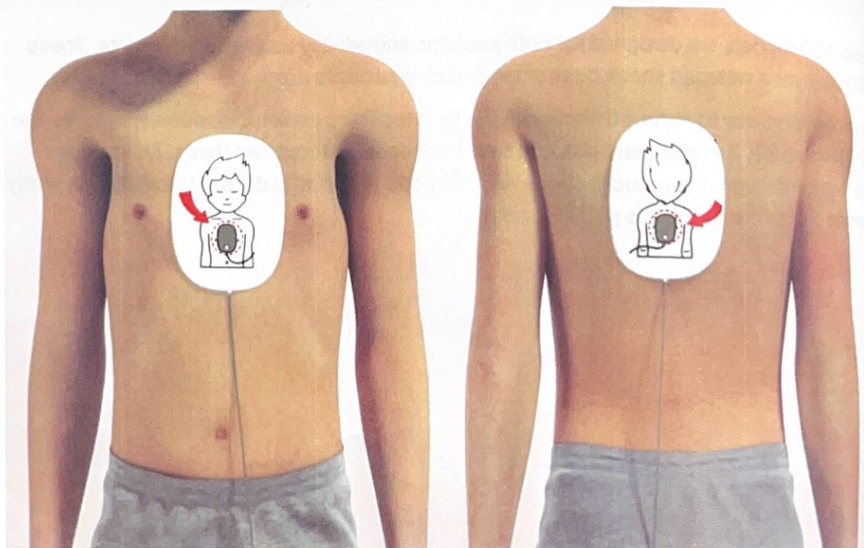


Choosing and Placing the AED Pads

Use child pads, if available, for infants and for children younger than 8 years of age. If child pads are not available, use adult pads. Make sure the pads do not touch each other or overlap. Adult pads deliver a higher shock dose, but a higher shock dose is better than no shock.

For pad placement, follow the AED manufacturer's instructions and the illustrations on the AED pads. Some AEDs require placing child pads in a front and back (anteroposterior [AP]) position (Figure 33), while others require right-left (anterolateral) placement. For infants, AP pad placement is common. See Critical Concepts: AED Pad Placement Options in Part 4.

Figure 33. AP AED pad placement on a child victim.



AED Use for Victims 8 Years of Age and Older

- Use the AED as soon as it is available.
- Use adult pads (Figure 34). **Do not use child pads**—they will likely give a shock dose that is too low.
- Place the pads as illustrated on the pads.
- Place the pads directly on the skin. Do not allow the pads to touch or overlap, and do not place on or over clothing.

AED Use for Victims Younger Than 8 Years of Age

- Use the AED as soon as it is available.
- Use child pads (Figure 35) if available. If you do not have child pads, you may use adult pads. Place the pads so that they do not touch each other.
- If the AED has a key or switch that will deliver a child shock dose, turn the key or switch.
- Place the pads as illustrated on the pads.
- Place the pads directly on the skin, and do not place on or over clothing.

Figure 34. Adult AED pads.

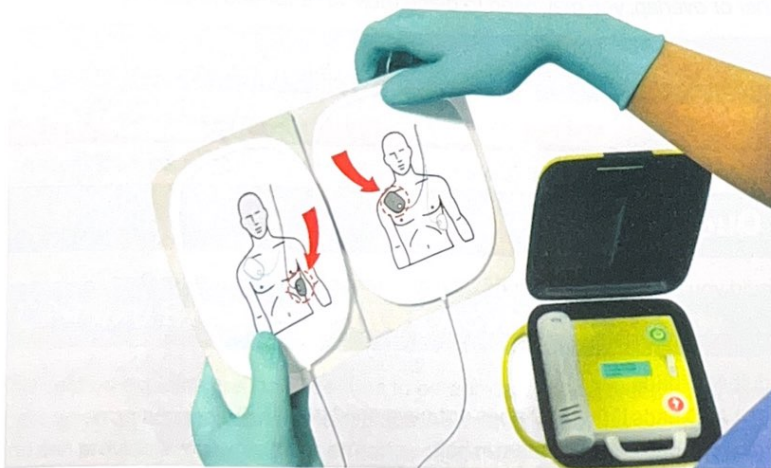


Figure 35. Child AED pads.



AED Use for Infants

For infants, a manual defibrillator is preferred to an AED. A manual defibrillator has more capabilities than an AED and can provide the lower energy doses that infants often need. This course does not cover how to use a manual defibrillator, a skill that requires advanced training.

- When a manual defibrillator is not available, an AED equipped with a pediatric dose attenuator is the preferred alternative.
- If neither is available, you may use an AED without a pediatric dose attenuator.



Critical Concepts:
Using Adult Pads or Adult Shock Dose Is Better Than No Defibrillation for an Infant or Child

AED Pads

If you are using an AED for an infant or for a child younger than 8 years of age and the AED does not have child pads, you may use adult pads. To ensure that the adult pads do not touch each other or overlap, you may need to place them anterior and posterior.

Shock Dose

If the AED you are using cannot deliver a pediatric dose, use the adult dose.

Review Questions

1. What should you do when using an AED on an infant or a child younger than 8 years of age?
 - a. Never use adult AED pads.
 - b. Use adult AED pads.
 - c. Use adult AED pads if the AED does not have child pads.
 - d. Use adult AED pads, but cut them in half.
2. If a manual defibrillator is not available for an infant victim, which action should you take?
 - a. Perform high-quality CPR.
 - b. Use an AED equipped with a pediatric dose attenuator.
 - c. Cut the adult pad to fit the infant.
 - d. Wait for advanced care to arrive.
3. What is important to remember about AED pad placement on infants?
 - a. Ensure that pads overlap each other in very small infants.
 - b. Place 1 adult pad on the chest.
 - c. You may need to place 1 pad on the chest and 1 on the back, according to the diagrams on the pads.
 - d. If child AED pads are not available, do not use the AED.

See Answers to Review Questions in the Appendix.