

The C-A-B of CPR Steps for Adults, Children, and Infants

Component	Recommendations		
	Adults	Children	Infants
Recognition	Unresponsive (for all ages)		
	No breathing or no normal breathing (ie, only gasping)	No breathing or only gasping	
	No pulse felt within 10 seconds		
CPR sequence	Chest compressions, Airway, Breathing (C-A-B)		
Compression rate	At least 100/min		
Compression depth	At least 2 inches (5 cm)	At least 1/3 AP diameter About 2 inches (5 cm)	At least 1/3 AP diameter About 1 1/2 inches (4 cm)
Chest wall recoil	Allow complete recoil between compressions Rotate compressors every 2 minutes		
Compression interruptions	Minimize interruptions in chest compressions Attempt to limit interruptions to <10 seconds		
Airway	Head tilt–chin lift (suspected trauma: jaw thrust)		
Compression-ventilation ratio (until advanced airway placed)	30:2 1 or 2 rescuers	30:2 Single rescuer 15:2 2 rescuers	
Ventilations with advanced airway	1 breath every 6-8 seconds (8-10 breaths/min) Asynchronous with chest compressions About 1 second per breath Visible chest rise		
Defibrillation	Attach and use AED as soon as available. Minimize interruptions in chest compressions before and after shock; resume CPR beginning with compressions immediately after each shock.		

Abbreviations: AED, automated external defibrillator; AP, anterior-posterior; CPR, cardiopulmonary resuscitation.

BLS for Healthcare Providers Critical Concepts

High-quality CPR improves a victim's chances of survival. The critical characteristics of high-quality CPR include:

- **Start compressions within 10 seconds** of recognition of cardiac arrest.
- **Push hard, push fast:** Compress at a rate of at least 100/min with a depth of at least 2 inches (5cm) for adults, approximately 2 inches (5cm) for children, and approximately 1 1/2 inches (4cm) for infants.
- **Allow complete chest recoil** after each compression.
- **Minimize interruptions** in compressions (try to limit interruptions to < 10 seconds).
- **Give effective breaths** that make the chest rise.
- **Avoid excessive ventilation.**

Automated External Defibrillator-AED

- As soon as an AED becomes available, the first step the rescuer should perform is to turn on the AED.
- After the AED delivers a shock, the rescuer should immediately restart CPR, beginning with chest compressions.

Foreign Body Airway Obstruction - Choking

- The best way to relieve severe choking in responsive adult or child – Perform abdominal thrusts.
- The best action to relieve severe choking in a responsive infant – Begin cycles of 5 back slaps, followed by 5 chest thrusts.
- When choking victim becomes unresponsive (adult, child, or infant) – the rescuer should send someone to activate emergency response system and immediately start CPR beginning with compressions.

Child or Infant With A Heart Rate

- When a child or infant has a heart rate greater than 60 per minute and a pulse but is not breathing effectively, the rescuer should give breaths without chest compressions.
- When an unresponsive child/infant is not breathing and has a heart rate less than 60 per minute and signs of poor perfusion despite oxygenation and ventilation with a bag-mask, the rescuer should perform both compressions and breaths.

C-A-B is Chest Compressions–Airway–Breaths, Not A-B-C

CHEST COMPRESSIONS

- The rescuer should initially ensure that the scene is safe when the rescuer first sees a potential victim.
- A victim who is unresponsive with no normal breathing and no pulse needs CPR.
- To identify cardiac arrest in an unresponsive victim with no breathing (or no normal breathing), a healthcare provider should check a pulse for no more than 10 seconds.
- It is important to compress to the appropriate depth during CPR to create blood flow during compressions.
- The depth of chest compressions for an adult victim should be at least 2 inches (5cm).
- The depth of chest compressions for an infant is at least one third the depth of the chest, approximately 1.5 inches (4cm).
- Rate of performing chest compressions for victims of all ages is at least 100 compressions per minute.
- Hands are placed on the lower half of the breastbone to perform chest compressions on the adult.
- In 2-rescuer CPR, while the first rescuer begins chest compressions, the second rescuer maintains an open airway and gives ventilations.
- Preferred chest compression technique for 2-rescuer CPR for the infant is the 2 thumb-encircling hands technique.

AIRWAY

- After the airway is opened, the proper technique for delivering mouth-to-mouth ventilation is the rescuer opens the airway, seals his or her mouth over the victim's mouth, pinches the victim's nose closed, and gives 2 breaths while watching for the chest to rise.

BREATHS

- The rescue breath for an adult, child, or infant is effective when the chest rises visibly.
- During bag-mask ventilation, giving a breath just until you see the chest rise is recommended to minimize the risk of gastric inflation.
- The compression-to-ventilation ratio for 1-rescuer adult CPR is 30:2.
- The compression-to-ventilation ratio for 2-rescuer child/infant CPR is 15:2.
- Compression and ventilation rates for 2-rescuer CPR in the presence of an advanced airway is to compress at a rate of at least 100 per minute, 1 breath every 6 to 8 seconds.
- When administering breaths by using a bag-mask device for a child who is not breathing but does have a pulse, the rescuer should give breaths at the rate of 1 breath every 3 to 5 seconds.
- Bag-mask device/technique is not recommended for a single rescuer to provide breaths during CPR.



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