



© 2020 American Heart Association

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

- **Start compressions within 10 seconds** after recognizing cardiac arrest.
- **Push hard and push fast:** Compress at a rate of 100 to 120/min with a depth of
 - At least 2 inches (5 cm) for adults
 - At least one third the depth of the chest, approximately 2 inches (5 cm), for children
 - At least one third the depth of the chest, approximately 1½ inches (4 cm), for infants
- **Allow complete chest recoil** after each compression.
- **Minimize interruptions** in compressions (try to limit interruptions to less than 10 seconds).
- **Give effective breaths** that make the chest rise.
- **Avoid excessive ventilation.**

Summary of High-Quality CPR Components for BLS Providers

Component	Adults and Adolescents	Children	Infants
		(Age 1 Year to Puberty)	(Age Less Than 1 Year)
Scene safety	Make sure the environment is safe for rescuers and victim		
Recognition of cardiac arrest	Check for responsiveness		
	No breathing or only gasping (ie, no normal breathing)		
	No definite pulse felt within 10 seconds		
	(Breathing and pulse check can be performed simultaneously in less than 10 seconds)		
Activation of emergency response system	If you are alone with no mobile phone, leave the victim to activate the emergency response system and get the AED before beginning CPR	Witnessed collapse Follow steps for adults and adolescents on the left	
	OR	Unwitnessed collapse Give 2 minutes of CPR Leave the victim, activate the emergency response system, get the AED (if available), return to the child or infant and resume CPR; use the AED if needed	
Compression-ventilation ratio	1 or 2 rescuers	1 rescuer	2 or more rescuers
	30 to 2	30 to 2	15 to 2
Compression rate	100-120/min		
Compression-ventilation ratio with advanced airway	Continuous compressions at a rate of 100-120/min		
	Give 1 breath every 6 seconds (10 breaths/min); Effective breaths produce adequate chest rise		
Compression depth	At least 2 inches (5 cm)*	At least one-third AP diameter of chest	At least one-third AP diameter of chest
	*no more than 2.4 inches (6 cm)	About 2 inches (5 cm)	About 1.5 inches (4 cm)
Hand placement	2 hands on the lower half of the breastbone (sternum)	2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum)	1 rescuer
			2 fingers in the center of the chest, just below the nipple line
			2 or more rescuers
			2 thumbs encircling hands in the center of the chest, just below the nipple line
Chest recoil	Allow full recoil of chest after each compression to allow the heart to adequately refill between compressions		
Minimizing interruptions	Limit interruptions in chest compressions to less than 10 seconds		
AED	Turn it on 1st; Follow AED prompts; Actions required for submerged victim and hairy chested victim		
Rapid defibrillation	Eliminates abnormal heart rhythm; Restores a regular cardiac rhythm		
Team dynamics	Knowing one's limitations; Clear role & responsibilities; Constructive feedback		
Foreign Body Airway Obstruction	Conscious - Heimlich maneuver		Conscious - 5 Back slaps & 5 chest thrusts
	Unconscious - CPR <i>modified</i> to look for obstructed object when you open the airway		Unconscious - CPR <i>modified</i>

Abbreviations: AED - automated external defibrillator; AP - anteroposterior; CPR - cardiopulmonary resuscitation