

BLS HCP Study Guide The ABC&D of CPR

MANUEVER	ADULT	CHILD	INFANT
CPR	ADULT: Adolescent and older	CHILD: 1 year to puberty (about 12-14 years old)	INFANT: Less than 1 year of age
Establish that the victim does not respond Activate the emergency response system.	Activate the emergency response system as soon as the victim is found unresponsive If asphyxial arrest likely, call after 5 cycles (2 minutes) of CPR	Activate the emergency response system after giving 5 cycles of CPR For sudden, witnessed collapse, activate after verifying that victim unresponsive	
AIRWAY Open the Airway Use head tilt-chin lift.	Head tilt-chin lift (Suspected head and neck trauma, use jaw-thrust)		
BREATHING Check breathing	Open the airway, look (toward chest), listen, and feel. Take at least 5 seconds and no more than 10 seconds.		
First 2 breaths If the victim is not breathing, give 2 breaths that make the chest rise.	Give 2 breaths (1 second each)		
Rescue breathing without chest compressions	1 breath every 5 to 6 seconds (approximately)	1 breath every 3 to 5 seconds (approximately)	
Rescue breaths for CPR with advanced airway	1 breath every 6 to 8 seconds		
CIRCULATION Check Pulse At least 5 seconds and no more than 10 seconds.	Carotid pulse If no pulse, start CPR	Carotid pulse If no pulse or pulse is less than 60 bpm with signs of poor perfusion, start CPR	Brachial pulse If no pulse or pulse is less than 60 bpm with signs of poor perfusion, start CPR
Start CPR			
• Compression rate	100 per minute		
• Compression location	Center of breastbone, between nipples	Just below the nipple line on breastbone	
• Compression method Push hard and fast, allow complete recoil	Heel of 1 hand with second hand on top	Heel of 1 hand with second hand on top OR Heel of 1 hand for small victims	1-rescuer: 2 fingers 2-rescuer: 2-thumbs-encircling hands
• Compression depth	1 ½ to 2 inches	1/3 to 1/2 the depth of the chest	
• Compression ventilation ratio	30:2 1-or 2-rescuer CPR	30:2 for 1-rescuer CPR 15:2 for 2-rescuer CPR	
DEFIBRILLATION	ADULT: over 8 years	CHILD: 1-8 years	INFANT: Less than 1 year of age
Automated External Defibrillator - AED	All: Use adult pads ONLY. Do <u>not</u> use child pads/key/switch. HCP: For out-of-hospital response provide 5 cycles/ 2 minutes of CPR before shock if response time greater than 4 to 5 minutes Use AED as soon as available for witnessed sudden collapse	All: Use child pads/key/switch for child 1 to 8 years if available. If child pads not available, may use adult AED pads HCP: For out-of-hospital response provide 5 cycles/ 2 minutes of CPR before shock Use AED as soon as available for witnessed sudden collapse	No recommendation for infants less than 1 year of age

RESCUE TECHNIQUES - ABC and D

Unresponsiveness: After determining that the scene is safe, check to see if victim is responsive. If the adult victim is unresponsive, send someone to activate the emergency response system (EMS) - phone 911 and get the AED.

“Phone FIRST” versus “Phone FAST” if rescuer is ALONE

1. If alone the rescuer phones 911 immediately after discovering unresponsive adult victim and then returns to begin CPR. The goal of “phone first” approach is fast arrival of EMS professionals able to attach and use a defibrillator.
EXCEPTION: if asphyxial arrest likely, call after 5 cycles of CPR (2 minutes).
2. If alone the rescuer calls out for “help” immediately for infants and children and begins the ABCs of CPR and then phones 911 after 2 minutes of rescue support (5 cycles of 30:2). The goal of “phone fast” approach is to deliver oxygen immediately because the most common cause of cardiac arrest in infants and children is a severe airway breathing problem, respiratory arrest, or shock.
EXCEPTION: for sudden, witnessed collapse of child or infant, call immediately after verifying that victim is unresponsive.

Therefore, if you are alone and find an infant who is not responsive, you begin the steps of CPR and activate the emergency response system after you give 5 cycles of CPR (about 2 minutes).

Airway: Open the Airway.

- The *head tilt-chin* lift is the best way to open unresponsive victim’s airway when you do NOT suspect cervical spine injury.
- The *jaw-thrust* with cervical spine immobilization is used for opening airway without tilting the head or moving the neck if a neck injury is suspected - after two unsuccessful attempts, use *head tilt-chin lift* to open the airway.

Breathing: Check for Breathing.

- **Look, Listen, and Feel** for breathing. Check for breathing by looking for chest rise, listening and feeling for airflow through victim’s nose and mouth.
- The best way to give mouth-to-mouth breaths is seal your mouth over the victim’s mouth, pinch the nose and give 2 breaths, watching for chest rise.
- The best way for a rescuer to know that a rescue breath is effective – the rescuer should watch for visible chest rise.
- Some victims may demonstrate agonal gasps for several minutes after a cardiac arrest, but these gasps are too slow and too shallow and will not maintain oxygenation. For this reason, the rescuer needs to open the airway and give 2 breaths.

Circulation: Check for a Pulse.

Push Hard. Push Fast. Allow for Full Chest Recoil. Minimize Interruptions. Avoid Hyperventilation.

- You should start cycles of chest compressions and breaths when the victim is unresponsive, is not breathing adequately, and does not have a pulse.
- Proper compression technique requires the right rate and depth of compressions, as well as full chest recoil. Take your weight off your hands and allow the chest to come back to its normal position. Full chest recoil maximizes the return of blood to the heart after each compression.
- Minimizing interruptions in chest compressions will increase the victim’s chances of survival.
- The rate of performing chest compressions for a victim of any age (adult, child and infant) is at a rate of 100 compressions per minute.
- The best way to describe how you and a second rescuer can give CPR to an infant together using the 2-thumbs encircling hands technique; you switch to cycles of 15 compressions and 2 breaths

with one rescuer giving chest compressions positioned at the infant's toes and the other rescuer giving breaths positioned at the infant's head.

Defibrillation: Attach the Automated External Defibrillator (AED).

- The probability of successful defibrillation diminishes rapidly over time. The earlier defibrillation occurs, the higher the survival rate.
- The four common steps of operating an AED are:
 1. Power on the AED.
 2. Attach pads to the victim.
 3. Clear the victim and allow the AED to analyze the rhythm.
 4. Clear the victim and deliver shock, if advised.
- If you touch the victim while the AED is delivering a shock, the AED will shock you while it is shocking the victim.
- If the AED does not detect a rhythm requiring a shock (“no shock indicated” or “no shock advised” message), leave the electrode pads attached on the victim's chest and continue CPR, beginning with compressions.
- For adult victims (age over 8), use ONLY adult AED pads and system. Do NOT use child pads for adult victims because the smaller shock may not be effective.
- After you power on an AED and attach the pads to the victim, next step is to clear the victim so the AED can analyze the heart rhythm.

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) – Begin CPR. When you open the airway, look for and remove the object (if seen) before giving rescue breaths.

HANDS-ONLY CPR

Hands-Only CPR has been widely publicized by the AHA as an appropriate bystander response for adult victims of out-of-hospital, witnessed, sudden cardiac arrest. Hands-Only CPR is CPR without breathing.

Two simple steps:

1. Call 911
2. Push hard and fast in the center of the chest

Hands-Only CPR is NOT recommended for:

1. Unresponsive infants and children
2. Victims of
 - Drowning
 - Trauma
 - Airway obstruction
 - Acute respiratory diseases
 - Apnea, such as associated with drug overdose

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