

The ABC & D of CPR

Age	Determine Responsiveness	Call 9-1-1	Initial Breaths	Signs of Circulation	Compressions	Compressions: Respirations	Rescue Breathing
Infant Birth-1 yr.	Are you OK?	If alone, call out for "help." Begin 1 minute of rescue support If available, 2nd rescuer activates EMS	Two Breaths 2 sec per breath	Effective breathing, Coughing, Movement Brachial Artery	Two fingers ½ - 1 inch 100 x minute Center of chest 1 finger below nipple line	5:1 one-rescuer 5:1 two-rescuer After 20 cycles reassess pulse, then every few minutes.	If alone, after 1 minute of rescue support Activate EMS! Phone 9-1-1 1 breath every 3 seconds 20 breaths per minute
Child 1-8 yr.	Are you OK?	If alone, call out for "help." Begin 1 minute of rescue support If available, 2nd rescuer activates EMS.	Two Breaths 2 sec per breath	Effective breathing, Coughing, Movement Carotid Artery	Heel of one hand 1 - 1½ inches 100 x minute Center of chest between the nipples	5:1 one-rescuer 5:1 two-rescuer After 20 cycles reassess pulse, then every few minutes.	If alone, after 1 minute of rescue support Activate EMS! Phone 9-1-1 1 breath every 3 seconds 20 breaths per minute
Adult Over 8 yr.	Are you OK?	If alone, activate EMS first! Phone 9-1-1 If available, 2nd rescuer activates EMS	Two Breaths 2 sec per breath	Effective breathing, Coughing, Movement Carotid Artery	Two hands 1½ - 2 inches 100 x minute Center of chest between the nipples	15:2 one-rescuer 15:2 two-rescuer if airway unsecured After 4 cycles reassess pulse, then every few minutes.	1 breath every 5 seconds 10-12 breaths per minute

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 (unconscious), call or send someone to call the emergency response system (EMS) - phone 9-1-1.

Airway: Open the Airway.

- Head Tilt-Chin Lift maneuver is the best way to open the airway when victim has no evidence of trauma.
- Jaw-Thrust maneuver is used for opening airway with cervical spine immobilization if a neck injury is suspected.

Breathing: Check for Breathing.

- Look, listen, and feel for breathing. Check for breathing by looking to see chest rise and fall when the victim breathes, listening and feeling for airflow through victim's nose and mouth.
- After opening the airway, check for adequate breathing. If absent or inadequate provide 2 rescue breaths. If unsuccessful (air will not go in and chest will not rise), rescuer probably failed to open the airway properly. Reposition the head and reattempt 2 slow rescue breaths.
- Ventilation volume should be enough to cause the chest to rise. Ventilations should take about 2 seconds to deliver.

Circulation: Check for Signs of Circulation including a pulse.

- Signs of Circulation: effective breathing, coughing, or movement while checking for a pulse.
- Best location for performing a pulse check for an adult is the carotid artery of the neck.
- No signs of circulation begin chest compressions.
- Compressions on the adult, two hands are placed in the center of the chest between the nipples.
- Correct technique to perform chest compressions on a child use the heel of one hand in the center of the chest between the nipples.
- Speed of compressions in the adult, child and infant is at a rate of about 100 times per minute.
- Correct ratio of compressions to ventilations for the infant or child is 5 to 1; for the adult 15:2.
- Check for signs of circulation after 1 minute of CPR and every few minutes thereafter.

Defibrillation: Attach the Automated External Defibrillator (AED). The AED is only used on an adult victim over 8 years of age.

- Immediate CPR and defibrillation within minutes (no more than 3 to 5 minutes) offer the best chance of survival in a sudden cardiac arrest.
- Immediate CPR provides a flow of oxygen-rich blood to the heart and brain and "buys time" until defibrillation.
- CPR alone may not save the life of a sudden cardiac arrest victim. Early defibrillation is needed.

IF RESCUER IS ALONE

"Phone FIRST" versus "Phone FAST"

1. If alone the rescuer phones 9-1-1 immediately after discovering unresponsiveness adult victim. The goal of "phone first" approach is fast arrival of EMS professionals able to attach and use a defibrillator.
2. If alone the rescuer calls out for "help" immediately for infants and children and begins the ABCs of CPR and then phones 9-1-1 after 1 minute of rescue support. The goal of "phone fast" approach is to deliver oxygen immediately because the most common cause of cardiac arrest in infants and children is severe airway and breathing problem or shock.

RESCUE BREATHING

- Rescue breathing (delivers oxygen to the lungs and blood) – provide rescue breathing if victim is not breathing or inadequate breathing (reflex breathing) with signs of circulation.
- With pocket mask but no oxygen provide approximately the same volume as you would with mouth-to-mouth ventilation (with a volume sufficient to make the chest rise) and deliver the breaths over 2 seconds.
- Ventilation volume should be enough to cause the chest to rise.
- If victim's stomach is inflating (swelling), the cause is the rescuer delivering ventilations too quickly and too forcefully.
- For an adult, provide rescue breathing at a rate of 1 breath every 5 seconds (10 to 12 breaths per minute).
- For a child, provide rescue breathing once every 3 seconds (20 breaths per minute).

FOREIGN BODY AIRWAY OBSTRUCTION

- Conscious, choking adult becomes unconscious and collapses during abdominal thrusts. After you activate the EMS system, lower the victim to the ground, open the airway with a tongue-jaw lift, perform a finger sweep, open the airway, and check for breathing. If the victim is not breathing adequately, attempt rescue breathing.
- Child coughing develops severe breathing distress characterized by high-pitched sound when child breathes in, cough becomes weaker and ineffective. Child develops bluish color. These are signs of – Severe or complete airway obstruction with inadequate air exchange. Begin abdominal thrusts.
- Responsive child is struggling to breathe and holding her throat. Begin abdominal thrusts until object is removed or child becomes unconscious.

Stroke Warning Signs – Phone 9-1-1

- Sudden weakness or numbness of the face, arm, or leg on one side of the body
- Sudden dimness or loss of vision, particularly in one eye
- Loss of speech, or trouble talking or understanding speech
- Sudden, severe headache with no apparent cause
- Unexplained dizziness, unsteadiness or sudden falls, especially along with any of the previous symptoms

♥ Call 9-1-1 if you see or have any of these symptoms. Treatment can be more effective if given quickly. Every minute counts!



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Heart Attack Warning Signs – Phone 9-1-1

- Uncomfortable pressure, fullness, squeezing, or pain in the center of the chest lasting more than a few minutes or that goes away and comes back
- Pain spreading to the shoulders, neck, lower jaw, or arms
- Chest discomfort with lightheadedness, fainting, sweating, nausea, or shortness of breath
- Victim denial - may wait for hours before seeking emergency help

♥ Call 9-1-1 if you see or have any of these symptoms. Treatment can be more effective if given quickly. Every minute counts!

Less Common Heart Attack Warning Signs – Phone 9-1-1

- Atypical chest pain, stomach or abdominal pain
- Nausea or dizziness (without chest pain)
- Shortness of breath and difficulty breathing (without chest pain)
- Unexplained anxiety, weakness or fatigue
- Palpitations, cold sweat or paleness

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POINTS TO REMEMBER

- **Cardiac Arrest:** Severe airway and breathing problems or shock precede most cardiac arrests in children; in adults, a heart attack precedes most cardiac arrests. Cessation of a functional heartbeat.
- **Cardiopulmonary Resuscitation:** CPR is simply pumping and blowing. Chest compressions and rescue breathing provides oxygen to the heart and brain.
- **Chain of Survival:** Links in a chain to describe actions to save an adult victim of cardiac arrest – (1) early access to 9-1-1, (2) early CPR, (3) early defibrillation, and (4) early advanced care.
- **Heart Attack:** Adult victim complains of vague but severe pressure in the chest that becomes pain in the back. Victim feels nauseated, dizzy, and sweaty but denies having a heart attack - Tell victim to lie down or sit quietly, then phone 9-1-1 immediately.
- **Injuries** are the leading cause of death in children and young adults.
- **Recovery Position:** Victim breathing with signs of circulation, place in recovery position and monitor breathing.
- **Rescue Breathing:** Delivers oxygen to the lungs and blood.
- **Stroke:** Stroke is a major cause of disability and death in the United States. The most powerful modifiable risk factor for stroke is untreated high blood pressure (hypertension).
- **Two Rescuer CPR:** Best way to determine if 2nd rescuer is compressing with enough force and depth is for 1st rescuer to check for a pulse with each chest compression.

