

2015 CPR Matrix



Layperson CPR and AED

The following steps are the same when providing care for adults, children, and infants.

► CPR

1. Make sure the scene is safe!
2. Check for responsiveness—tap victim’s shoulder and shout “Are you OK?”
3. Shout for nearby help.
 - If alone, call 911 (use mobile device if available) and retrieve an AED, if available. Then proceed to Step 4.
 - If a bystander arrives, have him or her call 911 and retrieve an AED, then proceed to Step 4.
4. Check for no breathing or gasping for 5–10 seconds.
 - If no breathing or only gasping, begin chest compressions.
 - If breathing but not responding, place the victim in the recovery position to keep the airway open and monitor the victim for changes.
5. Provide chest compressions:
 - Give 30 chest compressions.
 - Hand placement and depth should be appropriate for the patient’s age.
6. Open the airway:
 - Tilt the victim’s head back and lift the chin.
7. Give 2 breaths:
 - Each breath lasts 1 second and should produce visible chest rise.
8. Continue CPR until an AED is available, EMS personnel take over, or the victim starts to move. **Note:** It is acceptable to do hands-only (compression-only) CPR until EMS arrives.

► AED Use

1. For an unresponsive, nonbreathing victim, perform CPR as described previously and apply an AED as soon as one is available.
2. Turn on the device and follow the prompts.
3. Place the pads on the victim’s bare, dry chest.
4. Allow the device to analyze the victim’s heart rhythm.
5. Provide a shock (if indicated) and immediately resume CPR, starting with chest compressions.
6. Perform 2 minutes of CPR (5 cycles of 30 compressions and 2 breaths).
7. Repeat Steps 4 through 6 until EMS personnel take over or the victim starts to move.

More Detail for Layperson CPR

	Adult (Older Than 8 Years)	Child (1–8 Years)	Infant (Birth–1 Year)
Compressions	2 hands 30 compressions Rate at least 100 to 120/min Depth: push hard (2 to 2.4 inches)	1 or 2 hands 30 compressions Rate at least 100 to 120/min Depth: push hard (at least one third of the anterior-posterior diameter of the chest—about 2 inches)	2 fingers 30 compressions Rate at least 100 to 120/min Depth: push hard (at least one third of the anterior-posterior diameter of the chest—about 1½ inches)
Airway	Head tilt-chin lift	Head tilt-chin lift	Head tilt-chin lift
Breathing	Pinch nose and breathe slowly into mouth 2 breaths (1 second each) Continue until visible chest rise occurs	Pinch nose and breathe slowly into mouth 2 breaths (1 second each) Continue until visible chest rise occurs	Breathe into mouth and nose 2 breaths (1 second each) Continue until visible chest rise occurs
AED	Adult electrode pads	Pediatric pads, if available; if none, use adult pads	Pediatric pads, if available; if none, use adult pads

* Note: If you are the lone rescuer for a pediatric/infant unwitnessed cardiac arrest, it is acceptable to do 2 minutes of CPR; then call 911.

Health Care Provider CPR and AED

The following steps are the same when providing care for adults, children, and infants.

► CPR

1. Make sure the scene is safe!
2. Check for responsiveness and look at the chest for signs of breathing.
 - If the patient is unresponsive and has normal breathing, place the victim in the recovery position, have someone call 911 (use mobile device if available), and monitor the victim for changes.
 - If the patient is unresponsive and has abnormal breathing (not breathing, or only gasping), check for a pulse, have someone call 911, and retrieve an AED if available.
3. If a pulse is present but the unresponsive patient is not breathing, perform rescue breathing:
 - Give 1 breath every 5 to 6 seconds for adults; give 1 breath every 3 seconds for children and infants.
 - Each breath lasts 1 second and should produce visible chest rise.
4. If a pulse is absent, begin CPR:
 - Provide chest compressions:
 - Give 30 chest compressions; hand placement and depth should be appropriate for the patient's age.
 - Open the airway:
 - Tilt the patient's head back and lift the chin.
 - Give 2 breaths:
 - Each breath lasts 1 second and should produce visible chest rise.
5. Continue CPR until an AED is available, ALS personnel take over, or the patient starts to move. **Note:** It is acceptable to do hands-only (compression-only) CPR until EMS arrives.

► AED Use

1. For an unresponsive, nonbreathing patient, apply the AED as soon as one is available.
2. Turn on the device and follow the prompts.
3. Place the pads on the patient's bare, dry chest.
4. Allow the device to analyze the heart rhythm.
5. Provide a shock (if indicated) and immediately resume CPR, starting with chest compressions.
6. Perform 2 minutes of CPR (5 cycles of 30 compressions and 2 breaths).
7. Repeat Steps 4 through 6 until ALS personnel take over or the patient starts to move.

More Detail for Health Care Providers

	Adult (Puberty or Older)	Child (1 Year- Puberty)	Infant (Birth-1 Year)
Compressions (one rescuer)	2 hands 30 compressions Rate at least 100 to 120/min Depth: push hard (2 to 2.4 inches)	1 or 2 hands 30 compressions Rate at least 100 to 120/min Depth: push hard (at least one third of the anterior-posterior diameter of the chest—about 2 inches)	2 fingers 30 compressions Rate at least 100 to 120/min Depth: push hard (at least one third of the anterior-posterior diameter of the chest—about 1½ inches)
Compressions (two rescuers)*	30 compressions Switch rescuers every 2 min	15 compressions Switch rescuers every 2 min	15 compressions Switch rescuers every 2 min
Airway	Head tilt-chin lift Jaw thrust (spinal injury)	Head tilt-chin lift Jaw thrust (spinal injury)	Head tilt-chin lift Jaw thrust (spinal injury)
Breathing†	Pinch nose and breathe slowly into mouth 2 breaths (1 second each) Continue until visible chest rise occurs	Pinch nose and breathe slowly into mouth 2 breaths (1 second each) Continue until visible chest rise occurs	Breathe into mouth and nose 2 breaths (1 second each) Continue until visible chest rise occurs
AED	Adult electrode pads	Pediatric pads, if available; if none, use adult pads	Pediatric pads, if available; if none, use adult pads

* For newborns (neonate), perform two-rescuer CPR using the two-thumb, encircling-hands technique. For a primary cardiac event, give 15 compressions and 2 breaths.

† After the airway is secured with an advanced device, give one breath every 6 seconds (10 breaths/min); do not synchronize compressions and breaths.