

CARDIOPULMONARY RESUSCITATION (CPR)

1. Level: EMT, AEMT, Paramedic, RN
2. Clinical Indications: Basic life support for the patient in cardiac arrest
3. Procedure:
 - 3.1. Assess the patient's level of consciousness (shake and shout)
 - 3.2. If no response, open the patient's airway with the head-tilt, chin-lift. If the patient may have sustained C-spine trauma, use the modified jaw thrust while maintaining immobilization of the C-spine. For infants, positioning the head in the sniffing position is the most effective method for opening the airway.
 - 3.3. Check for pulse (carotid for adults and older children, brachial for infants) for at least 10 seconds.
 - 3.4. If no pulse, begin chest compressions based on the chart below:

Age	Location	Depth	Rate
Infant	Over sternum, between nipples (inter-mammary line), 2-3 fingers	At least one third the AP diameter of chest About 1½ inches (4 cm)	100-120/minute Asynchronous ventilations at 10/minute
Child	Over sternum, just superior to xiphoid process, heel of one hand (two hands for larger children)	At least one third the AP diameter of chest About 2 inches (5 cm)	100-120/minute Asynchronous ventilations at 10/minute
Adult	Over sternum, just superior to xiphoid process, hands with interlocked fingers	At least 2 inches (5 cm) while avoiding excessive chest compression depths (greater than 2.4 inches [6 cm])	100-120/minute Asynchronous ventilations at 10/minute or passive oxygenation (see below)

4. Considerations:
 - 4.1. High quality CPR with minimal interruptions have a greater impact on patient outcome than ET, drug, or other ACLS interventions
 - 4.2. Reassess pulse every two minutes.
 - 4.3. The most effective chest compressions are produced if the rescuers push hard, push fast at a rate of 100-120 per minute.
 - 4.4. Allow full chest recoil between compressions.
 - 4.5. Rescuers should change "compressor" roles about every 2 minutes.
 - 4.6. Limit interruptions in chest compressions to less than 10 seconds.
 - 4.7. After an advanced airway is in place, deliver continuous chest compressions without pause for ventilation. Ventilations should be delivered once every six seconds (10/minute).
 - 4.8. AVOID HYPERVENTILATION!
 - 4.9. A rapid increase in ETCO₂ may be the first sign of spontaneous circulation.