**Purpose:**
To attempt to establish return of spontaneous circulation and respiration in a patient in cardiorespiratory arrest.

**Indications:**
Patient is in cardiorespiratory arrest.

**Advantages:**
Provides circulation and respiration during cardiorespiratory arrest

**Disadvantages:**
None

**Complications:**
Possible chest trauma

**Contraindications:**
Patient has pulse and respiration
Patient meets any of the following criteria: valid DNR or POLST order, decapitation, rigor mortis, extreme dependent lividity, tissue decomposition, fire victim with full thickness burns to 90% or greater body surface area, or patient meets hypothermia criteria for withholding resuscitative measures

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**Flowchart: Cardiopulmonary Resuscitation Practical Skills**

1. Establish unresponsiveness
   - Breathing normally?
     - Yes: Refer to appropriate protocol
     - No: Check for pulse, Max 10 seconds

2. Any signs of circulation?
   - Yes: Open airway; provide 1 rescue breath every 5-6 seconds (adult) or every 3-5 seconds (child)
   - No: Initiate compressions and ventilation at an appropriate rate and depth

3. **Newborn < 1 month**
   - Place 2 thumbs together over lower 1/2 of sternum, encircling chest with both hands
   - Compress with thumbs and fingers at a rate of at least 100 beats per minute to depth of 1/3 posterior/anterior dimension. *Allow chest to fully recoil after each compression.*

4. **Infant: 1 month < 1 year**
   - Place 2 thumbs together over lower 1/2 of sternum, encircling chest with both hands
   - Compress with thumbs and fingers at a rate of at least 100 beats per minute to depth of 1/3 posterior/anterior dimension. *Allow chest to fully recoil after each compression.*

5. **Child: <1 < 12 years**
   - Place heel of 1 or 2 hands on middle of sternum
   - Compress at a rate of at least 100 beats per minute to depth of 1/3 posterior/anterior dimension. *Allow chest to fully recoil after each compression.*

6. **Adult: >12 years**
   - Place heel of both hands on lower 1/2 of sternum
   - Compress at a rate of at least 100 beats per minute to depth of at least 2 inches. *Allow chest to fully recoil after each compression.*

7. Compression to ventilation ratio
   - Newborn < 1 month: 3:1
   - Infant: 1 month < 1 year: 3:1
   - Child: <1 < 12 years: 15:2
   - Adult: >12 years: 30:2

8. Check for signs of ROSC: no more often than every 2 minutes and maximum 10 seconds; if none, continue compressions and ventilation
NOTES:

- Placement of an advanced airway should be deferred until 3 cycles of CPR have been administered (approximately 6 minutes).
- The rescuer performing chest compressions should switch at least every 2 minutes.
- All ventilations should be 1 second in duration.
- Chest compressions should be done as follows: **push hard and fast, release completely, minimize interruptions**.
- The system goal is hands on chest more than 90% of time; minimum compression depth of 2 inches in adults 90% of the time.
- The risk and benefit of providing CPR in a moving vehicle must be weighed on a case by case basis.
  - Providing compressions in a moving vehicle exposes the rescuer to potential injury.
  - Chest compressions in a moving vehicle are known to be less effective.