

# **CPR**

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# **BCLS**

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## The publication of the 2015 AHA Guidelines for CPR.

❖ 1960 Kouwenhoven, et al documented :  
**14** patients who survived cardiac arrest with the application of *closed chest cardiac massage.*

American Heart  
Association



*Learn and Live*

❖ **Rates of survival  $\leq 6\%$  .**

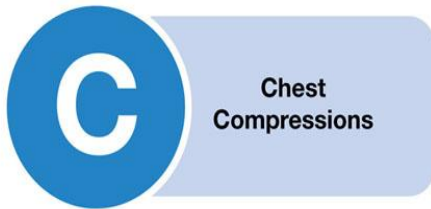


❖ **The highest survival rates from cardiac arrest are reported among patients of all ages who have :**  
✓ **a witnessed arrest and an initial rhythm of ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT).**



# BLS for Healthcare Providers Quick Reference

C-A-B (Not A-B-C)



KJ0901 3/11 © 2011 American Heart Association Printed in the USA

❖ cardiac arrest diagnosis :  
any unresponsive adult victim with  
no breathing or no normal breathing

CA → Help\*\* + CPR

❖ The rescuer should not attempt to  
check for a pulse

❖ C-A-B, chest compressions will be  
initiated sooner and ventilation only  
minimally delayed until completion of  
the first cycle of chest compressions .

## CHECK RESPONSE



Look, listen and feel for  
breathing and pulse



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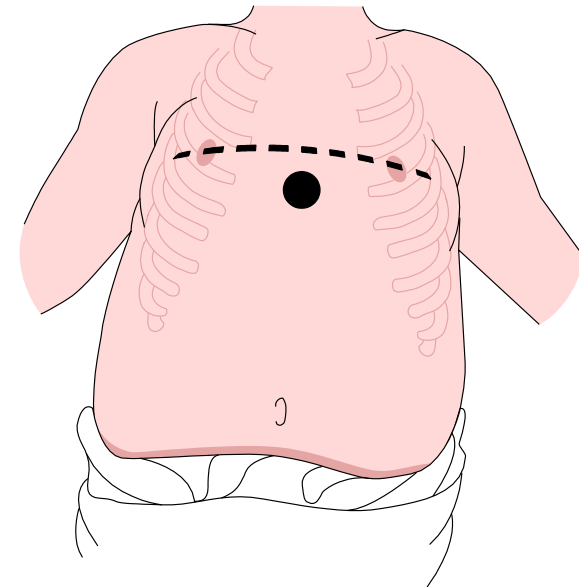
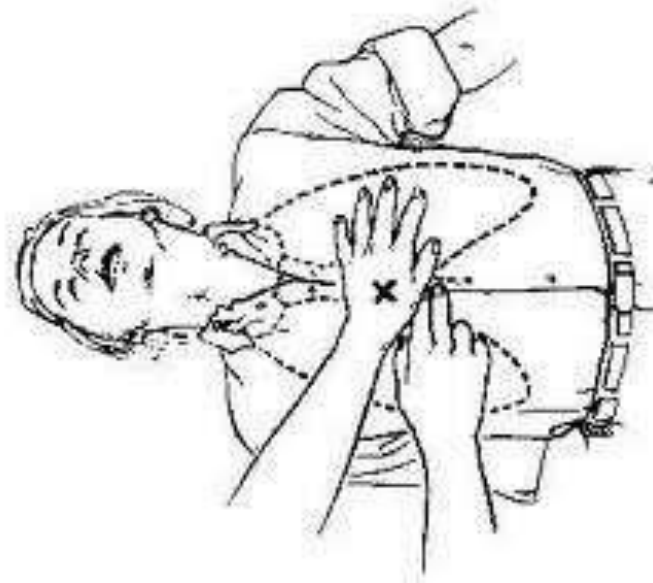
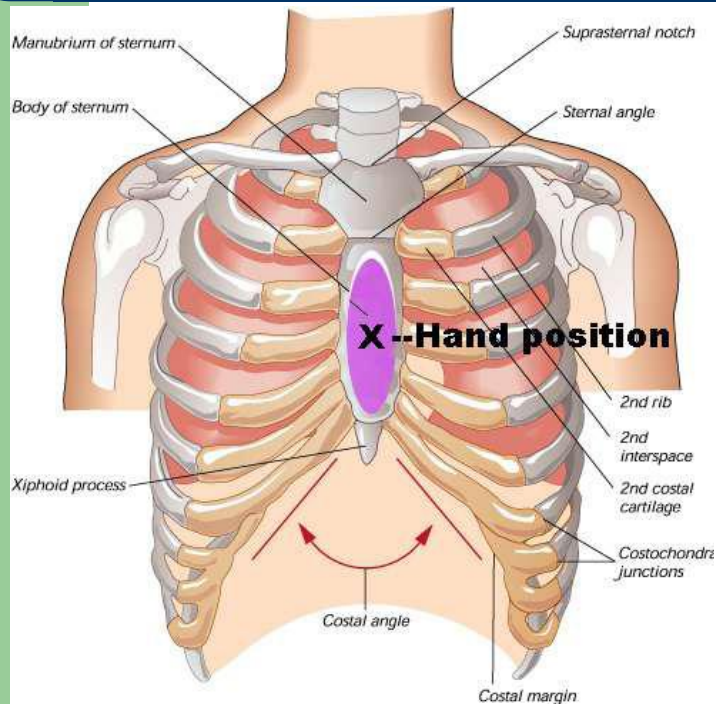
ADAM.

ADAM.

# Chest Compression :

Prior to beginning compressions :

- victim must be placed on his back on a hard surface
- backboard may be placed behind the victim.



-Compressions must be over the sternum two fingers over the xiphoid



## Chest Compression :



- Compressions should be done in a rocking movement, using the body to apply pressure rather than just the arms.
- The arm should not flex during compressions but should remain locked.



## compressions :

**Rate** : Begin CPR with 30 compressions

**AT LEAST 100 per minute, hard and fast.**

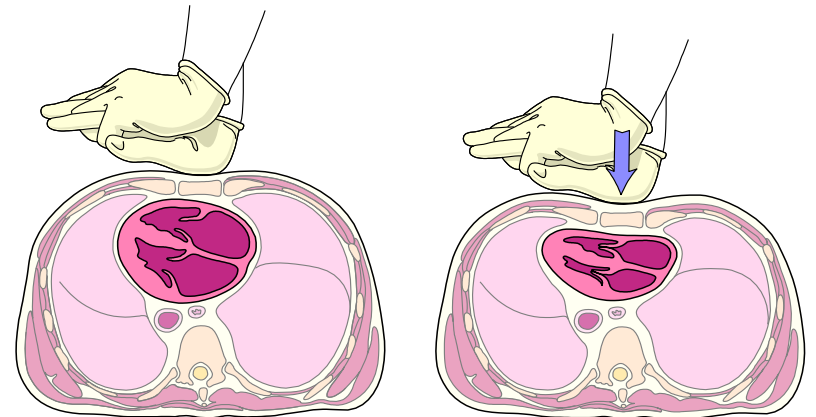
This rate corresponds roughly to the beat of the Bee Gees' song "Staying Alive" (Dum, dum, dum, dum, stayin' alive, stayin' alive....)

## **Depth** :

**Adults : AT LEAST 2 INCHES (5cm)**

**Infants : one-third** the anteriorposterior diameter of the chest.

- The chest should be allowed to completely recoil between each compression to allow the heart to refill
- But the rescuer should keep the hands in contact with the chest

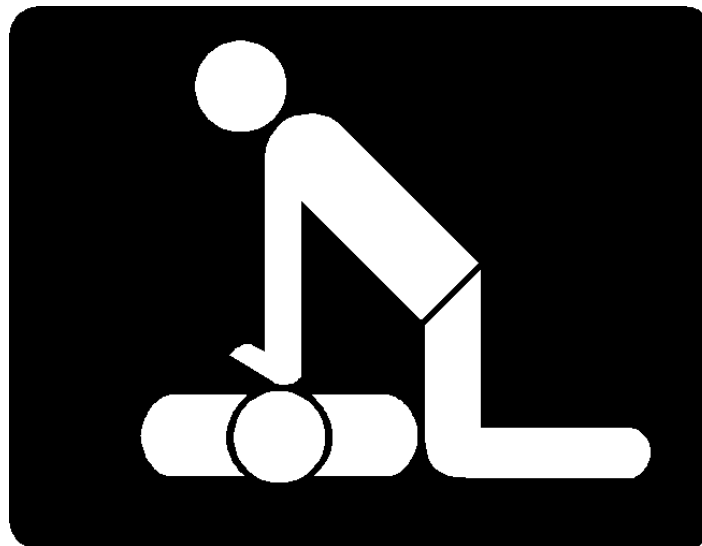





**Effective CPR provides  $1/4$  to  $1/3$  normal blood flow**  
**There is an increased focus on methods to ensure that high-quality CPR is performed**

**Adequate chest compressions :**

- **Appropriate depth and rate**
- **Complete recoil of the chest after each compression**
- **Minimizing any pauses in compressions**
- **Avoiding excessive ventilation**



- Determine Unresponsiveness (shake and shout), if no response  
Check for no breathing or normal breathing  
“look, listen, and feel” (minimum 5 seconds; maximum 10 seconds)
  - Ask for help and call for an AED/defibrillator
- 

- 30 compressions (Acceptable <18 seconds for 30 compressions)
- Give 2 breaths (1 second each)

**adult : one or two rescuer , child one rescuer :**

**30 chest compressions : 2 breaths (5 cycles for 2 minutes)**

**Child 2 rescuer:**

**15 compressions: 2 breaths (5 cycles per minute)**

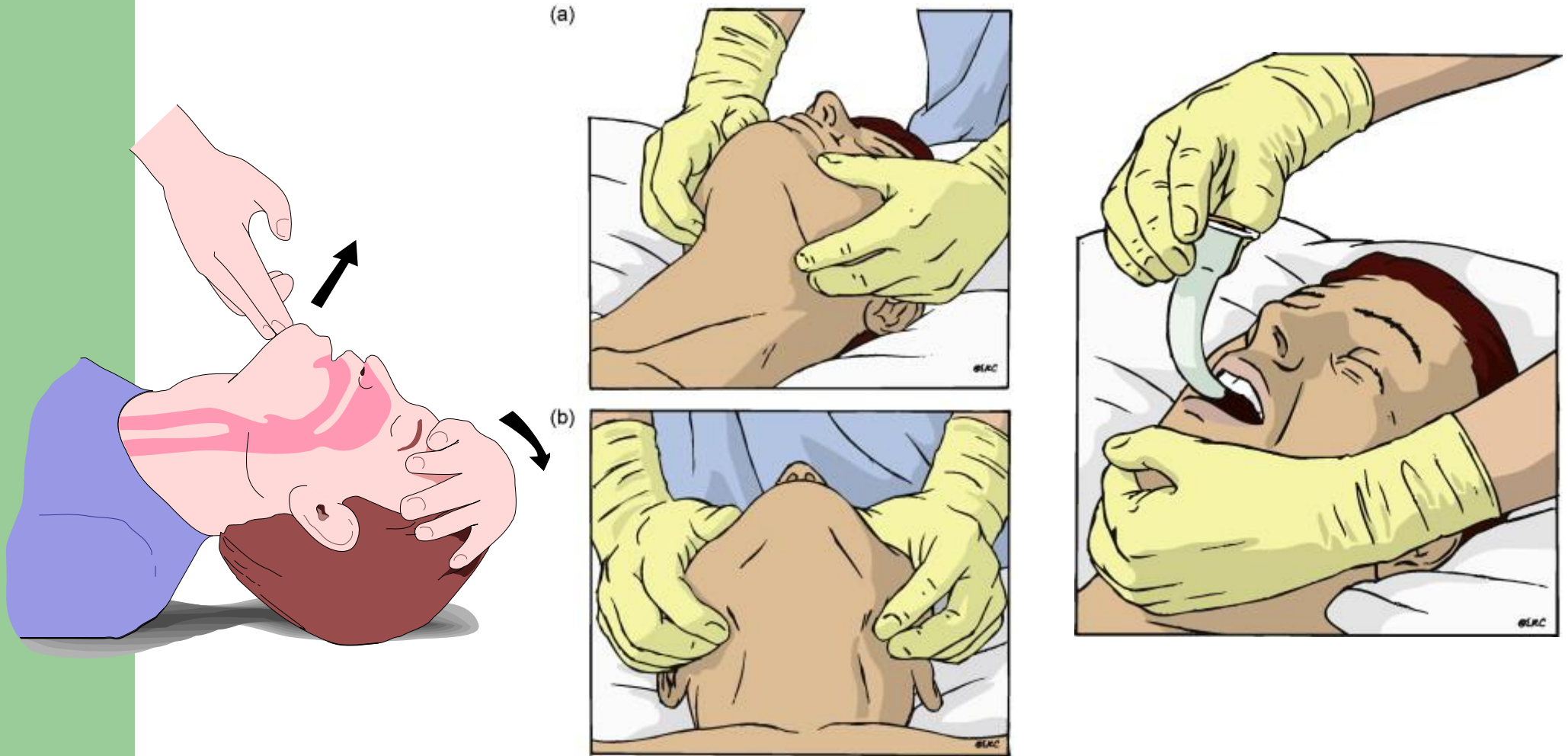
**❖ Reassess after every 5 cycles**

**<10 seconds for pulse checks or rescue breaths**

**❖ Continue until help arrives or victim recovers**

# A - B

- Head tilt–chin lift (HCP suspected trauma: jaw thrust)

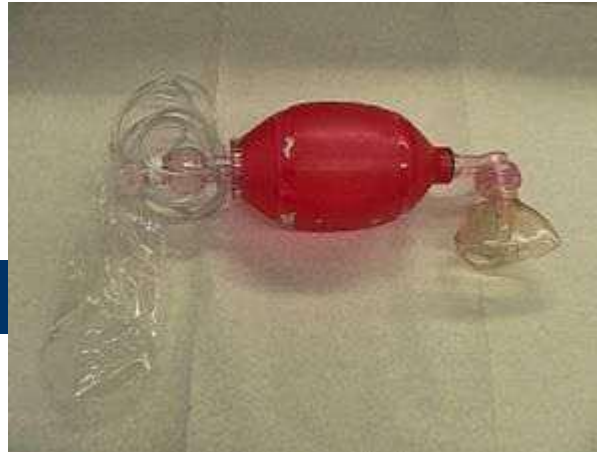


# A - B

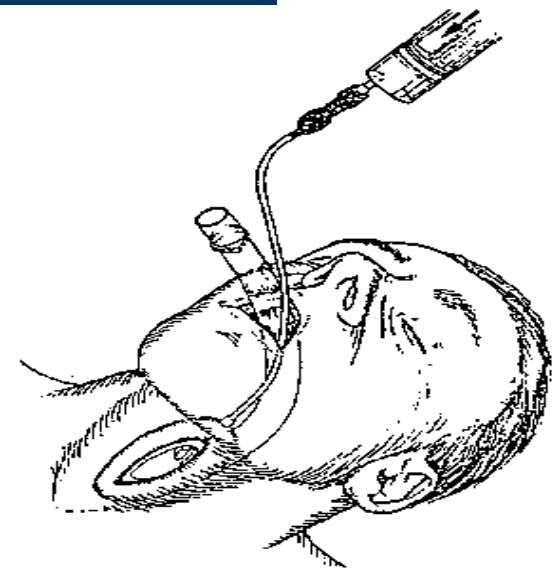
- 1 breath every 6-8 seconds (8-10 b/min)
- Rescue breaths contain **16% oxygen (21%)**



## A - B



- With advanced airway- no pause
- use of a supraglottic device in CA is quick and easy :  
(Laryngeal Masc)
- Avoid excessive ventilations
- with continuous chest compressions*



## **When Can I Stop CPR?**

- Victim revives
- Trained help arrives
- Too exhausted to continue
- Unsafe scene

- Cardiac arrest of longer than 30 minutes (controversial)

## **Why CPR May Fail**

- Delay in starting
- Improper procedures (ex. Forget to pinch nose)
- No ACLS follow-up and delay in defibrillation
  - ❖ Only 15% who receive CPR live to go home
  - ❖ Improper techniques



# A-B-C :

- ✓ Adults with respiratory arrest, such as related to :  
drug overdose, drowning.
- ✓ Newborns.

## Neonatal Resuscitation

- The etiology of neonatal arrests is nearly always asphyxia.  
→ A-B-C unless there is a known cardiac etiology
- compression-to-ventilation ratio (3:1)  
higher ratio (15:2) If the arrest is known to be of cardiac etiology

1. Shout for **help**
  2. Immediately begin CPR with **compressions** and continue at rate of 100 per minute.
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3. Open airway, ventilate twice and continue CPR at rate of:  
**30:2**                      or                      **15:2**  
for at least **5** cycles  
**Reassess after every 5 cycles**

4. **Continue** until help arrives, patient recovers, or physically unable to continue.

**1. What are 2 ways to open the victim's airway?**

**Head tilt-chin lift and jaw thrust**

**2. What is the RATE of compressions for Adults, Children and Infants?**

**At least 100/minute**

**3. If the chest does not rise when you give a breath, what should you do?**

**reposition the head and try again**

**4. If you suspect an injury, how do you open the victim's airway?**

**jaw thrust**

**5. Where do you place your hands when doing chest compressions on a child and adult**

**center of the victim's bare chest between the nipples**

**6. Where do you check for the pulse on an INFANT?**

**brachial artery or the femoral artery**