

Basic Life Support CPR





Introduction

- ◆ Mr. K
- ◆ ASU basketball game
- ◆ Student: You saved my child's life
- ◆ Introduce Annie



CPR Training Precautions

- ◆ Do not practice on a person
- ◆ Clean faces properly after each use
 - ◆ Alcohol
 - ◆ Bleach wash



Do Not Use A Manikin If:

- ◆ Cold or sore throat
- ◆ Known positive hepatitis B or C
- ◆ Infected by HIV or AIDS
- ◆ You have an infection



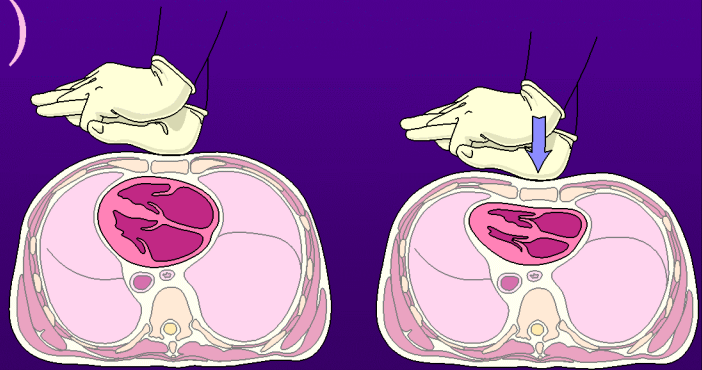
CPR

- ◆ Combines rescue breathing and chest compressions
- ◆ Revives heart (cardio) and lung (pulmonary) functioning
 - ◆ Use when there is no breathing and no pulse
- ◆ Provides O₂ to the brain until ACLS arrives



How CPR Works

- ◆ Effective CPR provides 1/4 to 1/3 normal blood flow
- ◆ Rescue breaths contain 16% oxygen (21%)





Start CPR Immediately

- ◆ Better chance of survival
- ◆ Brain damage starts in 4-6 minutes
- ◆ Brain damage is certain after 10 minutes without CPR



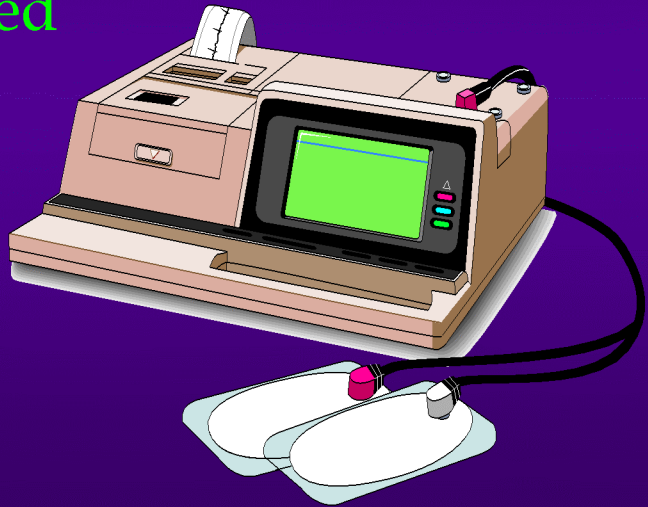
Do Not Move the Victim Until CPR is Given and Qualified Help Arrives...

- ◆ unless the scene dictates otherwise
 - ◆ threat of fire or explosion
 - ◆ victim must be on a hard surface
 - ◆ Place victim level or head slightly lower than body



Even With Successful CPR, Most Won't Survive Without ACLS

- ◆ ACLS (Advanced Cardiac Life Support)
- ◆ ACLS includes defibrillation, oxygen, drug therapy





Survey The Scene, then: RAP

◆ R -

Responsiveness

◆ Tap shoulder
and shout "Are
you ok?"





RAP

- ◆ A - Activate EMS (if unresponsive)
- ◆ YOU - call 911 - come back and let me know what they said (another can stay by the phone)
- ◆ You may have to make the call



911



- ◆ P - Position on back
 - ◆ All body parts rolled over at the same time
 - ◆ Always be aware of head and spinal cord injuries
 - ◆ Support neck and spinal column



ABCD

- ◆ **Airway**
- ◆ **Breathing**
- ◆ **Circulation - Bleeding**
- ◆ **Disability** (keep this in mind from the beginning)
 - ◆ If victim is unconscious but does display vital signs, place on left side



Checking Vital Signs

◆ A - Airway

◆ Open the airway

◆ Head tilt chin lift



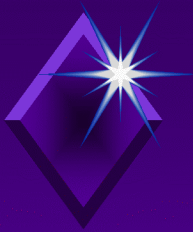


B - Check For Breathing

◆ Look, listen and feel for breathing

◆ No longer than 10 seconds





Breathing

- ◆ If the victim is not breathing, give two breaths (1 second or longer)
 - ◆ Pinch the nose
 - ◆ Seal the mouth with yours
- ◆ If the first two don't go in, re-tilt and give two more breaths (if breaths still do not go in, suspect choking)





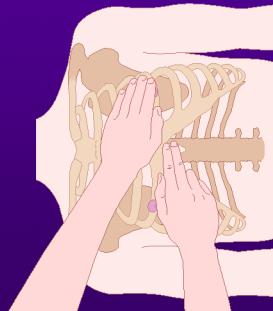
Breathing: Mouth To Nose (when to use)

- ◆ Can't open mouth
- ◆ Can't make a good seal
- ◆ Severely injured mouth
- ◆ Stomach distension
- ◆ Mouth to stoma
(tracheotomy)



Compressions

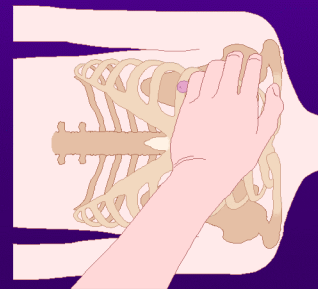
- ◆ After giving breaths...
- ◆ Locate proper hand position for chest compressions
 - ◆ Place heel of one hand on center of chest between the nipples **OR**





Compressions

- ◆ Using both hands, give 30 chest compressions
 - ◆ Count 1, 2, 3 ...
- ◆ Depth of compressions: 1.5 to 2 inches
- ◆ For children: $\frac{1}{2}$ to $\frac{1}{3}$ of chest depth and use 1 or 2 hands (keep one hand on forehead if possible)





CPR

- ◆ After 30 chest compressions give:
- ◆ 2 slow breaths
- ◆ Continue until help arrives or victim recovers
- ◆ If the victim starts moving: check breathing



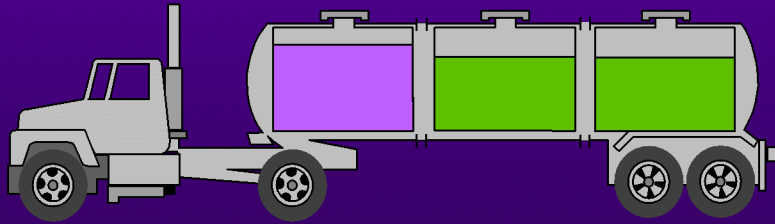
When Can I Stop CPR?

- ◆ Victim revives
- ◆ Trained help arrives
- ◆ Too exhausted to continue
- ◆ Unsafe scene
- ◆ Physician directed (do not resuscitate orders)
- ◆ Cardiac arrest of longer than 30 minutes
 - ◆ (controversial)



When to Stop CPR

- ◆ Victim revives
- ◆ Replaced by another rescuer
- ◆ Too exhausted
- ◆ Trucker





Two Partner CPR

- ◆ Rescuer 1:
 - ◆ RAPAB
- ◆ Rescuer 2:
 - ◆ place hands for compressions
- ◆ Compression rate: 30:2
- ◆ Switch off when tired
- ◆ 1 and 2.....4 and change





Checking for CPR Effectiveness

- ◆ Does chest rise and fall with rescue breaths?
- ◆ Have a second rescuer check pulse while you give compressions



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
- ◆ Terminal disease or unmanageable disease (massive heart attack)



Injuries Related to CPR

- ◆ Rib fractures
- ◆ Laceration related to the tip of the sternum
 - ◆ Liver, lung, spleen



Complications of CPR

- ◆ Vomiting
 - ◆ Aspiration
 - ◆ Place victim on left side
 - ◆ Wipe vomit from mouth with fingers wrapped in a cloth
 - ◆ Reposition and resume CPR



Stomach Distension

- ◆ **Air in the stomach**
 - ◆ Creates pressure against the lungs
- ◆ ***Prevention of Stomach Distension***
 - ◆ Don't blow too hard
 - ◆ **Slow rescue breathing**
 - ◆ Re-tilt the head to make sure the airway is open
 - ◆ Use mouth to nose method



Mouth to Mouth Barrier Devices

- ◆ Masks
- ◆ Shields





If You Are Afraid to Perform CPR

- ◆ Call EMS
- ◆ Open the airway
- ◆ Give chest compressions



Choking

- ◆ The tongue is the most common obstruction in the unconscious victim (head tilt- chin lift)
- ◆ Vomit
- ◆ Foreign body
 - ◆ Balloons
 - ◆ Foods
- ◆ Swelling (allergic reactions/ irritants)
- ◆ Spasm (water is inhaled suddenly)





How To Recognize Choking

- ◆ Can you hear breathing or coughing sounds?
 - ◆ High pitched breathing sounds?
- ◆ Is the cough strong or weak?
- ◆ Can't speak, breathe or cough
- ◆ Universal distress signal (clutches neck)
- ◆ Turning blue



Recognizing Choking #2

- ◆ A partial airway obstruction with poor air exchange should be treated as if it were a complete airway blockage.
- ◆ **If victim is coughing strongly, do not intervene**



Conscious Choking

(Adult Foreign Body Airway Obstruction)

- ◆ Give 5 abdominal thrusts (Heimlich maneuver)
 - ◆ Place fist just above the umbilicus (normal size)
 - ◆ Give 5 upward and inward thrusts
 - ◆ Pregnant or obese? 5 chest thrusts
 - ◆ Fists on sternum
 - ◆ If unsuccessful, support chest with one hand and give back blows with the other
- ◆ Continue until successful or victim becomes unconscious





If You Are Choking And You Are Alone

- ◆ Use fist
- ◆ Use corner of furniture
- ◆ Be creative



If Victim Becomes Unconscious After Giving Thrusts

- ◆ Call 911
- ◆ Try to support victim with your knees while lowering victim to the floor
- ◆ Assess
- ◆ Begin CPR
- ◆ After chest compressions, check for object before giving breaths





You Enter An Empty Room And Find An Unconscious Victim On The Floor

- ◆ What do you do?
- ◆ Assess the victim (RAPABC)
 - ◆ Give CPR if needed
 - ◆ After giving compressions:
 - ◆ look for object in throat
 - ◆ then give breaths



CPR for Infants (Under 1 Year of Age)

- ◆ Same procedures (RAPAB) except:
- ◆ Seal nose and mouth or nose only
- ◆ Give shallow “puffs”
- ◆





◆ RAPAB

◆ Give CPR

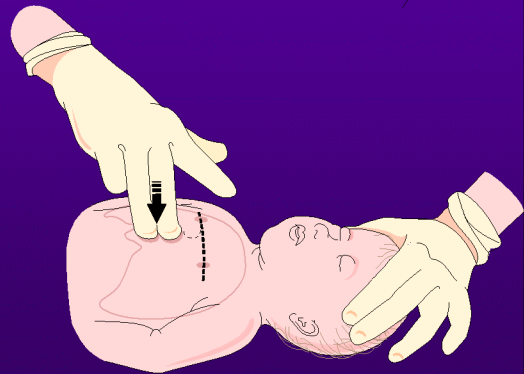
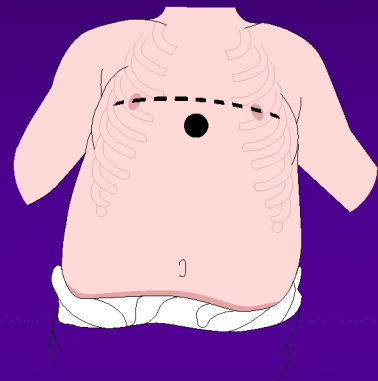
◆ Press sternum $\frac{1}{2}$ to $\frac{1}{3}$
depth of the chest

◆ Use middle and ring finger

◆ 30 compressions to 2

◆ If alone, resuscitate for 2
minutes then call 911

CPR: Infants





Choking: Conscious Infants

- ◆ Position with head downward
- ◆ 5 back blows (check for expelled object)
- ◆ 5 chest thrusts (check for expelled object)
- ◆ Repeat





Choking: Unconscious Infants

- ◆ If infant becomes unconscious:
- ◆ RAPAB
- ◆ When the first breaths don't go in, check for object in throat then try 2 more breaths.
- ◆ If neither set of breaths goes in, suspect choking
- ◆ Begin 30 compressions
- ◆ Check for object in throat (no blind finger sweep)
- ◆ Give 2 breaths



SIDS

- ◆ 5000 per year
- ◆ Affects more males than females
- ◆ No known cause
- ◆ No indication of problem
- ◆ Usually occurs during the sleep during first 6 months of life
- ◆ Place baby on back (now, side)
- ◆ Avoid “fluffy” blankets etc.