



***Basic Life Support Refresher
(BLSR) Day II***

CPR/AED

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STUDENT PERFORMANCE OBJECTIVE

- *Given a PowerPoint Presentation, the student will discuss CPR and AED standards according to the standards of the American Heart Association BLS for Healthcare Providers Refresher Course. Students will need to demonstrate CPR and AED skills, with proficiency, to the satisfaction of the FRA staff.*

Overview

**CPR Facts/Statistics*

**2-Rescuer CPR*

**Chain of Survival*

**AED*

**1-Rescuer Adult/Child CPR*

**Infant CPR*

**Adult Rescue Breathing*

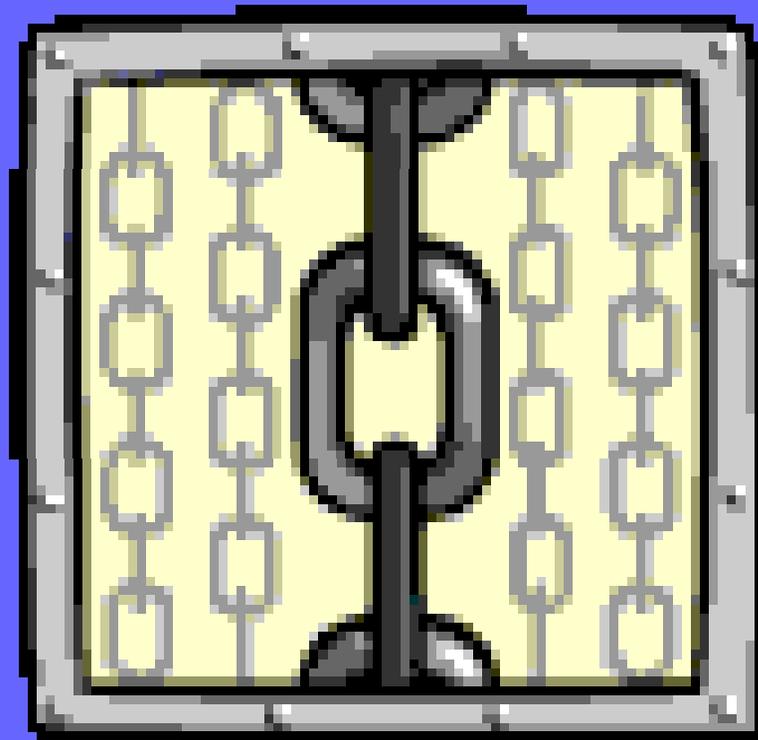
**Choking*

Let's Talk Facts...

CPR Facts & Statistics

- *CPR- Cardiopulmonary Resuscitation*
- *Helps maintain vital blood flow to the heart and brain.*
- *Increases the amount of time that an electric shock from a defibrillator can be effective.*
- *80 percent of all out-of-hospital cardiac arrests occur in private residential settings.*
- *Sudden cardiac arrest can occur after the onset of a heart attack or as a result of electrocution or near-drowning.*
- *Effective CPR, provided immediately after cardiac arrest, can double a victim's chance of survival.*

Chain of Survival



The 5 Links in the Chain of Survival

- *Recognize an Emergency - A citizen or bystander recognizes the warning signs of a heart attack, cardiac arrest, stroke, choking, or unresponsive person.*
- *Call 9-1-1 - As soon as an emergency is recognized, 911 is called. Information given will be relayed to the response team.*
- *Early CPR - With help from the dispatcher, callers can give CPR and use an AED until Advanced Care arrives.*
- *Early Defibrillation - A victim should be defibrillated immediately to allow a normal heart rhythm to resume.*
- *Early Advanced Care – Care provided by highly trained EMS personnel.*

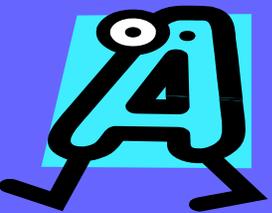
Adult CPR

1-Rescuer Adult CPR

Check for Responsiveness

AVPU

- *Alert*
- *Verbal*
- *Pain*
- *Unresponsive*



1-Rescuer Adult CPR (cont.)

ALWAYS REMEMBER YOUR ABCS



- *Airway – Open (Head Tilt/Chin Lift or Jaw Thrust)*
LLF - Look for chest rise and fall
Listen for breaths, noises, and airway obstructions
Feel for breaths against your cheek
LIMIT AIRWAY CHECKS TO 10 SECS OR LESS
- *Breathing – If no breathing, administer 2 breaths with a Bag Valve Mask, ensure adequate chest rise and fall, and maintain a good seal*
- *Circulation – Check for pulse for 5-10 seconds; Carotid and Radial (same side)*

1-Rescuer Adult CPR (cont.)

- *If no pulse is present, begin CPR*
- *Ratio - 30 Compressions: 2 Breaths*
- *Depth - 1 ½- 2 inches; allow full chest recoil
-position hands between the natural nipple line*
- *No longer than 10 seconds between compressions and breaths*

Child CPR

1- Rescuer Child CPR

- *Child* – defined as age one to puberty
 - per MD Medical Protocol ages 1-12
 - lower volume of air (use smaller equipment)
- *Ratio* – 30 Compressions: 2 Breaths
- *Depth* – 1/3-1/2 depth of chest; allow full chest recoil
 - 1 or 2 hands as needed



- *If pulse is absent or less than 60 bpm, start CPR*

Rescue Breathing

Rescue Breathing with Bag Valve Mask

- *Used for victims who are not breathing or breathing is inadequate*
- *BVMs come in various sizes; use appropriate size*
- *E/C method used; provider should be positioned directly above patient's head while ventilating*
- *Deliver breath over 1 second. Too much force or administered too quickly can cause vomiting or aspiration*
- *Administer 1 breath every 5-6 seconds for Rescue Breathing. Use supplemental oxygen*

Rescue Breathing with Bag Mask (cont.)

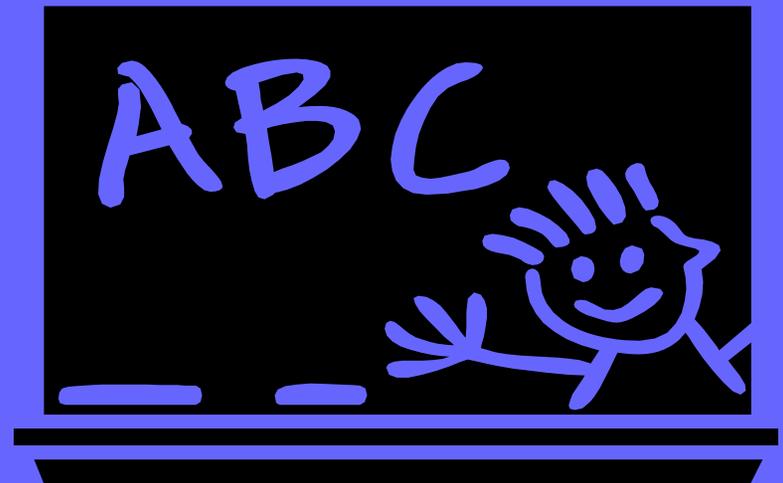
- *If chest rise/fall is absent, re-open airway and check for a good seal*
- *Infants - performed the same as an adult, however breaths are given every 3-5 seconds*

2 – Rescuer CPR

2-Rescuer CPR

- *Each rescuer has a specific roll – one performs chest compressions, while the other performs ventilations, maintaining an open airway*
- *CPR ratios – 30:2 for adults, 15:2 for child/infant*

A **V** **P** **U**



CPR with an Advanced Airway

- *2-Rescuer*
- *Compression rate is about 100 beats per minute*
- *One breath is provided every 6-8 seconds*
- *Avoid hyperventilation*
- *Do not pause compressions to provide breaths*

**Automated
External
Defibrillator**

Using the AED

- *Turn on AED*
- *Place pads on victim's bare chest, ensuring appropriate size pads for patient; children ages 1-8 should have child pads and/or Child AED*
- *Make sure no one touches the patient*
- *Semi-automatic AED will tell you when to push the shock button*
- *An AED is **ONLY** used on an unresponsive patient who is not breathing and has no pulse*

Unwitnessed vs. Witnessed Arrest

- *Witnessed Arrest – Activate AED as soon as possible*
- *Unwitnessed Arrest – Perform 2 minutes (5 cycles) of CPR before placing the AED on the victim*

AED - Special Considerations

- *Victims less than one year of age*
- *Victims with a hairy chest - hair may prevent pads from sticking*
- *Victims covered in water - move to dry area and dry patient off*
- *Victims found on or around conductive surfaces, i.e. metal/aluminum, should be removed from that area*
- *Necklaces or other body jewelry within one inch of electrode placement should be removed*

AED - Special Consideration (cont.)

- *Implanted Pacemakers and/or Automated Internal Cardioverter Defibrillators (AICD) - place pads approximately 1 inch from device. If an AICD is already in a shock sequence, allow 30 to 60 seconds for the AICD to complete the treatment cycle before delivering a shock from the AED*
- *Medicine patches in the area of AED pads - remove patch and wipe off residue before applying pads*

Infant CPR

Infant 1-Rescuer CPR

- *Infant – defined as one month to one year of age*

A V P U



- *Open Airway - Tilt the head back into the neutral or “sniffer's” position*
 - *When opening the infant’s airway, it's important not to tilt the head too far back. Overextending the neck may close off the air passage*

Infant 1-Rescuer CPR (cont.)

- *Pulse Check – Brachial pulse on side closest to rescuer
- No pulse or less than 60 bpm, start CPR*
- *Compressions - 30:2; 2 fingers between the nipple line*
- *Depth - 1/3 – 1/2 depth of chest, ensure full chest recoil*

2-Rescuer Infant CPR

- *Two main differences – Hand placements and compression/ventilation ratios*
 - *Compressions – 2 thumbs encircling hands techniques; just below the nipple line on breast bone*
 - *Depth - 1/3 – 1/2 depth of chest, ensure full chest recoil*
-15:2 ratio
- **Remember 15:2 ratios are only done for Child and Infant 2-Rescuer CPR*****

Choking

Adult/Child Choking - Responsive



- *Choking – partial or complete airway obstruction
- prevents adequate breathing*
- *Patient will present in standing or kneeling position,
generally displaying the universal sign for choking*
- *Perform abdominal thrusts, also known as the Heimlich
Maneuver*
- *Repeat until object is expelled or patient goes
unresponsive*
- *If patient is overweight or pregnant, perform chest thrusts
instead of abdominal thrusts*

Adult/Child Choking (Unresponsive)

- *If patient goes unresponsive, gently lower patient to the ground*
- *Start CPR*
- *Each time victim is ventilated, look in mouth for object. If object is visible, carefully remove*

*****DO NOT PERFORM A BLIND FINGER SWEEP*****

Infant Choking - Responsive

- *Sit/kneel with infant in your lap*
- *Hold prone, face down with head slightly lower than chest*
- *Deliver 5 back slaps forcefully, then rotating infant supine cradled in one arm, deliver 5 downward chest thrusts forcefully*
- *Repeat sequence until object is expelled or infant goes unresponsive*
- *If infant goes unresponsive, follow the same guidelines for adult/child*

Questions?

Review

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