

## BASIC LIFE SUPPORT (BLS)

**DISCIPLINE:** Fire/First Responder/Community

**DATE PREPARED:** 2/1/2023

**TIME REQUIRED:** 2-3 Hours

### OVERVIEW and PURPOSE:

- 1) The Basic Life Support (BLS): CPR and First Aid provider program is designed to provide course participants with foundational knowledge and teach skills needed to perform cardiopulmonary resuscitation (CPR) and other lifesaving skills.
- 2) During this course, participants will become familiar with the signs and symptoms associated with cardiovascular diseases such as heart attack as well as with other diseases and conditions that may also pose an immediate threat to life. Those conditions — such as shock and choking— are included in this course.

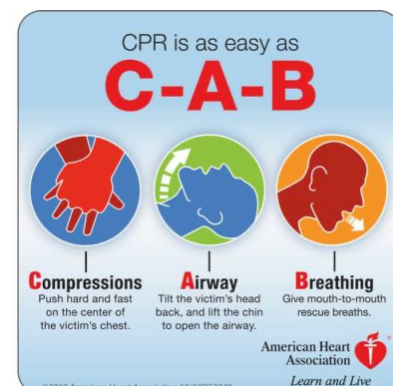
### INTRODUCTION TO BLS

- Heart disease is the number one cause of death in both men and women globally and claims more lives than all forms of cancer combined.
- Cardiac arrest may be caused by almost any known heart condition and is often fatal if appropriate steps aren't taken immediately.
- Cardiac arrest does not discriminate. It can affect all ages, genders, nationalities, and races.
- This is why early recognition and immediate cardiopulmonary resuscitation, or CPR, are crucial for survival from cardiac arrest.
- Approximately every 90 seconds, someone dies of sudden cardiac arrest.
- Sudden cardiac arrest occurs without warning, or within minutes after symptoms appear.
- The term *heart attack* is often mistakenly used to describe cardiac arrest.
  - Although a heart attack may cause cardiac arrest and sudden death, they are actually different conditions.
- Out-of-Hospital Chain of Survival



### MAIN COMPONENTS OF CPR

- Chest compressions
- Airway
- Breathing



## HIGH QUALITY CPR

- Position victim faceup on a firm, flat surface
- Start compressions within 10 seconds after recognizing cardiac arrest.
- Push hard, push fast: Compress at a rate of 100-120/min with a depth of at least:
  - **Adults:** 2 inches (5cm), but not more than 2.4 inches.
  - **Children:** 1/3 the depth of the chest (approx. 2 inches).
  - **Infants:** 1/3 the depth of the chest (approx. 1 ½ inches)
- Allow for complete chest recoil after each compression.
- Minimize interruptions in compressions (try to limit interruptions to less than 10 seconds).
- Give effective breaths. Deliver each breath over 1 second (enough to see adequate chest rise).
  - Do not over ventilate!

## Compression-to-Ventilation Ratio

	<u>Adults</u>	<u>Children</u>	<u>Infants</u>
<b>Single rescuer</b>	Perform 30 compressions and give 2 rescue breaths <b>(30:2)</b>	Perform 30 compressions and give 2 rescue breaths <b>(30:2)</b>	Perform 30 compressions and give 2 rescue breaths <b>(30:2)</b>
<b>Multi-rescuer</b>	Perform 30 compressions and give 2 rescue breaths <b>(30:2)</b>	Perform 15 compressions and give 2 rescue breaths <b>(15:2)</b>	Perform 15 compressions and give 2 rescue breaths <b>(15:2)</b>

## AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)

- Turn on AED.
- Place pads on patient's bare chest.
  - If hair: shave or place a spare set of pads on and rip hair off.
  - If pacemaker: place pads just above or just below pacemaker.
  - If submerged in water: remove person from water and place pads as directed.
  - If medication patch: remove patch and wipe area clean.
    - DO NOT TOUCH PATCH WITH BARE HANDS!
- Plug in pads.
- Follow AED voice prompts.
- Only stop CPR:
  - If patient regains consciousness.
  - When the AED is analyzing rhythms.
  - When AED is delivering a shock.
- Shockable rhythms include pulseless ventricular tachycardia (pVT) and ventricular fibrillation.