



# KnowCPR

Simple...Affordable...Fun

## STUDENT HANDBOOK

Community CPR/AED (adult, child, infant)  
&  
Universal Basic First Aid

June 2020 Edition

Know CPR  
www.KnowCPR.com  
Info@KnowCPR.com  
(703) 528-7045

*Copyright Know CPR LLC, 2020*



This Know CPR student manual is for the sole purpose of assisting individuals in their preparation for and in conjunction with a Know CPR First Aid or CPR training course.

The information contained in this manual is based on generally available information, updated to reflect the most recent 2015 AHA ECC Guidelines, and should not be considered a substitute, in any part, for hands-on training by a certified instructor

# Table of Contents

## **Basic First Aid**

- Heart Attack
- Symptom of Heart Attack
- Stroke
- Symptoms of Stroke
- Heart Attack & Stroke Risk Factors
- Universal Precaution
- Good Samaritan Laws
- Primary Assessment
- Shock
- Care for Shock
- Recovery Position
- Nose Bleeds
- Burns
- Head, Neck, & Back Injuries –Adults
- Head, Neck, & Back Injuries -Children
- Muscle & Bone Injuries
- Child Care: Prevention Job 1
- Bleeding Control
- Impaled Objects & Protruding Organs
- Some Sudden Illnesses
- Severe Allergic Reaction
- Poison Ivy & Poison Oak
- Poisons

# Table of Contents (continued)

## **Basic First Aid (Cont)**

- Hypothermia & Frost Bite
- Severe Allergic Reaction
- Poison Ivy & Poison Oak
- Poisons
- Hypothermia & Frost Bite
- Heat Stroke
- Chemical in Eyes
- Snake & Spider Bites
- Bee Stings
- Seizure

## **Community or Layman CPR**

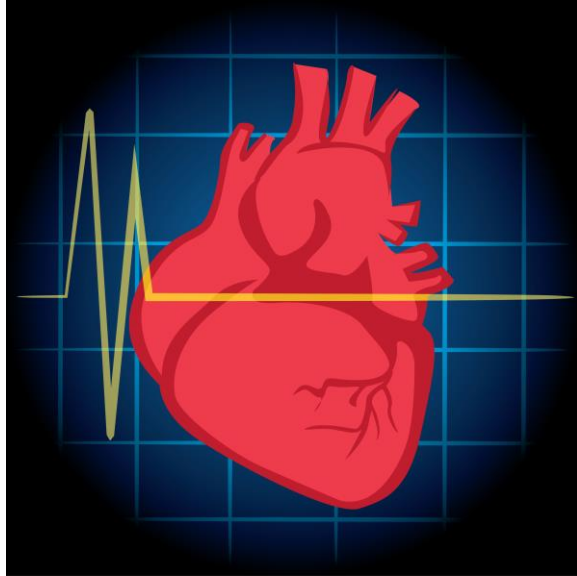
- Respiratory & Cardiovascular Systems
- Cardiopulmonary Resuscitation (CPR)
- Adult Chain of Survival
- Child/infant Chain of Survival
- Adult CPR Skills (Ages 8+/Puberty+)
- Child CPR Skills (Ages 1-8/Puberty)
- Infant CPR Skills (Newborn to 1)
- Adult/Child Conscious Choking
- Infant Conscious Choking
- Unconscious Choking
- Automated External Defibrillator (AED)

# Basic First Aid



# Heart Attack

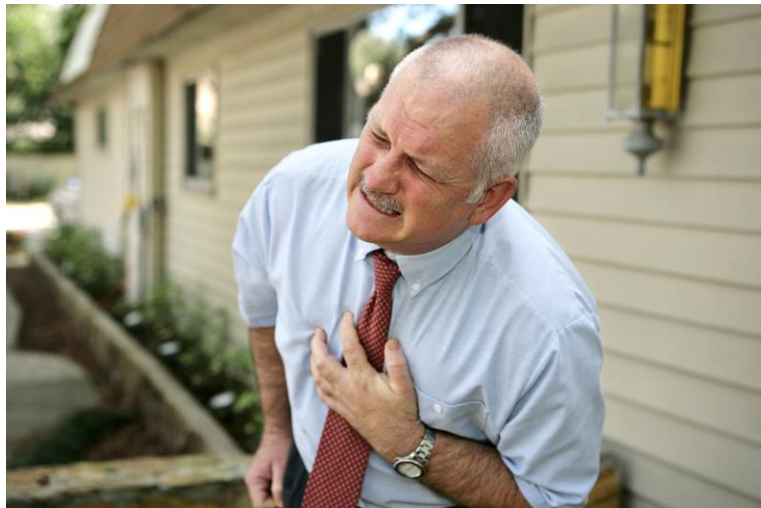
- A blockage of the vessels that deliver oxygenated blood to the heart.
- This can cause damage to the heart tissue, and even death.



# Symptoms of a Heart Attack

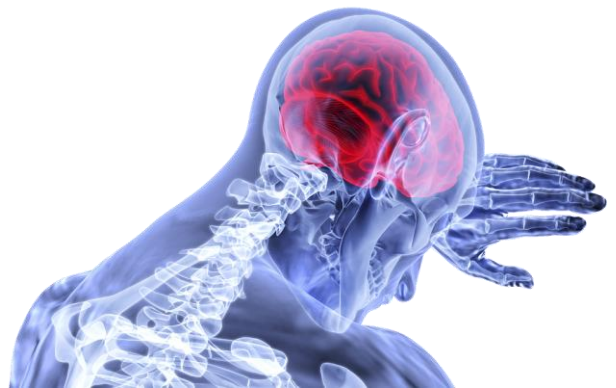
## **Common Symptoms of a Heart Attack include:**

- Pressure, tightness, pain in chest or arms that may spread to neck, jaw or back.
- Nausea, indigestion, heartburn or abdominal pain.
- Shortness of breath.
- Cold sweat.
- Fatigue.
- Lightheadedness, sudden dizziness, or passing out.



# Stroke

- A blockage of the vessels that deliver oxygenated blood to the brain.
- This can cause damage to the brain tissue, and even death



## Spot a Stroke F.A.S.T

- **F**acial droop on one side. Ask the person to smile.
- **A**rm weakness or numb. Ask person to raise both arms. Does one side droop.
- **S**peech difficulty. Slurred speech.
- **T**ime to call 9-1-1 for help.



# Heart Attack & Stroke Risk Factors

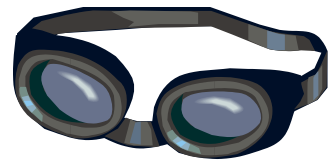
You should know that the following factors increase the risk of experiencing a heart attack and/or stroke:

- Family history.
- Age.
- Smoking cigarettes.
- High blood pressure.
- High blood cholesterol.
- Race.
- Gender.

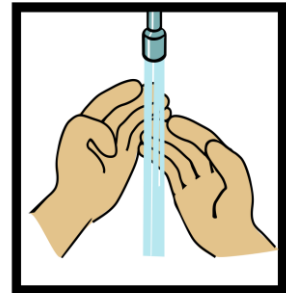


# Universal Precautions

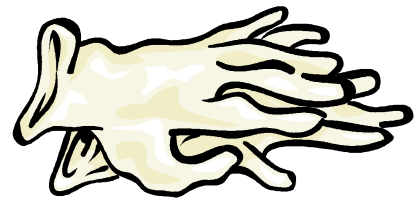
- Protective eyewear



- Soap & water



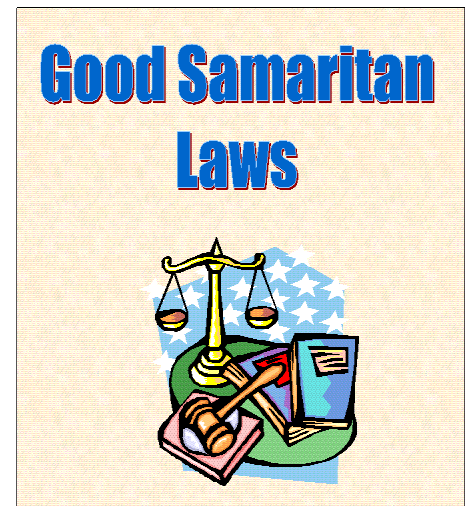
- Latex gloves



- Other barriers to bodily fluids

# Good Samaritan Laws

- Laws have been adopted by most states that protect a Good Samaritan from being sued when providing help to a victim in need.
- While these laws vary by state, guidelines generally include:
  - Obtain consent from a conscious adult.
  - Act within the rescuer's training.
  - Have good intentions.
  - Offer assistance for free.
  - Provide the best care possible.
  - Do not abandon a victim before advanced medical assistance arrives



# Primary Assessment

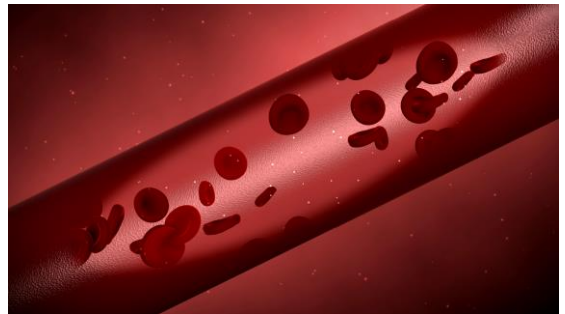
## Remember the 3-As

- **A**ssess the scene for Safety
- **A**lert EMS or Call 9-1-1
- **A**ttend injuries



# Shock

- Shock is a life-threatening medical condition that occurs when the body is not getting enough blood flow.
- Lack of blood flow means the cells and organs do not get enough oxygen and nutrients to function properly.
- As a result of shock, many organs can be damaged.



# Care for Shock

## SIGNS OF SHOCK

- Anxiety, restlessness or irritability
- Altered consciousness
- Pale, cool, moist skin
- Eyes lackluster, dazed look
- Rapid pulse rate and or Rapid breathing
- Internal or External Blood loss
- Weak helpless feeling
- Thirst and / or Nausea

## CARE FOR SHOCK

- Lay the victim flat on ground
- Keep victim comfortable & calm
- Control any external bleeding
- Keep airway open
- Cover victim, maintain body temperature
- Do not give victim anything to eat or drink
- Activate EMS & monitor regularly

# Recovery Position

- If a person is unconscious but is breathing and has no other life-threatening conditions, they should be placed in the **recovery position**.
- Placing someone in the **recovery position** will help keep their airway clear and open.
- It also ensures that any vomit or fluid won't cause them to choke.



# Nose Bleeds

- For nose bleeds, apply direct pressure just below the hard part of the victim's nose.
- Tilt your head forward so that the blood will not drip down the victim's throat. If the blood is swallowed, it will enter the stomach and may cause irritation – and it tastes bad too.





# Burns

“Stop, Drop & Roll”

The primary purpose of skin is to act as a barrier.

- **1st & 2nd Degree Thermal Burns**

- Apply cool running water.

- **3rd Degree Thermal Burns**

- Activate EMS.
- Do not apply water (unless exposed to a chemical).
- Cover with clean, dry dressing.
- Treat for shock.

- **Electrical Burns**

- Turn power off.
- Activate EMS.

## SKIN BURN



First-degree burn  
(red without blisters)

Second-degree burn  
(blisters, very painful)

Third-degree burn  
(the burnt area is stiff)

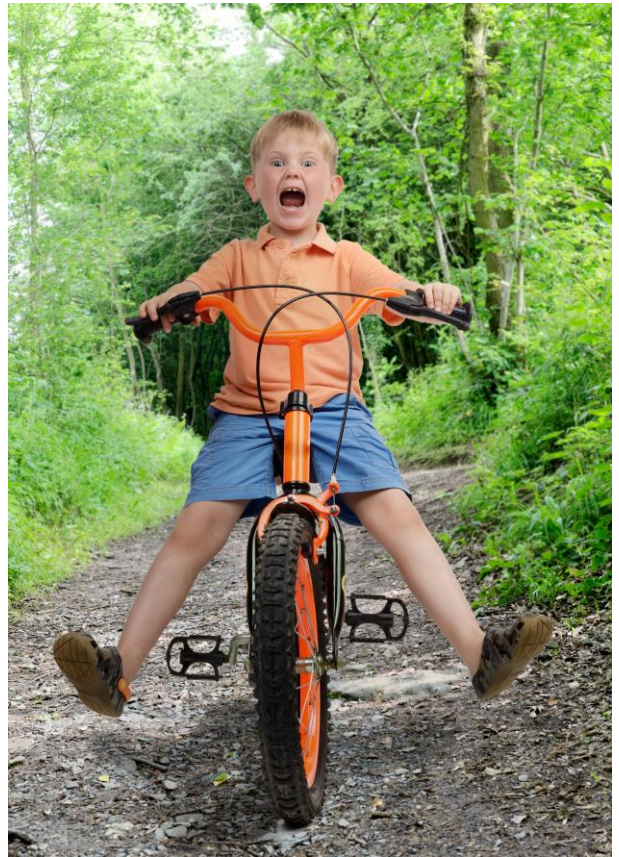
# Head, Neck, and Back Injuries

- Keep victim still.
- Ask how injury happened, if numbness, tingling, burning or loss of sensation is present in arms or legs.
- Stabilize head, protect airway, activate EMS.
- Do not move unless it is unsafe to in current location.



# Head, Neck, or Back Injuries

- Keep victim still.
- Ask how injury happened, if numbness, tingling, burning or loss of sensation is present in arms or legs.
- Stabilize head, protect airway, activate EMS.
- Do not move unless it is unsafe to in current location.



# Child Care: Prevention Job 1





# Muscle & Bones Injuries

- Treat as fractures.
- Stabilize & immobilize.
- Activate EMS



# Muscle Injuries

## Muscle Injuries

Remember:

R rest

I ice

C compress

E elevate



# Bleeding Control

- Direct pressure.
- Observe Universal Precautions.
- Manage shock.
- Check for arterial bleeding.
- Suspect internal bleeding if chest or abdomen is hit hard.
- Activate EMS.



# Impaled Objects & Protruding Organs

- If an object is impaled, or sticking into a victim, do not remove it or pull it out, as that can cause more damage.
- Keep the victim calm and wrap the object so that it is secure (so that it does not become worse). Seek medical attention immediately.
- If an organ is protruding - or sticking out - do not attempt to push it back into the body. Wrap it with a clean moist dressing and seek medical attention.





# Some Sudden Illnesses

- **Diabetes**
  - If victim is conscious give something with sugar (i.e. fruit juice).
  - Activate EMS
- **Altered mental status, Asthma, Seizures, Stroke, Heart Attack, Allergic Reactions**
  - Place in recovery position;
  - Activate EMS



# Severe Allergic Reactions

- A severe allergic reaction is known as anaphylaxis.
- Anaphylaxis is a life-threatening condition. It can cause extreme swelling, endangering the airway and breathing and can cause the person to go into shock.
- Prevention is the first step in dealing with severe allergies.
- If suspect anaphylaxis, call 911 immediately.
- You may also need to assist with the administration of allergy medications if we have been authorized to do so.

# Poison Ivy & Poison Oak

“Leaves of three,  
Let It Be”

- Recognize these plants and do not touch or burn them.
- The oil on their leaves can cause an allergic reaction.

Poison Ivy



Poison Oak



# Poisons

Poisons come in all shapes and forms.

If accidentally swallowed, follow directions on container, and  
**call POISON CONTROL**



**Do not induce vomiting unless directed to do so  
as this can cause more harm**

# Hypothermia & Frost Bite

## Hypothermia & Frost Bite

### **Hypothermia**

- The body temperature drops below normal.
- Shivering is a sign of mild hypothermia
- No signs of circulation can signal severe hypothermia

### **Treatment:**

- Remove from cold
- Call 911

### **Frost Bite**

A body part freezes or ice forms on or under the skin

### **Treatment**

Slowly warm, and do not rub frozen tissue. Call 911

\*Do not warm a frozen body part if you think it will refreeze before advanced medical care is given. This can cause more tissue damage



# Heat Stroke

# Heat Stroke

## Symptoms

- Hot, dry, red skin
- Confusion
- Unconsciousness
- Little or no sweating
- Full, rapid pulse

## Treatment

- Move to cool place
- Cool off (cold packs, fan)
- Remove excess clothing
- Give water
- Call 911 immediately**



# Chemical in Eyes

## **Chemical in Eyes**

Rinse chemical from eyes with cool running water for 15-20 minutes, and  
**call 911 or poison control**



# Snake & Spider Bites

- Snakes and spiders generally do not bite unless threatened.
- If someone is bitten, do not try to suck the venom out. By doing this, you risk poisoning yourself and contaminating the wound.
- Keep the affected area below the heart.
- Call 911 or poison control.
- Try to identify the snake or spider if you can, so that the correct anti-toxin can be administered.





# Bee Stings

- When removing a bee stinger, do not squeeze the top of the stinger.
- The bee stinger has a sac of venom attached to it. Pinching the stinger out will inject the person with more venom.
- Scrape the stinger out using a stiff object such as a credit card, nail file, driver' s license, etc.
- Wash the area and apply an ice pack. This will help reduce swelling.
- Keep in mind that many people are allergic to bee stings, so you may also want to monitor the person for allergic reaction



# Seizure

- If the person goes into convulsions, the focus should be on damage control.
- Do not try to restrain the person or put anything in the person's mouth.
- Clear the area to prevent the person from bumping into anything.
- Place something soft underneath the person's head so that the person does not smash their head into the ground.
- 911 should be called unless you have specific instructions from that person regarding their medical condition.
- After the seizure stops, roll the person onto their side into the recovery position.
- **In infants**, high temperature are another cause of concern. Try to lower the baby's body temperature by applying cool, moist towels and call 911.



# Community or Layman CPR



# Cardiopulmonary Resuscitation (CPR)

CPR is performed on victims that are unconscious, and cannot breathe or breathe effectively.

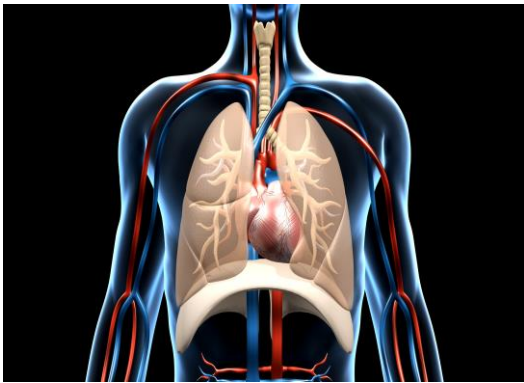
CPR provides victims the necessary oxygen and helps move the oxygenated blood throughout the body.

The rescuer provides the oxygen by pinching the victim's nose and giving 2 breaths into the victim's mouth.

The rescuer moves the oxygenated blood throughout the victim's body by providing 30 compressions directly over the victim's heart.



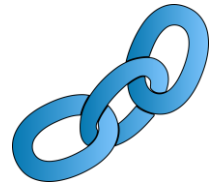
# Respiratory & Cardiovascular Systems



- A healthy person breathes in oxygen to fuel the body.
- The oxygen is absorbed into the blood stream, then pumped by the heart throughout the body.
- This is called circulation.

# Adult Chain of Survival

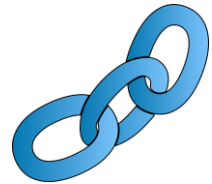
Describes the most effective approach for treating sudden cardiac arrest for victims that are ages 8+, or puberty +.



1. Immediate recognition and activation of EMS quickly initiates the treatment process;
2. Early CPR with effective chest compressions buy time for accessing an AED and improves the chance that defibrillation will work;
3. Rapid defibrillation provides the best chance to return the heart to a normal rhythm;
4. Effective advanced life support procedures and medications used by health professionals help sustain the chance for recovery and survival;
5. Integrated post-cardiac arrest care increases the likelihood of long-term survival.

# Child Chain of Survival

Describes the most effective approach for treating sudden cardiac arrest for victims that are ages less than 8, or puberty +.



1. Immediate recognition and activation of EMS quickly initiates the treatment process;
2. Early CPR with effective chest compressions buy time for accessing an AED and improves the chance that defibrillation will work;
3. Rapid defibrillation provides the best chance to return the heart to a normal rhythm;
4. Effective advanced life support procedures and medications used by health professionals help sustain the chance for recovery and survival;
5. Integrated post-cardiac arrest care increases the likelihood of long-term survival.

# Adult CPR Skills (Ages 8+/Puberty+)

## Primary Assessment

- Check for safety.
- Check responsiveness (Tap victim's shoulders, ask "are you OK?").

## If victim is unresponsive:

- Activate EMS
- If normal breathing, then put in recovery position.
- If not normal breathing.
  - With 2 hands on the breastbone, give 30 compressions, at least 2-2.4 inches deep, at a rate of 100-120 per minute;
  - Tilt head, pinch nose, provide 2 breaths, enough to make chest rise;
  - Repeat cycle until help arrives;
  - Use AED as soon as possible;
  - If AED says no shock, start compressions and follow instructions.



# Child CPR Skills (Ages 1-8/Puberty)

## Primary Assessment

- Check for safety.
- Check responsiveness (Tap victim's shoulders; ask "are you OK?").

## If victim is unresponsive:

- Activate EMS if with someone, if alone call 911 after 2 minutes or 5 cycles of CPR.
- If normal breathing, then put in recovery position.
- If not normal breathing:
  - With 1 hand over the breastbone, 30 compressions, at least 1/3 the depth of body, or about 2 inches, at rate of 100-120 per minute;
  - Tilt head, pinch nose, provide 2 breaths, enough to make chest rise;
  - Repeat cycle;
  - Use AED as soon as possible;
  - If AED says no shock, start compressions and follow instructions

# Infant CPR Skills (Newborn to 1)

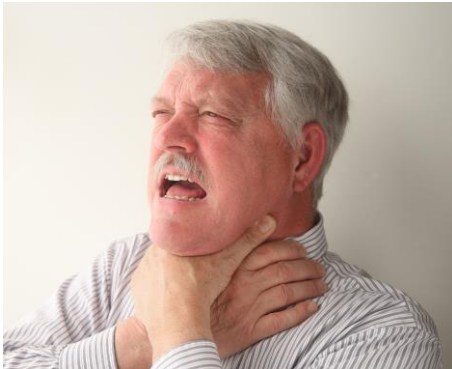
## Primary Assessment

- Check for safety.
- Check responsiveness (Tap victim's feet, ask "are you OK?" ).

## If unresponsive:

- Activate EMS immediately if with someone; after 2 minutes or 5 cycles of CPR if alone;
- If infant is not normal breathing:
  - Draw an imaginary line between the infant's nipples. Place tips of two fingers in center of chest, one finger width below the line.
  - Provide 30 compressions, at least 1/3 the depth of body, or about 1 ½ inches, at a rate of 100-120 per minute;
  - Tilt head, seal mouth over nose and mouth, provide 2 breaths, enough to make chest rise;
  - Repeat cycle;
  - Use AED as soon as possible;
  - If AED says no shock, start compressions and follow instructions

# Adult/Child Conscious Choking



- If victim can speak or cough, do not touch them.
- Encourage them to cough.

If victim cannot speak or cough:

- Call 911
- If permission given:
  - Place arms around victim.
  - Place fist in other hand just above victim's navel;
  - Thumb toward the stomach;
  - Repeatedly pull in and up (like a "J"), until object is dislodged.

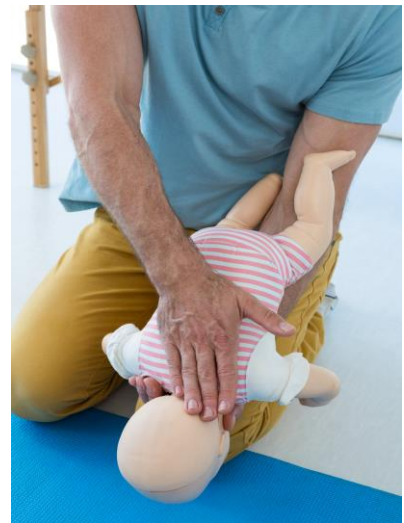


# Infant Conscious Choking

- If victim can speak or cough, do not touch them.
- Encourage them to cough.

If victim cannot speak or cough:

- Call 911
- If have consent from guardian:
  - Give 5 back blows followed by 5 chest thrusts.
  - Keep the infant's head lower than feet.
  - Always be sure to support the head and neck securely.
  - Repeat until object is forced out or until EMS arrives.



# Unconscious Choking

- If you are providing CPR on an unconscious victim and the rescue breaths are not entering the lungs, make sure the airway is open (use the head-tilt chin-lift). If it is open and you are not successful, there is most likely an obstruction in the victim's airway.
- **If you see an object in the victim's mouth**, bend your index finger like a hook and "sweep" the object out.
- If the victim is an infant, you should use your pinky finger to sweep out the object.
- Never perform a "blind finger sweep" by sweeping your finger in search of an object that you do not see. Only perform the sweep if you see the object.
- **If you do not see an object in the victim's mouth**, provide 30 compressions, then check in the mouth for an object. If you still do not see an object, provide 2 rescue breaths, followed by compressions.
- Repeat until the object is dislodged or rescue breaths are successful.

# Automated External Defibrillator (AED)

Use AED immediately when it arrives. If another person available to operate it, continue CPR until AED is ready.



- **Turn on AED;**
- Adhere defibrillation pads to bare chest;
- Allow to analyze heart;
- If shock advised, make sure no one is touching person before delivering shock;
- After shock delivered, resume CPR;
- AED voice instructions and analysis will guide care;
- Do not stop until signs of life, another provider or EMS takes over, or too exhausted to continue.