



# ProTrainings

Because Life Matters



**Adult, Child and Infant,  
CPR/AED**

The purpose of this booklet is to provide a brief review of course content for a specific ProTrainings course.

Visit [www.protrainings.com](http://www.protrainings.com) to view the full course curriculum.

# COURSE CONTENT

- 04 Overcome the 5 fears that prevent rescue
- 05 Prevention of cardiovascular disease
- 06 Recognition and action steps for suspected heart attack and stroke
- 07 Universal Precautions
- 08 CPR for adult, child and Infant
- 12 AED for adult, child and infant
- 15 Conscious and unconscious choking for adult, child and infant
- 18 Bleeding Control
- 18 Shock Management
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## BASIC TERMS

**Good Samaritan Law** | states that a person acting in good faith, rendering reasonable first aid, will not be held accountable for damages to that person unless gross willful misconduct is used. This person must not have a legal duty to respond or complete the first aid.

**Consent** | a patient allowing you to give first aid

**Informed consent** | you informing the patient of consequences, and then the patient giving permission for you to give first aid.

**Implied consent** | when a patient is unconscious, it is given that if the person were conscious, they would request care.

**Abandonment** | initiating care and then stopping without ensuring that the person has same level or higher care being rendered.

**Negligence** | When you have a duty to respond and you fail to provide care or give inappropriate care, and your failure to provide care or inappropriate care causes injury or harm.

**Universal Precautions** | Using gloves, masks, gowns, etc. for every patient every time when there is a possibility of coming in contact with any body fluids.

**Clinical Death** | The moment breathing and heartbeat stop. Typically, a person has a high likelihood of being revived without much cellular damage when clinically dead for approximately 0-6 minutes. Within 6-10 minutes, brain cell damage is highly likely.

**Biological Death** | Irreversible damage to brains cells and tissues. If a person has been clinically dead for 10 minutes or more, there will be irreversible cell damage. Resuscitation is unlikely but not impossible.



# THE FIVE FEARS

## 1 | FEAR OF DISEASE

**Solution:** Universal precautions. Whenever the possibility of coming in contact with bodily fluids exists, wear personal protective equipment for every patient, every time.



## 2 | FEAR OF LAWSUITS

**Solution:** Good Samaritan laws. States have laws that protect people from legal action who act in good faith to provide reasonable First Aid when the rescuer does not have a legal duty to respond.



## 3 | FEAR OF UNCERTAINTY

**Solution:** Emphasis is placed on the role of CPR not merely on the number sequences. Even if numbers are forgotten, remember to push hard and push fast. This emphasizes the simplicity of basic life support.



## 4 | FEAR OF HURTING A PATIENT

**Solution:** Patients who are clinically dead can only be helped, not made worse with resuscitation efforts.



## 5 | FEAR OF UNSAFE SCENE

**Solution:** Never enter an unsafe scene! Rescuers are no use to patients if they become patients themselves.



## CARDIOVASCULAR DISEASE

Cardiovascular disease is the number one killer in the United States. The Center for Disease Control reports that in the United States over 600,000 people die each year from cardiovascular disease.



### CONTROLLABLE RISK FACTORS

- cigarette smoking
- high blood pressure
- obesity
- lack of exercise
- high blood cholesterol levels
- uncontrolled diabetes
- high fat diet
- high stress

### UNCONTROLLABLE RISK FACTORS

- race
- heredity
- sex
- age

Cardiovascular disease causes damage to the heart and blood vessels.

Cardiovascular disease often leads to heart attack or stroke. The best way to survive a heart attack or stroke is to never have one. The key for cardiovascular disease is to focus on prevention.

You can give yourself the best chance of preventing cardiovascular disease with proper nutrition, consistent physical activity, weight management, stress management, eating proper fats and oils, and quitting smoking.



## HEART ATTACK

### SIGNS AND SYMPTOMS MAY INCLUDE

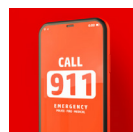
- Chest discomfort-pressure, tightness, that may radiate to jaw and arms.
- Nausea
- Sweating
- Shortness of breath
- Denial
- Feeling of weakness



Women present more with shortness of breath, extreme fatigue, or flu-like symptoms. About a third of women experience no chest pain.

### TREATMENT

Recognize the signs and symptoms of a heart attack, activate EMS, have patient remain in a position of comfort, offer 1 adult dose aspirin, and keep the patient calm and quiet.



## STROKE

Stroke is the 3rd leading cause of death in the United States. Strokes can be one of two types:

**ischemic** | a clot in a blood vessel that restricts or obstructs blood flow to the brain;

**hemorrhagic** | a blood vessel that ruptures and prevents blood flow to the brain. In either case, the brain is deprived of oxygen and tissue starts to die. The longer the stroke goes unrecognized and untreated, the more damage is done.



### SIGNS AND SYMPTOMS MAY INCLUDE

- Numbness or weakness of the face, arm or leg, especially on one side of the body. The acronym FAST helps in assessing a stroke:  
F– facial droop, A– Arm drift, S– Speech, T– Time
- Confusion, trouble speaking or understanding
- Trouble seeing in one or both eyes
- Trouble walking, dizziness, loss of balance or coordination
- Severe headache with no known cause

### TREATMENT

Recognize the signs and symptoms of a stroke, activate EMS, give nothing to drink or eat, and keep the patient calm and quiet. Monitor patient and be prepared to start CPR if necessary.





## CHAIN OF SURVIVAL

The earlier these steps take place in an emergency, the better the chance of a patient's survival.



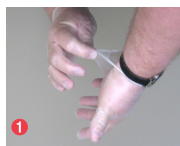
## UNIVERSAL PRECAUTIONS

### PUTTING GLOVES ON:

Use disposable gloves when providing first aid care. If you have a latex allergy use a latex alternative such as nitrile or vinyl. Before providing care, make sure the gloves are not ripped or damaged. You may need to remove rings or other jewelry that may rip the gloves.

### REMOVING GLOVES:

Remember to use skin to skin and glove to glove. ❶ Pinch the outside wrist of the other gloved hand. ❷ Pull the glove off turning the glove inside-out as you remove it. ❸ Hold it in the gloved hand. ❹ Use the bare hand to reach inside the other glove at the wrist to turn it inside out trapping the other glove inside. Dispose of gloves properly. If you did it correctly, the outside of either glove never touched your exposed skin.



### USE A RESCUE MASK OR FACE SHIELD:

If you have to provide rescue ventilations, use a rescue mask or face shield that has a one way valve. To prevent exposure, avoid giving direct mouth to mouth ventilations.



# CPR

## CHECK THE SCENE



### Key Questions to ask:

- Is it safe for me to help?
- What happened?
- How many patients are there?
- Am I going to need assistance from EMS?
- Do I have my personal protective equipment ready to use?

## CHECK THE PATIENT



- Tap and shout. Is there any response?
- While checking for responsiveness, look for normal breathing by looking at the person's chest and face. Is the patient breathing normally?
- Agonal respirations are not normal breathing. They would be characterized as occasional gasps. The chest does not rise.

## ACTIVATE EMS – CALL 911

Send someone to call and tell them to come back. The caller should give dispatch the patient's location, what happened, how many people are injured, and what is being done.



### If alone and no one is available:

- **PHONE FIRST** for adults and get the AED. Return to start CPR and use the AED for all ages.
- **CARE FIRST** for children and infants by providing about 5 cycles or 2 minutes of CPR before activating the emergency response number.
- **CARE FIRST** for all age patients of hypoxic (asphyxial) arrest (ei., drowning, injury, drug overdose).





# CPR

## COMPRESSIONS



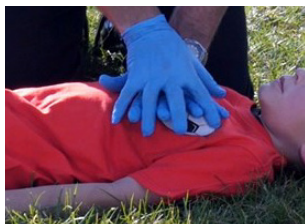
If the victim is unconscious with no normal breathing, begin chest compressions.

→ Give 30 chest compressions at a rate of 100-120 compressions per minute for all ages.

→ Hand placement for compressions:



**Adult** - Place heel of hand of the dominant hand on the center of the chest between the nipples. The second hand should be placed on top. Compress 2-2.4 inches deep.



**Child** - Hand placement is the same as adult. You may choose to use only one hand in the center of the chest between the nipples for a very small child. Compress at least 1/3 the depth of the chest.

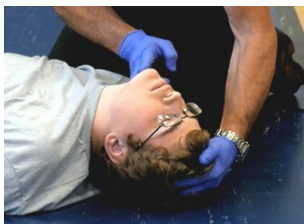


**Infant** - Place two fingers on the center of the chest between the nipples. Compress at least 1/3 the depth of the chest.



## CPR

### AIRWAY



#### → Open Airway using head tilt chin lift

Look in the mouth to make sure the airway is clear.

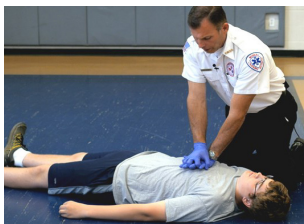
If you see any foreign object, sweep it out right away.

### BREATHING

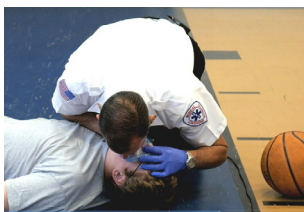


#### → Give 2 breaths lasting 1 second each. Watch for chest rise and fall.

**Note:** If not using a rescue mask, make sure you make a seal over the mouth on an adult or child and pinch the nose closed each time you give a breath. On an infant, make sure to cover the mouth and nose with your mouth.



#### → Continue cycles of 30 compressions to 2 breaths until an AED arrives, advanced medical personnel take over, the patient shows signs of life, the scene becomes unsafe, or you are too exhausted to continue.



#### → Give 2 breaths lasting 1 second each. Watch for chest rise and fall.



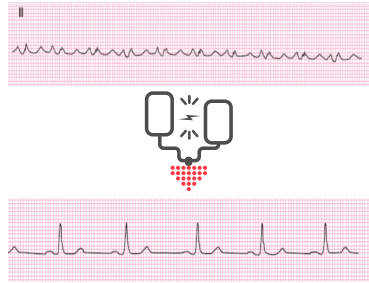
## CPR SUMMARY



- ✓ Check the Scene for Safety
- ✓ Check the person for responsiveness and normal breathing
- ✓ Call 911
- ✓ Give 30 Chest **Compressions**
  - Rate of 100-120 per minute,
  - 2-2.4 inches deep for Adults, 1/3 depth of chest Child and Infant
- ✓ Open the **Airway**
- ✓ Give 2 **Breaths**
- ✓ Continue cycles of 30 compressions to 2 breaths



## AED- AUTOMATED EXTERNAL DEFIBRILLATOR



### CLINICAL DEATH

Breathing and heart  
beat have stopped:  
**0-6 minutes**

### BIOLOGICAL DEATH

Cellular death has  
occurred: **10 minutes**



**The AED analyzes the heart's rhythm, states whether a shock is advised and then powers up, the operator then pushes a button that will deliver the shock.**

- Each minute that defibrillation is delayed the chance of survival is reduced by 10 percent. After 10 minutes few people are resuscitated.
- Early defibrillation increases survival rates to greater than 50%.
- Rescuers should begin chest compressions as soon as possible, and use the AED as soon as it is available and ready.
- If you are giving CPR to a child or infant and the available AED does not have child pads or a way to deliver a smaller dose, it is still recommended to use the AED even with adult pads. With adult pads for a small child or infant, you would place one pad on the center of the chest and the other on the center of the back between the shoulder blades.

### AED CONSIDERATIONS:

- ✓ Remove a patient from standing water, such as in a puddle, before AED use. Rain, snow, or a damp surface is not a concern.
- ✓ Patient should be removed from a metal surface if possible.
- ✓ Slightly adjust pad placement so as not to directly cover the area if the patient has an obvious bump or scar for a pacemaker.
- ✓ Remove medication patches found on the patient's chest with a gloved hand.
- ✓ Never remove the pads from the patient or turn the machine off.

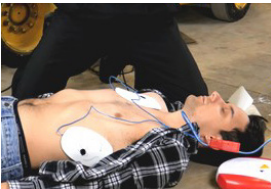
## AED | AUTOMATED EXTERNAL DEFIBRILLATOR



→ Turn the machine on.



→ Bare the chest. Dry it off if it is wet. If there is excessive hair you may need to shave it off.

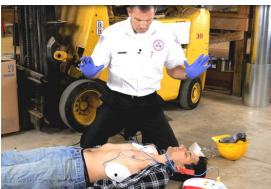


→ Place one pad on the patients upper right chest above the nipple. Place the other pad on the patients lower left ribs below the armpit.

**\*\*Follow the directions shown on the pads for the AED pad placement.**

→ Make sure pads are pressed down firmly.

→ Follow AED prompts.



→ Stand Clear. Do not touch the patient while the AED analyzes



→ If the AED says, "Shock advised, charging...", shout, "Clear" and make sure no one is touching the patient. Push the shock button when the AED tells you to.

→ If no shock is advised give CPR if the patient is not moving and not breathing.

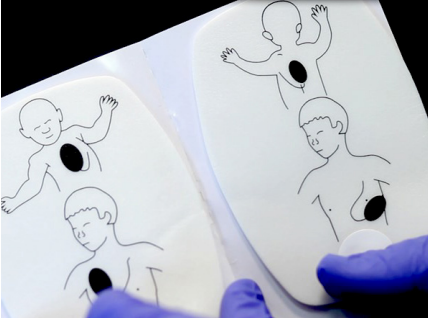


→ As soon as the shock has been delivered, give 30 chest compressions followed by 2 breaths. Continue cycles of 30:2 until you see signs of life.

→ The AED will reanalyze every 2 minutes and prompt for a shock if needed.



## AED | CHILD AND INFANT PAD PLACEMENT

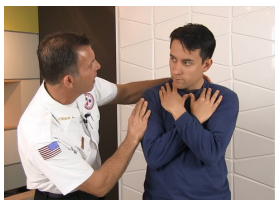


- For children 8 years old and younger or under 55lbs, and infants, an AED with pediatric pads is preferred.
- If only a standard AED with adult pads is available, it should still be used for children and infants in cardiac arrest.
- When placing the pads on a child, the pads should not touch.
- For a small child or infant, the pads should be placed one in the center of the chest and one in the center of the back between the shoulder blades.





## CONSCIOUS CHOKING



### CONSCIOUS CHOKING

- ask, "Are you choking?"
- If a person is unable to cough, breath or speak, activate EMS



### ADULT AND CHILD

- Stand behind the victim with one foot in-between the victims feet and your other foot behind you.
- Place the flat side of your fist just above the patients belly button. Grab the back of your fist with your other hand.
- Administer abdominal thrusts, pulling inward and upward, until the object comes out or the patient becomes unconscious.



### INFANT

- Support the infant's face and place body on your forearm.
- Keep the infants head lower than the feet.
- Administer 5 back blows between the shoulder blades with the palm of your hand.
- Support the infant's head. Turn the baby over onto your other forearm. Give 5 chest thrusts.
- Continue back blows and chest thrusts until object comes out or infant becomes unconscious.



### SPECIAL CIRCUMSTANCES:

- If the patient is pregnant or too large to reach around, give chest thrusts instead.



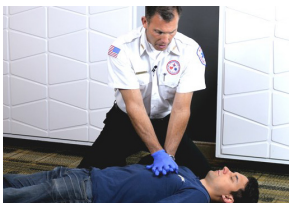
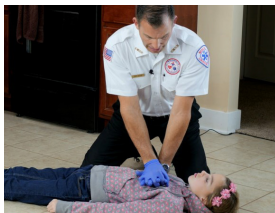
## UNCONSCIOUS CHOKING



→ If you are giving someone abdominal thrusts and the person goes unconscious, lower the patient safely to the ground.

→ Activate EMS, send someone to call 911

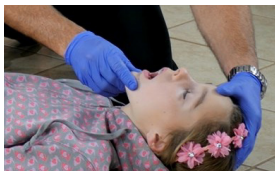
→ **Adult, Child, and Infant:** Give 30 chest compressions



→ Open the airway and check the mouth for a foreign body. If something is seen, sweep it out with a finger. Use the pinky finger for an infant.



→ Attempt rescue breaths. If breaths do not make the chest rise, reposition head and reattempt rescue breaths.



→ Open the airway and check the mouth for a foreign body. If something is seen, sweep it out with a finger. Use the pinky finger for an infant.



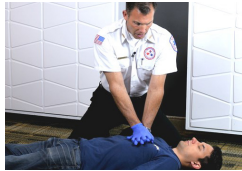
→ Attempt rescue breaths. If breaths do not make the chest rise, reposition head and reattempt rescue breaths.



## UNCONSCIOUS CHOKING



→ Give 30 chest compressions.



→ Open the airway and check the mouth for a foreign body. If something is seen sweep it out with a finger. Use the pinky finger for an infant.



→ Give 2 breaths.

→ If breaths do not make the chest rise, reposition head and reattempt rescue breaths. Continue compressions, foreign body check, breathing attempts until air goes in and chest rises.



→ If victim has no pulse and is not breathing normally, continue CPR with cycles of 30 compressions to 2 breaths.



## BLEEDING AND SHOCK

### BLEEDING CONTROL



**Capillary bleeding** is usually not serious and is characterized by oozing blood that is easily stopped. **Venous bleeding** steadily gushes larger amounts of blood, but can usually be stopped with direct pressure. **Arterial bleeding** is usually spurting and is the most serious because a large amount of blood can be lost quickly.

- Inspect the wound. Look for the area where the bleeding is coming from. Apply gloves.
- Use direct pressure on the wound using an absorbent pad or gauze. Add more gauze or padding if necessary.
- Make a pressure bandage by wrapping a roller gauze or elastic bandage around the wound to maintain bleeding control.
- If severe bleeding is not controlled, consider using a tourniquet.
- Activate EMS if severe bleeding is present, use direct pressure and apply pressure bandage. *If wound is minor, wash and apply an antibiotic ointment, then bandage as needed.*

### SHOCK

- Shock is the body's inability to circulate oxygen to the vital organs.
- **Signs & Symptoms:** restlessness, dizziness, confusion, cool moist skin, anxiety, delayed capillary refill time, and weakness.
- **Treatment:** Recognize, Activate EMS, keep calm, give nothing to eat or drink, maintain body heat, raise the legs if no spinal injury or fracture of the legs.



## SPECIAL CONSIDERATIONS

### SPECIAL CONSIDERATIONS FOR HYPOTHERMIA



If the victim is unresponsive, not breathing, and suspected to be in hypothermia, follow the normal steps for CPR and take a few extra steps.

- Activate EMS and begin CPR without delay
- AED should be used as normal
- Do not wait to check the victim's temperature
- Do not wait until the victim is rewarmed to start CPR
- Wet clothes should be removed from the victim to prevent further heat loss
- Shield the victim from wind or cold
- If the person is breathing, rewarm and monitor the person until EMS arrives. Avoid rough movement and handle person gently.
- Passive warming, such as warm blankets and heat packs, can be used until active warming is available with advanced medical care.

### SPECIAL CONSIDERATIONS FOR PREGNANCY

- The same skills and techniques for Adult CPR need be followed. The focus needs to be on providing high quality CPR for mother. Because of potential interference with maternal resuscitation, fetal monitoring should not be undertaken during cardiac arrest in pregnancy.
- Because pregnant patients are more prone to hypoxia, oxygenation and airway management should be prioritized during resuscitation from cardiac arrest in pregnancy.



## SPECIAL CONSIDERATIONS

### SPECIAL CONSIDERATIONS FOR DROWNING



Water does not need to be “pumped out” of the lungs or stomach of a drowning victim. The routine use of abdominal thrusts or other techniques to remove water from drowning victims is unnecessary, potentially dangerous, and not recommended.

Most victims do not get large amounts of water in their lungs, ie. aspirate water. This is because of the body’s natural defense of keeping water out

of the lungs with a laryngospasm (breath holding). Even if water is aspirated, there is no need to clear the airway of aspirated water, because only a small amount of water is aspirated by the majority of drowning victims. Aspirated water is rapidly absorbed into the central circulation.

- The number one priority is the rescuer’s safety. The rescuer must not put himself or herself in danger to rescue a drowning victim. Do not swim out to a drowning victim. Reach out with a long object, throw something that floats, but don’t go.
- The first and most important treatment of the drowning victim is ventilation. Prompt initiation of rescue breathing increases the victim’s chance of survival. Victims with only respiratory arrest usually respond after a few artificial breaths are given.
- For an unresponsive, non-breathing victim, immediate bystander CPR plus early activation of the EMS system is crucial .
- CPR normally begins with chest compressions in a C-A-B sequence. However, the guidelines recommend CPR for drowning victims should use the traditional A-B-C approach in view of the lack of oxygen, ie. hypoxic nature of the arrest. It would be appropriate to open the airway and give 2 breaths before starting compressions.
- To use the AED, the victim needs to be out of the water. However, it is only necessary to dry the chest area before applying the defibrillation pads and using the AED.
- Vomiting is common in drowning victims. If vomiting occurs, turn the victim to the side and remove the vomit using your finger. Continue care after airway is cleared.



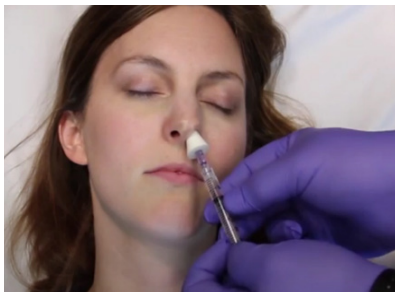


## SPECIAL CONSIDERATIONS

### OPIOID OVERDOSE

Opiates and opioids are Central Nervous System (CNS) depressants that can slow down breathing, eventually causing it to stop.

Anyone taking opiates can suffer opiate or opioid overdose, especially when a person takes more than was prescribed by the doctor, combines opiates or opioids with other CNS depressants or has an unknown condition that makes them more sensitive to overdose.



#### Common opiates and opioids:

- Heroin
- Morphine
- Codeine
- Methadone
- Hydrocodone known as Vicodin or Lortab
- Oxycodone otherwise known as Percocet

**Common drugs that may cause similar signs, but are not opioids or opiates:** (Naloxone has no effect on these drugs)

- Cocaine
- LSD
- Ecstasy
- Tranquilizers
- Marijuana

#### Common opioid overdose signs:

- Bottles of drugs or drug paraphernalia nearby the patient
  - A very slow respiration rate or not breathing
  - Pinpoint pupils
- For a patient with a suspected opioid overdose, appropriately trained lay rescuers or healthcare providers should administer intramuscular or intranasal naloxone, if available.
- A naloxone dose of 2 mg is recommended for rapid reversal when respiratory compromise is present. Naloxone typically takes 3-5 minutes for full effect.
- For patients suspected to be in cardiac arrest, standard resuscitative measures should take priority over naloxone administration, with a focus on high-quality CPR.
- If there is no change in 3-5 minutes after the first dose of naloxone, one can administer another dose and continue CPR.

## MOVING PEOPLE

### RECOVERY POSITION

- Used when a person is breathing and unconscious
- Helps keep airway open
- Allows fluid to drain from mouth
- Prevents aspiration



- Extend victim's arm closest to you above victim's head
- Place victim's leg farthest from you, over his other leg
- Support head and neck
- Place victim's arm farthest from you across his chest



- Roll victim towards you
- Position victim's top leg so the knee acts as a prop for the body
- Place victim's hand under chin to keep airway open

### EMERGENCY RESCUE MOVES

In general a rescuer should not move a person unless it is necessary to provide care or there is a direct danger to the person's life. Remember to protect the head, neck and back.

#### Clothing Drag

Grasp the shirt near the shoulders. Lift up and walk backwards dragging the patient.

#### Blanket Drag

Place the patient on blanket or sheet. Grasp at head end, lift up and walk backwards or crawl while dragging the patient.

#### Extremity drag

If necessary simply drag by holding the legs or forearms and pulling.



## LAYRESCUER SKILL CHART

| SKILL  | ADULT<br>adolescent and older<br>(approx 12 years and older)   | CHILD<br>1 year to adolescent   | INFANT<br>under 1 year old  |
|--|--|---|---|
| <b>Check the scene</b>   | Do not enter an unsafe scene   | Do not enter an unsafe scene  | Do not enter an unsafe scene  |
| <b>Check the patient for unresponsiveness and no normal breathing</b>                            | Tap on the collar bones and shout. Look at face and chest for breathing  | Tap on the collar bones and shout. Look at face and chest for breathing   | Tap the shoulders or flick the feet and shout. Look at face and chest for breathing   |
| <b>Activate EMS</b>  | <b>If completely alone:</b><br>Activate EMS after unresponsiveness is found. Come back to provide care.<br>If asphyxial arrest is likely, call after 2 minutes or 5 cycles of CPR  | <b>If completely alone:</b><br>Go activate EMS after 5 cycles or 2 minutes of CPR. For a sudden witnessed collapse, activate EMS after unresponsiveness is found. Come back to provide care.                    |   |
| <b>Compressions</b><br>Push hard and fast  | 30 at a rate of 100-120 per minute.<br><b>Use 2 hands:</b><br>Place the heel of 1 hand in the center of the chest, place other hand on top.<br><b>Depth:</b> 2—2.4 inches  | 30 at a rate of 100-120 per minute.<br><b>Use 1 or 2 hands:</b><br>Place the heel of 1 hand in the center of the chest, if needed place other hand on top.<br><b>Depth:</b> At least 1/3 the depth of the chest | 30 at a rate of 100-120 per minute.<br><b>Use 2 fingers</b> on the breastbone between the nipples.<br><b>Depth:</b> At least 1/3 the depth of the chest |
| <b>Airway</b>  | Head tilt chin lift. Look in the mouth for any foreign objects.  |   |   |
| <b>Breathing</b>   | Give 2 breaths lasting about 1 second each.  |   |   |
| <b>Unconscious Choking:</b> After attempting 2 breaths, they will not go in and make chest rise. | Reposition airway, tilt head back further and try again. If air still does not go in and make the chest rise, begin 30 chest compressions, open the airway and look in the mouth for a foreign object. If one is seen, sweep it out, attempt 2 breaths. If air does not go in, reposition airway, tilt head back further and try again. Continue cycles of 30 chest compressions, foreign body check, 2 breaths, reposition attempt 2 breaths again until air goes in and makes chest rise. After breaths go in, check patient and provide appropriate care. |   |   |
| <b>AED</b>   | CPR should be provided immediately until an AED is available and ready to use.   | Child pads with attenuator should be used for infants to 8 years old. If not available, use adult pads. Don't let pads touch together.  |   |

ProTrainings is a nationally recognized CPR & First Aid Training provider offering healthcare CPR, lay rescuer/general workplace CPR, and first aid certification. All courses follow the latest scientifically backed and nationally recognized guidelines developed by the International Liaison Committee on Resuscitation (ILCOR) and the AHA/ECC.



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