



# ProTrainings

Because Life Matters



**CPR + First Aid**  
for All Ages

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.

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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 the patient (or victim) 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.

**ABCs of CPR** | Airway, Breathing, Circulation

**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 OF RESCUE

## 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 act or 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.



## HEALTHY LIVING

The health choices we make on a daily basis effect so many aspects of our lives. Making better choices can help reduce half of the top causes of death, including heart disease, cancer, stroke, diabetes and many other health issues. While we cannot control everything, this list shows the difference between many items we can and cannot control.

### UNCONTROLLABLE RISK FACTORS

- Race
- Heredity
- Sex
- Age
- Physical disabilities

Cardiovascular disease causes damage to the blood vessels throughout the body and will eventually start to effect organs causing heart attacks, strokes, or diabetes. The best way to survive a heart attack or stroke is to never have one. Focusing on prevention is the best way to prevent cardiovascular disease.



### CONTROLLABLE RISK FACTORS

- Cigarette smoking/vaping
- High blood pressure
- Body weight
- Lack of exercise
- High blood cholesterol levels
- Uncontrolled diabetes
- Proper sleep
- High stress
- Proper nutrition
- Recreational drug use

Start with proper nutrition, consistent physical activity, stress management, quality sleep, and quitting smoking or vaping or other controllable risk factors. These will not only help prevent long term health issues, but will also increase you current quality of life.



# 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

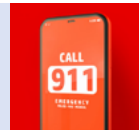
Women present more with shortness of breath, extreme fatigue, or flu-like symptoms. About a third of women experience no chest pain.

Ensure the victim does not have an allergy, recent internal bleeding or are on blood thinners before offering the aspirin.



## 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 or 2-4 chewable baby aspirin, and keep the patient calm and quiet.



# STROKE

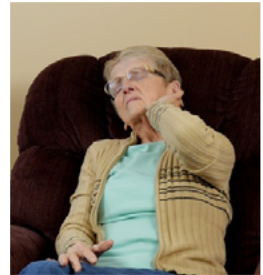
Stroke is the 5th leading cause of death in the United States.

Strokes can be one of two types:

**Ischemic** | a clot in a blood vessel; or

**Hemorrhagic** | a ruptured blood vessel.

In either case, the blood flow to the brain is restricted, depriving the brain of oxygen and tissue starts to die. Damage to brain tissue continues until the stroke is recognized and treated.



## SIGNS AND SYMPTOMS

The acronym **FAST** helps in assessing a stroke:

**F**– facial droop, **A**– Arm drift, **S**– Speech, **T**– Time of onset/Time to call

## OTHER SIGNS AND SYMPTOMS

- Numbness or weakness of the face, arm or leg, especially on one side of the body.
- Trouble seeing in one or both eyes
- Trouble walking, dizziness, loss of balance or coordination
- Confusion, trouble speaking or understanding
- 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. The best chance of treatment occurs if the patient gets help in less than 3 hours, the sooner the better though. Monitor patient and be prepared to start CPR if necessary.



# OPIOID OVERDOSE

## OPIOID OVERDOSE

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

Opiates are naturally occurring, while opioids are synthetic drugs. Anyone taking these drugs can overdose, especially when taking drugs illegally, when a person takes more than what 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

- Codeine
- Heroin
- Methadone
- Morphine
- Oxycodone, also known as OxyContin or Percocet

### Common opioids

- Fentanyl
- Carfentanil

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

- Cocaine
- Ecstasy
- LSD
- Marijuana
- Tranquilizers

### Signs and Symptoms:

- Bottles of drugs or drug paraphernalia near the patient
- A very slow respiration rate or not breathing
- Pinpoint pupils

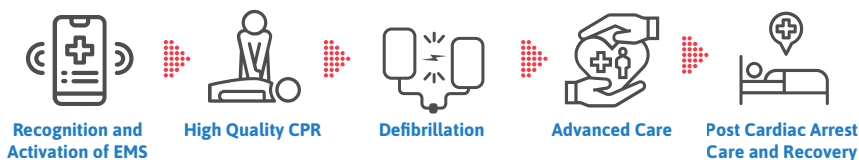
## TREATMENT

For a patient with a suspected opiate or opioid overdose, trained rescuers should administer 2 mg of intramuscular or intranasal naloxone, if available. Full effect can take 3-5 minutes.

- 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, a second dose may be considered while continuing CPR.

## CHAIN OF SURVIVAL

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



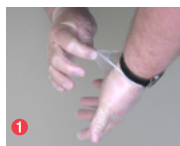
## UNIVERSAL PRECAUTIONS

### 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.

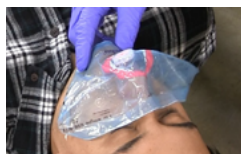
### REMOVING GLOVES:

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:

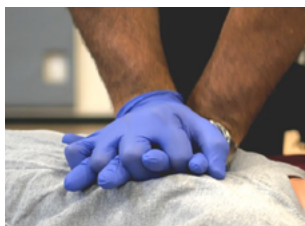
- **PHONE FIRST** for adults and witnessed arrest in children or infants. Get the AED and return to utilize AED and start CPR.
- **CARE FIRST** for unwitnessed children and infants by providing about 5 cycles or 2 minutes of CPR before activating the emergency response number.
- **CARE FIRST** for all age patients of hypoxic (asphyxial) arrest (e.g., drowning, injury, drug overdose).



## COMPRESSIONS

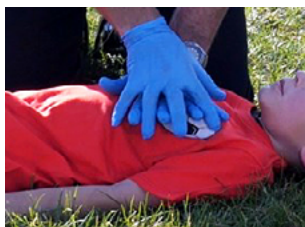
If the victim is unconscious with no normal breathing, begin chest compressions.

- 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.

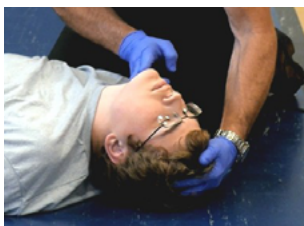


**Child** - Hand placement is the same as adult. You may choose to use only one hand in the center of the chest between the nipples for a very small child. Compress at least 1/3 the depth of the chest.



**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.



### BREATHING

#### → Give 2 breaths with face shield or pocket mask, 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.



### REPEAT CYCLE

#### → 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.

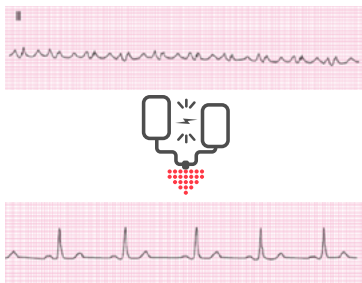
## CPR SUMMARY



1. Check the Scene for Safety
2. Check the person for responsiveness and normal breathing
3. Call 911
4. Give 30 Chest **Compressions**
  - Rate of 100-120 per minute
  - Appropriate depth
  - Adults 2-2.4 inches
  - Children and infants one-third ( $\frac{1}{3}$ ) depth of chest
  - Full chest recoil
5. Open the **Airway**
6. Give 2 **Breaths**
7. 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 can increase survival rates to near 50% in certain situations.
- 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. If the chest is wet, quickly dry before placing pads.
- ✓ 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 near AED pad location with a gloved hand, then wipe clean.
- ✓ Jewelry does not need to be removed so long as there is no contact with the pads.
- ✓ Never remove the pads from the patient or turn the machine off.

## AED | AUTOMATED EXTERNAL DEFIBRILLATOR



1. Turn the machine on.

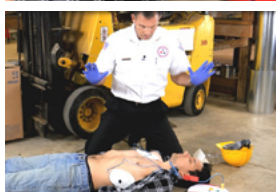


2. Bare the chest. Dry it off if it is wet. If there is excessive hair you may need to shave it off.

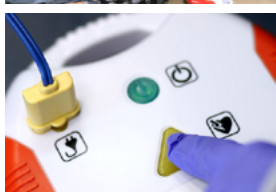


3. Place one pad on the patients upper right chest above the nipple. Place the other pad on the patients lower left ribs below the armpit.

**\*\*Follow the directions shown on the pads for the AED pad placement and make sure pads are pressed down firmly.**



4. Follow AED prompts.
5. Stand Clear. Do not touch the patient while the AED analyzes



6. 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 the AED says, "No shock advised," continue CPR if the patient is not moving and not breathing.

7. 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 55 pounds, 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



## ADULT AND CHILD

**Indications:** Universal sign for choking and panic

1. Ask, "Are you choking?"
2. If a person is unable to cough, breathe, or speak, activate EMS.
3. Stand behind the victim with one foot in-between the victims feet and your other foot behind you.
4. Place the flat side of your fist just above the patients belly button. Grab the back of your fist with your other hand.
5. Administer abdominal thrusts, pulling inward and upward, until the object comes out or the patient becomes unconscious.



## INFANT

**Indications:** Panic, crying with no noise, blue tinge around lips, eyes or fingernails, small objects within reach of infant.

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



### SPECIAL CIRCUMSTANCES:

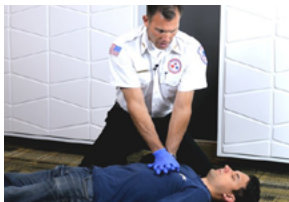
- If the patient is pregnant or too large to reach around, give chest thrusts instead.
- It may be easier to kneel behind a smaller child.



# UNCONSCIOUS CHOKING



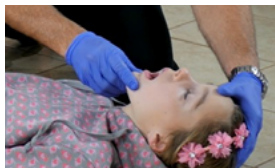
1. If you are giving someone abdominal thrusts and the person goes unconscious, lower the patient safely to the ground.
2. Activate EMS, send someone to call 911.
3. **Adult, Child, and Infant:** Give 30 chest compressions..



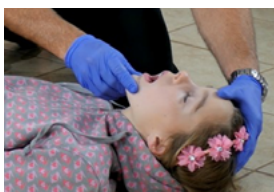
4. Open the airway and check the mouth for a foreign body. If something is seen, sweep it out with a finger. Use the pinky finger for an infant.



5. Attempt rescue breaths. If first breath does not make the chest rise, reposition head and attempt second breath.



6. **Adult, Child, and Infant:** Repeat 30 chest compressions, checking the airway, and attempting two breaths until the object comes out or professional help takes over.





## SPECIAL CONSIDERATIONS

### SPECIAL CONSIDERATIONS FOR HYPOTHERMIA



If the victim is unresponsive, not breathing, and has suspected hypothermia, follow the normal steps for CPR and incorporate additional steps for hypothermia treatment.

- 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.
- *See additional hypothermia care on page 31.*

### SPECIAL CONSIDERATIONS FOR PREGNANCY

- The same skills and techniques for Adult CPR need to be followed. The focus needs to be on providing high quality CPR for mother.
- 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

Victims who are struggling to stay above water are usually quiet and are barely getting above the surface of the water. This is very contrary to what most movies depict where they are yelling and waving their arms above water.

Most victims do not get large amounts of water in their lungs, ie. aspirate water. This is because the body has a 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. Therefore, there is no need to pump water out of the stomach.

#### **To rescue a drowning victim:**

Always ensure 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. Be sure to notify rescue personnel early.

#### **CPR and Resuscitation Considerations**

If the victim is unresponsive and not breathing, initiate high-quality CPR. If CPR is unable to be performed due to no hard flat surface, it is recommended to provide rescue breathing until CPR can be performed.

- 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, then use the AED as normal.
- 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.

# BLEEDING CONTROL AND TOURNIQUETS

## 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.

1. Have victim apply direct pressure and apply your personal protective equipment.
  2. Inspect the wound. Look for the area where the bleeding is coming from.
  3. Use direct pressure on the wound using an absorbent pad or gauze. Add more gauze or padding if necessary.
  4. Make a pressure bandage by wrapping a roller gauze or elastic bandage around the wound to maintain bleeding control.
  5. If severe bleeding is not controlled, consider using a tourniquet.
  6. Activate EMS if severe bleeding is present, use direct pressure and apply pressure bandage.
- If wound is minor, wash and bandage as needed. An antibiotic ointment may be considered.

## TOURNIQUET

Tourniquets are devices that cut off blood flow from a wound that direct pressure does not stop. While makeshift tourniquets can save lives, it is highly recommended to have commercially manufactured tourniquets for reliability and ease of use.



1. Identify source of severe bleed and ensure direct pressure is applied.
2. Place tourniquet 2-3 inches above the bleed and tighten strap.
3. Twist windlass until no pulse is felt beyond the tourniquet.
4. Write the time that the tourniquet was placed and seek immediate medical attention.

### Special notes:

- Do not place a tourniquet over a joint such as the elbow or knee.
- If you do not know how to check for a pulse, at least make sure there is no bleeding.
- Makeshift tourniquets need to have a windlass as much as 90% of tourniquets that fail do not have a windlass.
- Properly applied tourniquet will cause pain to the victim, but if needed, it could save their life.



# FIRST AID CARE

## SHOCK

Shock is the body's inability to circulate oxygen to the vital organs.

### Signs & Symptoms

- ✓ Anxiety
- ✓ Restlessness
- ✓ Confusion
- ✓ Weakness
- ✓ Cool moist skin
- ✓ Delayed capillary refill time
- ✓ Dizziness



**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.

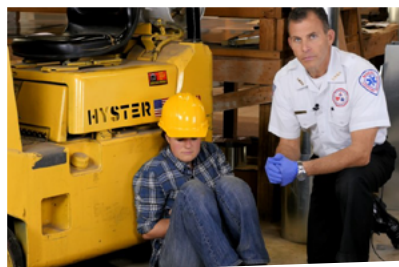
## SECONDARY SURVEY

The secondary survey is an organized way to check a conscious person for conditions which may not be visible or immediately life threatening, but may become so if not cared for.

Call 911 for any altered level of consciousness, signs of shock, or potential head, neck or back injuries.

When performing a head-to-toe exam, look for:

- ✓ Deformities
- ✓ Burns
- ✓ Contusions
- ✓ Tenderness
- ✓ Abrasions
- ✓ Lacerations
- ✓ Penetrations
- ✓ Swelling



**Head** | soft spots, blood, look at the eyes, blood or loose teeth in the mouth, blood or fluid from nose or ears, bruising of the eyes and behind the ears

**Neck** | bleeding, pain, tenderness, bruising, open wounds

**Chest** | blood, accessory muscle breathing, broken ribs, or open wounds

**Abdomen** | bleeding, abdominal evisceration, guarding, tenderness, bruising

**Pelvis** | bleeding, instability

**Legs/Arms** | bleeding, bruising, deformity, open wounds, distal sensation and movement

## FIRST AID CARE

### EVISCERATION (DISEMBOWELMENT)

An evisceration refers to when the abdominal organs are protruding from the abdomen. While this may look horrible, it really depends on how deep it is. Often the patient's largest concerns will be the drying out of abdominal organs, hypothermia since there is no skin to protect from heat loss and infection down the road.

**TREATMENT** Activate EMS, cover with sterile or clean moist dressing. Do not attempt to push bowel or organs back into place. Keep patient warm, bend the knees if possible, care for shock, check and correct ABCs.

### PENETRATING TRAUMA

Penetrating trauma occurs when an object punctures your skin. This could be anything from a stick to a knife or bullet wound.

**TREATMENT** Ensure your safety, call EMS for any serious injury, keep the patient still, do not remove any item stuck in the patient, control bleeding with direct pressure and bulky dressings, help the patient into a comfortable position and keep them warm.



### AMPUTATION (REMOVAL OF BODY PART)

An amputation is the removal of a body part. While this is traumatic, this does not mean there will always be significant bleeding. As advances in medicine continue, there is an ever growing possibility of surgeons reattaching the amputated part. Follow these steps to give the greatest possibility:

**TREATMENT** Activate EMS, control bleeding with direct pressure and bulky dressing. If bleeding is not controlled, consider tourniquet. Assess and treat for ABCs and shock if needed. If amputated part can be found wrap in clean or sterile dressing and place in plastic bag. Put bag in container of ice or ice and water. Keep amputated part dry and protect from freezing.

# FIRST AID CARE

## HEAD, NECK AND BACK INJURIES

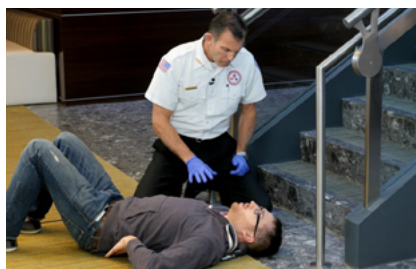
### Common Causes are

- Motor Vehicle accidents
- Pedestrian-vehicle collisions
- Falls
- Blunt trauma
- Diving accidents
- Any trauma leaving the patient unresponsive

### Signs & Symptoms

- Bruising around the eyes and behind the ears
- Irregular or abnormal breathing patterns
- Altered mental status
- Unconsciousness
- Headache
- Pain, pressure, stiffness in the back or neck area
- Inability to move the arms or legs
- Numbness or tingling in the extremities

**TREATMENT** Activate EMS, do not move the patient unless life threatening danger arises, minimize movement, check and correct ABCs.



## CONCUSSIONS

### Signs & Symptoms

- Dizziness
- Inability to track movement with eyes
- Blurred vision
- Loss of balance
- Confusion
- Acute memory loss
- Dazed look
- Nausea

**TREATMENT** Activate EMS, let patient sit in position of comfort, monitor patient for life threatening issues, check and correct ABCs.

**Concussion in sports:** If a player shows signs of having a concussion, the player is not allowed to go back to play until cleared by a physician.



# FIRST AID CARE

## MUSCULOSKELETAL INJURIES

### Sprains and strains

A sprain occurs when a joint is overextended causing a ligament to stretch or tear. A strain is an overextended muscle. In either case, a minor sprain or strain is usually not serious. A more serious strain or sprain may show the same signs as a fracture and require medical attention. Sprain or strain signs include:

- Pain upon movement
- Tenderness
- Minor swelling or bruising



### JOINT INJURIES VIDEO

Scan the QR code for specifics on joint injuries..

**TREATMENT RICE(S)** - Rest the injured area, Ice for 10-15 minutes every hour, Compress by wrapping with an ACE or elastic bandage, Elevate the injured area above the person's heart level. (See note on Splinting at the bottom of this page.)

### Fractures

- If patient is not able to move the body part, treat as a fracture.
- Consider the mechanism that caused the injury.
- Look for deformity, open wounds, tenderness, significant swelling, discoloration, bruising, crepitus (a grating sensation), and loss of movement.
- Cover any open wounds with dry clean dressings, but do not apply pressure over possible fracture.
- General splinting is not recommended. See note below on Splinting.

**TREATMENT** Activate EMS if necessary, manually stabilize the affected body part, do not attempt to straighten, use ice to minimize swelling.

## SPLINTING

**Splinting** is usually best left for trained providers as splinting takes practice. Stabilizing joints injuries or fractures in the position found can reduce pain and prevent further injury to the patient.

Splinting may be appropriate if there will be an extended time for EMS response, EMS is not available, or an individual will be transporting the patient to a hospital.

The concept of splinting is to minimize motion by immobilizing the injury itself as well as joints or bones next to the injury without causing further complications.

# FIRST AID CARE

## BURNS

### First Degree / Superficial

- Pain
- Red Skin
- Swelling

### Second Degree / Partial Thickness

- Pain
- Blistering
- White or Red Skin
- Body fluids leaking from the burn site

### Third Degree / Full Thickness

- Numbness in burned area and severe pain in surrounding area
- Multicolored skin, black, white, gray, and red
- Severe body fluid loss



**TREATMENT** Stop the burning with water, cover with dry sterile dressing (for chemical burns, flush with water for 15-20 minutes). For 1st and 2nd degree burns, activate EMS if severe conditions exist, such as a large burn area. For 3rd degree burns, electrical burns, and chemical burns activate EMS immediately. For electrical burns, look for entrance and exit burns. Care for shock, check and correct ABCs. Be sure to keep patient warm.

## EYE INJURIES

- **Burns** | Stop the burning, bandage both eyes.
- **Chemical** | Flush with warm water for 15-20 minutes and bandage both eyes.
- **Penetrating Trauma** | Do not remove. Bandage the object into place, place a cup over object, and cover both eyes.



**TREATMENT** Activate EMS if severe conditions exist. Seek professional medical treatment for all forms of eye injuries.





# FIRST AID CARE

## NOSE BLEEDS (EPISTAXIS)

Nosebleeds are a common occurrence for many people. While usually not life threatening, certain items can make them true emergencies.

### Watch for:

- Blood thinners
- Deformity in the nose
- Heavy bleeding
- Nose bleeds caused by trauma with other complaints
- Steady bleeding that lasts for more than 20 minutes



**TREATMENT** Pinch nose, tilt the head forward, and apply a cold pack to the back of the neck or the bridge of the nose.

## EAR INJURIES

Due to high risk of permanent injury to the ear and hearing, seeking advanced medical care is usually the best option. Bleeding from inside or outside of the ear is usually a result from trauma to the area around the ear and can have more serious concerns. Foreign objects in the ear may have caused permanent injury upon insertion, but attempting to remove improperly may cause permanent damage as well. Below are some treatments for some more minor injuries.

### TREATMENTS

**External ear injuries** treat with gauze and direct pressure. Watch for signs of infection and be sure to seek medical treatment for any serious injury.

**Foreign objects in the ear** should have EXTREME CAUTION used. Stop and seek medical help if there is any increase in pain or the object can't be easily removed.

**Bleeding in the ear** should have gauze placed outside the ear to collect the blood, never put anything into the ear canal and seek medical attention.

## DENTAL AND ORAL EMERGENCIES

Dental injuries can be extremely painful. Most dental injuries need to be evaluated by a dentist. There are a couple injuries that can be helped with first aid treatment. If the tongue, lips or cheek are involved, since blood may cause airway compromise, seeking medical treatment first should be considered. If life threatening conditions exist, call 911 and provide appropriate care.

### TREATMENTS

**Bleeding-** apply gauze with direct pressure to the area. Be careful not to block the airway or cause a choking hazard.

**Avulsed teeth (knocked out)-** avoid handling by the root end, quickly rinse and gently place back in socket. Use gauze to bite down on the tooth to hold it in place. If replacing tooth is not possible, store in milk, saliva or tooth preservation kit. For **primary teeth (aka baby teeth)**, store in milk, saliva, or tooth preservation kit and seek dental care.

**Pain or swelling-** apply a cold compress to the outside of the mouth near the injury. If life-threatening conditions exist, call 911 and provide appropriate care.

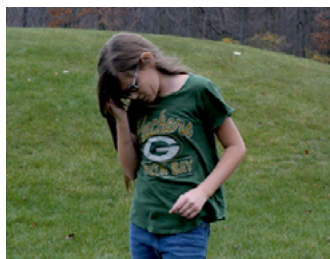


# FIRST AID CARE

## DIABETIC EMERGENCIES

### Signs & Symptoms

- Altered level of consciousness
- Weakness
- Personality changes
- Dizziness
- Irritability
- Difficulty breathing
- Cool, clammy skin



**TREATMENT** Give sugar if conscious. If unconscious or condition does not improve, activate EMS, check and correct ABCs.

## SEIZURES

### Signs & Symptoms

- Altered level of consciousness
- Uncontrollable shaking
- Stiffness



**TREATMENT** Activate EMS if the reason for the seizure is unknown or it lasts for more than 5 minutes. Protect patient from further harm, place nothing in the mouth, and do not try to restrain the patient. After seizure ends, open the airway, check and correct ABCs, and consider moving patient into the recovery position if patient is unconscious and breathing.

## POISON CONTROL

The most important point for poisoning is to prevent it from happening. Store poisons, like cleaning products and medications, out of reach of children. Use cabinet and drawer safety locks.

### Signs & Symptoms

- Open bottles of medication or cleaning products near the victim
- Burning sensation in the chest and throat
- Difficulty breathing
- Altered level of consciousness
- Headache
- Nausea and vomiting
- Hallucinations
- Excessive sweating
- Severe abdominal cramping
- Burns, stains, or blue tint around the mouth
- Abnormal odor from victim's mouth



**TREATMENT** Activate EMS and call Poison Control Services, 1-800-222-1222. Follow their directions.

# FIRST AID CARE

## ALLERGIC REACTIONS

Allergic reactions can happen because of food, drugs, poisons, plants, inhalation or insect stings.

### Signs & Symptoms

- Altered level of consciousness
- Tightness in the chest and throat
- Difficulty breathing
- Swelling of the mouth or throat
- Severe abdominal cramping
- Rashes/Hives

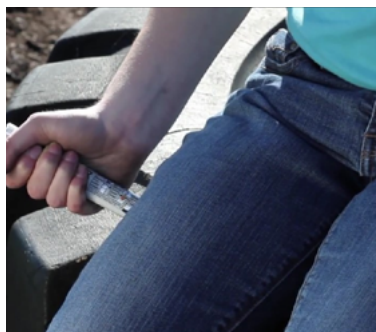


**TREATMENT** Activate EMS, remove patient from source of allergen, place in position of comfort. Look for obvious bites and stings. For wasps or bees, check for a stinger. If one is found, use a credit card to scrape the stinger out. If the patient has a prescribed epinephrine auto injector, assist patient in utilizing the device.

## EPINEPHRINE INJECTION

Epinephrine is the first line of defense when it comes to treating anaphylaxis. Epinephrine does not cure the patient, it only masks symptoms temporarily so 911 or further medical treatment must be sought to complete treatment.

First Aid providers should only assist a person in using their own prescribed epinephrine auto-injector. Exceptions, such as at camp or school, may have authorization to use a facility supplied epinephrine auto-injector.



### To administer an epi-pen:

1. Remove the safety cap.
2. Grip the device in your hand with the tip pointing downward. Never put your thumb, fingers or hand over either end.
3. Firmly push the tip into the middle of the person's outer thigh at a 90° angle (through clothing if needed) until the pen clicks.
4. Hold it there for three seconds to ten seconds depending on directions from specific device.
5. Pull the auto-injector straight out of the leg. Make sure not to pull out at an angle as this could cause a lot of pain and bleeding.
6. Rub the area for about 10 seconds just to help drug absorption within the muscle of the leg.
7. A second auto-injector may be administered if the symptoms continue or recur.

# FIRST AID CARE

## ASTHMA

Asthma is a condition that causes swelling in the lower airway with an increase of mucus production and usually occurs with exercise, temperature changes, pollen, or chemicals.

### Signs & Symptoms

- Shortness of breath or wheezing
- Leaning forward to breath
- Unable to make noise or speak
- Blue lips and fingernails
- Moist skin
- Rapid, shallow breathing



**TREATMENT** Activate EMS and keep patient calm. Place in position of comfort. Ask about allergies, asthma, COPD or other medical conditions. If the patient has a prescribed inhaler, assist patient to utilize the device. Check and correct ABCs.

## SNAKEBITES

Bites from poisonous snakes can be deadly if not treated quickly. Because children have a smaller body size, they are at higher risk for death or serious complications.

Getting the victim advanced medical care and into an emergency room as quickly as possible is most important. A person's life can be saved and serious effects avoided with the right antivenom and quick action.

### Signs & Symptoms

- Bleeding from wounds
- Blurred vision
- Burning of the skin
- Convulsions
- Dizziness
- Excessive sweating
- Fainting
- Fang marks in the skin
- Loss of muscle coordination
- Nausea and vomiting
- Numbness and tingling
- Severe pain
- Skin discoloration
- Swelling at the site of the bite
- Weakness

**TREATMENT** Activate EMS, move to safe location, calm the patient, keep injured area still and at the level of the heart, gently wash with soap and water if available.

## SCORPIONS

While scorpions can cause severe medical issues, most scorpion stings are not dangerous. Err on the side of caution if you are not sure if you were stung by a venomous species and seek immediate medical treatment.

### Signs & Symptoms

- Abdominal pain & cramps
- Drooling
- Localized pain
- Muscle twitching
- Respiratory depression
- Restlessness

**TREATMENT** Move to a safe location, keep patient calm, clean site with soap and water, ice or cold compress for pain, and monitor for severe symptoms. If any severe symptoms develop or symptoms continue for over 48 hours, seek medical treatment.

# FIRST AID CARE

## TICKS

Ticks can carry Lyme disease that can cause many symptoms. To prevent tick bites, wear long clothing, consider EPA registered insect repellents, and be sure to check yourself for ticks when you come inside from areas known to have ticks, such as wooded and grassy areas. The sooner you remove a tick, the less likely the transmission of Lyme disease.

### Signs & Symptoms of Lyme Disease

- Facial Palsy
- Headaches
- Irregular heart beats
- Rashes
- Joint Pain
- Nerve Pain

**TREATMENT** If a tick is found, use tweezers and grab the tick as close to the skin as possible. Pull straight back causing the skin to tent. The tick will eventually let go. Avoid squeezing too hard or twisting as this may leave the head of the tick embedded in your skin. You can save the tick in a plastic bag to be tested for Lyme disease. Then wash the area with soap and water. If rash or fever occur within several weeks, notify your doctor about the recent tick bite.

## SPIDER BITES

Spiders usually only bite when they are trapped or unintentionally contacted and most spider bites are non-venomous.

### Signs & Symptoms

- Chills
- Cramping
- Fever
- Itching
- Nausea
- Pain radiating from the bite
- Restlessness

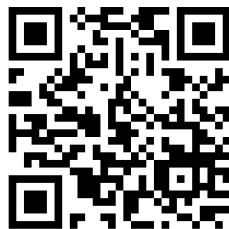
**TREATMENT** Remove yourself from the area to prevent further bites, wash bite with soap and water, elevate extremity or use a cold compress to help with pain, if possible identify the spider that bite you and if it is a venomous species, seek immediate medical attention.

## COMMON BITES AND STINGS

Mosquitoes, bees, wasps, fire ants and deer flies can be annoying. When bitten or stung by one of them, it can be very painful, but only occasionally life-threatening. Preventing these bites and stings is best. This involves wearing appropriate clothing, safely using insect repellents, and staying away from known problem areas or times of the day they are most active.

### Signs & Symptoms

- Itching
- Pain at the site
- Redness
- Swelling



SCAN QR CODE FOR  
VIDEO

**TREATMENT** Wash area with soap and water and a cold compress for pain or swelling. Over the counter medication may be considered as well. For wasps or bees, check for a stinger. If one is found, use a credit card to scrape the stinger out. Monitor patient for severe symptoms of allergic reaction and follow treatment in previous pages.



# FIRST AID CARE

## JELLYFISH STINGS

Avoid jellyfish stings by swimming in designated areas, stay informed about any recent sightings in the area, and consider full body swimsuits or protective lotions.

### TREATMENT

1. Move away from jellyfish area.
  2. Remove any visible tentacles with tweezers, a blunt object or gloved hands.
  3. Use seawater to remove any remaining tentacles or toxins. Do Not use fresh water.
  4. Rinse with vinegar as soon as possible for at least 30 seconds, to inactivate the venom.
- For pain control, immerse affected area in water as hot as you can safely tolerate for 20-45 minutes.



SCAN QR CODE FOR  
MARINE LIFE FIRST AID  
VIDEO

## STINGRAY AND SEA URCHIN INJURIES

Avoid stingray injuries by staying in clear water and by sliding your feet on the ocean bottom. Sea urchin injuries can be prevented by wearing water shoes and being careful about where you are walking or sitting in the water.

### TREATMENT FOR SKIN PUNCTURES

1. Move to safe area and have patient sit or lie down.
2. Removal of a stingray stinger should be left to professionals, but sea urchin spines should be carefully removed with tweezers.
3. Use direct pressure to control any bleeding. Be cautious not to push any spines further into the patient.
4. If possible, elevate effected limb.
5. Soaking the injured area in water as hot as you can safely tolerate for 30-90 minutes.
6. Seek further medical treatment to ensure no debris is left and due to the risk of infection.

## ELECTROCUTION/LIGHTNING STRIKES

Electricity can be extremely dangerous. Always be aware of power sources when plugging in or working on electronic devices. For lightning, stay indoors, but if you are stuck outside, stay away from tall objects. Our bodies have many paths for electricity to travel. This can very dangerous for our heart as it can stop our heart from beating properly.

### TREATMENT

1. Before approaching the victim, ensure no further risk of electrocution.
2. Check for responsiveness, call for help if needed.
3. Assess for normal breathing, begin CPR if needed.
4. If patient is responsive, keep patient still.
5. Cover entrance and exit wounds.
6. Monitor for shock until EMS arrives.



# FIRST AID CARE

## HEAT RELATED EMERGENCIES

While heat emergencies typically happen during the hotter summer months, we should be aware of them year round depending on the activity or environment we are in. These heat emergencies typically will progress to the next stages as we stay in hot environments and don't rest or stay hydrated. Be watchful of ourselves and those around us for these conditions. Keep in mind the very young and elderly are most susceptible, but the treatments do not change for any age.

## HEAT CRAMPS

- Faintness, dizziness
- Exhaustion
- Possible nausea and vomiting
- Normal mental status
- Severe muscle cramps/pain

**TREATMENT** Get patient out of the hot environment, cool the patient, remove tight clothing, and give water if tolerated.

## HEAT EXHAUSTION

- Moist and clammy skin
- Pale
- Weak, dizzy or faint
- Headache
- Nausea and vomiting

**TREATMENT** Get patient out of the hot environment, remove clothing as necessary, gently cool the patient, give water if tolerated. Immerse the persons full body in cool water if it can be done safely, keeping the head above water. If patient does not improve or becomes unconscious, activate EMS, check and correct ABCs.



## HEAT STROKE

- Unconscious or nearly unconscious
- Dry or wet skin, usually red
- Very high body temperature

**TREATMENT** Activate EMS immediately, get patient out of the hot environment, check and correct ABCs, remove clothing as necessary, gently cool the patient, give nothing to drink or eat. Immerse the persons full body in cool water if it can be done safely, keeping the head above water.

# FIRST AID CARE

## COLD RELATED EMERGENCIES

### Factors that affect onset

- Weather severity
- Age
- Pre-existing medical condition
- Alcohol or drug consumption
- Clothing



### HYPOTHERMIA

Hypothermia tends to progress in stages starting from mild signs to severe as listed in order below. The earlier signs are recognized and treated, the better the outcome.

- Shivering
- Feeling of numbness
- Slow breathing
- Slow pulse
- Loss of coordination
- Slurred speech
- Decreased levels of consciousness
- Hard, cold, painless body parts
- Death

**TREATMENT** Move patient to a warm environment, but avoid rough movement and handle person gently. Rewarm by removing wet clothing and covering patient with dry blankets. If patient does not improve, shows decreased level of consciousness or becomes unconscious, activate EMS. Monitor and treat ABCs.

### FROST-BITE

- Waxy looking, discolored, numb, swollen extremities (usually fingers and toes) after prolonged exposure to cold.
- Blisters may occur in severe cases.
- Skin may be stiff or frozen solid



**TREATMENT** Seek immediate professional medical help. Do not rub the affected area.





# MOVING PEOPLE

## RECOVERY POSITION

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



1. Extend victim's arm closest to you above victim's head
2. Place victim's leg farthest from you, over their other leg
3. Support head and neck
4. Place victim's arm farthest from you across their chest



5. Roll victim towards you
6. Position victim's top leg so the knee acts as a prop for the body
7. 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.

## Notes

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

# LAYRESCUER SKILL CHART

SKILL	ADULT adolescent and older (approx 12 years and older)	CHILD 1 year to adolescent	INFANT under 1 year old
Check the scene	Do not enter an unsafe scene		
Check the patient for responsiveness and no normal breathing	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
Activate EMS	<p><b>If alone:</b> Activate EMS, then come back to provide care.</p> <p>If <b>asphyxial arrest</b> is likely, call after 2 minutes or 5 cycles of CPR</p>	<p><b>If alone:</b></p> <p><b>Unwitnessed arrest:</b> Activate EMS after 5 cycles or 2 minutes of CPR.</p> <p><b>Witnessed arrest:</b> Activate EMS, then come back to provide care.</p>	
Compressions Push hard and fast	<p>30 at a rate of 100-120 per minute.</p> <p><b>Use 2 hands:</b> Place the heel of one hand in the center of the chest, place other hand on top.</p> <p><b>Depth:</b> 2—2.4 inches</p>	<p>30 at a rate of 100-120 per minute.</p> <p><b>Use 1 or 2 hands:</b> Place the heel of one hand in the center of the chest, if needed place other hand on top.</p> <p><b>Depth:</b> About one-third the depth of the chest</p>	<p>30 at a rate of 100-120 per minute.</p> <p><b>Use 2 fingers</b> on the breastbone between the nipples.</p> <p><b>Depth:</b> About one-third the depth of the chest</p>
Airway	Head tilt chin lift. Look in the mouth for any foreign objects.		
Breathing	Give 2 breaths lasting about 1 second each.		
Unconscious Choking: After attempting 1 breath, there no chest rise.	Reposition airway, ensure proper technique and attempt second breath. If air still does not make the chest rise, perform 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. Continue cycles of 30 chest compressions, foreign body check, and 2 breaths until advanced help arrives. If breaths go in, recheck patient for responsiveness and breathing and provide appropriate care.		
AED	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 each other.	

ProTrainings is a nationally recognized CPR and First Aid Training provider offering Healthcare CPR (BLS), CPR for All Ages, CPR for Adults, 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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