

First Aid

**Dr. Israa A. Saleh
Al Azhar University
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Definition:

- First Aid is the initial assistance or treatment given to a casualty for any injury or sudden illness before the arrival of an ambulance, doctor, or other qualified personnel.
- It uses the available human and material resources at the site of accident to provide initial care to the victim.



Goals of first aid:

- **There are three main goals of first aid abbreviated as 3P:**
- **Preserve life**
- **Prevent further injury**
- **Promote recovery**

Preserve life

Preserving life:

- Control bleeding
- Treat probable cause of shock
- Maintain airway in correct position
- Perform CPR when needed (no breathing or pulse)

Prevent further injury

- Dress wound to prevent infection
- Provide comfort to casualty
- Place casualty in a comfortable position

Promote recovery

- Relieve casualty from anxiety
- Encourage confidence and trust
- Attempt to relieve pain and discomfort
- Handle casualty gently
- Protect casualty from cold and wet

PRINCIPLES OF FIRST AID

(4 C's)

- Call for Help
- Calmly Take Charge
- Check the scene & the casualty
- Carefully apply FIRST AID



First Aid Principles

Only do what you have been trained for



Think before you act



Protect Life



Prevent further harm



Promote Recovery



Asses the injured person's situation



**Ask permission
before treating an
injured person**



**Don't panic.
Remain calm and in
control**



**Prevent cross infection.
Protect yourself and the
injured**

Rules and responsibilities:

- Manage the incident and ensure the continuing safety of themselves, bystanders and the casualty
- Assess casualties and find out the nature & cause of their injuries
- Arrange for further medical help or other emergency services to attend (e.g.the fire service)
- If trained, prioritize casualties based upon medical need
- Provide appropriate first aid treatment as trained
- If able, make notes/observations of casualties
- Fill out any paperwork as required
- Provide a handover when further medical help arrives

First aid Kit

- Bandages, roller bandages and tape
- (Sterile) Gauze
- Antiseptic wipes and swabs
- Absorbent compresses
- Antibiotic cream
- Burn ointment
- Mask for breathing (rescue breathing/CPR)
- Chemical cold pack
- Eye shield and eye wash
- First aid reference guide that includes local phone numbers



- 2 Disposable PVC Gloves
- 1 Disposable Instant Ice Pack
- 1 First Aid Tape
- 1 Large Trauma Pad
- 1 Compass
- 1 Moleskin Blister Relief
- 1 Triangular Bandage
- 1 Ice Pack
- 1 First Aid Manual
- 1 First Aid Bag with Reflective Strip
- 1 Glow Stick (6 hours)

Legal aspects of providing the first aid

The law that protects you as a voluntary person from being sued wrongdoing:

- You are reasonably careful.
- You act in a good faith (not for a reward).
- You do not provide care beyond your skills level.
- You do not leave the causality until someone with the same skills takes your place or when the place becomes so dangerous.

"We're just an ordinary family, living an ordinary life. You hear about these types of stories in the news but you never expect it to happen to you,"

**First aid
really
saves
LIVES!**



PRIORITY OF CASUALTIES

- **Save the conscious** casualties before the unconscious ones as they have a higher chance of recovery.
- **Save the young** before the old.
- **Do not jeopardize** your own life while rendering First Aid. In the event of immediate danger, get out of site immediately.
- Remember: One of your aims is to preserve life, and not endanger your own in the process of rendering First Aid.

What to do and what not to do as first aider

Do

Before handling the casualty use:

Mask

Gloves

Head Cover

Do not

Prescribe Medicine

Declare DEATH

Action plan

Is abbreviated by **DRABC**

- **D** : danger .
- **R** : response.
- **A** : airway .
- **B** : breathing .
- **C** : circulation .



D- Danger

Check for **DANGER**

- To you
 - To others
 - To victim.
-
- Essential to protect yourself from injury and infection .
 - Ensure surroundings are safe .
 - Protection from infection : to prevent “cross infection” .

R-Response

- Gently “Shake and Shout” at the casualty
- Is the casualty is conscious?
- Is the casualty drowsy or confused?
- Is the casualty unconscious, but reacting?
- Is the casualty unconscious with no reaction?
- If unconscious, place the casualty in the stable side position.

Systems for response



MENTAL STATUS ASSESSMENT

A

ALERT

Not necessarily orientated to time and place or neurologically normal.



V

VERBAL

Not fully awake. Only responds to verbal stimuli.



P

PAIN

Difficult to rouse and only responds to painful stimuli.



U

UNRESPONSIVE

Completely unconscious with no response.



More FREE resources at eventmedicinegroup.org

A-Airway

- Put the person on his or her back on a firm surface.
- Kneel next to the person's neck and shoulders.
- Open the person's airway using the **head tilt-chin lift**. Put your palm on the person's forehead and gently push down. 
- Then with the other hand, gently lift the chin forward to open the airway.
- Check for normal breathing, taking **no more than 10 seconds**: Look for chest motion, listen for breath sounds, and feel for the person's breath on your cheek and ear. Do

Head Tilt - Chin Lift



- Head tilt stretches anterior neck muscles, lifts tongue away from posterior pharyngeal wall and epiglottis away from laryngeal inlet
- Chin lift stretches structures more and pulls mandible and tongue forward
- If neck injury suspected, do not tilt the head unless jaw thrust fails
- Death from hypoxic airway obstruction is much more common than quadriplegia resulting from emergency airway manipulation

B-Breathing



- **Rescue breathing** can be mouth-to-mouth breathing or mouth-to-nose breathing if the mouth is seriously injured or can't be opened.
- With the airway open (using the head tilt-chin lift), pinch the nostrils shut for mouth-to-mouth breathing and cover the person's mouth with yours, making a seal.
- Prepare to give **two rescue breaths**.
- Give the first rescue breath — lasting one second — and watch to see if the chest rises.
- If it does rise, give the second breath. If the chest doesn't rise, repeat the head tilt-chin lift and then give the second breath.

C-circulation

- Is there a **carotid** pulse? (where's the carotid pulse located?)
 - Is it strong?
 - Is it regular?
 - Is there a major blood loss?
-
- IF NO PULSE PRESENT THEN START CPR (CIRCULATION PULSE RESPIRATION)

That's enough for Today!

THANK YOU

Cardiopulmonary resuscitation



Cardiopulmonary resuscitation

- CPR should be performed immediately on any person who has become **unconscious** and is found to be **pulseless**.
- Cardiopulmonary resuscitation (CPR) consists of the use of chest compressions and artificial ventilation.
- maintain circulatory flow and oxygenation during cardiac arrest.
- Studies have shown that survival falls by 10-15% for each minute of cardiac arrest without CPR delivery.

CPR

- CPR should be started before the rhythm is identified and should be continued while the defibrillator is being applied and charged.
- CPR should be resumed immediately after a defibrillatory shock until a pulsatile state is established.
- The only absolute contraindication to CPR is a do-not-resuscitate (DNR) .

Equipment

- Can be performed anywhere without the need for specialized equipment.
- CPR is delivered without infection protection in the vast majority of patients who are resuscitated in the out-of-hospital setting, and no cases of disease transmission via CPR delivery have been confirmed.



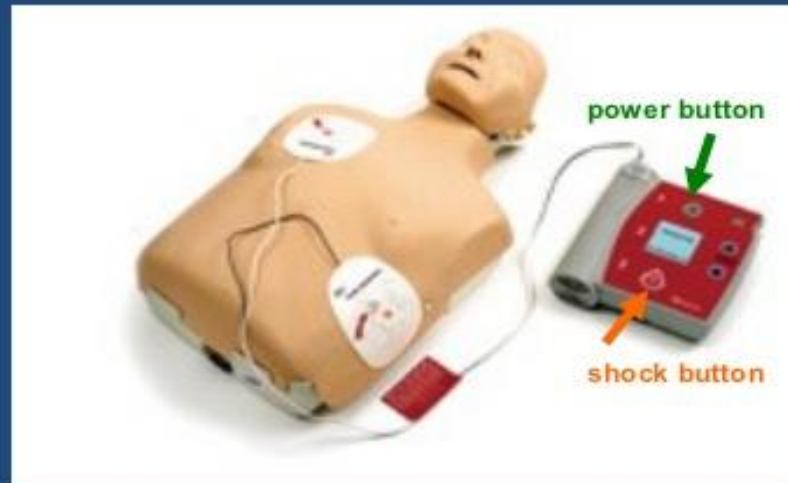
A cardiac defibrillator provides an electrical shock to the heart via 2 electrodes placed on the patient's torso and may restore the heart into a normal perfusing rhythm.



Automated External Defibrillator

Use of an AED

- ❖ Power on the AED
- ❖ Apply pads to the victim's bare chest
- ❖ Plug the pads into the AED
- ❖ "Clear" the victim and allow it to analyze
- ❖ If a shock is advised, "clear" the victim again and press the shock button
- ❖ Continue chest compressions
- ❖ Every 2 minutes the AED will repeat the steps



CPR Technique

- CPR comprises the following 3 steps, performed in order:
 - 1) Chest compressions
 - 2) Airway
 - 3) Breathing



For the CPR to be effective, the patient should be positioned appropriately :

- Supine
- On a hard surface
- The person giving compressions should be positioned high enough above the patient to achieve sufficient leverage.



Chest compressions

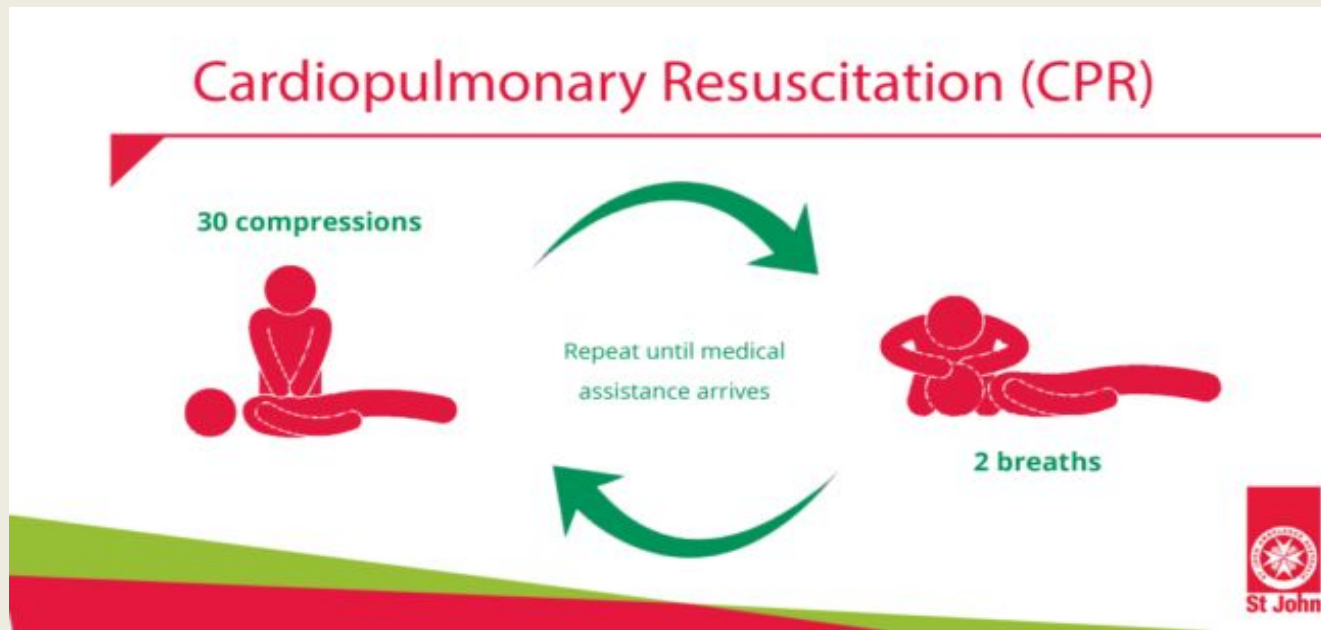
- Place the heel of one hand on the patient's sternum and the other hand on top of the first, fingers interlaced.
- Extend the elbows and the provider leans directly over the patient .
- Press down, compressing the chest at least 2 inches.
- Release the chest and allow it to recoil completely.

*The compression rate should be at least
100/min.*



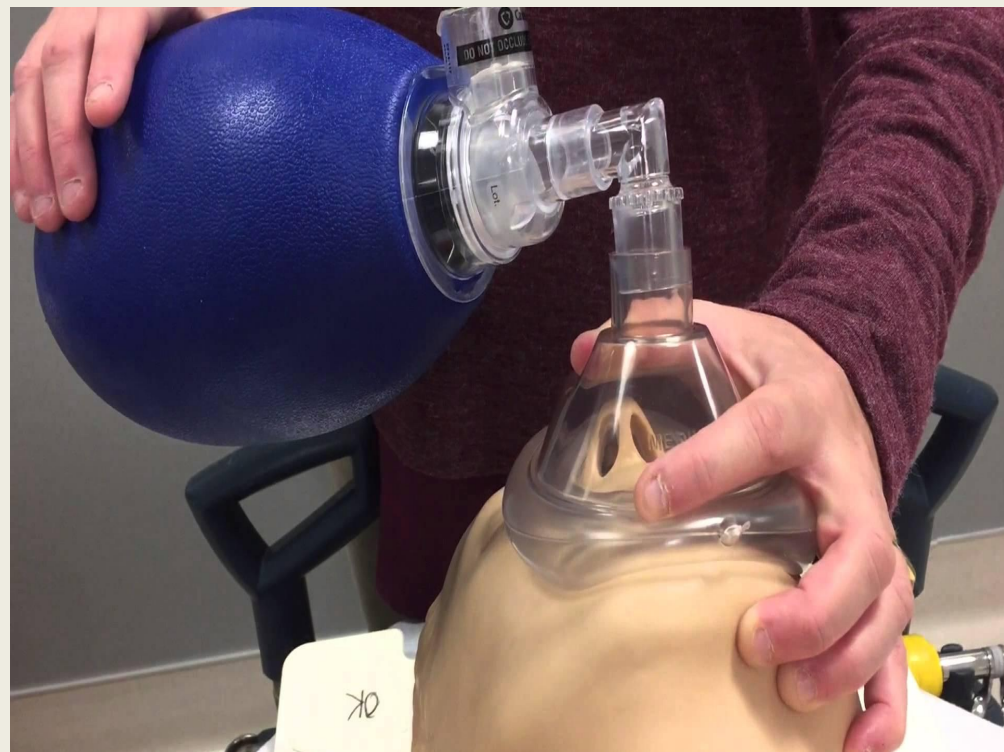
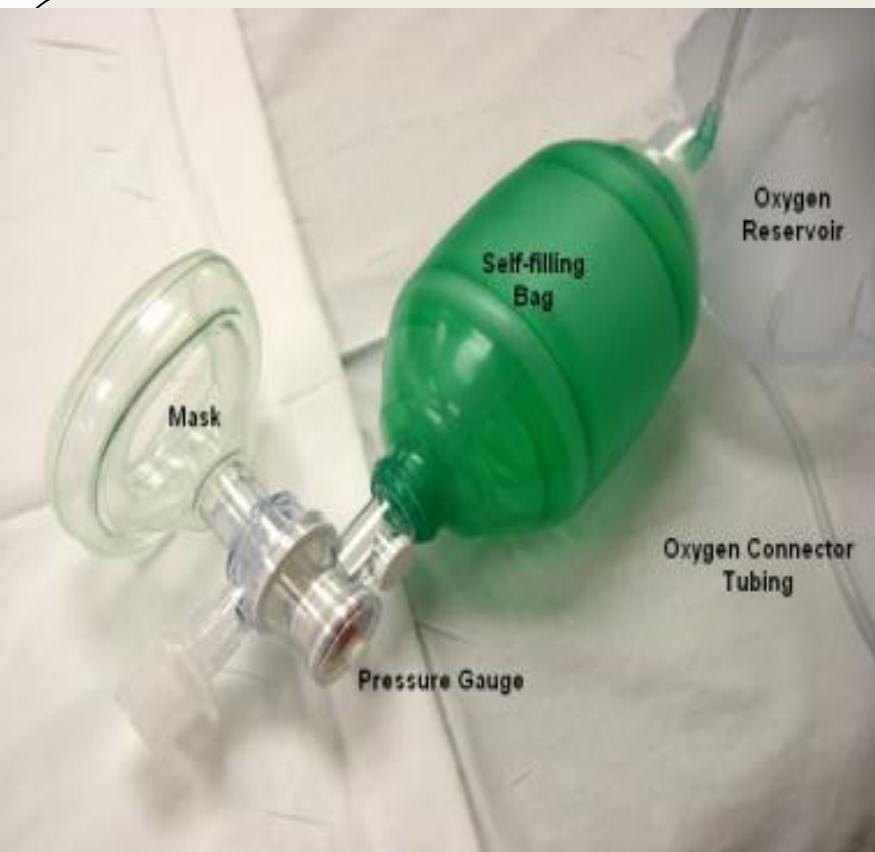
Chest compressions

- After 30 compressions, 2 breaths are given.
- This entire process is repeated until a pulse returns or the patient is transferred to definitive care.
- To prevent provider fatigue or injury, new providers should intervene every 2-3 minutes.



Ventilation

- If the patient is not breathing, 2 ventilations are given **via** the provider's mouth or a bag-valve mask (BVM).
- If using the bag-valve mask, you to ensure a tight seal between the mask and the patient face.
- Squeeze the bag with one hand for approximately 1 second, forcing at least 500 mL of air into the patient's lungs.



Ventilation

To perform the mouth-to-mouth technique, the provider does the following :

- Pinch the patient's nostrils closed to assist with an airtight seal.
- Put the mouth completely over the patient's mouth.
- After 30 chest compression, give 2 breaths.
- Give each breath for approximately 1 second with enough force to make the patient's chest rise

mouth-to-mouth breathing technique



Note:

- ✓ Head tilt
- ✓ Jaw support
- ✓ Nose pinch
- ✓ Mouth seal



Note:

- ✓ Check for rise and fall of chest with each breath.

- ✓ Head tilt
- ✓ Mouth-to-mouth
- ✓ Rescue breaths. Each breath takes one second



CPR Cycle

#1,2,3,4



#5,6,7,8



- Perform chest compressions.
- Give 30 compressions and two breaths.
- Count = 1&2&3&4&5...&30
- Call 101

Compressions : ventilations ratio = 30:2

After CPR

POST-CPR RECOVERY POSITION

- 1.** Bend one arm and keep legs straight.



- 2.** Place back of victim's hand against cheek and hold there.



- 3.** Hold victim's hand against cheek to support head.



- 4.** Hand supports head.
Bent knee prevents rolling
Bent arm gives stability

Front view of recovery position



Hints

- In cases in which the trauma was not witnessed, it may be assumed that a longer period of hypoxia might have occurred and limiting CPR to 30 minutes or less may be considered.
- When the circumstances or timing of the traumatic event are in doubt, resuscitation can be initiated and continued until arrival at the hospital.
- Withholding resuscitation should be considered in cases of penetrating or blunt trauma victims who will obviously not survive.

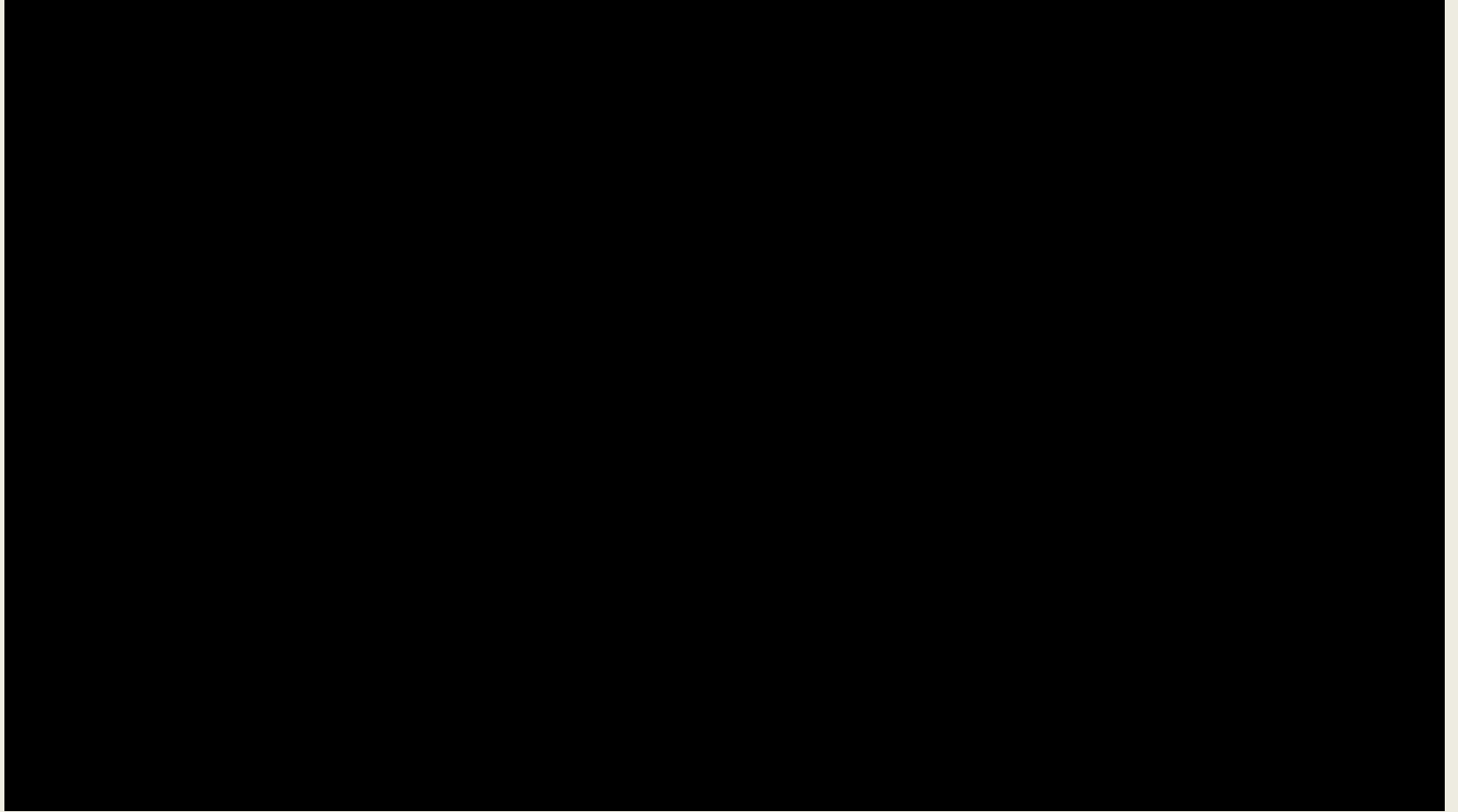
Complications

- Fractures of ribs or the sternum from chest compression.
- Gastric insufflation from artificial respiration using noninvasive ventilation method.
- This can lead to vomiting with increased risk of aspiration and compromising airway.

Time to Apply



Time to Apply



Pediatric CPR (Aged 1 Year To Puberty)

- When two rescuers are present, performing CPR on a child is the same as performing CPR on an adult, except that the **compression ventilation ratio when 2 rescuers are present drops to 15:2.**
- **The compression: ventilation ratio for 1 rescuer CPR in infants is 30:2,** the same as for two rescuer CPR children.
- One or two hands may be used to compress the chest to a depth of $\frac{1}{3}$ the diameter of the chest.
- Remember that compressions should be done when there is no pulse present or when the child's heart rate *is less than 60 beats a minute and there are signs of poor perfusion.*

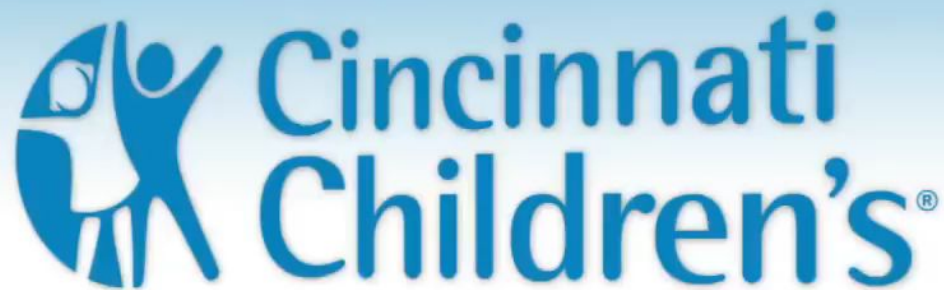
age)

- **Checking for responsiveness:** never shake an infant as this may cause brain damage. To check for responsiveness in an infant, tap the soles of the feet while calling to the infant in a loud voice.
- **Pulse check location**– for an infant, it is easiest to check for a pulse using the brachial artery. To locate the brachial artery, place 2 or 3 fingers on the inside of the upper arm between the shoulder and elbow. Press the fingers gently for 5 to 10 seconds to feel for a pulse. Pushing too firmly may occlude the infant's pulse.
- **Depth of compressions**– compress the infant's chest to one-third the depth of the chest, or approximately 1 ½ inches.
- **Compression delivery technique**– 2 finger technique: when one rescuer is present, the chest is compressed using two fingers on the lower half of the sternum, avoiding the xiphoid process (the very end of the sternum where it narrows and comes to a point). To landmark, place 2 fingers in the center of the infant's chest, just below the nipple line. Push down on the infant's chest one-third the depth of the chest, or approximately 1 ½ inches. Allow the chest to fully recoil (return to its neutral position) in between compressions. Compressions should be delivered at a rate of 100-120 compressions/minute.
- **2 thumb-encircling hand technique:** When two rescuers are present, the compression: ventilation ratio drops to 15:2, the same as for children. To perform this technique, position yourself at the infant's feet. Place your thumbs side by side on the center of the infant's chest just below the nipple line. Encircle the infant's chest so that the fingers of both hands support the infant's back. Use your thumbs to deliver compressions at the appropriate depth and rate (100-120 compressions/minute; 1/3 of the depth of the chest or approximately 1 ½ inches). This position allows another rescuer to support airway and breathing without getting in the way of the rescuer performing chest compressions, and is therefore the preferred technique when two rescuers are present. This technique also allows for more consistent chest compressions and superior blood flow and blood pressure compared to the 2-finger technique.

Compression delivery technique VS. 2 thumb-encircling hand technique



Time to Apply



Enough for Today

Any Questions?

1. Choking

Scenario:

You were sitting in a restaurant with your friends and suddenly you started hearing someone coughing out loud on the table next to you, it takes you only few seconds before realizing that he was choking..!?

What to do doctor?



Choking

- Partial or complete obstruction of the airway can be due to a foreign body (e.g., food, a bead, toy, etc.).



CHOKING

Choking is a life threatening emergency.

Signs of Choking:

-Grabbing the throat

Mild Obstruction	Severe Obstruction
Able to speak	Not able to speak
Signs of distress (eyes look fearful)	Signs of distress (eyes look fearful)
Forceful coughing	weak or no coughing
Wheezing and gagging between coughs	High-pitched noise or no noise when trying to breathe
Reddish Face	Greyish face bluish lips

Step 1

- If the Person Is Conscious but Not Able to Breathe or Talk?

1. Give Back Blows

- Give up to 5 blows between the shoulder blades with the heel of your hand.

Step 2.

If Person Is Still Choking, Do abdominal thrusts

- Stand behind the person and wrap your arms around the waist.
- Place your clenched fist just above the person's navel. Grab your fist with your other hand.
- Quickly pull inward and upward as if trying to lift the person up.
- Perform a total of 5 abdominal thrusts (also known as the **Heimlich maneuver**).

Abdominal Thrusts (The Heimlich Maneuver)

1. Stand behind the person with your arms around the waist.
2. Make a fist with one hand and position it slightly above the person's navel.
3. Grasp the first with the other hand pressing into the abdomen with quick hard upward thrusts.

Perform five abdominal thrusts.



Cont.

- If the blockage is still not dislodged, continue cycles of 5 back blows and 5 abdominal thrusts until the object is coughed up or the person starts to breathe or cough.
- Take the object out of his mouth only if you can see it.
- **Never** do a finger sweep unless you can see the object in the person's mouth.

- If the person is obese or pregnant, do **high abdominal thrusts**:
- Stand behind the person, wrap your arms around them, and position your hands at the base of the breast bone.
- Quickly pull inward and upward.
- Repeat until the object is dislodged.

Step 3

Give CPR, if Necessary

- If the obstruction comes out, but the person is not breathing or if the person becomes unconscious:
- For a child, start [CPR for children](#).
- For an adult, start [CPR for adults](#).

In pediatrics

1

- Give 5 firm back blows with the heel of one hand between the infant's shoulder blades.



2

- Place two or three fingers in the center of the infant's chest just below the nipple line and compress the breastbone about 1½ inches.
- Give 5 chest thrusts
- Support the head and neck securely when giving back blows and chest thrusts. Keep the head lower than the chest.



3

- Continue sets of 5 back blows and 5 chest thrusts until the:
- Object is forced out.
- Infant can cough forcefully, cry or breathe.
- Infant becomes unconscious.

Choking First Aid



1 Get Them
To Cough



2 Do 5 Back
Blows



3 Do 5 Chest
Thrusts



Assess severity

**Severe
airway obstruction
(ineffective cough)**

**Mild
airway obstruction
(effective cough)**

**Unconscious
Start CPR**

Conscious
5 back blows
5 abdominal
thrusts

Encourage cough
Continue to check for
deterioration to ineffective
cough or until obstruction
relieved

Video !

**Time to
apply**

2. Bleeding

Scenario

You were driving car home in a summer morning with your child, once you have arrived home you have seen blood pouring out of your child's hand. You began feeling terrified but before getting to the source you tried to find a way to stop the bleeding could be stopped.



What is in your mind doctor?

Definition:

- **Bleeding**, technically known as **hemorrhaging**, is the loss of blood escaping from the circulatory system (veins, arteries & capillaries) due to damage or a rupture.
- Bleeding can occur **internally**, where blood leaks from blood vessels inside the body, or **externally**, either through a natural opening such as the mouth, nose, ear, urethra, vagina, or anus, or through a break in the skin.
- You should always suspect internal bleeding when a casualty shows signs and symptoms of shock or has been involved in an incident that may have caused internal injuries

Types

- Abrasions that don't penetrate below the skin
- Hematoma or bruises - collection of blood outside of a blood vessel giving the skin a spongy, rubbery, lumpy feel
- Crushing injuries
- Lacerations or incisions
- Puncture wounds (needles or knives)
- Gunshot wounds



Abrasion



Laceration



Avulsion



Incision



Puncture



Amputation

Arterial or Venous Blood

- Arterial blood
 - Copious
 - Bright red in colour
 - Spurting
- Venous blood
 - Dark red
 - Oozes out gradually

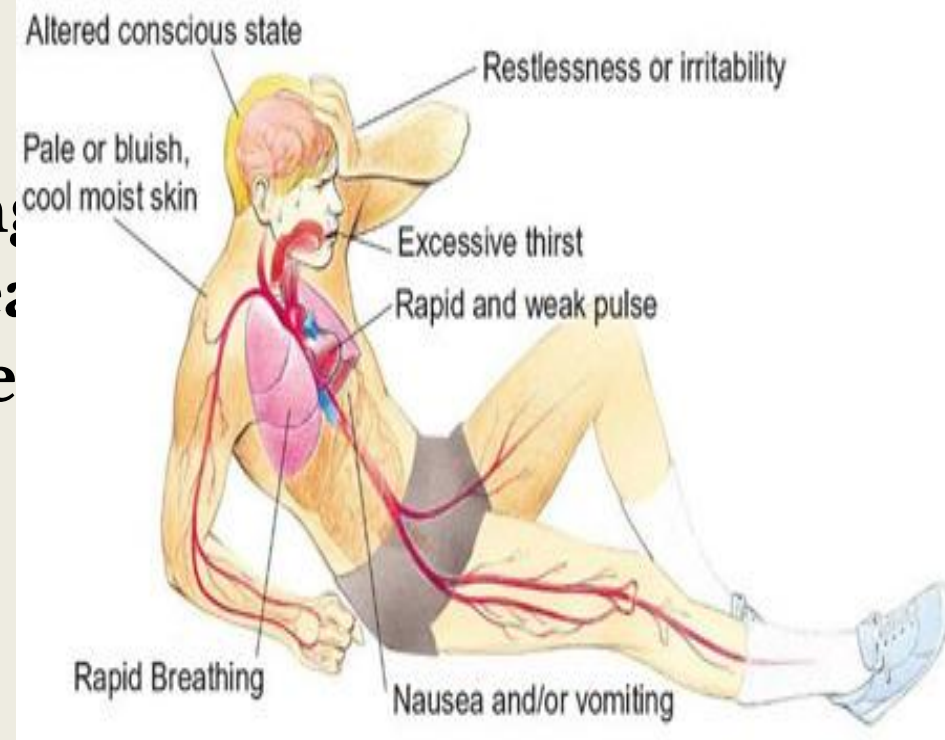


shock

- Shock occurs when there is a drop in the supply of oxygen to the body tissues due to insufficient circulation.
- Some causes of shock include:
 - severe allergic reaction.
 - significant blood loss.
 - heart failure.
 - blood infections.
 - dehydration.
 - poisoning.
 - burns.

Signs and Symptoms

- Rapid or weak pulse
- Pale, cool, sweaty skin
- Rapid, shallow breathing
- Feeling dizzy or light headed
- Feeling anxious or restless
- Nausea or vomiting
- Feeling thirsty
- Possible pain
- Feeling confused
- Deteriorating level of consciousness

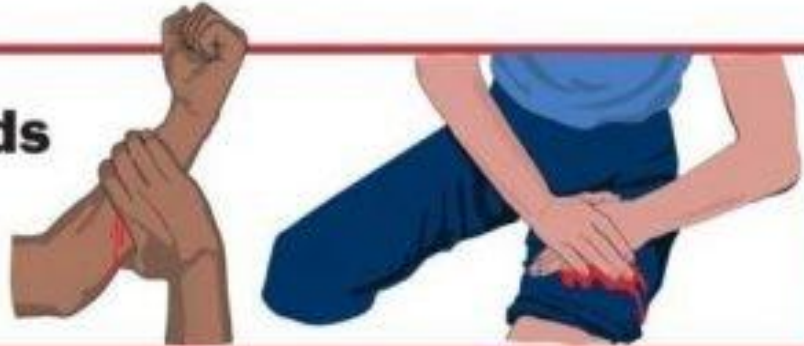


Action

Bystanders can take simple steps to keep the injured alive until appropriate medical care is available.
Here are three actions that you can take to help save a life:

1. Apply Pressure with Hands

EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with both hands if possible.



2. Apply Dressing and Press

EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with bandages or clothing.



3. Apply Tourniquet(s) ★

If the bleeding doesn't stop, place a tourniquet 2-3 inches closer to the torso from the bleeding. The tourniquet may be applied and secured over clothing.



PULL the strap through the buckle, **TWIST** the rod tightly, **CLIP** and **SECURE** the rod with the clasp or the Velcro strap.

If the bleeding still doesn't stop, place a second tourniquet closer to the torso from first tourniquet.

1. Stop Bleeding

- Apply **direct pressure** on the cut or wound with a clean cloth, tissue, or piece of gauze until bleeding stops.
- If blood soaks through the material, don't remove it. Put more cloth or gauze on top of it and continue to apply pressure.
- If the wound is on the arm or leg, **raise limb** above the heart, if possible, to help slow bleeding.
- Restrict movement of injured area.
- Apply cold compress to the swell.
- Wash your hands again after giving first aid and before cleaning and dressing the wound.
- Do not apply a tourniquet unless the

2. Clean and protect

- **2. Clean Cut or Wound**
- Gently clean with soap and warm water. Try to rinse soap out of wound to prevent irritation.
- Don't use hydrogen peroxide or iodine, which can damage tissue. WHY?!
- **3. Protect the Wound**
- Apply antibiotic cream to reduce risk of infection and cover with a sterile bandage.
- Change the bandage daily to keep the wound clean and dry.

Warnings!

- DO NOT bandage too tightly.
- Constantly check for signs of shock.
- DO NOT remove the previous layer of bandage.
- DO NOT apply cold compress for more than 10 minutes as it may result in frostbite.
- Give oxygen if possible.
- Don't forget to Call ambulance if wound is severe.



Embedded object in wound

- Identify location and size of the wound
- **Do not remove** the embedded object
- Use pads, dressing and bandages to **apply and maintain pressure around** the object
- **Elevate** wound if possible
- **Restrict movement** of injured area
- Reassure casualty
- Monitor and record vital signs
- Give oxygen if available and safe to do so
- Seek medical aid - Call ambulance



Embedded Object Wounds



Do not
remove
object.



Apply
pressure to
surrounding
area.



Place padding
around object.
Build padding
up as high as
embedded
object.



Bandage over
padding or on
either side of
it if object still
protrudes.

Amputation Wound



- Control bleeding
- Preserve the amputated part
- **Preservation of the amputee part :**
 - Wrap the amputated part with a dry sterile gauze or clean cloth.
 - Put the wrapped amputated part in a plastic bag or waterproof container
 - Place the bag or container with the wrapped part on ice.

Don't!

- Scrub amputated part
- Decide whether a body part is salvageable or not.
- Put ice directly on the part
- Wrap amputated part in a wet dressing.
- Cut any part even too small from the amputee part

Nose Bleeds

- can occur for various reasons **LIKE!!**
- Usually respond well to first aid. Unless you suspect the nose bleed may be caused by a head injury or high blood pressure, you should seek medical aid.



Nose Bleed First Aid

- Call ambulance if the nose bleed is caused by a head injury.
- Pinch together the soft part of the nose (**below the bridge**) and hold pressure for 10 minutes
- Have the casualty lean forward and breathe through their mouth and spit out any blood
- Have the casualty rest for 10 minutes. Rest the casualty for up to 20 min hot day.
- If the bleed continues for than **20 minutes** seek med



Child sits in adults lap



Video !

**Time
to apply**

Nose Bleed



Severe Bleeding First Aid



3.poisoning

Scenario 3:

you were in a manifestation for justice with many other colleagues of yours, then a group of police men has stopped your from proceeding, then they used a toxicous gas to separate you, you ran but while you were running you saw someone who is gasping, after you have stopped you recalled your first aid skills?

What did you do?

Definition

- A **poison** is a substance that causes injury, illness or death if it enters the body.
- Poisons may enter the body in the form of liquids, solids, or gas and vapor fumes.
- Poisons can enter by:
 - Ingestion through the mouth and digestive system
 - Inhalation of fumes through the lungs
 - Absorption of a chemical or plant extract through the skin
 - Injection of drugs of abuse or by substances

Symptoms and signs

- Symptoms and signs Depending on the substance involved and entry route, the following may occur:
 - Nausea or vomiting
 - Diarrhea
 - Profuse sweating
 - Abdominal pain
 - Unconsciousness or deteriorating conscious state
 - Seizures
 - Breathing difficulty



Management,

Step 1

- Check for safety before approaching the victim.
- Ensure safety for yourself, victim and any others before approaching to give first aid.
- If safe and necessary, remove the victim to a safer area.
- Note any information about the nature of the poisoning incident, e.g. tablets, berries, burns around the mouth etc.

Do not enter the fume-filled area yourself. If the casualty is in a closed space filled with exhaust fumes, open the doors letting the fumes escape before you enter.

Reassure them. Stay with them until the emergency services arrive.



Step 2

- Check the victim's level of consciousness :
If unconscious
- If breathing normally, turn the victim on the side to clear and open the airway.
- If not breathing normally, begin CPR
- If there are burns around the mouth, wipe the area clean before starting CPR.

Cont.

- If conscious
- If the mouth is burnt from a corrosive poison, wipe the area with a moist cloth or tissues.
- Check for remaining steps and you can even get first aid procedure for Ingested (swallowed) poisons, Inhaled poisons, Absorbed poisons and Injected poisons (excluding venoms)

Swallowed poisons

Swallowed poisons include chemicals, drugs, plants, fungi and berries, poisonous mushrooms.

Signs and symptoms of swallowed poisoning:

- Nausea and vomiting (sometimes blood-stained)
- Cramping stomach pains
- A burning sensation
- Partial loss of responsiveness
- Seizures



What you need to do- swallowed poisoning

- If the person is conscious, **ask** them what they have swallowed, how much and when.
- **Call emergency for medical help** and tell them as much information as possible.
- **Keep checking** their breathing, pulse and level of response.
- If they become **unresponsive**, open their airway and check breathing.
- **Look** for clues, like plants, berries or empty packaging and containers.
- **Never try to make the person vomit**, but if they vomit naturally then put some of their vomit into a

Swallowed poisons



Never

- **Never** induce vomiting if the victim is unconscious or is having convulsions.
- **Never** induce vomiting if the victim has swallowed a corrosive poison.
- **Never** induce vomiting if the person has swallowed petroleum products such as kerosene, gasoline, oil, or lighter fluid. Most pesticides which come in liquid formulations are dissolved in petroleum products.

- Find out what poison the person has ingested. A **corrosive poison is strong acid or alkali**. The victim will complain of severe pain and will show signs of severe mouth and throat burns.
- The words "**emulsifiable concentrate**" or "**solution**" on the pesticide label are signals NOT to induce vomiting in the poison victim if he has swallowed the concentrates. Concentrated petroleum products (like corrosive poisons) cause severe burns. They will burn as severely when vomited up. If he has swallowed a dilute form of these

Carbon monoxide poisoning

If the casualty has had exposure to low levels of carbon monoxide for prolonged periods of time, they may complain of:

- Headaches
- Confusion
- Feeling aggressive
- Nausea and vomiting
- Diarrhea

CARBON MONOXIDE (CO) POISONING



**CAN'T BE
SEEN**

**CAN'T BE
SMELLED**

**CAN'T BE
HEARD**

**CAN BE
STOPPED**

Severe symptoms may

- Grey-blue skin color
- Cherry Red Color of skin
- Rapid, difficult breathing
- Impaired level of response, leading to unresponsiveness



CO poisoning

CARBON MONOXIDE: How to spot the dangers



MILD

Slight headache
Nausea
Vomiting
Fatigue



MEDIUM

Severe headache
Confusion
Drowsiness
Fast heart rate



EXTREME

Unconsciousness
Convulsions
Cardio-respiratory failure
Death

What to do in CO poisoning

- **Call the emergency** services and tell them that you suspect inhalation of fumes.
- If necessary, **get them away** from the source of the fumes into an environment with fresh air.
- **Support** the casualty in a comfortable position and encourage the casualty to breathe normally.
- **Treat** any burns or other injuries.
- **Monitor** the casualty by keeping an eye on their breathing, response and pulse.
- If the casualty is **unresponsive**, open the airway, check for breathing and if necessary, perform CPR.

Food poisoning

- Food poisoning is caused by eating contaminated food. In most cases the food hasn't been cooked properly.
- The effects of food poisoning can make someone feel extremely ill.

What to look for - Food poisoning

If you think someone may have these are the five key things to look for

- Feeling sick
- Vomiting, sometimes bloodstained
- Stomach cramps
- Diarrhea
- Headache or fever



- The most important thing is for you to keep encouraging the person to **drink water** so they don't get dehydrated. Most people will get better without needing treatment. If can't drink, we give intravenous fluids for hydration.

FOOD POISONING



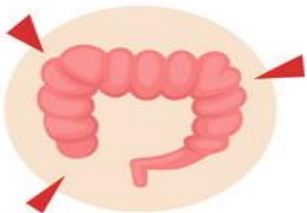
Overdue products



Medicine



Dizziness



Intestinal colic



Diarrhea



Headache



Organophosphorus Poisoning

- Organophosphorus insecticides include some of the most toxic pesticides and widely used.
- Signs and symptoms of organophosphorus poisoning:

Bradycardia ... Bronchoconstriction ...
Hypotension ... Lacrimation ... Meiosis ...
Salivation ... Sweating ... Urination ... Muscular
fasciculation ...

Insomnia ... Restlessness ... confusion ...
Respiratory depression ... Circulatory

What to do?

- **Call emergency**

While waiting the emergency help, what to do?

- For poisons on the skin?
- For chemical burns of the skin?
- For poisons in the eye?



Poison on the Skin

- The faster the poison is washed off the patient, the less injury that will result.
- Drench skin and clothing with water (shower, hose, faucet, pond).
- Remove clothing.
- Cleanse skin and hair thoroughly with soap and water. Detergents and commercial cleansers are better than soap.
- Dry and wrap in a blanket.

Chemical Burns of the Skin

- Wash with large quantities of slow running water.
- Remove contaminated clothing.
- Immediately cover loosely with a clean, soft cloth.
- Avoid use of ointments, greases, powders, and other drugs in first aid treatment of burns.
- Recognize the signs of pesticide poisoning and know first aid treatment for it.
- Know the importance of a pesticide first aid kit and what it should contain.
- Understand the importance of poison control centers and how to get immediate

information on types of poisonings and their

Poison in the Eye



- It is most important to **wash** the eye out quickly but as **gently** as possible.
- Hold eyelids open and wash eye with a gentle stream of **clean running** water.
- Continue washing for **fifteen minutes or more**. It is important to use a **large volume** of water. If possible, at least five gallons should be used to flush the eye properly.
- **Do not use chemicals or drugs** in wash water. They may increase the extent of the injury.
- **Cover** the eye with a clean piece of cloth and seek medical attention immediately.

First Aid for Poisoning Victim

- Contact with poisonous plants
 - Wash well with water and soap
 - If rash develops– apply calamine or caladryl lotion as directed
- If poisoning by injection
 - Occurs when an insect, spider, or snake bites or stings
 - Remove the stinger if possible
 - Wash the area well with water and soap
 - Apply sterile dressing and cold pack to help reduce swelling

If poisoning by inhalation of gases

If entering area:

- Take deep breath-
- Try to hold breath while rescuing patient
- Remove victim from the area
- Check for adequate breathing
- Provide artificial respiration if necessary
- Call for help If poisoning by contact with skin
- Wash area with large amounts of water will help to dilute the substance
- Remove any contaminated clothing
- Call Dr or seek medical attention ASAP or PCC

Contact with poisonous plants

- Wash well with water and soap
- If rash develops– apply calamine or caladryl lotion as directed

If poisoning by injection Occurs

- when an insect, spider, or snake bites or stings
- Remove the stinger if possible
- Wash the area well with water and soap
- Apply sterile dressing and cold pack to help reduce swelling

Snakebites

1. Wash the wound
2. Immobilize the area– position it lower than the heart
3. Do not cut or apply a tourniquet
4. Monitor breathing- give artificial respirations
5. Call Doctor or seek medical attention
6. Ticks Wash area with water and soap
7. Apply antiseptic
8. Monitor for signs of infection
9. Seek medical attention

Injection poisoning

1. Watch for allergic reactions and or anaphylactic shock
2. Monitor airway
3. Call for medical assistance ASAP
4. Reassure patient throughout
5. REVIEW- What are the signs of an allergic/anaphylaxis reaction?

Eye and stings...

First Aid Tips for Accidental Poisoning

First Aid for Eye exposure

- Hold the eyelids open, wash gently with tap water continuously for 10-15 minutes



First Aid for Stings

- Wash the area with soap or disinfectant and water.
- Remove any stings or tentacles attached to the skin.
- Apply ice if there is swelling
- If the person develops an allergic reaction (Rash, temperature, difficulty in breathing, swelling of the face and neck) take victim to a doctor immediately.



Video!

Time
to apply

4.Burns

Scenario 4:

At a beautiful morning while you were preparing a cup of tea, the boiler suddenly slipped from your hand and the hot tea poured over you leg. It was so painful and you had to act?

Definition and classification

- Injury caused by fire, heat, chemical agents, radiation, and/or electricity.

Common causes of burns include:



Thermal
(heat)



Chemical



Electrical

Definition and classification

● Classifications of burns

1. **Superficial**

- **First degree** burn and the least severe type of it, since it involves only the top layer of skin.
- Skin is red or discolored, mild swelling or pain.
- Most common cause of **sunburn**, brief contact with steam or hot object.

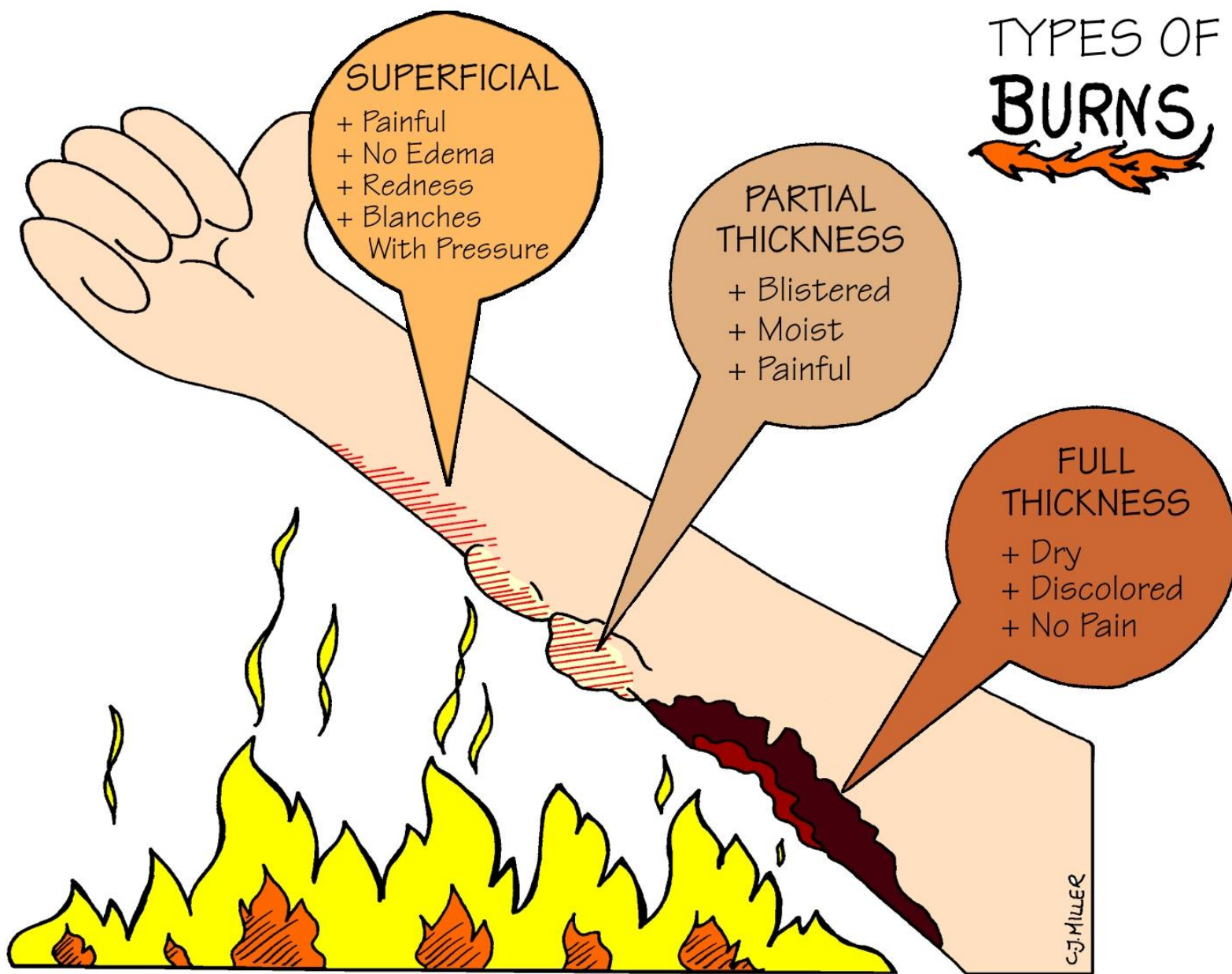
2. Partial-thickness

- Second degree burn.
- Involves injury to the top layers of skin
- **Blister** will form.
- Skin is red with mottled appearance, painful, may take 3-4 weeks to heal.
- Common causes—excessive sun exposure, sunlamp, radiation, contact with hot or boiling liquids, fire.

3. Full-thickness

- Third degree burn.
- Most severe burn.
- Injury to all layers and underlying tissue.
- White and or charred appearance, very painful or painless if nerves damaged.
- Can be life threatening—if infection, shock develops.

TYPES OF BURNS



First Aid

Cool

*Cov
er*

Call

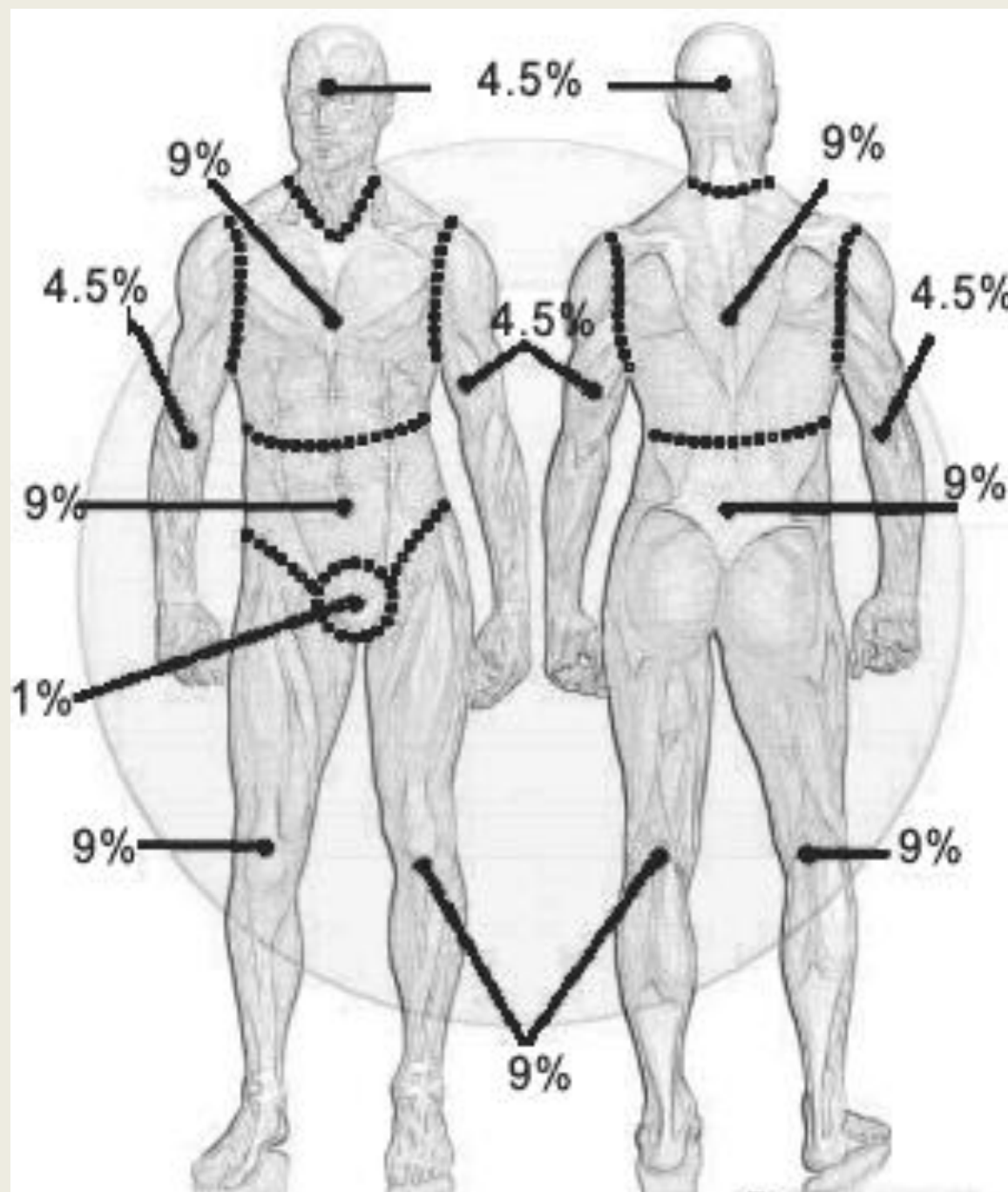
What to do?

Treatment Objectives Remove source of heat
Cool the skin

- Do not use ice– may cool skin excessively.
- Cover the burn.
- Relieve pain.
- Observe for and treat shock.
- Prevent infections.

Treatment, medical treatment

- Usually not required for superficial and mild partial-thickness burns.
- **Rules for when to treat**
 1. If more than 15 % of the body is burned (adult) or 10% of a child's body "Rule of Nines".
 2. Seek Dr if burns affect face or respiratory tract
 3. Burns cover more than one body part.
 4. Less than 5 or greater than 60 years old.
 5. Treatment All full-thickness burns require medical treatment



Superficial and mild partial-thickness

- Cool area with large amounts of cool water with **running water** for at **least 10 minutes**.
- dry with sterile gauze
- Use non-adhering dressing to area (non-sticky dressing, a plastic bag, non-fluffy bandage).
- Relieve pain.
- If running water is not available then improvise, any harmless liquid can be used.



What Not To Do

- Do not try to remove clothing sticking to a burn, instead cool through the clothing .
- Do not touch the wound with your hands or unsterile objects.
- Do not apply toothpaste / butter / creams to a burn. Running water is the most effective cooling method.
- Never run if your clothing catches fire. Running will fan the flames. STOP, DROP, and ROLL on the ground to smother the flames.
- Don't cover the burn unless clothing rubs on it. If it rubs, cover it with a gauze pad taped well away from the burn. Remove the dressing everyday and clean the wound, cover it again.
- Do not stop cooling before 10 minutes is up!
- Do not use ice, because it may further damage the injured skin.

Severe partial- or full-thickness burns

1. Call for help immediately.
2. Cover with a sterile dressing.
3. Elevate affected areas.
4. Do not allow victim to walk.
5. Do not remove any clothing that may be attached to the burn.
6. Watch for sign of shock/ respiratory distress until medical help arrives.

CHEMICAL BURNS



- Occur when something caustic, such as cleaning product— bleach, ammonia— household and garden products—fertilizers--, gasoline is splashed into the skin or onto the skin.
- *It is important to read all product labels carefully.*
- **Wash** the area with large quantities of water for at **least 20 minutes**.
- Remove any contaminated clothing or jewelry during the washing.
- Cover the burned area with a **sterile dressing** to avoid infection.

eyes burned by chemicals or irritating gases

1. Immediately Flush the eyes with large amounts of water minutes
 2. Caution not to drain water into the unaffected eye if only one is affected.
 3. Flush from the inner to outer eye.
 4. Continue flushing for **15-20 minutes**, or until the pain stops, whichever takes long.
 5. After flushing, **cover** the eye or skin with a clean bandage or cloth.
 6. Watch for signs of shock/ respiratory distress until medical help arrives.
- Seek medical help if the eye still hurts after 15-20 minutes of home treatment and if there is a possibility of permanent damage to be damaged.



ELECTRICAL BURNS

- Even with just a wild shock, a victim can suffer **serious internal injuries**.
 - A current of 1,000 volts or more is considered high voltage, but even the 110 volts of household current can be deadly.
1. **Call ambulance** .
 2. Follow -DRABCD .
 3. **Isolate power source** before touching casualty .
 4. If you cannot safely isolate power source call emergency services .
 5. Remain a least 10 meters away from any incidents involving high voltage power .
 6. After power source is isolated extinguish any burning clothing.
 7. Check for breathing and pulse if the victim is

What Not To Do

- **Never approach or touch** a victim of an electrical injury until you are sure the power is turned off.
- **Do not move** the victim.
- **Do not cool** the burn. **Cover** any burn injuries with a dry, sterile dressing and give care for shock.

Remember Loss of body fluids can occur very quickly with severe burns

- Shock is common in burn victims
- Be alert and know the signs of shock
- Remain calm- reassure patient-Call for help



Inhalation Burn

● ***Classification:***

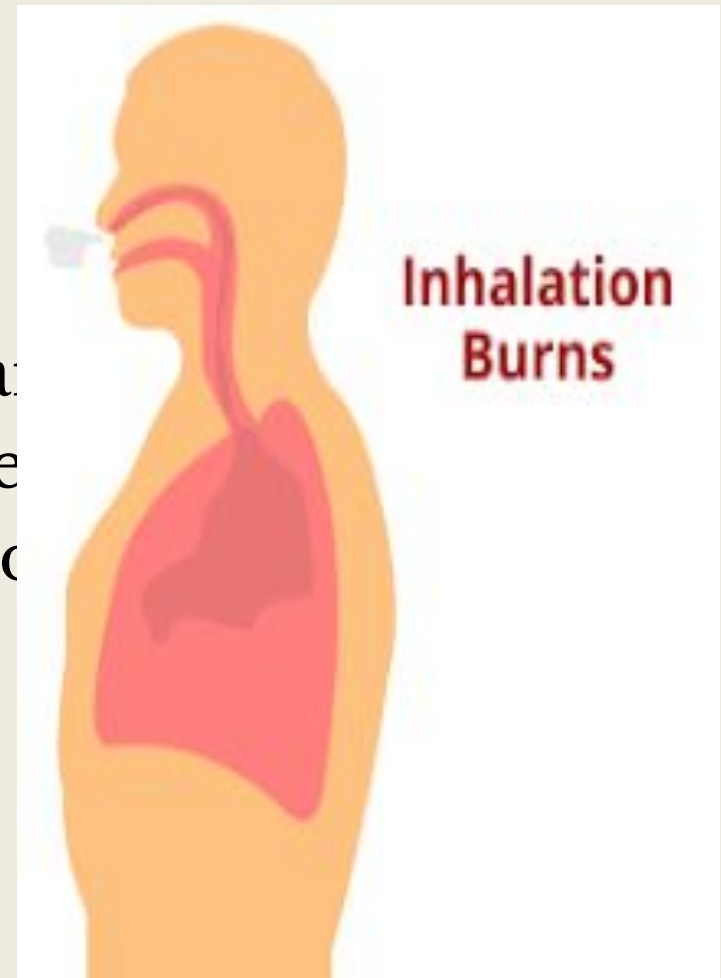
- Heat inhalation.
- Smoke inhalation (many types),



Damage from toxin inhalation may not show up for hours and can worsen quickly.

Sings of inhalation injury

- unconscious
- dizzy or confused
- chest pain
- coughing or choking
- shortness of breath, or irregular breathing
- smoke around mouth and nose
- burns inside mouth, throat, and airways
- swollen airways
- black or gray saliva
- nauseated or vomiting
- double or blurry vision
- numbness or tingling in his or her extremities



What To Do

- **Get Emergency Help**
- **Get the Person to Safety** Move the person into fresh air if you can do so safely.
- Sit or lay the person down on their side, not their back (**safety position**).
- **While waiting for help, if the person is not breathing, give CPR.**

FIRST AID TIPS FOR BURN

- 1** **Cool the burn** under running water for atleast **10 minutes.**
- 2** **Protect the burn**, with sterile, **non-adhesive bandage.**
- 3** **Donot apply butter or ointments**, which can cause infection.
- 4** **Don't break blisters.** If it breaks, gently clean the area.
- 5** Take an counter **pain reliever.**
- 6** If it is a serious burn, call **Blood For Sure Helpline 080 67335555.**

Frostbite

Definition:

Freezing of tissue fluids with damage to the skin and underlying tissues

- Caused by exposure to freezing or below-freezing temperatures
- Early signs and symptoms
 1. Redness Tingling
 2. Other signs and symptoms progresses; Pale, glossy skin
 3. Blisters.
 4. White- grayish color.
 5. Pain.
 6. LOC and death.



Frost Bite

Frost-bite occurs when body tissues freeze after exposure to below zero temperatures.

The signs and symptoms include white, waxy looking skin that is firm to the touch but the tissue underneath feels soft and pain followed by numbness.

Do's :

- ❑ *Cover frostbitten toes, ears with warm hands.*
- ❑ *The area affected can be warmed by breathing on them or placing them in a warm area of*
- ❑ *the body or by dipping the affected area in warm water (40 degree centigrade).*
- ❑ *Cover the area affected.*

Don'ts :

- ❑ *Do not rub as tiny ice crystals in the tissues may cause more damage.*
- ❑ *Never rub snow on the area as this may cause further freezing and do not apply direct heat as this may re-warm the area too quickly.*
- ❑ *Do not let the patient walk.*
- ❑ *Do not break blisters if any.*



Common sites: fingers, toes, ears, nose, cheeks.

Objectives of first aid:

- Directed at maintaining respirations.
- Treating shock.
- Warming body.
- Preventing further injury

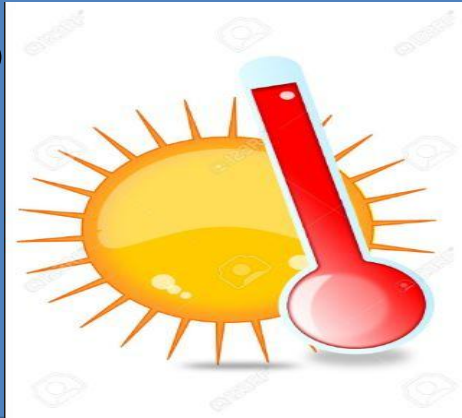
Video!

Time
to apply

5.Heat stroke

Scenario 5

In a summer morning while you were at the shore, you saw a fisher man about to faint, he looked miserable and fatigue, the sun was extremely burning that morning, and while you were hiding under an umbrella, you noticed how that man was been exposed so terrible. You decided to offer help?



Heat effects,

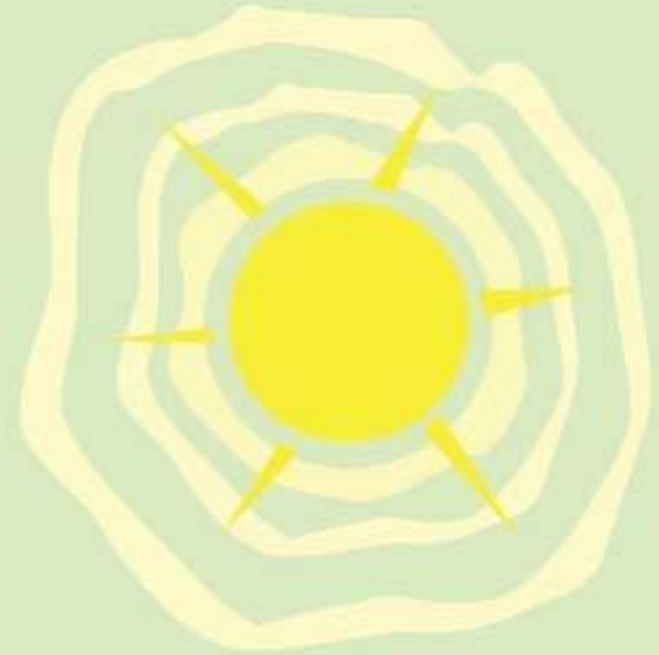
- **Heat stroke,**

Over exposure to heat may cause a chemical imbalance in the body.

- Occurs when water and salt are lost through perspiration.
- Also occurs when body cannot eliminate excess heat.
- This most serious form of heat injury

Signs and symptoms

1. High temperature
2. Red, hot, flushed skin
3. Rapid pulse
4. May lose consciousness
5. High temp will lead to convulsions



Excessive Body Heat

Hyperthermia of greater than 40.6 °C (105.1 °F) in combination with disorientation and a lack of sweating.



GREATER THAN
40.6 °C (105.1 °F)



Dehydration, Humidity or Disruption of Enzymes regulating biochemical reactions



Seizure



Organ Failure, Unconsciousness or Death



Who's at risk?



Seniors



Children



Athletes



Outdoor workers

Signs & Symptoms

104 F



NO SWEATING



DRY, HOT
RED SKIN



DIZZINESS &
HEAD ACHES



VOMITING



UNCONCIOUSNESS



PINPOINT
PUPILS

Prevention



DRINK
ENOUGH



NO ALCOHOL
& CAFFEINE



COOL
SHOWERING



WEAR LIGHT
PROTECTION



DO NOT STAY
CLOSED CAR



LIMIT
OUTDOOR TIME

First aid to heat stroke

- **If Heat Cramps Muscle pains and spasms,**
 1. Apply firm pressure on cramped muscle to provide relief.
 2. Provide rest and move to cooler area.
 3. Small sips of water or electrolyte solution (e.g., sports drink).
- **General**
- Cool sponge bath.
- Ice or cold packs to groin, armpits.
- Call for medical help ASAP.

Heat exhaustion

- Occurs when exposed to heat with loss of fluids through sweating
- Excessive exposure to heat or high external temperature
- Heat exhaustion can be prevented by:

- Signs and symptoms

1. Pale and clammy skin
2. Excessive sweating
3. Headache
4. Muscle cramps
5. Nausea and vomiting
6. Fainting and or dizziness



First Aid for Heat Exhaustion

1. Move to a cooler area.
2. Loosen clothing.
3. Apply cool- wet cloths.
4. Lay the patient down and elevate feet 12 inches.
5. Give sips of cool water or a sports drink.
6. Watch for shock/ respiratory distress and call for help if condition worsens

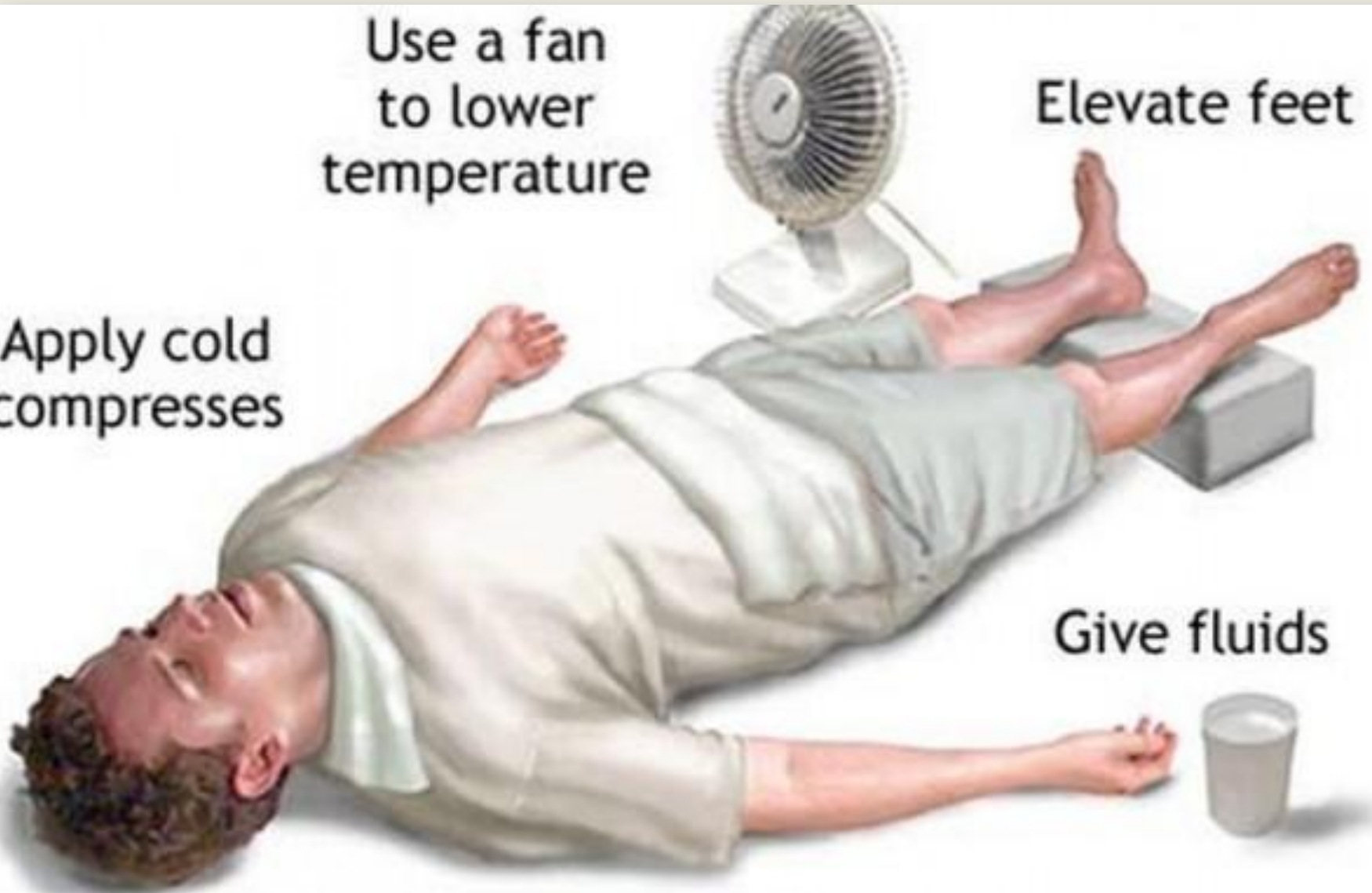
Use a fan
to lower
temperature

Elevate feet

Apply cold
compresses

Give fluids

Have the person lie down



Heat Exhaustion Vs Heat Stroke

HEAT EXHAUSTION

OR

HEAT STROKE

Faint or dizzy

Excessive sweating



Cool, pale,
clammy skin

Nausea or vomiting



Throbbing headache

No sweating

Body temperature
above 103°
Red, hot, dry skin



Nausea or vomiting



Heat Exhaustion Vs Heat Stroke

HEAT EXHAUSTION OR HEAT STROKE?

HEAT EXHAUSTION SYMPTOMS

1. Faint or dizzy
2. Excessive sweating
3. Cool, pale, clammy skin
4. Nausea, vomiting
5. Rapid, weak pulse
6. Muscle cramps

HOW TO TREAT IT

1. Move to cooler location
2. Drink water
3. Take a cool shower or use cold compresses



HEAT STROKE SYMPTOMS

1. Throbbing headache
2. No sweating
3. Body temp above 103°
Red, hot, dry skin
4. Nausea, vomiting
5. Rapid, strong pulse
6. May lose consciousness

HOW TO TREAT IT

1. Get emergency help
2. Keep cool until treated

Strain and Sprain

- **Scenario 6**

You are a sportive person, and while you were running you just fell down, while you were trying to get out you felt pain in your foot, so you had that fear of fracture. After a while you decided to do first aid?

Sprain and strain

- **Sprain:**

Injury to tissues surrounding a joint,

- Occurs when the part is forced beyond its normal ROM.
- Common sites: ankles and wrists.

- **Strain:**

- Overstretching of a muscle Caused by overexertion or by lifting.
- Frequent sites: back

SPRAIN

- ✓ An overextending or tearing of ligaments.
- ✓ The ankle is the most common location for a sprain.

STRAIN

- ✓ An overextending or tearing of muscles or tendons.
- ✓ The lower back and the hamstring muscle in the back of our thighs are where strains commonly occur.

Sprain and strain

- **Signs and symptoms (sprain)**

1. Swelling
2. Pain & discoloration
3. Impaired motion may also occur
4. Sprains frequently resemble fractures or dislocations—treat as fracture if any doubt

Strain:

1. Sudden pain
2. Swelling
3. bruising

First Aid!

Sprain

1. Apply cold pack to reduce swelling
2. Elevate the affect area
3. Encourage rest
4. Apply elastic bandage for support
5. Seek medical evaluation if the patient has sever swelling, pain or a fracture is suspected

Strain

1. Rest
2. Cold pack application
3. Warm pack after cold reduces swelling
4. Seek medical evaluation

R – Rest, I – Ice, C – Compression



R – Rest

After injury, stop your child taking part in any painful activity. Moving the injured part can increase bleeding and swelling, and slow down the healing process. Don't let your child keep playing.



I – Ice

Use an ice pack to reduce pain and swelling in the affected area. Apply ice for 15 minutes every two hours for 24 hours, then for 15 minutes every four hours for 24 hours.



C – Compression

Bandage the area firmly (but not too tightly), starting just below the injured area and moving up. Overlap each layer by half. Finish bandaging about one hand's width above the injured area.

Fractures

- Any break in a bone.
- Types of fractures:
 1. Closed (Simple) fracture :
The skin is intact and no wound exists anywhere near the fracture site.
 2. Open (Compound) fracture :
The skin over the fracture has been damaged or broken.
The bone may be visible through the wound or not.

Some signs of serious muscle, bone or joint injuries:

- Significant deformity .
- Bruising and swelling .
- Inability to use the affected part normally .
- Bone fragments sticking out of the wound .
- The injured area is cold or numb .

- **Simple closed fracture:** Clean break or crack in the bone.
- **Comminuted fracture:** This is a type of fracture that produces multiple bone fragments.
- **Open fracture:** part of the bone breaks through the skin causing bleeding
- **Green-Stick fracture:** Occurs mostly in children . bone bends and crack from one side leaving the other side unaffected.

Simple fracture



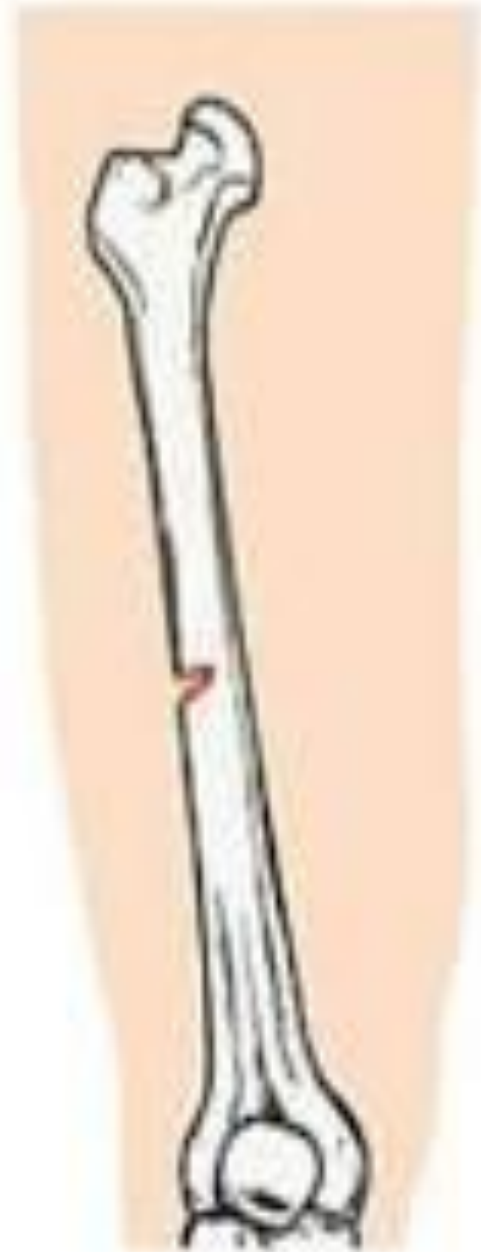
Comminuted fracture



Open fracture



Greenstick



FIRST AID

▣ **Stop any bleeding:**

- If they're bleeding, elevate and apply pressure to the wound using a sterile bandage, a clean cloth, or a clean piece of clothing.
- If bone is pushing through skin, do not touch it or try to put it back in place.

Cont.'

□ Immobilize the injured area:

- If you suspect they've broken a bone in their neck or back, help them stay as still as possible.
- If you suspect they've broken a bone in one of their limbs, immobilize the area using a splint or sling.

Cont.'

□ Splint the Area, if Possible:

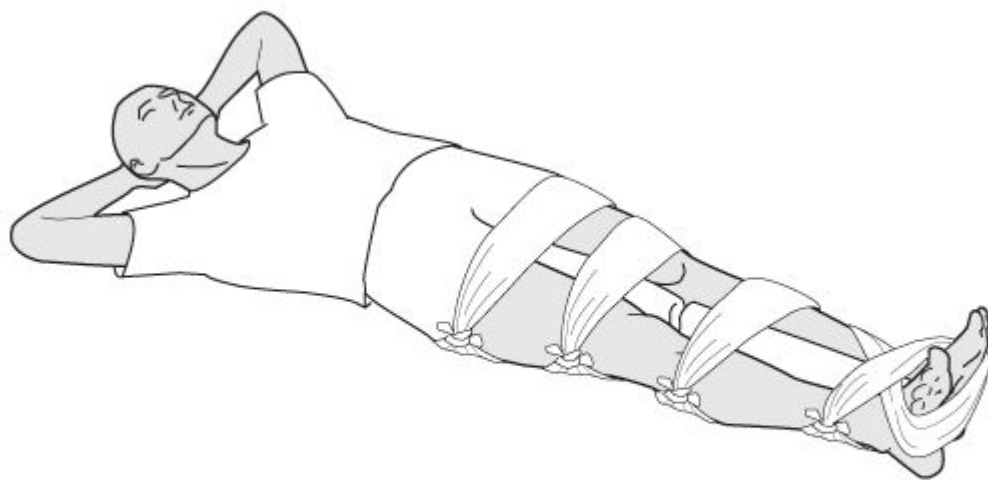
- The purpose of the splint is to hold still and protect a wounded body part from further damage.
- Gently tape the dislocated area or fracture to a rolled-up newspaper, ruler, stick, or a rolled-up piece of clothing with first aid tape.
- In general, try to include the joint above and below the injury in the splint. As much as possible, avoid moving the injured limb, and never force it or try to twist it back into place.



Sling



Sling and Swathe



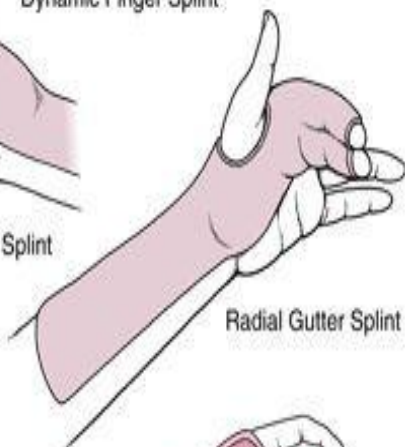
Finger Splint



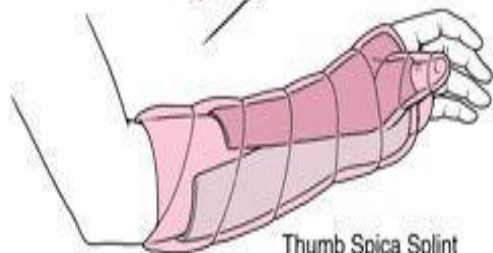
Dynamic Finger Splint



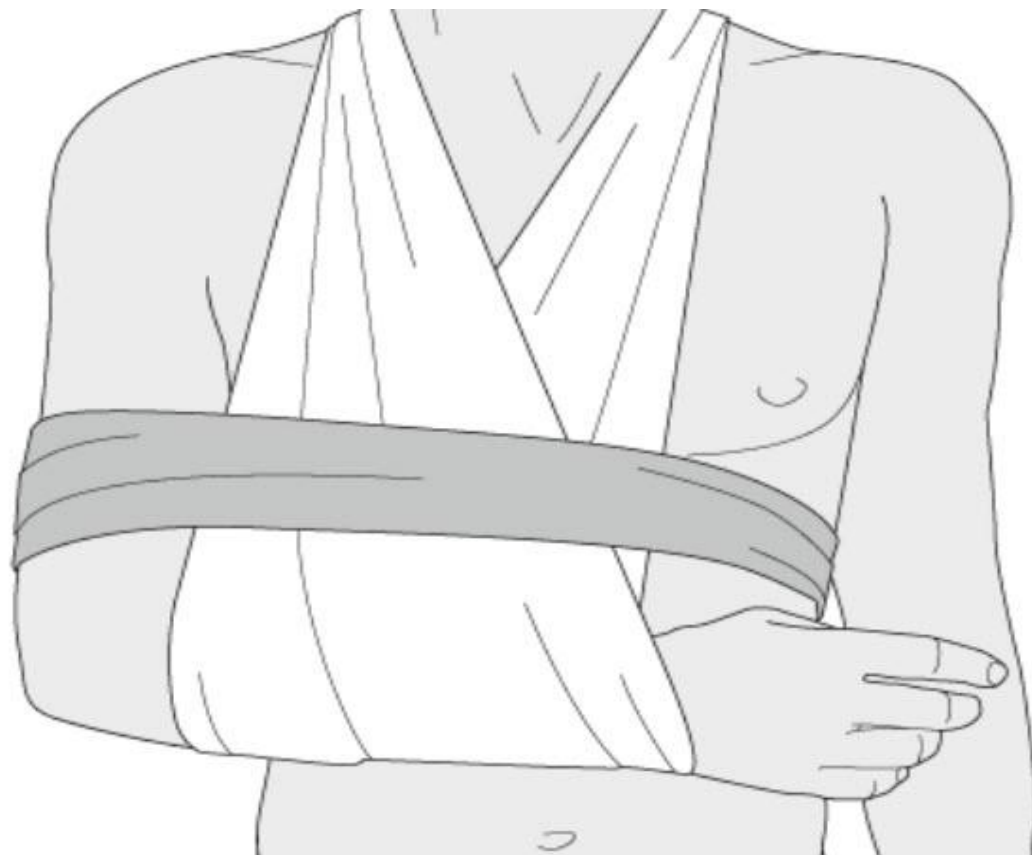
Ulnar Gutter Splint



Radial Gutter Splint



Thumb Spica Splint



Posterior Ankle Splint

Cont.'

□ Apply cold to the area:

- Wrap an ice pack or bag of ice cubes in a piece of cloth and apply it to the injured area for up to 10 minutes at a time.
- Elevate the injured area if possible.

Cont.'

▣ **Manage Pain and Inflammation**

▣ **Treat them for shock:** Help them get into a comfortable position, encourage them to rest, and reassure them. Cover them with a blanket or clothing to keep them warm.

▣ **Get professional help:** Call 101 or help them get to the emergency department for professional care.

▣ **Follow Up**

- The doctor will X-ray the dislocation or fracture and may realign and set it.
- The doctor may apply a splint or cast, or

You should also call 101 if

- You suspect they've broken a bone in their head, neck, or back.
- The fractured bone has pushed through their skin.
- They're bleeding heavily.
- Experience loss of feeling at the injured site

Otherwise, help them get to the emergency department by car or other means so a doctor can diagnose their condition and recommend appropriate treatment.

First Aid *for* BROKEN BONE

1

Control the bleeding by keeping sterile, clothes/ cotton pad with a firm pressure.



2

Don't try to move the person only if necessary to avoid further injury.

3

Apply ice packs to limit swelling. Never apply ice directly to the fracture. **Wrap in a towel** before applying.



4

A Splint helps to immobilize the bone before professional medical attention can take over.

5

A Sling can help to stabilize an arm that is broken.



6

If the fracture is severe, call **Blood For Sure Ambulance** 080 67335555 for medical help.

Dislocation

- when one end of a bone making up a joint is pulled or pushed out of place.
- The most common joint dislocation is a shoulder dislocation.
- caused by trauma to the joint or when an individual falls.
- Great and sudden force applied, by either a blow or fall, to the joint can cause the bones in the joint to be displaced or dislocated from normal position.

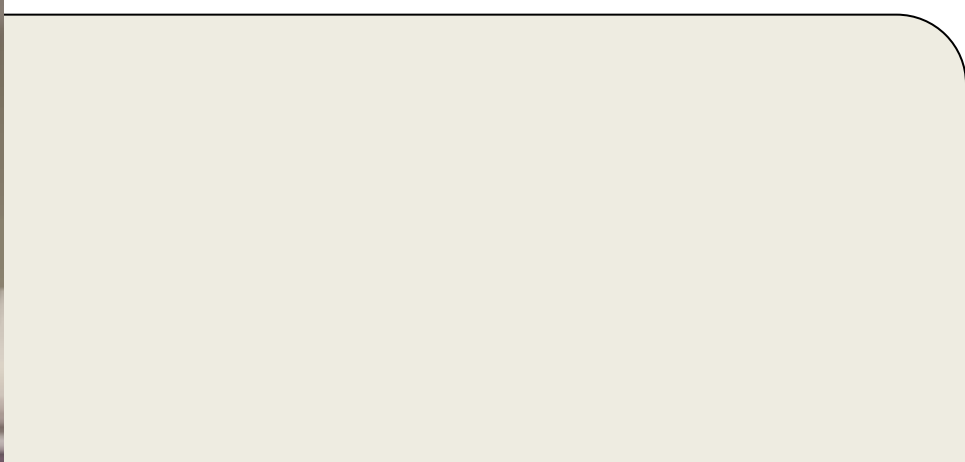
Shoulder Dislocation

Normal Anatomy



Dislocation





In case of dislocation

- Call medical help immediately.
- **Don't** try to reduce the affected joint towards its normal site.
- As this can cause serious damage to nerves and blood vessels.
- Splint the joint . And wait for help calmly.
- Try to comfort the patient.



