First Aid
HSE Training
HSE Presentation

Course Basis

- In construction industries not a day goes by without some type of injury occurring
- The direct cost and indirect cost of injuries is getting higher
- Peoples basics instinct is to help injured people, but using improper help procedures may lead to a more disastrous situation rather than saving lives
- Prompt, properly administered first aid care can mean the difference between life and death, rapid versus prolonged recovery, temporary versus permanent disability.

Objectives of the First Aid

- **Prolonged life**
- **Alleviate suffering**
- **First aiders responsibilities ends when the services of Medical professional begins**
- **First aiders are not intended to compete with Medical professionals**

First Aid - Basic

We all take certain measures to prevent accidents but despite our best efforts emergencies arise. You or people nearby trip and fall... unintentionally come in contact with exposed wiring... step on a rusty nail... or literarily bite off more than you can chew... And when an accident happens, time is not on your side. Besides a well-stocked and functional First Aid Kit, preparation and skills are the most important tools you can have at your disposal.

First Aid Kit

- Sterile adhes
  assorted size
- Sterile gauze
  assorted size
- Hypoallergen
  tape
- Scissors
- Tweezers
- Needle
- Ace bandage
- Moistened t
- Antiseptic

pins

ask

n

Cuts and Scrapes

Open Wound apply 5 C's

- Clean the wound
- Control Bleeding
  - By applying pressure
  - Elevating the wounded part at least above the heart
  - Put pressure on Limbs pressure points
- Cover the wounds with sterilize or clean cloths
- Care for shock
- Call Physician

Cuts and Scrapes

Clean the wound with mild anti-bacterial soap and water. You can use sterilized tweezers to remove any debris that remains embedded in the wound after rinsing. This will reduce the risk of an infection and possible complications. If the debris is abundant or can't be removed for some other reason, a trip to the emergency room will be necessary.

Cuts and Scrapes

- Control the bleeding. Water may induce bleeding by thinning the blood. If while rinsing the wound you notice increased blood flow, use gauze or a clean cloth to apply gentle, continuous pressure until the blood clots.
- Elevate the wounded part of the body if possible above the heart level

Cuts and Scrapes

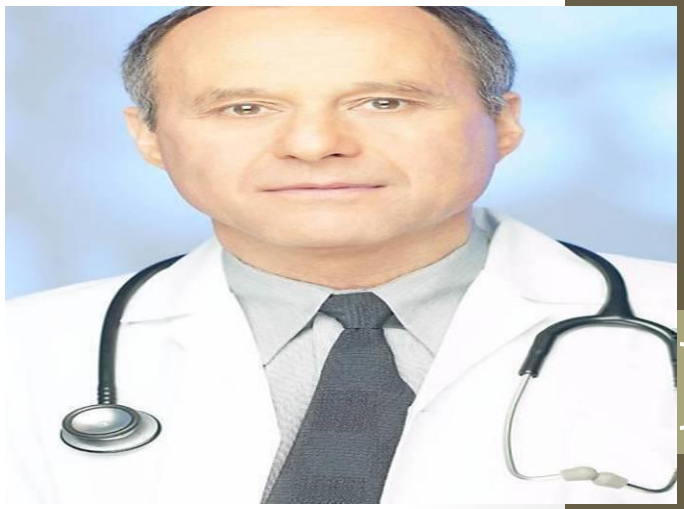
Although hydrogen peroxide is commonly used as a disinfectant for minor cuts and scrapes, it is actually not very effective and may even delay the healing process by irritating a person's living cells. You can use hydrogen peroxide but apply it **around** the open wound, not directly to it. An antibiotic ointment such as Neosporin is a better alternative - it will keep the wound from getting infected and speed up the healing process.

Cuts and Scrapes

Cover the wound with a bandage or sterile gauze to keep dirt and bacteria out. Change the dressing frequently and rinse the wound as often as necessary to keep it free of dirt.

Cuts and Scrapes

- Care for shock. Some victim may lead to shock due to blood loss. Gently lay him down with his head slightly lower than his chest and his feet elevated.
- Call the Physician. If the wound is very deep or the bleeding is profuse, it may require stitches in order to heal properly.



Puncture Wounds

- Unlike a **cut**, a puncture wound does not typically result in profuse or excessive bleeding and although painful, may look harmless as the skin around the wound simply closes. But puncture wounds carry a risk of infection and if left unattended can result in serious complications.
- Injuries sustained by stepping on a nail that punctures through a shoe are especially prone to infection. If the injury is caused by stepping on a nail or a shard of glass that's been exposed to the elements, it is a good idea to consult a physician who may recommend a tetanus shot or booster.

Puncture Wounds

- A **bite** from a household pet or another person that results in a puncture wound should be considered and treated as serious injury. If the bleeding is heavy or the item that caused the wound appears unsanitary, thoroughly clean the injured area with mild anti-bacterial soap and water and seek professional medical assistance as soon as possible.
- If the injury is minor, clean it with soap and water and apply an antibiotic ointment such as Neosporin to prevent infection. Dress the wound with sterile bandage and replace the dressing frequently. It is prudent to keep a close eye on the wound for several days to prevent an onset of an infection from any debris that may've lodged itself deep in the wound. If you notice persistent redness or puffiness or if the wound starts to ooze pus, have the victim consult a doctor right away.

Shock

Shock is a life-threatening condition that occurs when the body is not getting enough blood flow. This can damage multiple organs. Shock requires IMMEDIATE medical treatment and can get worse very rapidly.

- Major classes of shock include:

- Cardiogenic shock (associated with heart problems)
- Hypovolemic shock (caused by inadequate blood volume / Blood loss /Severe bleeding)
- Anaphylactic shock (caused by allergic reaction)
- Septic shock (associated with infections)
- Neurogenic shock (caused by damage to the nervous system)

Shock

- Shock can be caused by any condition that reduces blood flow, including:
- Heart problems (such as heart attack or heart failure)
- Low blood volume (as with heavy bleeding or dehydration)
- Changes in blood vessels (as with infection or severe allergic reactions)
- Shock is often associated with heavy external or internal bleeding from a serious injury. Spinal injuries can also cause shock

Shock

A person in shock has extremely low blood pressure. Depending on the specific cause and type of shock, symptoms will include one or more of the following:

- Anxiety or agitation
- Confusion
- Pale, cool, clammy skin
- Low or no urine output
- Bluish lips and fingernails
- Dizziness, light-headedness, or faintness
- Profuse sweating, moist skin
- Rapid but weak pulse
- Shallow breathing
- Chest pain
- Unconsciousness

Shock

First Aid for Shock

- Call 911 for immediate medical help.
- Check the person's airway, breathing, and circulation. If necessary, begin rescue breathing and CPR.
- Even if the person is able to breathe on his or her own, continue to check rate of breathing at least every 5 minutes until help arrives.
- If the person is conscious and DOES NOT have an injury to the head, leg, neck, or spine, place the person in the shock position. Lay the person on the back and elevate the legs about 12 inches. DO NOT elevate the head. If raising the legs will cause pain or potential harm, leave the person lying flat.
- Give appropriate first aid for any wounds, injuries, or illnesses.
- Keep the person warm and comfortable. Loosen tight clothing.

Shock

RECOVERY POSITION

To put the victim in the recovery position grab the victim's leg and shoulder and roll him towards you

Continue to roll the victim until he is on his side.

Adjust the top leg so that both the hip and knee are bent at right angles. Gently tilt the head back to keep the airway open. Keep the person warm until medical help is obtained.

Shock

DO NOT

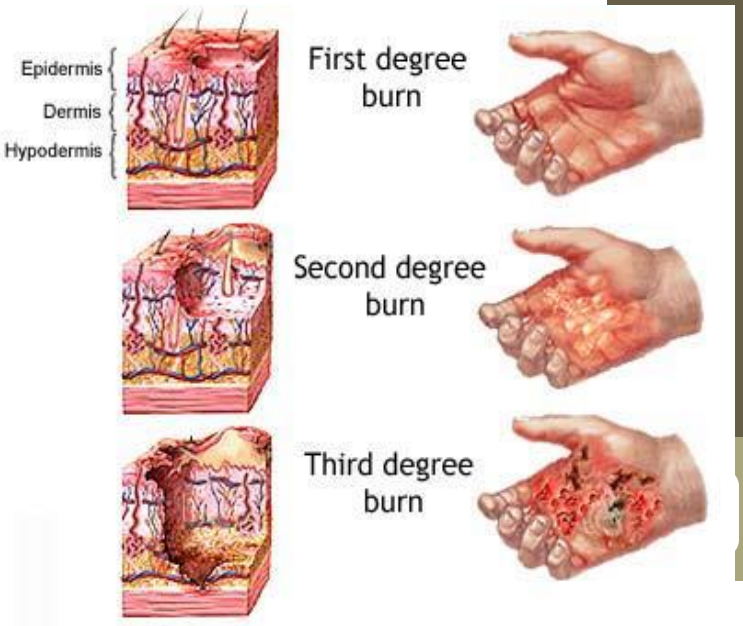
- DO NOT give the person anything by mouth, including anything to eat or drink.
- DO NOT move the person with a known or suspected spinal injury.
- DO NOT wait for milder shock symptoms to worsen before calling for emergency medical help.

IF THE PERSON VOMITS OR DROOLS

- Turn the head to one side so he or she will not choke. Do this as long as there is NO suspicion of spinal injury.
- If a spinal injury is suspected, "log roll" him instead. Keep the person's head, neck and back in line and roll him or her as a unit.

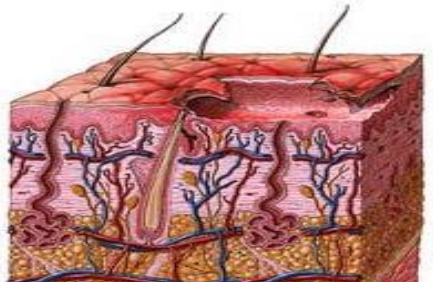
Burns

- A burn victim will require different type of care depending on the type and extent of his injury. Burns vary greatly from a common, fairly harmless sunburn to a potentially life-threatening 3rd degree burn caused by open flames or **electrocution**. Here's how to distinguish the three different types of burn injuries and how to care for each:



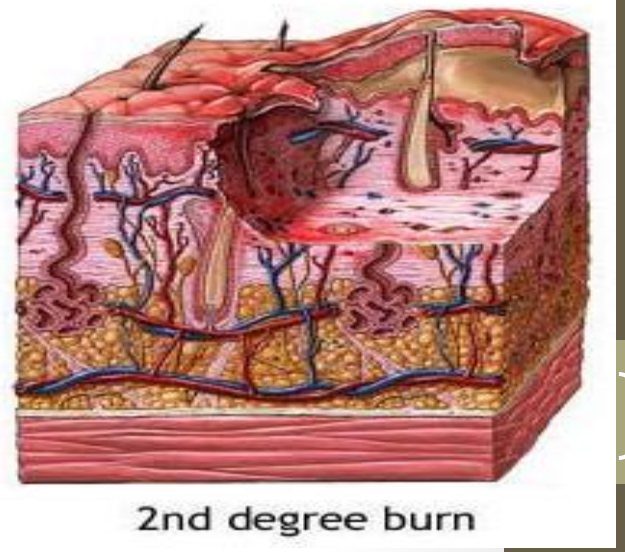
Burns

- **1st degree burns are usually accompanied by redness and some swelling of the skin.** Treat a minor burn by first cooling the affected area. If possible, keep the injury under cool running water for at least 10 minutes. If running water is not available place the burn in a container of cold water such as a bucket, tub or even a deep dish. Using a cool, wet compress made of clean cloth will also work if nothing is available. Keeping the burn cool will reduce pain and minimize the swelling. If the injury is the part of a body where jewelry or snug clot is present, carefully remove them before it begins to swell. Apply a moisturizing lotion o Aloe Vera extract and dress the burnt area w loosely wrapped sterile gauze.



Burns

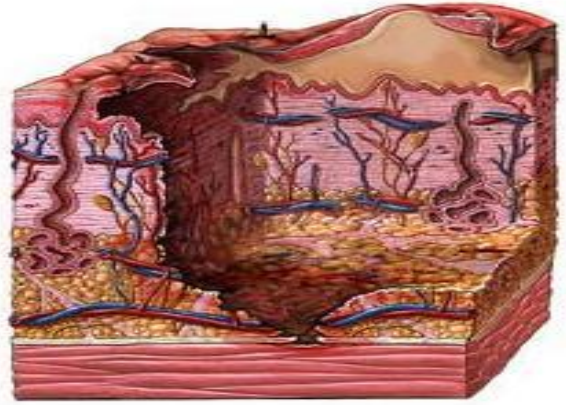
- **2nd degree burns will result in deeper, more intense redness of the skin as well as swelling and blistering.**
  This type of burn should be treated just as a 1st degree burn but because the damage to the skin is more extensive, extra care should be taken to avoid infection and excessive scarring. Replace the dressing daily and keep the wound clean. If a blister breaks use mild soap and warm water to rinse the area. Apply antibiotic cream such as Neosporin to prevent infection before redressing in sterile gauze.



2nd degree burn

Burns

- **3rd degree burns may appear and feel deceptively harmless as the victim may no feel much pain due to complete destruction of all layers of skin and tissue as well as nerve endings. The damaged area may appear charred or ash-color and will instantly start to blister or "peel".** If the victim's clothing is on fire, douse him with non-flammable liquid.
- Dial 9-1-1. Do not remove burnt clothing from the victim as this will expose open wounds to the elements and potential infection. If possible, cover the victim's injuries with wet sterile cloth to reduce the pain and swelling. If you notice that the victim is going into shock and loses consciousness, you will need to perform **CPR**.



3rd degree burn

Electrocution

- Electricity travels through conductors - any material which allows electrical flow - as it tries to reach the ground. Because people make excellent conductors, minor electrocution is a common household hazard. Fortunately it is usually more surprising than dangerous and does not require medical attention. However, some basic precautions should be taken to insure that the shock does not interfere with the body's normal electrical impulses including the functions of the brain and the heart. Prolonged exposure to a direct source of electricity can also cause severe burns to the skin and the tissue.

Electrocution

- In the event of electrocution do **NOT** rush to assist the victim until you are certain that he is no longer in contact with electricity. Otherwise the current will pass through the victim directly to you.
- If at all possible, turn off the source of electricity (i.e. light switch, circuit breaker, etc.) If this is not an option, use **non-conductive** material such as plastic or dry wood to separate the source of electricity from the victim.
- If the injuries appear serious or extensive, dial 9-1-1.

Electrocution

- Check the victim's vitals signs such as the depth of his breathing and regularity of his heart beat. If either one is effected by exposure to electricity or if the victim is unconscious, begin to perform **CPR**.
- Treat any areas of the victim's body that may have sustained **burns**.
- If the victim is responsive and does not appear seriously injured but looks pale or faint, he may be at risk of going into shock. Gently lay him down with his head slightly lower than his chest and his feet elevated.

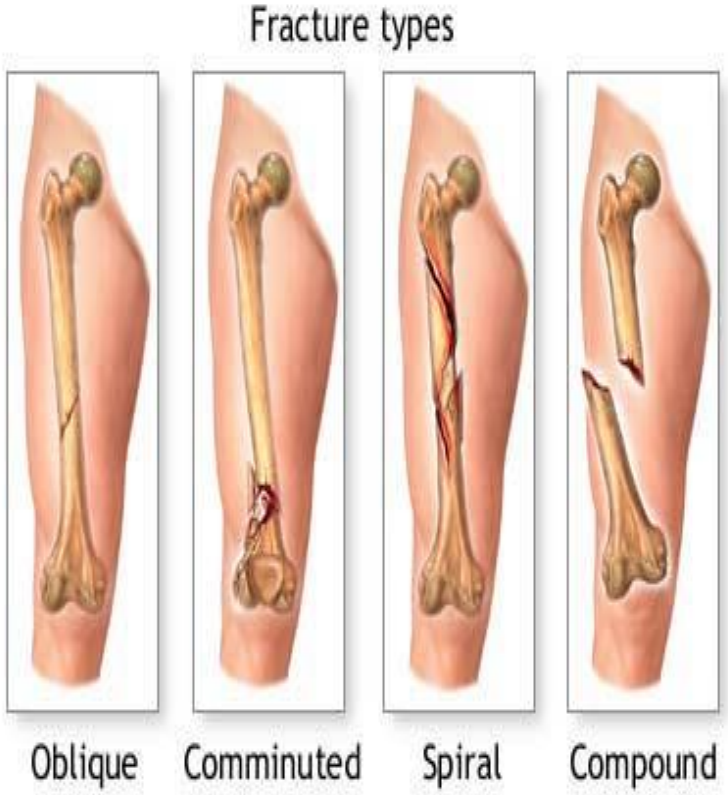
Fractures

- A fracture (broken bone) may not always be obvious as most breaks do not result in compound fractures (bone protruding through the skin). It is important not to misdiagnose a break and mistake it for a **bruise** or sprain. Typical symptoms of a fracture are:
- Immediate and excessive swelling
- Injured area appears deformed
- The farthest point of the injured limb turns blue or is numb to the touch
- Even slight movement or contact to the injured area causes excessive pain

Fractures

There are several types of bone fracture, including:

- Oblique - a fracture which goes at an angle to the axis
- Comminuted - a fracture of many relatively small fragments
- Spiral - a fracture which runs around the axis of the bone
- Compound - a fracture (also called open) which breaks the skin



Fractures

- Dial 9-1-1 immediately and immobilize the broken bone with a splint. A functional splint can be made of almost any material (wood, plastic, etc.) as long as it is rigid and is longer than the broken bone. To apply the splint simply lay it along the broken bone and wrap it against the limb with gauze or a length of cloth, starting at a point farthest from the body. Do not wrap it too tight as this may cut off blood flow.
- If the break is in the forearm, loosely wrap a magazine or a thick newspaper around the break and use a sling fashioned from gauze or a strip of cloth to keep the elbow immobilized.
- A break in the lower part of the leg requires two splints, one on each side of the leg (or at least the shin). If suitable material is not available, you can use the victim's healthy leg as a makeshift splint.

Fractures

As much as possible, keep the victim from moving and until an ambulance arrives, remember **ICE**:

- **"I"** is for ice - if possible apply an ice pack or ice cubes to the injured area. This will keep down the swelling and reduce pain.
- **"C"** is for compression - if the wound is bleeding, apply direct pressure with a clean cloth to reduce blood flow.
- **"E"** is for elevation - try to keep the injured area as high above heart level as possible. This will reduce blood flow to the injury and minimize swelling.

Fractures

Splint is a medical device for the immobilization of limbs or of the spine. It can be used:

- By the Emergency Medical Services or by volunteer first responders, to immobilize a fractured limb before the transportation; it is then a temporary immobilization;

Fractures

In case of a medical emergency, one should make a splint:

- Treat the area of all wounds before creating the splint.
- The injured limb should be left in the position that it was found in.
- Something rigid will be best for support such as sticks, boards, or rolled up newspaper. If these are not available, try rolled up clothing. The limb can also be taped to an uninjured body part to prevent it from moving.
- Extend the splint above and below the injured area to prevent it from moving. Splinting beyond the closest two joints is ideal.
- Secure the splint with ties and be sure not to knot the injured area. Avoid tying too tight as it may cut off circulation.
- Check the area often for swelling or paleness
- Seek medical attention quickly

Head Injury

Although most minor head injuries caused by a fall or a strike to the head may result in a **bruise** or a bump and are not dangerous, it is extremely important to pay close attention to the following symptoms:

- Excessive bleeding from an open wound
- Loss of consciousness
- Interruption of breathing
- Prolonged disorientation or apparent memory loss

If you detect any of the above, the victim may have sustained serious head trauma and will require professional medical attention. If that's the case, dial 9-1-1 immediately. Until the ambulance arrives:

Head Injury

- If possible, place the victim in a dim, quiet area.
- Lay the victim down with his head and shoulders slightly elevated.
- If the wound is bleeding, dress it with gauze or clean cloth.
- Do not leave the victim unattended.
- If the victim loses consciousness, you may need to perform **CPR**.

If the injury does not appear serious or extend beyond minor **bruising**, it should be treated accordingly.

Nose Bleed

- A human nose is rich with small fragile blood vessels which are susceptible to damage. A nosebleed may be caused by a fall, a strike to the nose, or even from breathing excessively dry air.
- If the nosebleed is not a symptom of a more serious injury, it is rarely dangerous and can usually be stopped by applying continuous pressure

Nose Bleed

- Do NOT tilt the victim's head backward.
- Have the victim sit or stand upright to slow down the flow of blood.
- Loosen any tight clothing around the victim's neck.
- If possible, have the victim spit out excess saliva - swallowing may disturb the clot and cause nausea.
- Pinch the nostrils shut and press the tip of the nose against the bones of the face.
- Maintain pressure for 5 to 10 minutes.
- Once the bleeding has stopped, the victim should avoid blowing his nose or otherwise straining himself for at least an hour.

If the victim's nose continues to bleed or if the blood flow appears to be excessive, or if the victim feels weak or faint, the damage may be more serious than it appears. You should call 9-1-1 or take him to the nearest emergency room as soon as possible.

Bite Wound

- If the victim was bitten by an animal or insects such as dog, cat, snake, scorpion, poisonous spider or a rat, an immediate shot may be necessary to prevent the possibility of a rabies infection or venom.
- Contrary to common belief, a human bite can sometimes be more dangerous than that of an animal because human saliva contains many more types of bacteria which may cause infection.

Bite Wound

First Aid treatment should be;

- Use anti-bacterial soap and water to thoroughly clean the bite wound.
- Apply antibiotic ointment such as Neosp to prevent infection.
- If the injury resulted in broken skin, dres with a sterile bandage and replace the dressing frequently.
- If the bite is deep, the victim may need to be treated for a **puncture wound**.
- Bring to Physician

Basic Life Support (BLS)

Basic Life Support (BLS) is a specific level of pre-hospital medical care provided by trained responders, including emergency medical technicians, in the absence of advanced medical care.

- Basic Life Support consists of a number of life-saving techniques focused on the "ABC"s of pre-hospital emergency care:
- **Airway**: the protection and maintenance of patient airway including the use of airway adjuncts such as an oral or nasal airway
- **Breathing**: the actual flow of air through respiration, natural or artificial respiration, often assisted by emergency oxygen
- **Circulation**: the movement of blood through the beating of the heart or the emergency measure of CPR

BLS may also include considerations of patient transport such as the protection of the cervical spine and avoiding additional injuries through splinting and immobilization.

Basic Life Support (BLS)

- BLS generally does not include the use of drugs or invasive skills, and can be contrasted with the provision of Advanced cardiac life support (ACLS). Most laypersons can master BLS skill after attending a short course. Firefighters and Safety Officers are often required to be BLS certified. BLS is also immensely useful for almost everybody who is in the right age and can do it properly.
- CPR provided in the field buys time for higher medical responders to arrive and provide ACLS. For this reason it is essential that any person starting CPR also obtains ACLS support by calling for help via radio using agency policies and procedures and/or using an appropriate emergency telephone number.

What Not to Do?

Before we learn what to do in an emergency, we must first emphasize what not to do:

- DO NOT leave the victim alone.
- DO NOT try make the victim drink water.
- DO NOT throw water on the victim's face.
- DO NOT prompt the victim into a sitting position.
- DO NOT try to revive the victim by slapping his fa

Always remember to exercise solid common se
When faced with an emergency situation we ma
impulsively and place ourselves in harm's way. Al
time should not be wasted, only approach the vi
determining that the scene is safe: always check
potential hazards before attempting to perform **CPR.**

Artificial Respiration (AR)

- **Artificial respiration** is the act of simulating respiration, which provides for the overall exchange of gases in the body by pulmonary ventilation, external respiration and internal respiration
- This means providing air for a person who is not breathing or is not making sufficient respiratory effort on their own (although it must be used on a patient with a beating heart or as part of cardiopulmonary resuscitation in order to achieve the internal respiration).
- Pulmonary ventilation (and hence external respiration) is achieved through manual insufflations of the lungs either by the rescuer blowing in to the patient's lungs
- It is also commonly called as rescue breathing or ventilation

Artificial Respiration (AR)

- Artificial respiration is a part of most protocols for performing cardiopulmonary resuscitation (CPR) making it an essential skill for first aid. In some situations, artificial respiration is also performed separately, for instance in near-drowning and opiate overdoses. The performance of artificial respiration in its own is now limited in most protocols to health professionals, whereas lay first aiders are advised to undertake full CPR in any case where the patient is not breathing sufficiently

- **Insufflation**, also known as 'rescue breaths' or 'ventilations', is the act of mechanically forcing air into a patient's respiratory system. This can be achieved via a number of methods, which will depend on the situation and equipment available. All methods require good airway management to perform, which ensures that the method is effective.

Artificial Respiration (AR)

These methods include:

- Mouth to mouth - This involves the rescuer making a seal between their mouth and the patient's mouth and 'blowing', in order to pass air in to the patient's body
- Mouth to nose - In some instances, the rescuer may need or wish to form a seal with the patient's nose. Typical reasons for this include maxillofacial injuries, performing the procedure in water or the remains of vomit in the mouth

Place your mouth over the person's mouth and exhale

Artificial Respiration (AR)

- Mouth to mask – Most organizations recommend the use of some sort of barrier between rescuer and patient to reduce cross infection risk. One popular type is the 'pocket mask'.
- If you feel a pulse (i.e. the victim's heart is beating) but the victim is still not breathing, **rescue breaths** should be administered, one rescue breath every five seconds (remember to pinch the nose to prevent air from escaping). After the first rescue breath, count five seconds and if the victim does not take a breath on his own, give another rescue breath.

Artificial Respiration (AR)

Efficiency of mouth to patient insufflation

- Normal atmospheric air contains approximately 21% oxygen when created in. After gaseous exchange has taken place in the lungs, with waste products (notably carbon dioxide) moved from the bloodstream to the lungs, the air being exhaled by humans normally contains around 17% oxygen.
- This means that the human body utilizes only around 19% of the oxygen inhaled, leaving over 80% of the oxygen available in the exhalatory breath.
- This means that there is more than enough residual oxygen to be used in the lungs of the patient, which then crosses the cell membrane to form oxyhemoglobin.

Cardio Pulmonary Resuscitation (CPR)

Can you save a life? In an emergency, when every second is critical, do you know what to do?

- According to recent statistics sudden cardiac arrest is rapidly becoming the leading cause of death in world. Once the heart ceases to function, a healthy human brain may survive without oxygen for up to 4 minutes without suffering any permanent damage. Unfortunately, a typical ERT response may take 6, 8 or even 10 minutes.

Cardio Pulmonary Resuscitation (CPR)

CPR is a lifesaving procedure that is performed when someone's breathing or heartbeat has stopped, as in cases of electric shock, drowning, or heart attack. CPR is a combination of:

- Rescue breathing, which provides oxygen to a person's lungs
- Chest compressions, which keep the person's blood circulating.

CPR = ECC + AR

ECC – External Chest Compression

AR – Artificial Respiration / rescue breathing / ventilation

Permanent brain damage or death can occur within minutes if a person's blood flow stops. Therefore, you must continue these procedures until the person's heartbeat and breathing return, or trained medical help arrives.

Cardio Pulmonary Resuscitation (CPR)

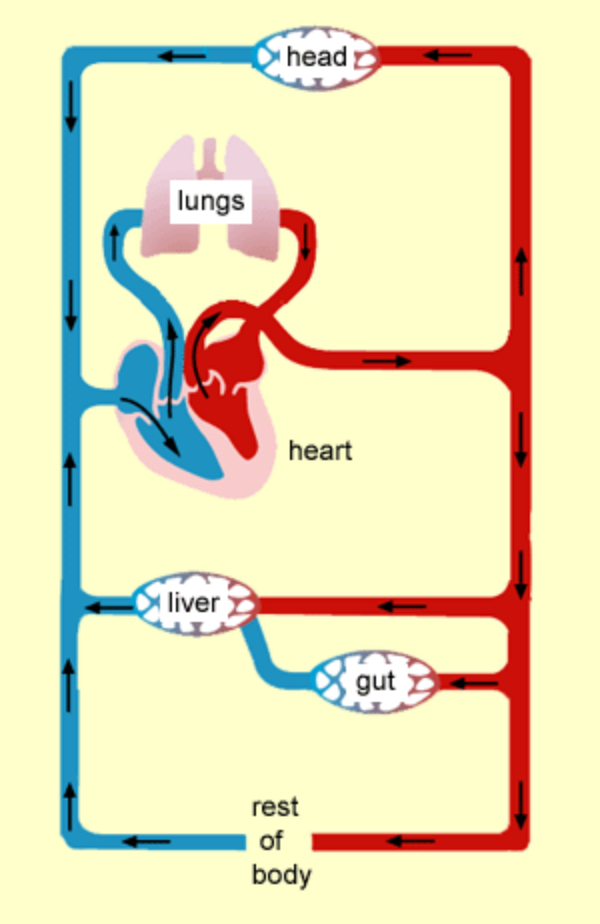
It is during those critical minutes that CPR can provide oxygenated blood to the victim's brain and the heart, dramatically increasing his chance of survival. And if properly instructed, almost anyone can learn and perform CPR.

CPR TIME LINE

0-4	minutes - brain damage unlikely
4-6	minutes - brain damage possible
6-10	minutes - brain damage probable
over 10	minutes - probable brain death

How CPR Works

- The air we breathe in travels to our lungs where oxygen is picked up by our blood and then pumped by the heart to our tissue and organs. When a person experiences cardiac arrest - whether due to heart failure in adults and the elderly or an injury such as near drowning, electrocution or severe trauma in a child - the heart goes from a normal beat to an arrhythmic pattern called ventricular fibrillation, and eventually ceases to beat altogether.
- This prevents oxygen from circulating throughout the body, rapidly killing cells and tissue. In essence, **Cardio** (heart) **Pulmonary** (lung) **Resuscitation** (revive, revitalize) serves as an artificial heartbeat and an artificial respirator.



How CPR Works

- CPR may not save the victim even when performed properly, but if started within 4 minutes of cardiac arrest and defibrillation is provided within 10 minutes, a person has a 40% chance of survival.
- CPR is a simple but effective procedure that allows almost anyone to sustain life in the first critical minutes of cardiac arrest. CPR provides oxygenated blood to the brain and the heart long enough to keep vital organs alive until emergency equipment arrives.

To make learning CPR easier, a system was devised that makes remembering it as simple as **A-B-C:**

Airway
Breathing
Circulation

Calling for Help (Dial 9-1-1)

- It is critical to remember that dialing 911 may be the most important step you can take to save a life.
  If someone besides you is present, they should dial 911 immediately.
  If you're alone with the victim, try to call for help **prior to starting CPR on an adult** and **after a minute on a child**.

Provide operator with:
1. Your location
2. Your phone number
3. Type of emergency
4. Victim's condition

Adult CPR

- American Heart Association's guidelines dictate that Adult CPR is performed on any person over the age of 8. The procedure outlined in the following lessons is similar to Children CPR and Infant CPR, although some critical differences apply.
- Before you start any rescue efforts, you must remember to check the victim for **responsiveness**.

- If you suspect that the victim has sustained spinal or neck injury, do not move or shake him. Otherwise, shake the victim gently and shout "Are you okay?" to see if there is any response. If the victim is someone you know, call out his name as you shake him.
- If there is no response, immediately dial 9-1-1 and check the **airway**

Adult CPR

AIRWAY

- **"A"** is for AIRWAY. If the victim is unconscious and is unresponsive, you need to make sure that his airway is clear of any obstructions.
- The breaths may be faint and shallow - **look, listen** and **feel** for any signs of breathing.
- If you determine that the victim is not breathing, then something may be blocking his air passage. The tongue is the most common airway obstruction in an unconscious person.

Look, listen and feel for breathing

Adult CPR

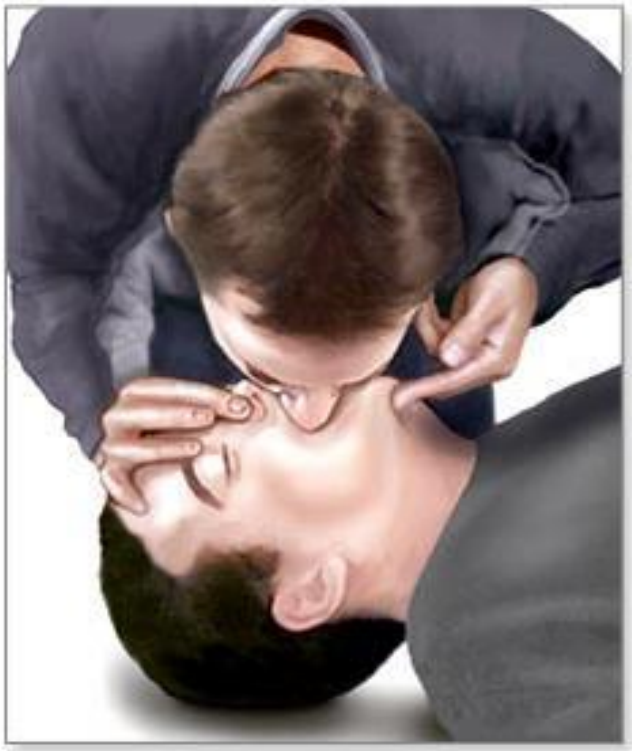
- With the victim lying flat on his back, place your hand on his forehead and your other hand under the tip of the chin
- Gently tilt the victim's head backward. In this position the weight of the tongue will force i to shift away from the back of the throat, opening the airway
- If the person is still not breathing on his own after the airway has been cleared, you will have to assist him **breathing**

While pushing back on the forehead, use your other hand to lift the chin forward

Adult CPR

BREATHING

- **"B"** is for BREATHING. With the victim's airway clear of any obstructions, gently support his chin so as to keep it lifted up and the head tilted back. Pinch his nose with your fingertips to prevent air from escaping once you begin to ventilate and place your mouth over the victim's, creating a tight seal.
- As you assist the person in breathing, keep an eye on his chest. Try not to over-inflate the victim's lungs as this may force air into the stomach, causing him to vomit. If this happens, turn the person's head to the side and sweep any obstructions out of the mouth before proceeding.



Place your mouth over the person's mouth and exhale

Adult CPR

Give **two** full breaths.

- Between each breath allow the victim's lungs to relax - place your ear near his mouth and listen for air to escape and watch the chest fall as the victim exhales
- If the victim remains unresponsive (no breathing, coughing or moving), check his **circulation**

Look, listen and feel for breathing

Adult CPR

CIRCULATION

- **"C"** is for CIRCULATION. In order to determine if the victim's heart is beating, place two fingertips on his carotid artery, located in the depression between the windpipe and the neck muscles, and apply slight pressure for several seconds.
- If there is no pulse then the victim's heart is not beating, and you will have to perform chest **compressions**

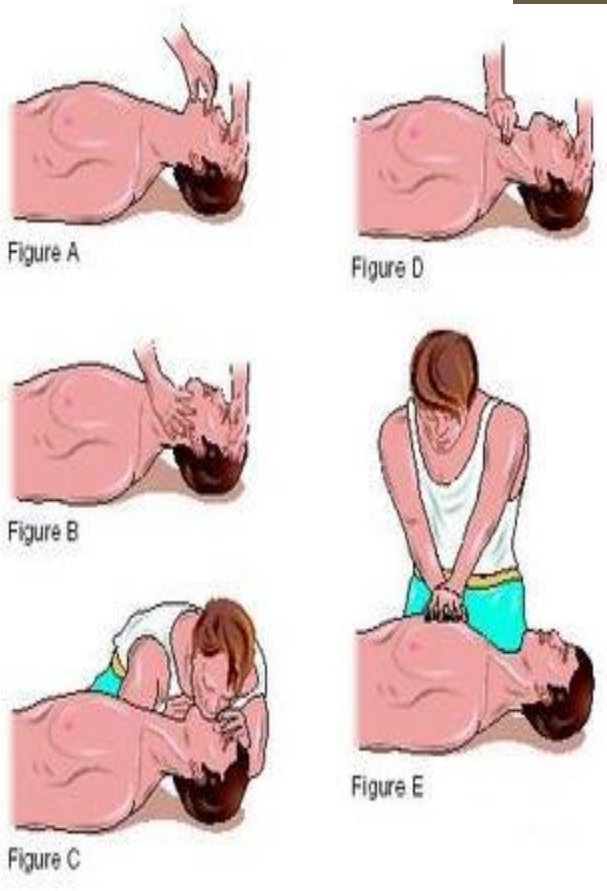
Adult CPR

COMPRESSIONS

- When performing chest compressions, proper hand placement is very important. To locate the correct hand position place two fingers at the sternum (the spot where the lower ribs meet) then put the heel of your other hand next to your fingers
- Place one hand on top of the other and interlace the fingers . Lock your elbows and using your body's weight, compress the victim's chest. The depth of compressions should be approximately 1½ to 2 inches - remember: **2 hands, 2 inches**

Adult CPR

- If you feel or hear slight cracking sound, you may be pressing too hard. Do not become alarmed and do not stop your rescue efforts! Damaged cartilage or cracked ribs are far less serious than a lost life. Simply apply less pressure as you continue compressions.
- Count aloud as you compress **15** times and giving the victim **2** breaths. This process should be performed four times in the span of 1 minute- 15 compressions and 2 breaths - after which remember to check the victim's carotid artery for pulse and any signs of consciousness.



Adult CPR

- If there is no pulse, continue performing 15 compressions/2 breaths, checking for pulse after every 4 cycles in the span of 1 minute until help arrives.
- If you feel a pulse (i.e. the victim's heart is beating) but the victim is still not breathing, **rescue breaths** should be administered, one rescue breath every five seconds (remember to pinch the nose to prevent air from escaping). After the first rescue breath, count five seconds and if the victim does not take a breath on his own, give another rescue breath.

Adult CPR

Two Man Rescue

- Just like the procedure in one man rescue, ABC shall be apply before proceeding to CPR
- The only difference is the manner of ratio of ECC and AR to be given
- For One man rescue 15:2 , 4 cycles in 1 minute
- For Two man rescue 5:1 , 12 cycles in 1 minute

Adult CPR

When to stop CPR /AR?

- When the victim is already conscious / breathing / with pulse
- When the rescuer is totally exhausted to perform a rescue
- When another rescuer takes his place after completing 4 cycles
- When the services of the Medical professional takes over
- When the Medical professionals pronounced that the victim is dead.

Adult CPR Review

In case of an emergency you may be the victim's only chance of survival. Until an ambulance arrives and professional assistance is available, you can increase that chance by 40% simply by remembering and effectively administering Cardio Pulmonary Resuscitation.

1. Check for responsiveness by shouting and shaking the victim. Do not shake or move the victim if you suspect he may have sustained spinal injury.

2. Call for HELP!!!!! (9-1-1).

3. Remember your A-B-C:

Airway: tilt the head back and lift the neck to clear the airway.

Breathing: pinch the victim's nose and give 2 breaths, watching for the chest to rise with each breath.

Circulation: if there is no pulse, perform 15 chest compressions 2 Breaths 4 cycles in 1 minute - 2 hands, 2 inches.

- 4. Check for pulse and if necessary perform the cycle again.

Choking

Choking is usually caused by a piece of foreign matter such as food becoming lodged in a person's windpipe. Because a choking victim is fully aware that he cannot breathe normally, a sense of panic may overcome them, making assessing the situation and rescue efforts difficult. It is important to try and keep the victim calm in order to determine whether your assistance is truly necessary or if the victim's own coughing reflex is sufficient.

Choking

Start by asking the person if he is choking. This simple step can be deceptively effective - the victim may be coughing violently or even gasping for air, but if he is able to answer then he is probably **not** choking. A choking victim will not be able to speak since oxygen cannot reach his lungs. But if after asking the person if he's choking all he can do is gesture or point to his throat and you notice his face starting to turn blue, then he is most likely choking and you will need to perform the Heimlich Maneuver immediately.

Universal sign for choking

Choking

- Start by finding the proper stance - behind the victim with one of your fe planted firmly between the victim's feet.
- Place one fist just above the person's navel with your thumb against the abdomen.
- Place your other hand directly on top of the first.
- Squeeze the victim's abdomen in qui upward thrusts as many times as it is necessary to dislodge the object in h windpipe.

Choking

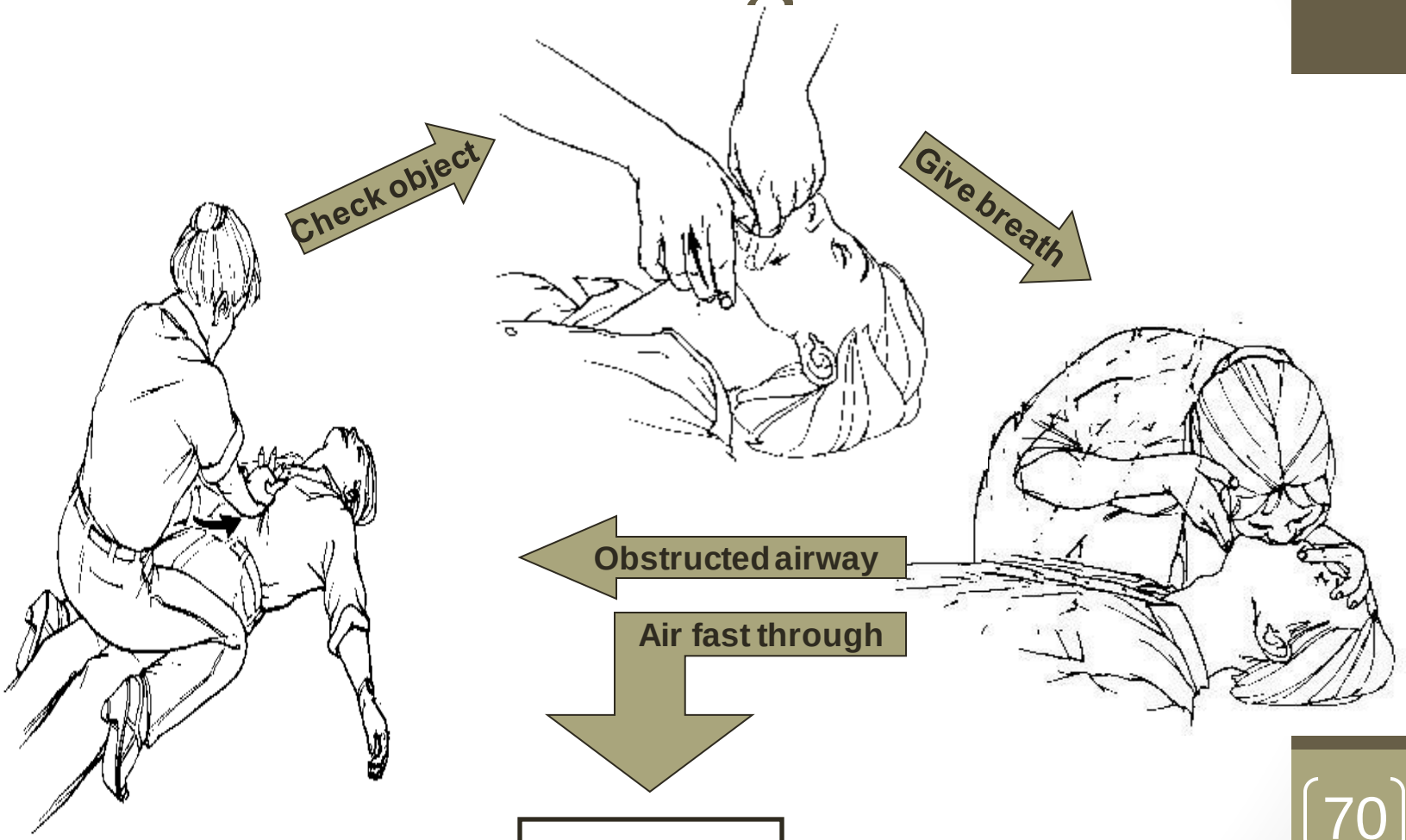
- If he was choked very badly the chance that he will collapse is eminent since he is running out of air, you must properly positioned your self and hold him to prevent him directly from falling
- Lie him down properly. Check for foreign object in his mouth by sweeping using one finger.
- Give full breath to check if his airway is still blocked. If air fast through his airway is clear then check for ABC
- If still block, Kneel beside the victim and apply pressure on the abdomen put your 2 palms just above his navel and make a quick upward thrusts ; this will pushed out the air inside his stomach to expelled the foreign object in his mouth
- You need at least 8-10 stroke and then Check for foreign object in his mouth by sweeping using one finger
- Repeat the above procedures until object is expelled and air fast through.

Choking

Heimlich maneuver for an unconscious adult

Each abdominal thrust attempts to clear the victim's airway of the foreign object by forcing air out through the windpipe.

Choking


Check object
Give breath
Obstructed airway
Air fast through
Check ABC

Summary

First aid includes any one-time treatment and follow-up for observation of minor injuries, including cuts, abrasions, bruises, first-degree burns, sprains, and splinters. Injuries or illnesses requiring only first aid are commonplace. One or more workers should be properly trained to administer basic first aid, including CPR. Workplaces should have a well-stocked first-aid kit and at least one or more employee assigned the responsibility for administering or coordinating first-aid treatments.

Summary

- When an injury does take place, whether it is to ourselves or a fellow employee, knowing what to do and being able to react quickly can limit the severity of the injury… or even prevent a death.
- First Aid is a best tool to help your co-workers, your family or maybe your own