SKIN, BURNS, HEAT EXHAUSTION, FEVER, HYPOTHERMIA

Indian Red Cross Society

SECTIONS

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Hypothermia

BURN WOUNDS

Introduction

- Burns result from various causes, including heat sources, fire, sun exposure, hot items, boiling liquids, chemicals, and even cold temperatures.

- Burn wounds can range in severity and require different levels of care and treatment

Classification of Burns

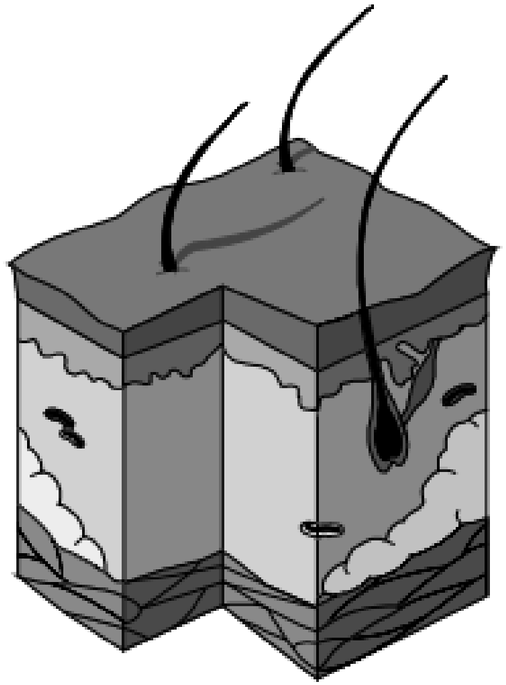
1	2	3
FIRST DEGREE BURNS	SECOND DEGREE BURNS	THIRD DEGREE BURNS

- Burns are classified based on the degree of skin and underlying tissue damage.
- The signs and symptoms vary depending on the severity of the burn.

First Degree Burns

Superficial first degree burns exhibit the following signs and symptoms

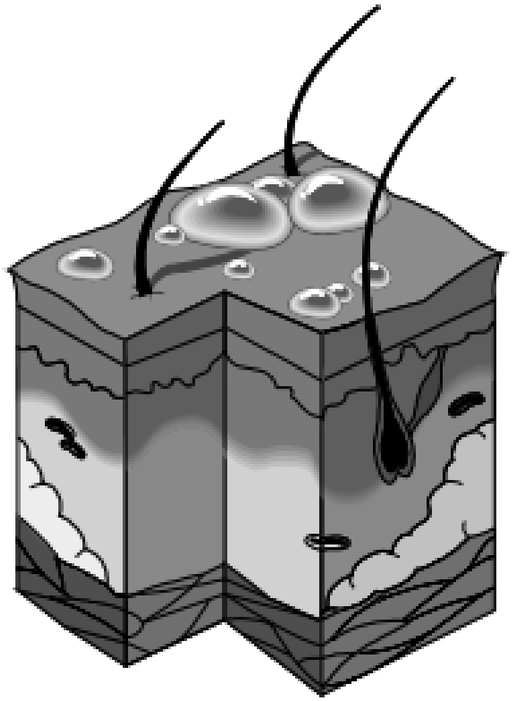
- Red or darker than usual skin
- Slightly swollen skin
- Painful, but usually bearable
- These burns typically affect only the epidermis (outermost layer of the skin).



Second Degree Burns

Intermediate second degree burns exhibit the following signs and symptoms

- Blistering
- Swelling
- Intense pain
- These burns involve both the epidermis and the dermis (deeper layer of the skin)



Third Degree Burns

Deep third degree burns exhibit the following signs and symptoms

- Black, parchment-like, or white-looking burn wound
- Mostly dry
- No pain within the third degree area, but intense pain in the surrounding second and first degree burned parts of the skin

TYPES OF BURNS BY ORIGIN

Introduction

Burns can be categorized based on their origin, which provides insights into the cause and appropriate treatment

Dry Burns

Dry burns result from the following sources

- Flames
- Contact with hot objects (e.g., hot cigarettes, hot domestic appliances)
- Friction (e.g., rope burns)

Scalds

Scalds occur due to exposure to the following

- Steam
- Hot liquids (e.g., tea, coffee, hot fat)

Electrical Burns

Electrical burns are caused by electrical current and can result from

- Low voltage current (e.g., home appliances)
- High voltage current (e.g., transformers)
- Lightning strikes

Chemical Burns

Chemical burns are caused by exposure to chemical substances, including

- Industrial chemicals
- Corrosive gases or inhaled chemical fumes
- Domestic chemicals and agents such as paint stripper, caustic soda, weed killers, bleach, oven cleaners, strong acids, or alkali

Radiation Burns

Radiation burns occur due to exposure to radioactive sources, such as

- X-rays
- Radiotherapy-rays

Frost Bites (Cold Burns)

Frost bites result from exposure to the following

- Cold wind
- Low temperatures
- Contact with freezing materials (e.g., cold metal)
- Contact with freezing vapors (e.g., liquid oxygen or liquid nitrogen)

Sun Burns

Sun burns are caused by intensive exposure to sunlight or over-exposure to ultraviolet light (UV) from a sunlamp or the sun.

Heat Exhaustion and Heat Stroke

Prolonged exposure to heat or hot weather can lead to heat exhaustion and heat stroke

DANGER OF BURNS

Introduction

Burn injuries, regardless of their severity, can lead to complications and pose serious problems

Importance of Burn Area

The area of the burns plays a crucial role in determining the danger

- Superficial burns over a large area of the body are more dangerous than complete charring of a specific limb.

- Burns often consist of a mix of different degrees and can vary in severity across different parts of the body within the same person.

Infection

Burn injuries leave the skin vulnerable to infection, increasing the risk of

Sepsis: A life-threatening infection that rapidly spreads through the bloodstream, potentially causing shock and organ failure

Low Blood Volume

Burn injuries damage the skin and blood vessels, leading to fluid loss and resulting in:

Hypovolemia: Low blood volume that can prevent the heart from adequately pumping blood through the body, potentially leading to shock

Low Body Temperature

Extensive skin injuries can disrupt the body's temperature regulation, increasing the risk of

Hypothermia: When the body loses heat faster than it can produce, leading to dangerously low body temperature.

Breathing Difficulties

Inhalation of smoke or hot air is a common danger accompanying burn injuries, which can:

- Burn the airways, making breathing difficult.
- Cause permanent lung damage and respiratory failure

DRY BURNS AND SCALDS (BURNS FROM FLAMES, HOT SURFACES, STEAM)

Safety First and Seek Help:

- Ensure your own safety and that of the victim.
- Call for help or ask a bystander to seek immediate assistance.
- Instruct the bystander to confirm if help has been secured.

Rescuing a Person from a Fire:

- Remember, rescuing from a fire is the duty of the fire brigade.
- If you must rescue someone, follow these guidelines:
- Call for help before entering the location.
- Protect your face with a wet handkerchief or cloth.
- Crawl along the floor to reach and pull out the casualty.
- Act swiftly, as there may be carbon monoxide present.
- Note that a wet handkerchief and crawling won't protect you from carbon monoxide.
- Avoid opening doors or windows as it can increase the fire.

Signs and Symptoms of Burns:

- First, second, and/or third-degree burn wounds.
- If burns involve the face or inhalation of hot air or smoke, you may also observe:
- Soot around the mouth or nose.
- Scorched eyebrows, eyelashes, mustache, beard, or hair.

Remember to provide immediate medical attention to burns and scalds. The information provided is a summary and should not substitute proper training or medical advice.

PROVIDE FIRST AID

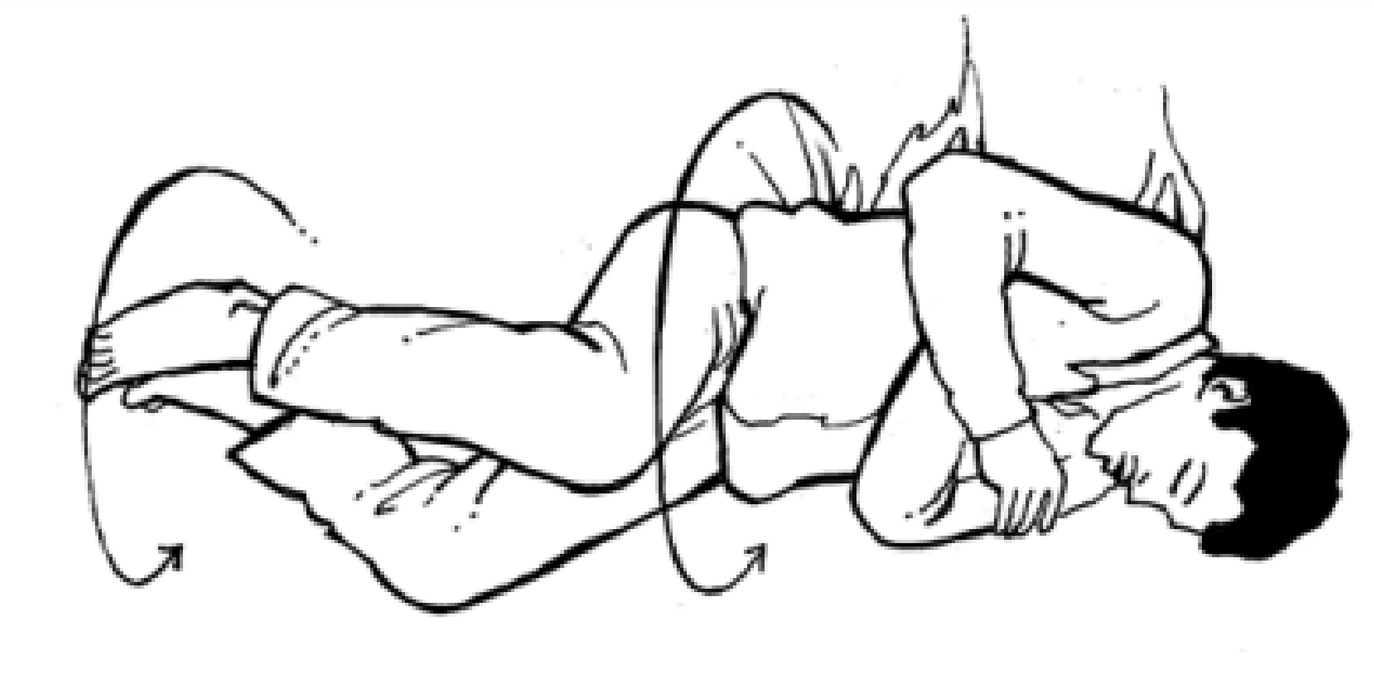
If the person’s cloths are on fire

- stop him from running around

- douse the fire with water

- approach the person whilst holding a rug, heavy blanket, coat or cotton table cover in front of you and wrap him in it to smother the flames

- make the person roll on the ground to smother the flames.

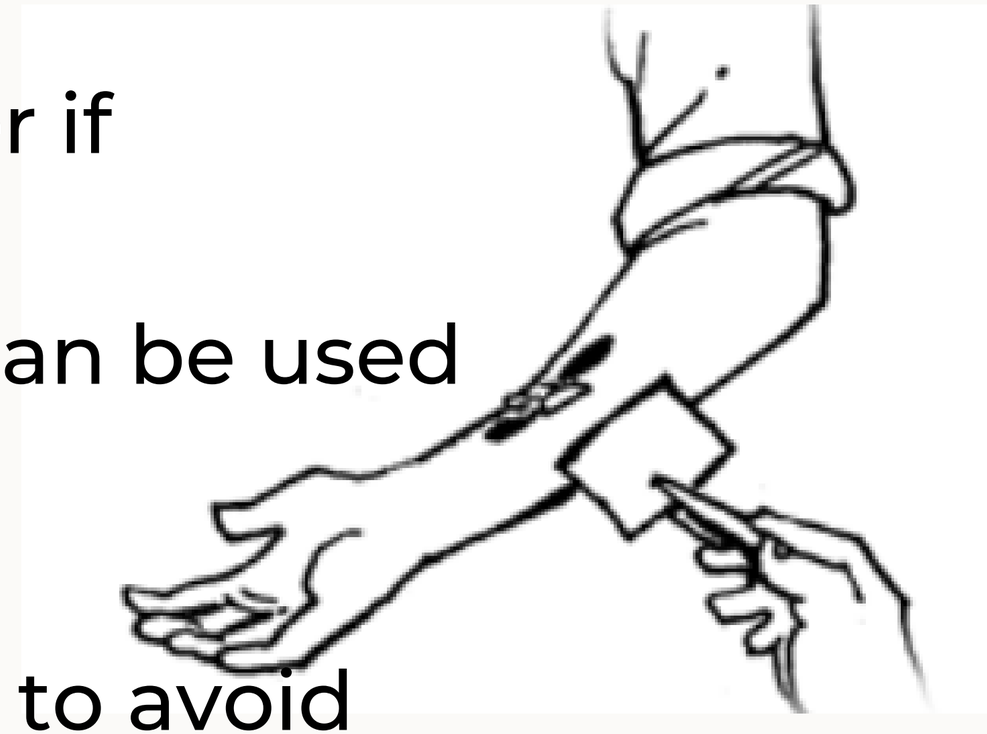


- Cooling with water will prevent the burn from going deeper and will reduce the pain. Pour water on the burn for 10-15 minutes or until the burn stops hurting. Do not use very cold water for cooling the burns. Burn victims can easily become hypothermic.

- Protect the burn victim by wrapping him in clean blankets.

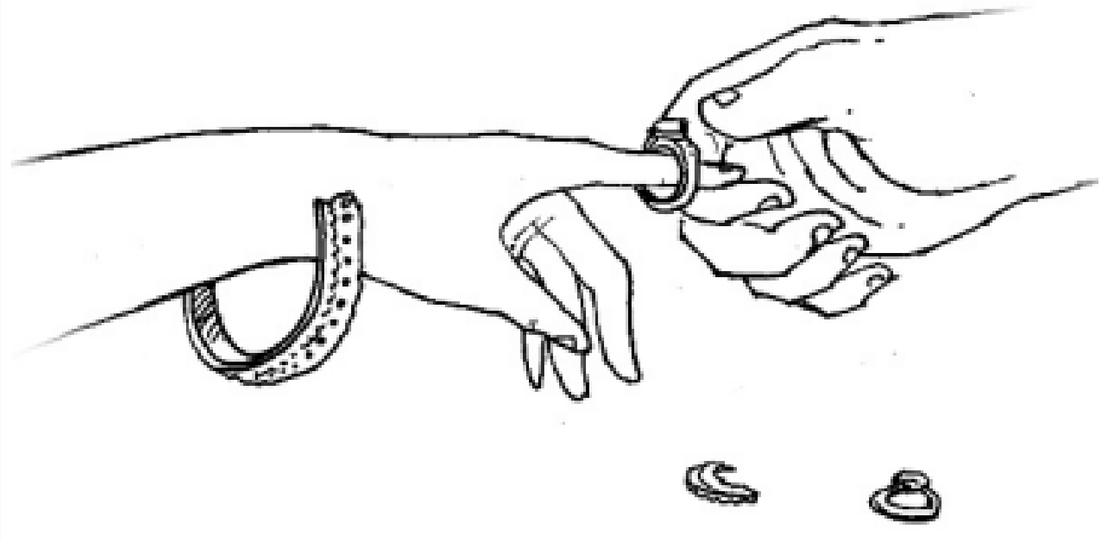
- Hand hygiene:

1. Wash hands with soap and water if available.
2. Ash or alcohol-based sanitizers can be used if soap is not available.



- Use gloves or a clean plastic bag to avoid touching the wounds.
- Cover burn wounds with a clean cotton cloth.
- Do not open blisters; leave them intact.

- Remove clothing or jewelry not stuck to the burned skin.
- Do not remove items attached to the burn wounds.
- If possible, remove belts, shoes, or boots to prevent swelling.
- Keep the casualty warm without overheating.
- Elevate burned hands, legs, or feet if possible.



- Do not leave the casualty alone; continue observing them.
- Monitor the casualty's breathing, especially if the face is burned or exposed to heat or smoke.
- For severe burns, transport the casualty promptly to the nearest healthcare facility or hospital.

Actions for Unconscious Person Still Breathing:

- Place the person in the recovery position if possible.
- Continuously observe the victim and monitor their breathing.

Actions When the Person Stops Breathing:

- Perform CPR (Cardiopulmonary Resuscitation).
- Do not interrupt resuscitation until one of the following occurs:
- The person starts to wake up, moves, opens their eyes, and breathes normally.
- Trained CPR help arrives and takes over.
- You become too exhausted to continue.
- The scene becomes unsafe to continue

- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

When to Refer a Burn Victim to a Healthcare Facility or Hospital:

- Arrange urgent transport to a healthcare facility or hospital if:
  - The injured person is under five years old or over 65 years old.
  - The burn is on the face, eyes, ears, hands, feet, sexual organs, or joints.
  - The burn encircles the entire limb, body, or neck.
  - The burn is equal to or larger than the injured person's hand size.
  - The burn appears black, white, papery, hard, and dry.

- The injured person has decreased or no feeling in or around the wound.
- The burns were caused by electricity, chemicals, or high-pressure steam.
- The injured person has inhaled flames, hot air, or a significant amount of smoke.
- Clothing or jewelry is stuck to the skin.
- The victim has suffered other serious trauma due to the accident.
- The victim has a pre-existing medical condition, such as diabetes.
- The person's condition is deteriorating.

Care Of Minor Burns

- For smaller burns (small first and second-degree burns), use fresh aloe vera or honey to the burn wound
- This can help the wound recover faster.

HYGIENE

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- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

PROVIDING FIRST AID

- After the burn wound has been cooled (see above for how to approach the casualty:
- Apply a clean cotton cloth to the wound.
- Avoid applying any medicine to the burns.

a.Do not cover the burns with cotton wool.

b.Do not apply Vaseline to the burns.

c.No pastes or creams should be applied to the burns.

- Ensure that the burned casualty gets enough fluids to drink.
- Refer the victim to a medical facility for additional care.

REFERRING TO THE DOCTOR

Always refer the victim to a medical facility for further care.

Advise the wounded person to seek medical attention if, in the days following, the burn smells terrible, there is any discharge from the wound or the wound is saturated with pus, the pain persists or worsens, there is swelling, or he develops a fever

SPECIFIC BURN LOCATIONS

BURNS TO THE FACE

- The victim may have trouble breathing after being burned in the face or after breathing hot air or smoke:
- In order to treat burns and scalds, approach the victim as instructed.
- Allow the victim to lie down in a posture that is most comfortable and conducive to his optimal breathing.
- Remove any loose clothing that can restrict breathing.
- Keep a close eye on the casualty's breathing and begin CPR if necessary.
- Always get these burn sufferers to a clinic or hospital as soon as possible.

BURNS TO THE EYE

- Burns to the eye can cause burnt eyelashes, burned eyebrows, burn sores around the eye, and red eyes that are burning and itchy.
- Shout or shout for assistance and request that a passerby seek assistance or arrange for immediate transportation to the closest medical facility.
- Rinse the eye vigorously for 10 to 15 minutes with plenty of clean or boiled and cooled water, being careful to prevent water from getting in the other eye.

BURNS TO THE EYE

- Ask the person to take off their contact lenses and store them safely if they wear them.
- Make arrangements for transportation to the closest hospital or medical institution.
- Avoid putting medicine in your eyes.
- Eye injuries need to be managed carefully, and patients should be taken to a clinic or hospital.

ELECTRICAL BURNS AND ELECTROCUTION BY ELECTRICITY OR LIGHTNING

Introduction

Electrical burns occur when electricity passes through the body, caused by various sources like lightning, household current, or vehicle batteries. Do not touch the person until the power source is turned off. Entry and exit points may show burn wounds, but hidden internal damage can occur. Electrical exposure can also lead to cardiac arrest.

Signs and Symptoms of Electrocution Accident:

Possible indications of an electrocution accident:

- Presence of electrical appliance connected to power source nearby casualty.
- Proximity to high voltage wires.
- Occurrence during a thunderstorm or similar conditions.

Casuality may exhibit the following:

- Unconsciousness.
- Difficulty breathing or cessation of breathing.
- Cardiac arrest (no heartbeat) or irregular pulse.
- Burn wounds.
- Muscle spasms.

Signs and Symptoms of Burns:

- First, second, and/or third-degree burn wounds.
- If burns involve the face or inhalation of hot air or smoke, you may also observe:
- Soot around the mouth or nose.
- Scorched eyebrows, eyelashes, mustache, beard, or hair.

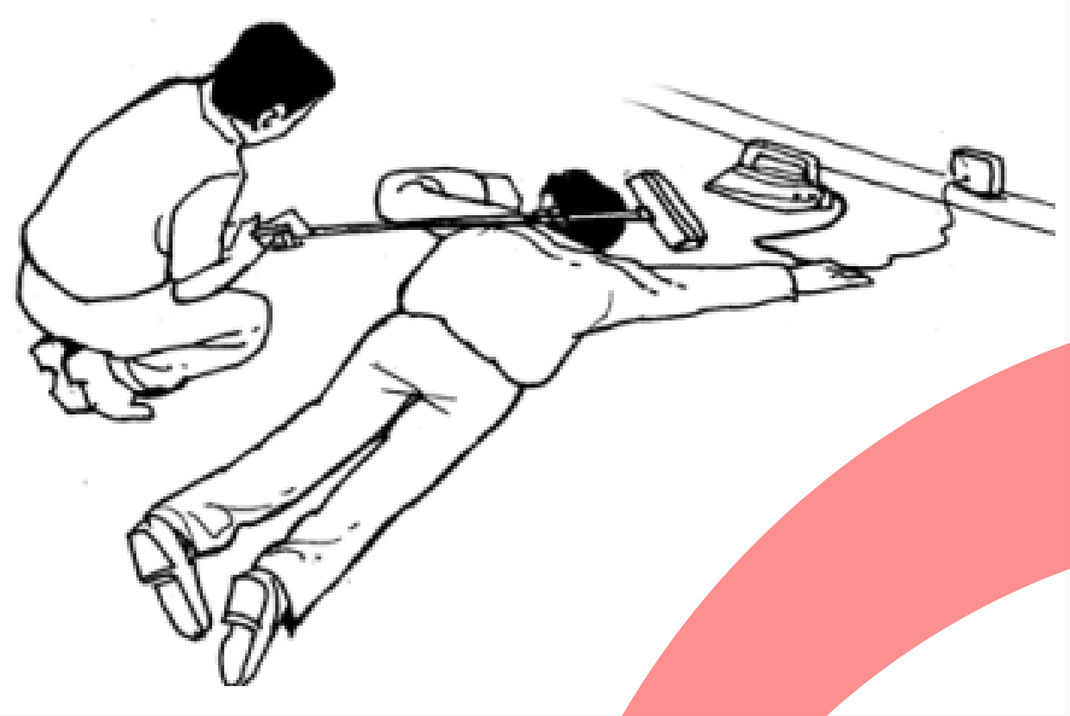
Remember to provide immediate medical attention to burns and scalds. The information provided is a summary and should not substitute proper training or medical advice.

Safety First and Call for Help

1. Never touch a casualty connected to an electrical source.
2. Turn off the source of electricity.
   - For high voltage currents, wait until the source is turned off before approaching.
   - For home electricity (220V), if unable to switch off the source, use a dry, non-conducting object to move it away from you and the injured person.
   - During a lightning strike, ensure personal safety and seek shelter inside a house or car.

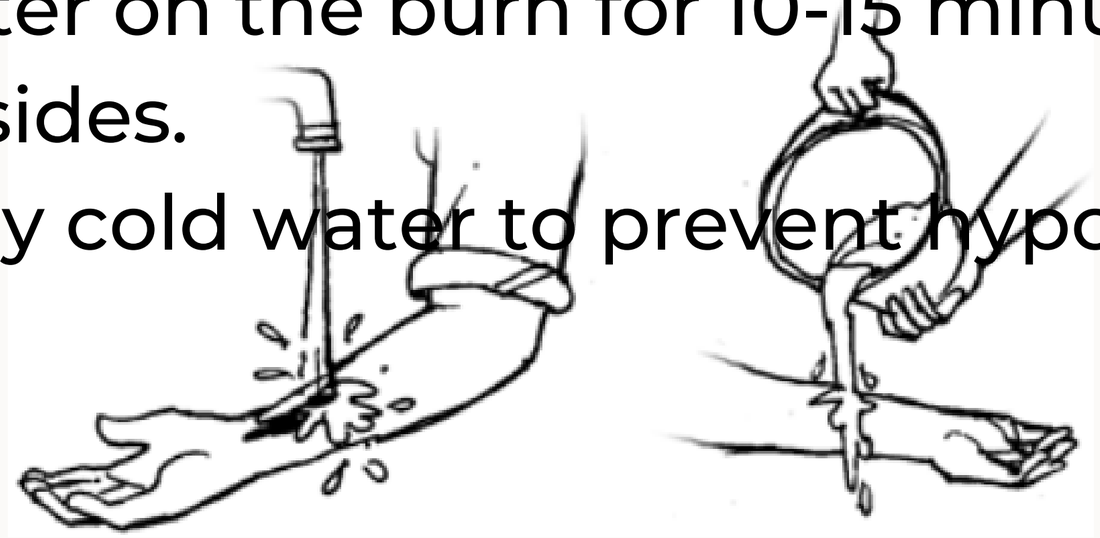
Shout or call for help if alone, but do not leave the person unattended.

- Ask a bystander to seek help or arrange urgent transport to the nearest healthcare facility or hospital.
- Instruct the bystander to return to confirm if help has been secured.



- Avoid moving the casualty, unless immediate danger is present.
- Cool down burn wounds using clean water (or any available water), ensuring the electricity is switched off:

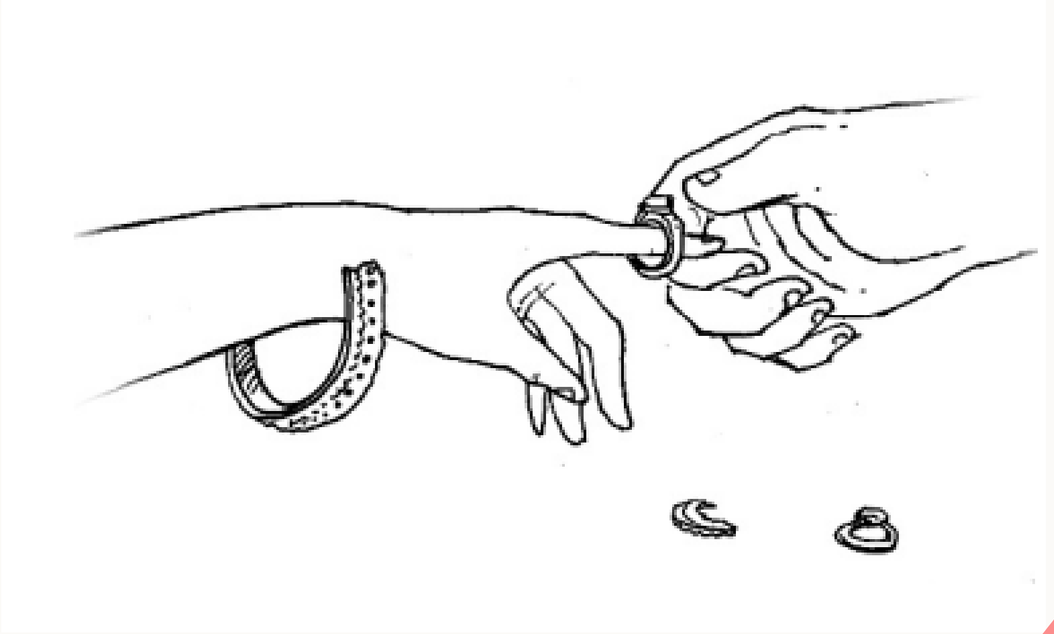
1. Pour water on the burn for 10-15 minutes or until pain subsides.
2. Avoid very cold water to prevent hypothermia.



- Protect the burn victim by wrapping them in a clean sheet or blankets.
- Wash hands with soap and water. Ash or alcohol-based sanitizers can be used if soap is unavailable.
- Use gloves or a clean plastic bag to avoid touching the wounds.

- Cover burn wounds with a clean cotton cloth.
- Do not open blisters; leave them intact.
- Remove clothing or jewelry not stuck to the burned skin, but do not remove anything attached to the wounds.

- If possible, remove belts, shoes, or boots to prevent swelling.
- Keep the casualty warm without overheating.
- If feasible, elevate burned hands, legs, or feet.
- Do not leave the casualty unattended; continue observing
- Transport the casualty promptly to the nearest healthcare facility or hospital.



If the person is unconscious but still breathing:

- Put the person in the recovery position.
- Continuously monitor the victim's breathing.

If the person stops breathing:

- Perform CPR (Cardiopulmonary Resuscitation).
- Do not interrupt the resuscitation until:
- The person shows signs of waking up, such as movement, opening their eyes, and breathing normally.
- Trained help arrives and takes over.
- You become too exhausted to continue.
- The scene becomes unsafe to continue.

- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

When to Refer a Burn Victim to a Healthcare Facility or Hospital:

- High voltage electrocution or lightning strike occurred.
- The injured person is under five years old or over 65 years old.
- Burns are located on the face, eyes, ears, hands, feet, sexual organs, or joints.
- Burns encircle an entire limb, body, or neck.
- The burn size is equal to or larger than the injured person's hand.
- Burns appear black, white, papery, hard, or dry.

- Decreased or no sense of feeling is observed in or around the wound.
- Clothing or jewelry is stuck to the skin.
- The victim has suffered from other serious trauma.
- The victim has a medical condition like diabetes.
- The person's condition is deteriorating.

CHEMICAL BURNS

Introduction

- Chemical burns can occur when certain chemicals irritate, burn, or penetrate the skin, potentially causing severe damage or even death.

- Unlike burns caused by heat or electrocution, chemical burns may develop slowly over time.

- It is essential to consider all chemical burns as serious and seek medical follow-up

SIGNS AND SYMPTOMS

When encountering a chemical burn, the following signs and symptoms may be observed:

- Evidence of chemicals in the vicinity of the victim.
- Complaints of intense stinging pain.
- Skin irritation, burns, discoloration, swelling, blisters, or peeling.
- Possible signs of poisoning (refer to the Poisoning chapter)

Actions for Chemical Burn Victims

1 Ensuring Safety and Calling for Help

2 Providing First Aid

Ensuring Safety and Calling for Help

- Prioritize safety for yourself and the victim, avoiding direct contact with the chemical without proper protection.

- If alone, shout or call for help, instructing bystanders to seek assistance or arrange urgent transport to the nearest healthcare facility.

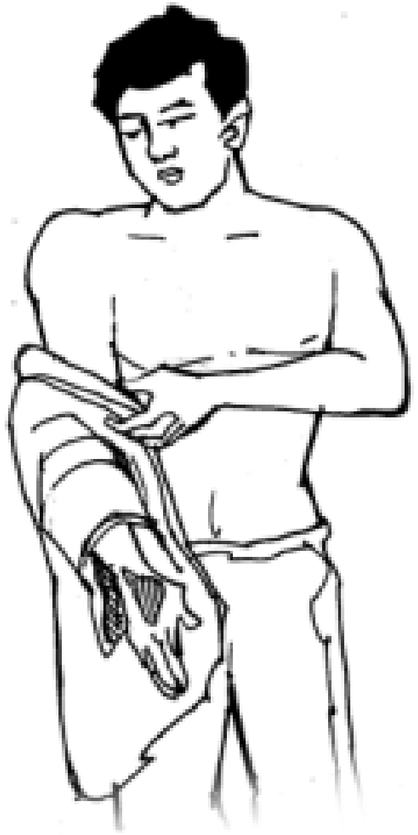
- Request confirmation from the bystander that help has been secured

Providing First Aid

- Wear gloves for personal protection; if unavailable, use a plastic bag as a barrier.

- Remove the source of the burn by gently brushing off any remaining dry chemical, followed by rinsing the affected skin with cool, running water for 10 to 15 minutes.

- Remove any clothing or jewelry contaminated by the chemical.
- Loosely wrap the burned area with a clean cloth.
- If the burning sensation persists, continue washing the burned area for several more minutes.
- Arrange for transportation to the nearest healthcare facility



SUNBURNS

Introduction

- Direct exposure to sunlight can have harmful effects on the skin and eyes.
- Sunburn occurs when the skin is exposed to ultraviolet (UV) rays from the sun, damaging the deeper skin layers.
- Symptoms of sunburn include redness, pain, peeling, and blistering

SIGNS AND SYMPTOMS

When a person suffers from sunburn, the following signs and symptoms may be observed

- Reddened and warm skin.

- Varying degrees of pain.

- In severe cases:
- Swelling
- Blisters
- Weeping skin

First Aid Steps

- Move the person to a shaded and cool area. If unavailable, cover the skin with light clothing or a towel.

- Cool down the skin by gently sponging or showering with lukewarm water for 10-15 minutes. Avoid using very cold water.

- Encourage the person to have frequent sip of cool water (exception to the standard guideline of not giving a casualty anything to drink).

- For severe sunburns, refer the person to th nearest healthcare facility.

- For minor burns, apply after-sun cream

When to Refer to a Healthcare Facility

- The burns cover a large body surface.
- Blisters are present.
- The person is a child or an elderly individual.
- Signs of heat stroke are noticed

SUNBURN OF THE EYE AND SNOW OR WELDERS BLINDNESS

Introduction

- Snow blindness or sunburn of the eye, also known as photokeratitis or ultraviolet keratitis, is a painful eye condition caused by exposure of inadequately protected eyes to ultraviolet rays.
- Common causes include:
- Looking into welding light without eye protection.
- Exposure to sunlight reflected from snow and ice without wearing sunglasses.
- Directly looking at sunlight, such as during a solar eclipse, without appropriate protection.

SIGNS AND SYMPTOMS

When a person suffers from sunburn of the eye(s) or snow or welders blindness, the following signs and symptoms may be observed

- Intense pain in the affected eye(s).
- Redness of the eye(s).
- Tearing of the eye(s).
- Sensitivity to light.
- The person may report staring directly into the sun or strong light, such as welding light or fireworks.

First Aid Steps

- Reassure the person.
- If the person wears contact lenses, ask them to remove them and keep them in a safe place.
- Instruct the person to protect their eye(s) by holding a non-fluffy pad against each injured eye.

First Aid Steps

- Wetting the eye pads with clean water is optional. If eye pads are unavailable, advise the person to keep their eyes closed or use sunglasses.
- Do not apply pressure to the eyes.
- Arrange transportation to the nearest healthcare facility or hospital.
- Do not administer any medication into the eye.

HEAT EXHAUSTION

1 INTRODUCTION

2 WHAT DO I SEE AND ENQUIRE?

3 WHAT DO I DO?

4 WHEN TO REFER TO A HEALTHCARE FACILITY

INTRODUCTION

- Heat exhaustion is a milder form of heat-related illness that can develop after prolonged exposure to high temperatures and inadequate or imbalanced replacement of fluids.

- Those most prone to heat exhaustion are elderly people, people with high blood pressure, and people working or exercising in a hot environment.

WHAT TO SEE AND ENQUIRE

Following signs and symptoms may be observed:

- Heavy sweating
- Paleness
- The casualty complains of muscle cramps
- The casualty complains of headache, dizziness or tiredness
- The casualty may act confused
- Rapid, weakening pulse
- Fast, shallow breathing

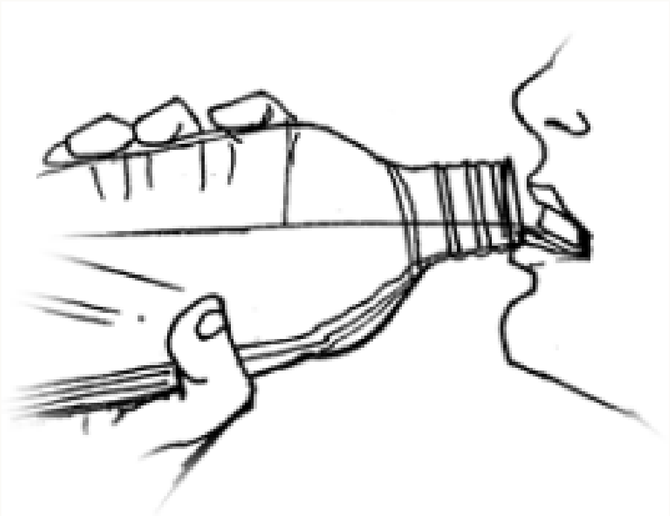
WHAT TO DO

1 Help the casualty move to a cool place.

2 Help the casualty to lie down with the legs slightly raised.

3 Cool the casualty by sponging him or having him to take a cool shower.

4 Ask the casualty to rest



5 Ask the casualty to drink plenty of water (this is an exception to the standard first aid guideline of not giving to drink or to eat to a casualty).

6 Keep observing the casualty's breathing and consciousness.

Refer the casualty to a healthcare facility.

What To Do if the Person is Unconscious but Still Breathing?

- Put the person in the recovery position
- Continue to observe the victim and check his breathing

What do I do when the person stops breathing:

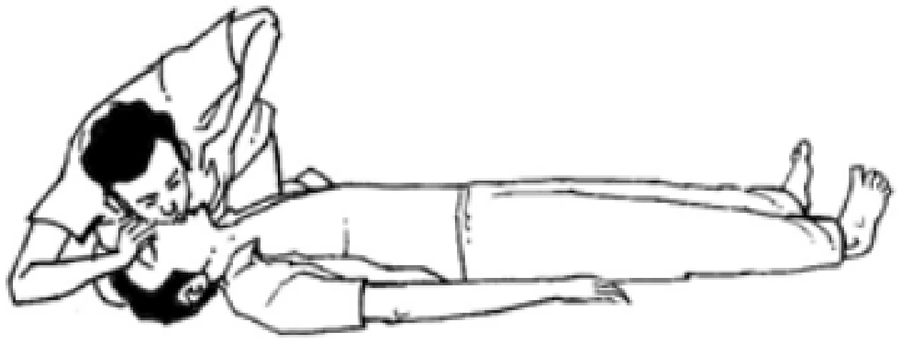
- Perform CPR
- Do not interrupt the resuscitation until:

  a) the victim wakes up, moves, opens his eyes and breathes normally

  b) help (trained in CPR) arrives and takes over

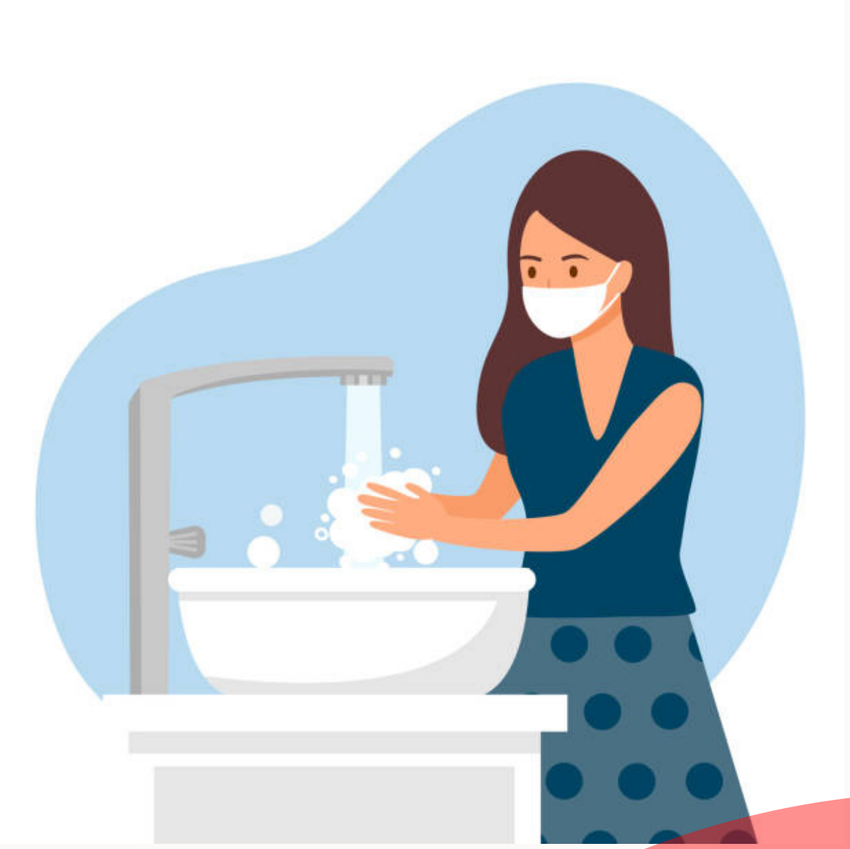
  c) you become too exhausted to continue

  d) the scene becomes unsafe for you to continue



3. Hygiene

Always wash your hands after taking care of a person. Use soap and water to wash your hands. Alcohol-based sanitizers can also be used, if available.



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WHEN TO REFER TO A HEALTHCARE FACILITY?

Always refer the casualty to a healthcare facility for further medical follow up.

HEATSTROKE

1 INTRODUCTION

2 WHAT DO I SEE AND ENQUIRE?

3 WHAT DO I DO?

4 WHEN TO REFER TO A HEALTHCARE FACILITY

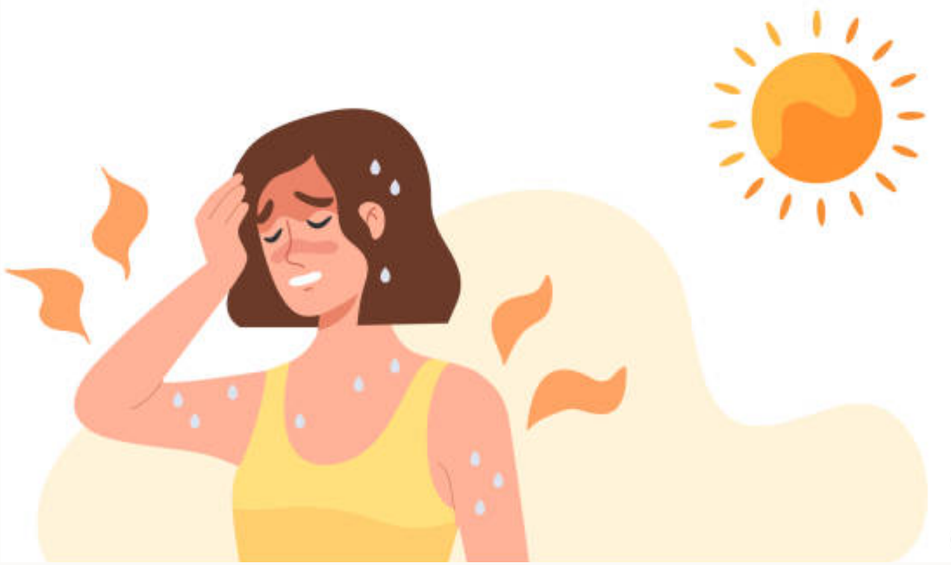
INTRODUCTION

- Normally the body dissipate the heat with the help of sweat glands.
- In some cases the body may not be able to dissipate the heat by sweating and the body temperature rises, sometimes up to 41.1 C (106 F) or higher. Or a dehydrated person may not be able to sweat fast enough to dissipate heat, which causes the body temperature to rise.
- Heat regulation mechanism fails during heatstroke.

- Heatstroke is a form of hyperthermia, an abnormally elevated body temperature with accompanying physical and neurological symptoms.

- Heatstroke is a true medical emergency that can be fatal if not properly and promptly treated.

- Most susceptible to heat strokes are infants and the elderly.



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WHAT TO SEE AND ENQUIRE

Following signs and symptoms may be observed:

- A hot flushed, red dry skin
- The casualty complains of headache, dizziness or discomfort
- The casualty may act confused or is restless
- A full bounding pulse
- A body temperature above 40 degrees Celsius (>104 F)

WHAT TO DO

1 Help the casualty move to a cool place.

2 Check the casualty's breathing and consciousness.

3 Help the casualty to lie down with the legs slightly raised.

4 Cool the casualty by sponging him or showering him with cool water.

5 Make the casualty to rest.

6 It the casualty is conscious, ask the casualty to drink water (this is an exception to the standard first aid guideline of not giving to drink or to eat to a casualty).

7 Keep observing the casualty's breathing and consciousness.

Refer the casualty to a healthcare facility.

What To Do if the Person is Unconscious but Still Breathing?

- Put the person in the recovery position
- Continue to observe the victim and check his breathing

What do I do when the person stops breathing:

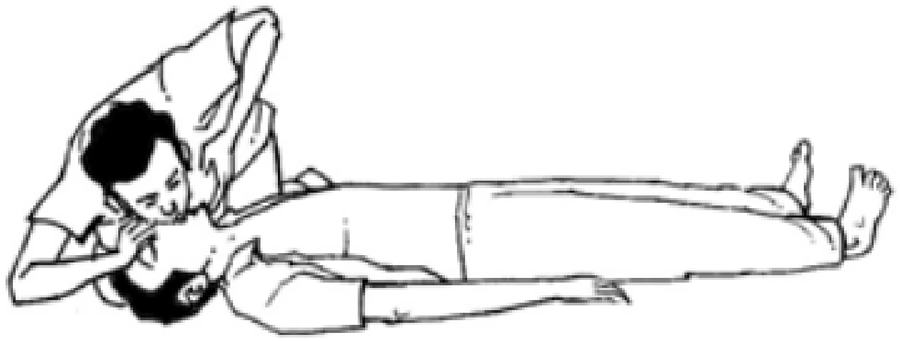
- Perform CPR
- Do not interrupt the resuscitation until:

  a) the victim wakes up, moves, opens his eyes and breathes normally

  b) help (trained in CPR) arrives and takes over

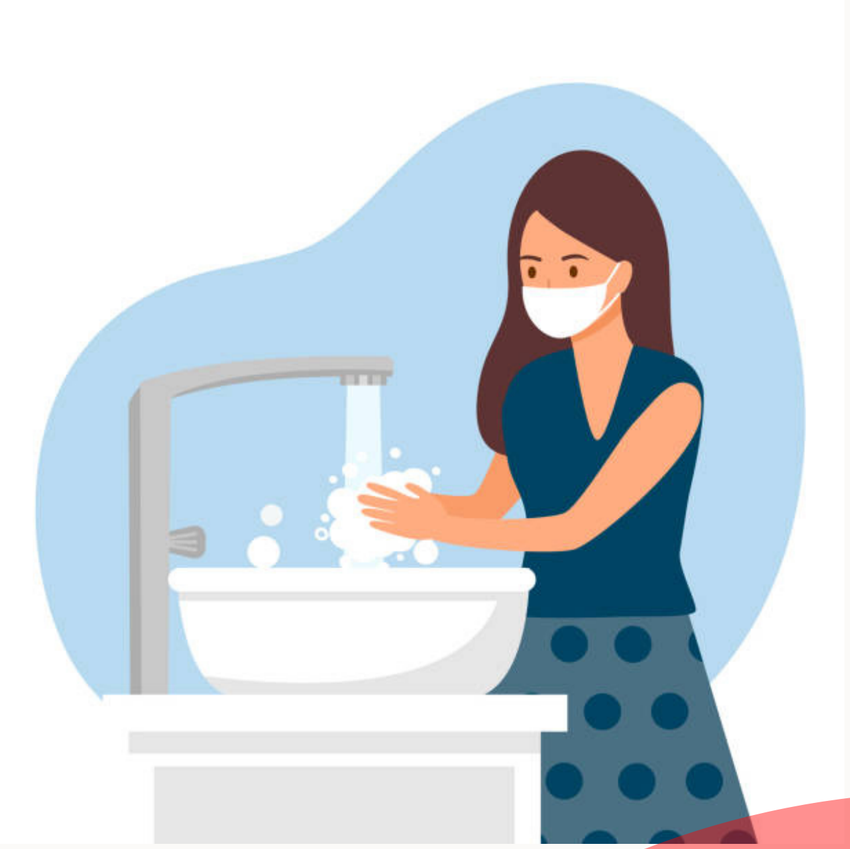
  c) you become too exhausted to continue

  d) the scene becomes unsafe for you to continue



3. Hygiene

Always wash your hands after taking care of a person. Use soap and water to wash your hands. Alcohol-based sanitizers can also be used, if available.



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WHEN TO REFER TO A HEALTHCARE FACILITY?

Always transport the casualty suffering a heatstroke to a healthcare facility for further medical treatment and follow up.

FROSTBITES

Introdcution

- Frostbite is caused by being exposed to temperatures below -0.55°C (31°F).
- Frostbite is caused by insufficient blood circulation in cold conditions.
- Extreme cold weather, inadequate or damp clothes, wind chill, tight clothing or boots, cramped position, weariness, some medications, smoking, alcohol usage, and conditions affecting blood vessels are all risk factors for frostbite.

- Frostbite can occur everywhere on the body, but the extremities (hands, feet, ears, nose, and lips) are most sensitive.
- Frostbite symptoms include chilly and painful afflicted areas, as well as pins and needles sensation and numbness when tissues freeze.

After effects:

- Cold sensitivity has increased.
- Numbness in affected body parts, particularly the fingers
- Reduced sensation of touch in afflicted body parts
- Pain that persists in damaged bodily parts

SYMPTOMS AND ENQUIRY

SYMPTOMS:

- The affected area may experience pins and needles, throbbing, or aching.
- Skin that is cold, numb, and white
- The sensation of tingling

If the frostbite is more advanced:

- The affected area may feel hard and frozen
- When the person is out of the cold:

1. The tissue is thawed out (defrosted and becomes soft)
2. The skin will turn red and blister, which can be painful
3. There may also be swelling and itching.

If the exposure to the cold continues and the frostbite develops further::

- The skin becomes white, blue or blotchy
- The tissue underneath feels hard and cold to touch.

When the person is out of the cold and the skin thaws (defrosts)::

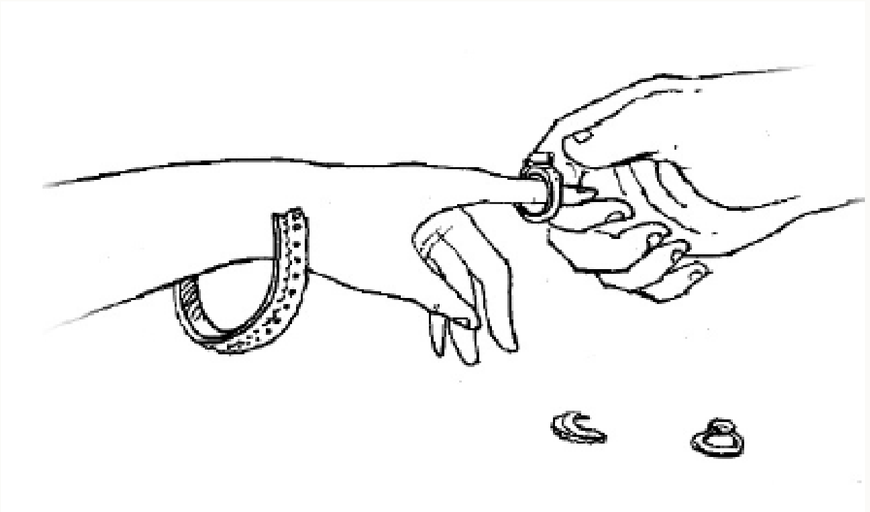
- Blood-filled blisters form and turn into thick black scabs. At this stage, it is likely that some tissue has died. This is known as tissue necrosis, and the tissue may have to be removed to prevent infection.

WHAT TO DO NOW?

1 If feasible, relocate the victim to a warmer location.

2 If possible, avoid walking on frostbitten toes and feet.

3 To prevent further heat loss, replace damp garments with dry clothing.

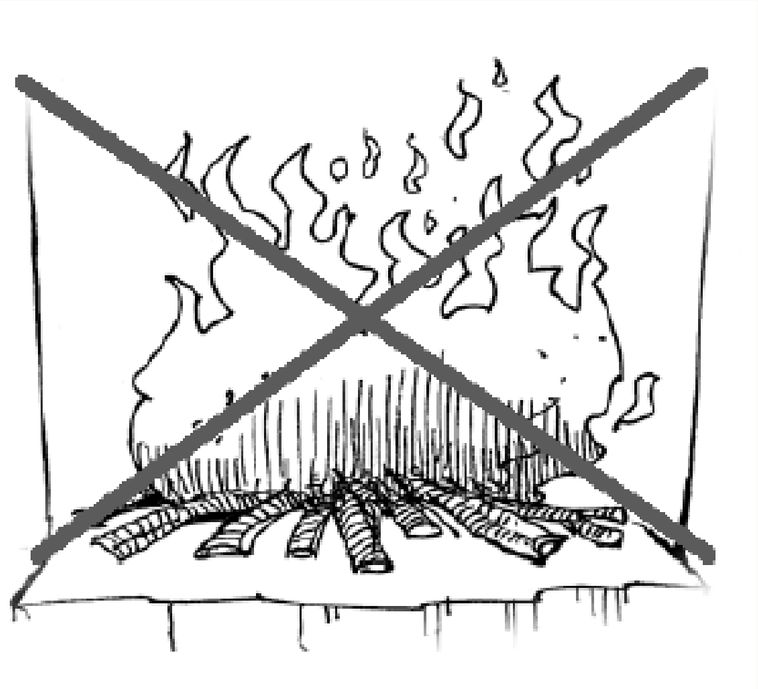


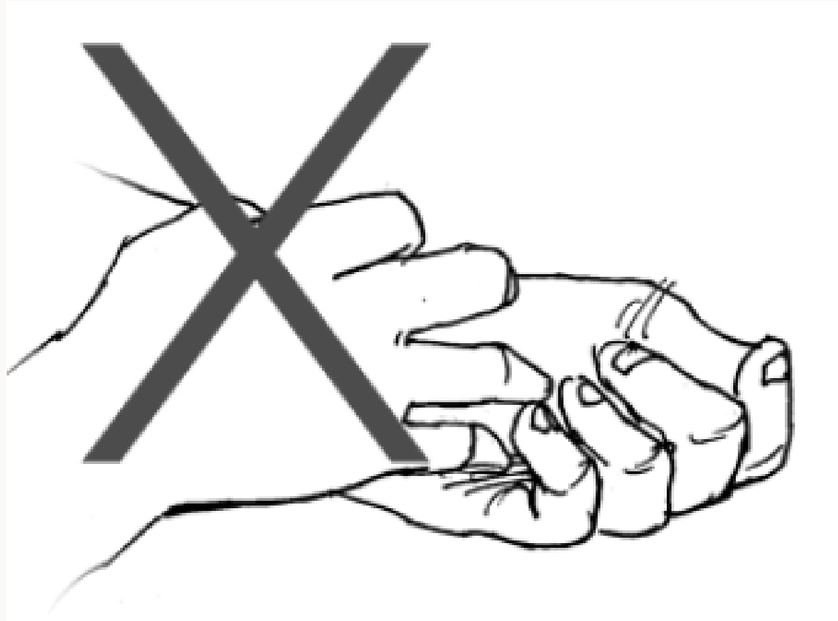
4 Remove constrictions such as gloves, rings, and boots with care.

5 Begin the rewarming procedure in the impacted locations

6 Warm the affected area with your hands, lap, or armpits.

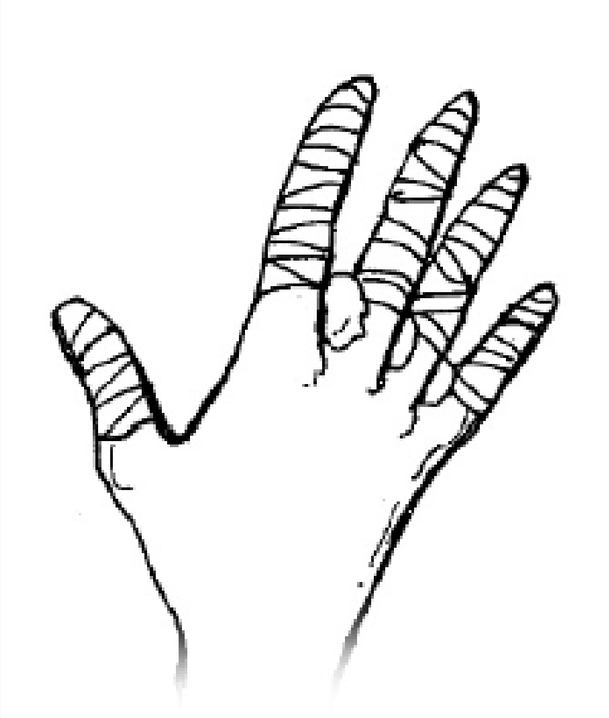
7 Avoid pressing or applying direct heat from a fire or heater to the affected region.





8 Warming up should take at least 30 minutes.

9 Do not allow the individual to smoke.



10 Wrap the thawed region in clean bandages, keeping fingers and toes apart.
To avoid infection, keep the skin clean.

11 Avoid excessive movement and, if possible, elevate the limbs

12 Do not walk on afflicted areas that have been re-warmed.

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- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

REFERRING TO THE DOCTOR

For Emergency:

- Always urgently transport the person suffering severe frostbites to the nearest healthcare facility.
- Person with minor frostbites should also always be referred to a healthcare facility

FEVER

Introdcution

Fever is a brief rise in body temperature that can be caused by a serious illness.

To determine the reason of fever, seek medical attention.

Untreated fevers caused by diseases such as malaria, typhoid, and pneumonia can be serious and even fatal.

The average body temperature is 37 °C (98.6 °F).

When the temperature rises above 37.7 °C (100 °F), fever is deemed present.

Specific temperature readings can be used to detect fever:

Anus (anal/rectal) temperature of 38.0 °C (100.4 °F) or higher.

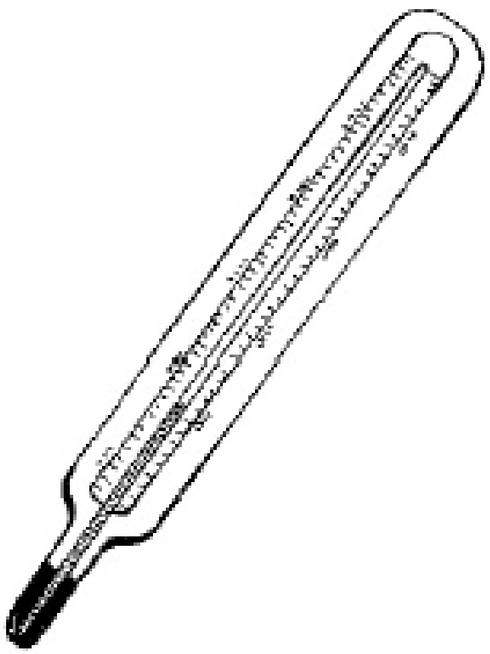
Mouth (oral) temperature of 37.7 °C (100 °F) or higher.

A temperature of 37.2 °C (99.0 °F) or higher under the arm (axillary) or in the ear (otic).

HOW TO MEASURE BODY TEMPERATURE

Measuring temperature:

- The body's temperature can be measured by a thermometer you place in the armpit, mouth, rectum, ear, or on the forehead.
- Mercury thermometers comprise a glass tube containing mercury and a temperature scale.
- The presence of a silver bulb identifies a mercury thermometer.
- Mercury thermometers should not be used orally or rectally to assess body temperature.



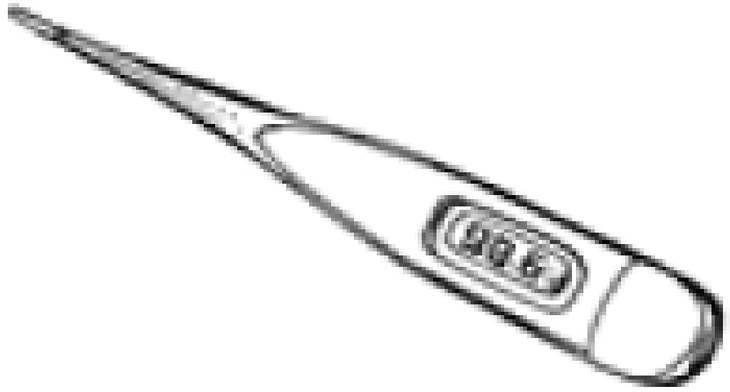
- Colored bulb thermometers contain non-poisonous fluid and function similarly to mercury thermometers.

- Before using, shake the fluid in the glass thermometer by flicking your wrist until it hits the lowest value.

- Temperature variations cause the fluid in the thermometer to expand and contract, allowing temperature readings from the scale.

- Electronic thermometers: some are battery-driven, while others are powered by sunlight.

- The temperature is displayed in Celsius or Fahrenheit.

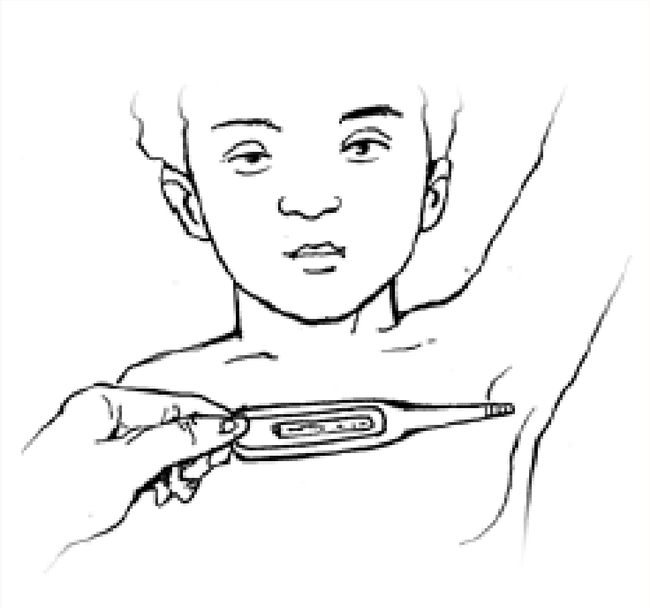


- The beep signals when the measurement is complete.

- Special electronic thermometers for measuring ear or forehead temperature

Measuring Using Armpit

- Use water, soap, or rub alcohol to clean the thermometer.
- Insert thermometer into armpit.
- Wait 5 minutes, or until the thermometer beeps.
- Check the temperature.
- Use water, soap, or rub alcohol to clean the thermometer.
- After handling the person, wash your hands with soap, water, or hand sanitizer.



Measuring Using Mouth

- Use water, soap, or rub alcohol to clean the thermometer.
- Put the thermometer in the mouth, under the tongue.
- Ask the person to close their mouth and hold the thermometer with their lips, avoiding chewing.
- Wait 3 minutes or until the thermometer beeps.
- Check the temperature.
- Use water, soap, or rub alcohol to clean the thermometer.
- After handling the person, wash your hands with soap, water, or hand sanitizer.

Measuring from Rectum

- For little children, this strategy is used.
- Use water, soap, or rub alcohol to clean the thermometer.
- Apply petroleum jelly (Vaseline) to the thermometer bulb.
- Place the youngster face down or on his or her knees on a level surface.
- Spread the buttocks and put the thermometer bulb into the anal canal 1 to 2 cm (1/2 to 1 inch).
- Wait 3 minutes or until the thermometer beeps.
- Check the temperature.
- Use water, soap, or rub alcohol to clean the thermometer.
- After caring for the person, wash your hands with soap, water, or hand sanitizer.

Read The Result

- After measuring the temperature, read it immediately.
- For glass fluid thermometers, read the temperature from the fluid's nearest line.
- Read the temperature from the electronic display of an electronic thermometer.
- A fever is defined as a temperature in the mouth that is more than 37.7°C (>100°F).
- If you don't have a thermometer, feeling the back of your palm on your abdomen can indicate fever if the skin is warm.

SYMPTOMS AND ENQUIRY

SYMPTOMS:

- Temperature increase
- Teeth chattering and shivering
- Having sweaty, hot, and flushed skin
- Muscle pain, fatigue, and headache
- Shaking and fits in toddlers under five years old
- In febrile seizures, a rigid body, jerking limbs, and loss of consciousness are common.
- Self-contamination, vomiting, foaming at the mouth, and rolling of the eyes
- Typically, a seizure lasts fewer than five minutes.
- Following the seizure, sleepiness
- Signs of dehydration, particularly those associated with vomiting or diarrhoea, chronic illness, or in young children or the elderly.

- The skin turns white, bluish, or blotchy.
- The tissue beneath is rigid and cold to the touch. Blood-filled blisters may occur as the skin thaws.
- Tissue necrosis (death of tissue) may develop
- Blisters may become thick black scabs
- To prevent infection, damaged tissue may need to be removed.

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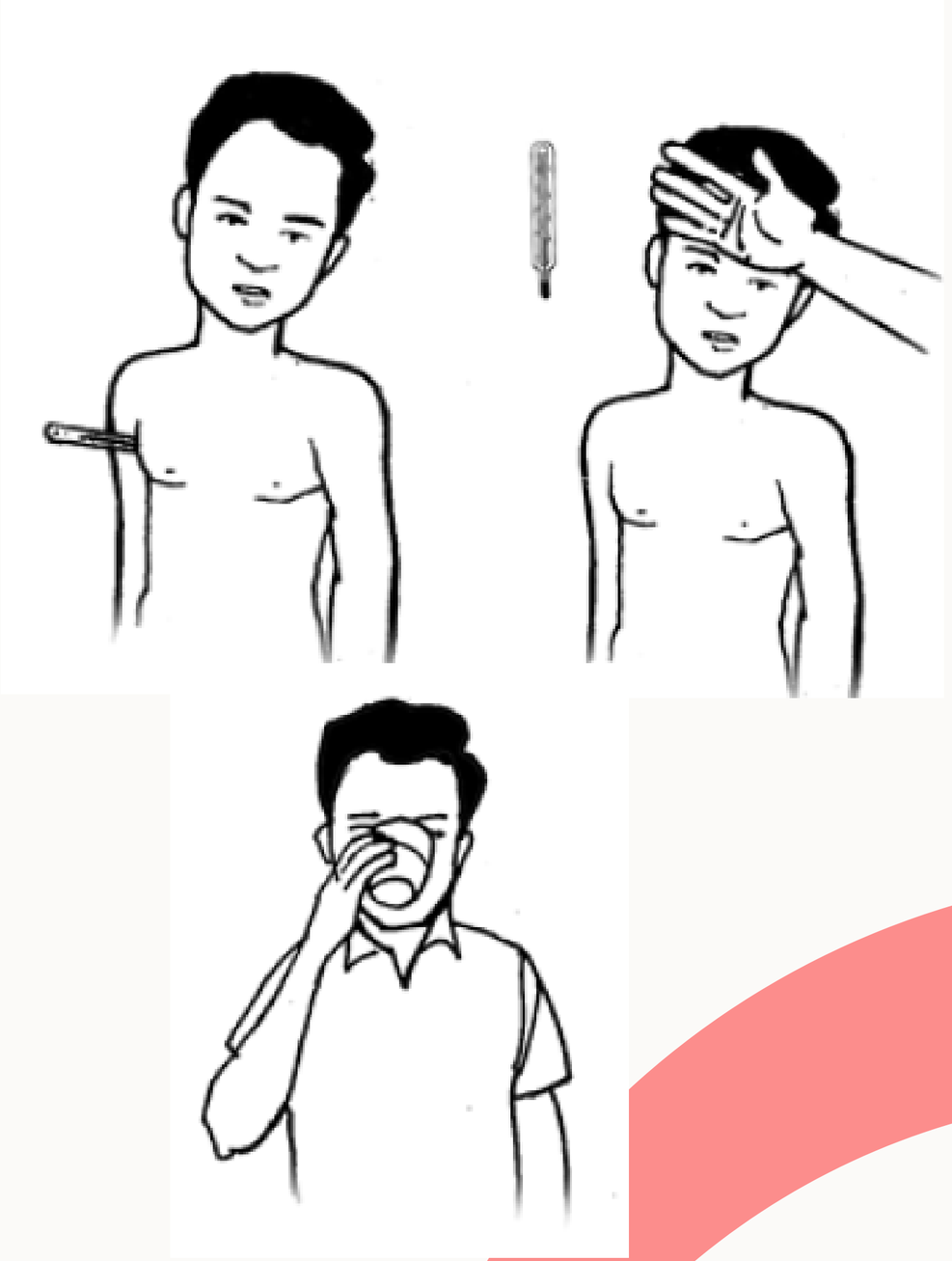
- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

WHAT TO DO NOW?

Support the sick person

- Measure body temperature
- Ask the person to rest
- Keep the person in a cool environment
- Ensure adequate fluid intake to prevent dehydration
- Contact a healthcare worker for further investigation
- Evaluate the person's clothing



Sponge with room temperature water
- Consider administering paracetamol for relief
- Seek medical attention for convulsions
- Monitor the sick person regularly
- Complete prescribed medication course
- Ensure correct dose and timing of medication
- Avoid using expired or improperly stored medication
- Seek medical help if fever persists or condition worsens

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- Wash your hands before and after taking care of patient
- Maintain hygiene by washing hands with soap and water or an alcohol based sanitizer

HYPOTHERMIA

1 DEFINITION OF HYPOTHERMIA

2 WHAT DO I SEE AND ENQUIRE?

3 WHAT DO I DO?

1.DEFINITION OF HYPOTHERMIA

Hypothermia occurs when a person's body temperature drops below 35 °C (95 °F)

It's usually caused by

- being in a cold environment
- being outdoors in cold conditions
- living in a poorly heated house
- falling into cold water.

2.WHAT DO I SEE AND ENQUIRE?

You might observe following signs and symptoms

- shivering
- mumbling, weak pulse
- lack of coordination
- drowsiness or very low energy
- confusion or memory loss
- bright red, cold skin (in infants)

3.WHAT DO I DO?

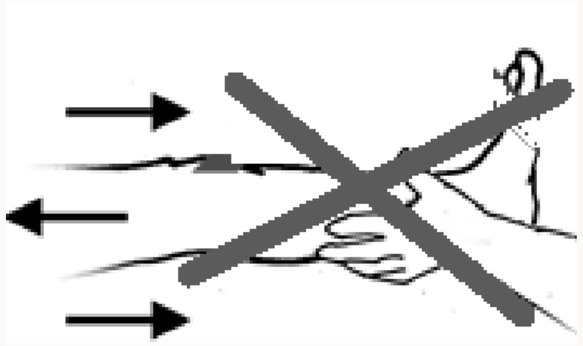
1. Safety First

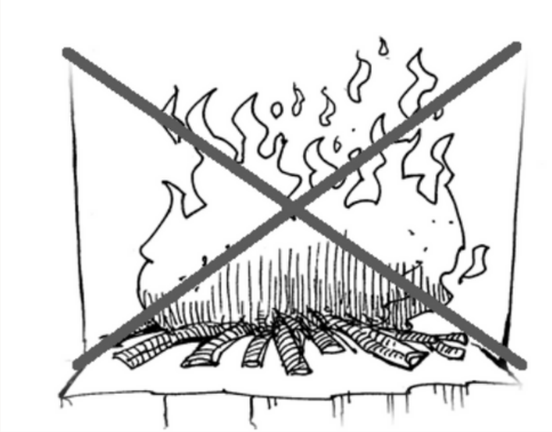
Make sure you are protected sufficiently against the cold, prior helping the other person

2. Provide first aid

- Move the person out of the cold.
- Protect them from the wind and insulate them from the cold ground.
- Remove wet clothing and replace with warm, dry coats or blankets.

- Warm the person gradually with warm compresses on the neck, chest, and groin.
- Offer warm, sweet, non-alcoholic drinks in sips.
- Avoid direct heat or rapid rewarming methods.
- Do not warm the arms and legs.
- Avoid eating, drinking, or smoking
- Transport the person to the nearest healthcare facility or hospital urgently.



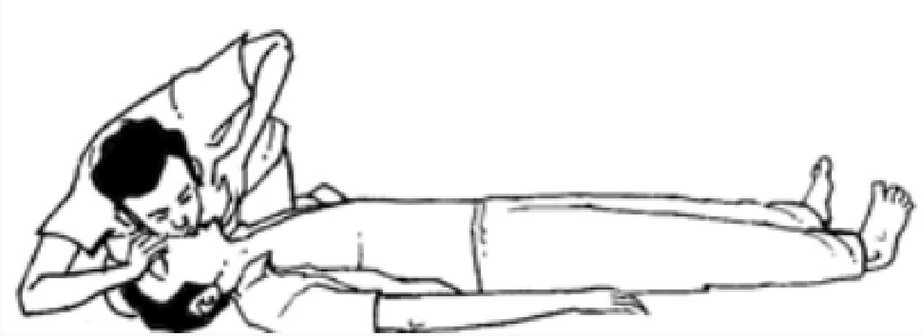


WHAT DO I DO IF THE PERSON IS UNCONSCIOUS, BUT IS STILL BREATHING?

- Put the person in the recovery position.
- Continue to observe the victim and check his breathing

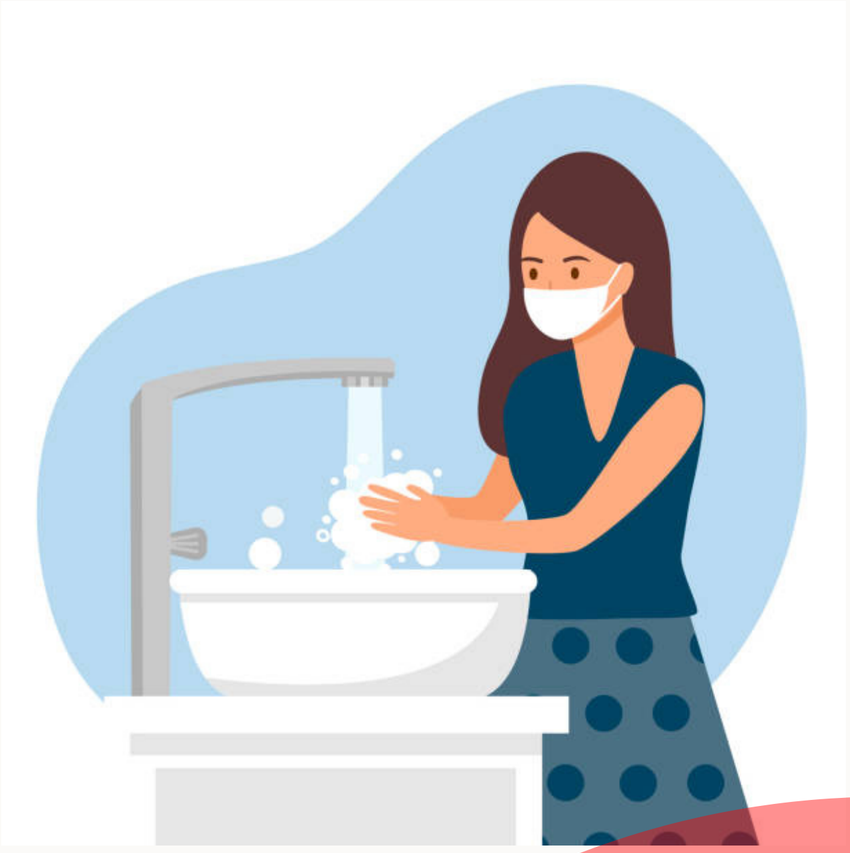
WHAT DO I DO WHEN THE PERSON STOPPED BREATHING?

- Perform CPR



3. Hygiene

- Always wash your hands after taking care of a person.
- Use soap and water to wash your hands.
- Alcohol-based sanitizers can also be used, if available.
- Use gloves to protect yourself.



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