



Basic First Aid for Medical students



Present by:

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Session Objectives

- Recognize the benefits of obtaining first-aid and CPR certification
- Identify proper procedures for a variety of medical emergencies
- Assist in administering first aid when a co-worker is injured
- Do no further harm

Prequiz:

True or False?

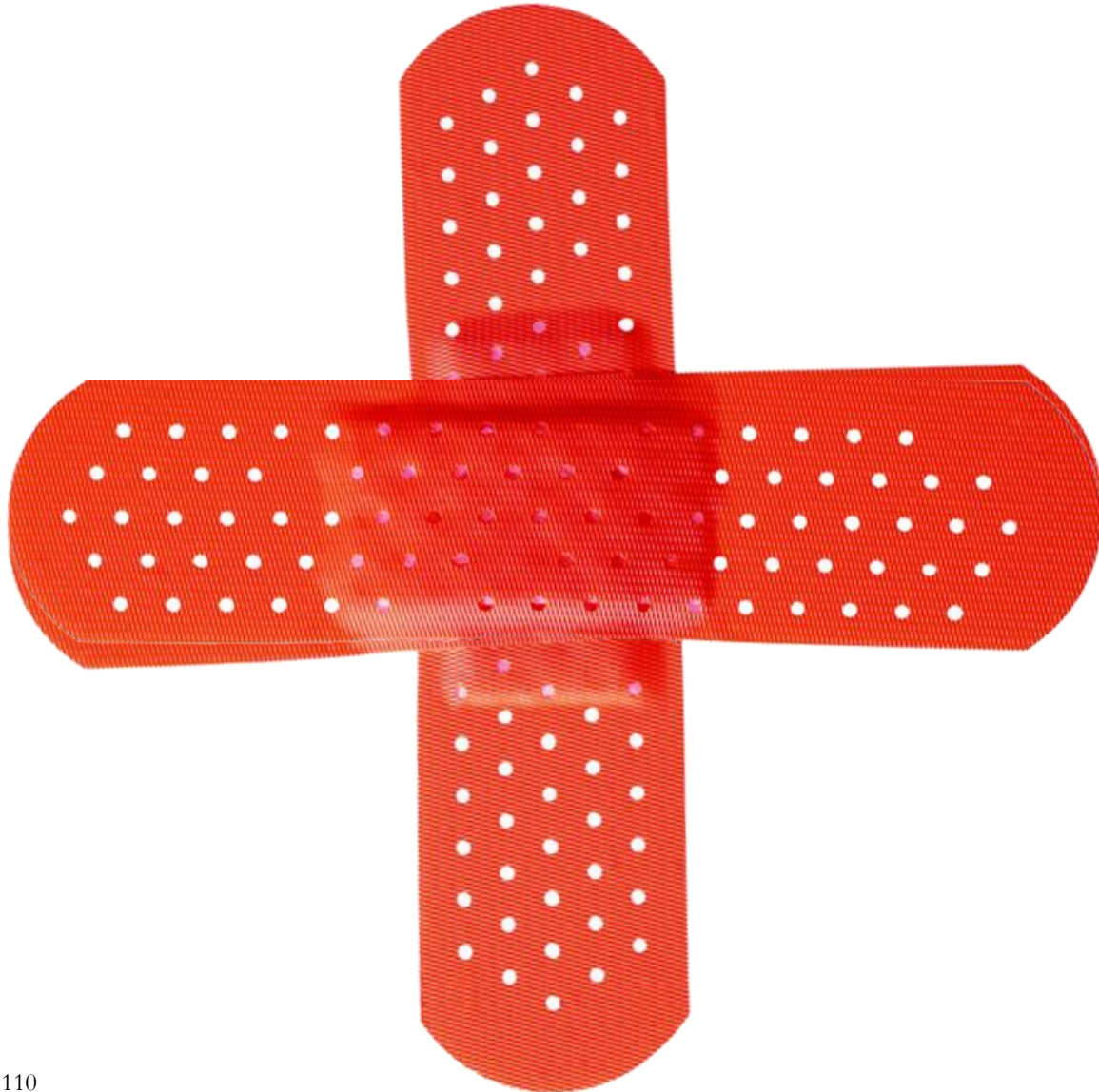
- F** After an accident, immediately move the victim to a comfortable position.
- F** If a person is bleeding, use a tourniquet.
- T** Signs of a heart attack include shortness of breath, anxiety, and perspiration.
- F** All burns can be treated with first aid alone; no emergency medical attention is necessary.

Help! Emergency!

**Minutes could
make a difference**



Four Basic Rules



Assess the Scene

- ✓ Evaluate the scene
- ✓ Assess safety
- ✓ Prioritize care
- ✓ Check for medical alert tags
- ✓ Do head-to-toe check
- ✓ Move only if necessary

No Breathing

Administer CPR:

- Lay the person on his or her back
- Give chest compressions
- Tilt head slightly
- Breathe into the person's mouth
- Continue until EMS personnel arrive



CPR **(Cardiopulmonary Resuscitation)**

BLS
Basic life support

CPR for Adults

- ◇ **Survey the scene**
- ◇ **Check for Consciousness (Are you OK!)**
- ◇ **Call 115**
- ◇ **CABs**
 - ◇ **Chest Compressions**
 - ◇ **Airway**
 - ◇ **Breathing**

BLS sequence

**Kneel by the side of
the victim**



BLS sequence



Shake shoulders

Ask “Are you all right?”

BLS sequence



If he responds

- Leave as you find him
- Find out what is wrong
- Reassess regularly

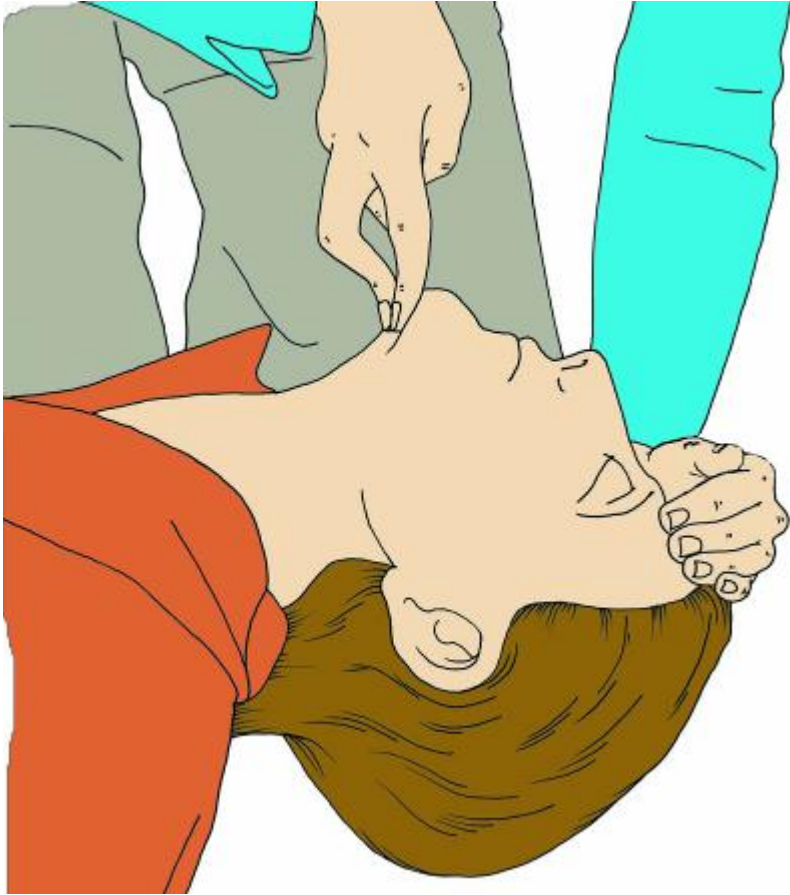
BLS sequence



Unresponsive

Shout for help

BLS sequence



Unresponsive

Shout for help

Open airway

BLS sequence



Unresponsive

Shout for help

Open airway

Check breathing

BLS sequence



Look, listen and feel
for NORMAL breathing

No breathing – apnea

Gasps (agonal
breathing)

Agonal breathing

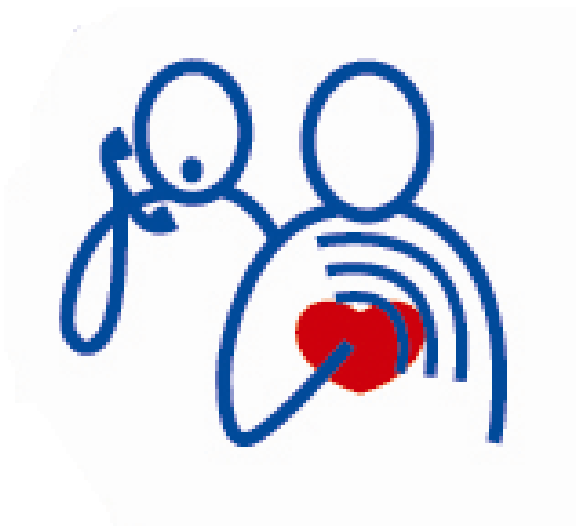
Occurs shortly after heart stops in up to 40% of cardiac arrests

Described as barely, heavy, noisy or **gasp**ing breathing

Recognise as a sign of cardiac arrest

Do not confuse agonal breathing with **NORMAL** breathing

BLS sequence



Unresponsive

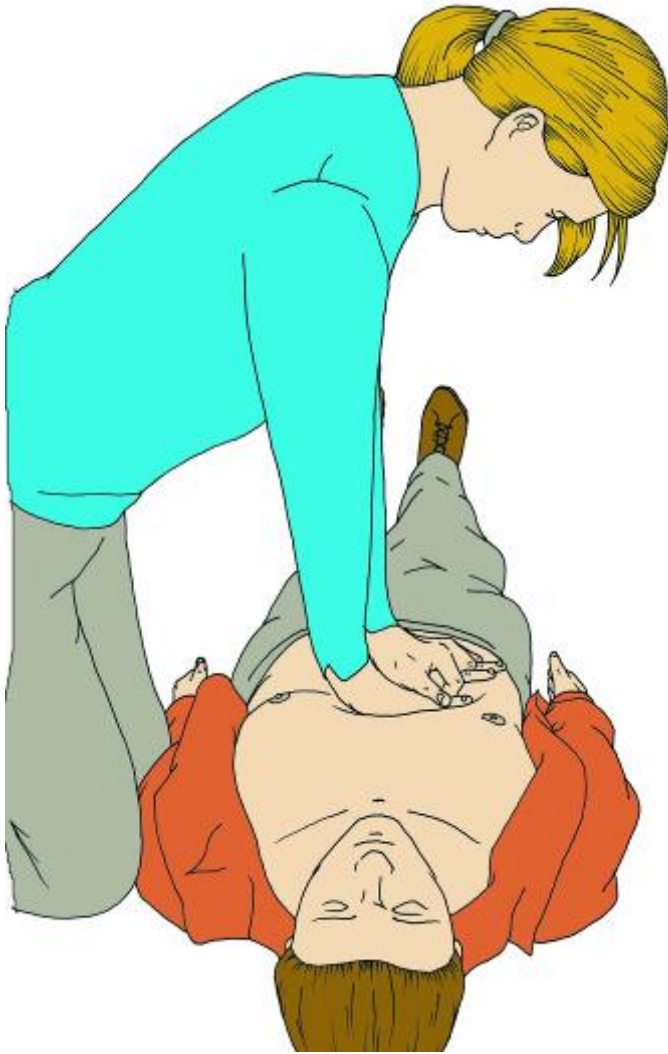
Shout for help

Open airway

Check breathing

Call 155 (112)

BLS sequence



Unresponsive

Shout for help

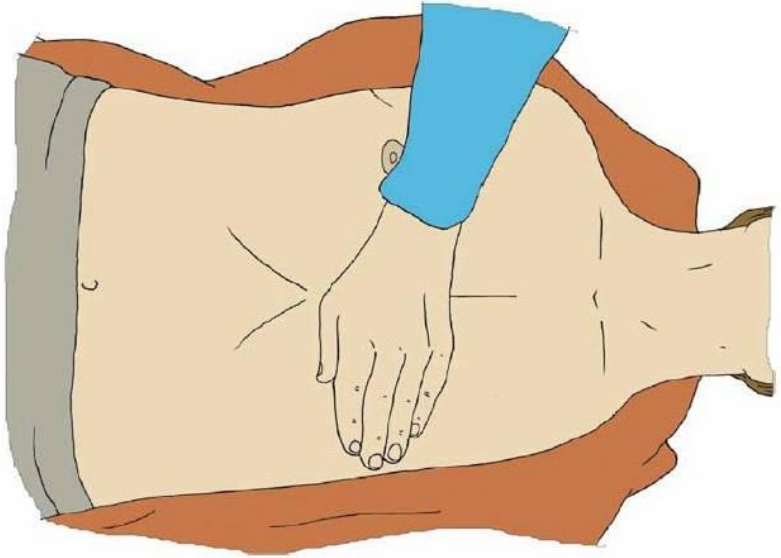
Open airway

Check breathing

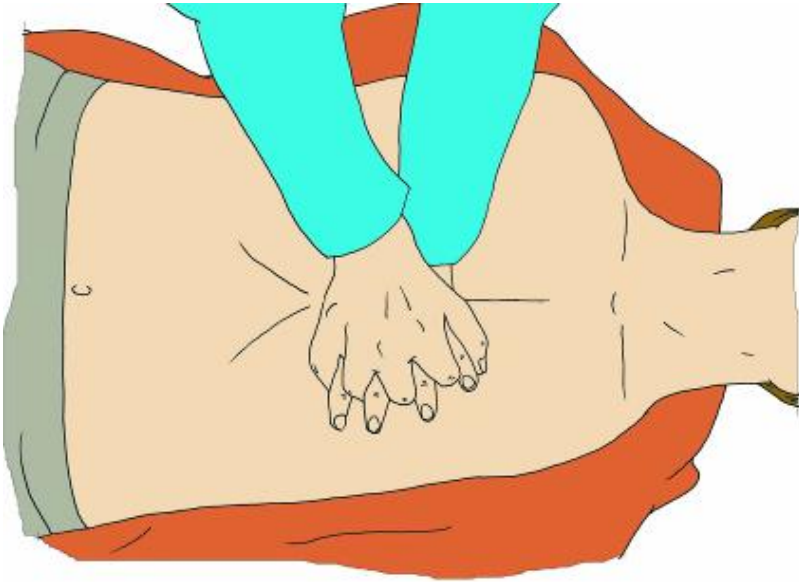
Call 112

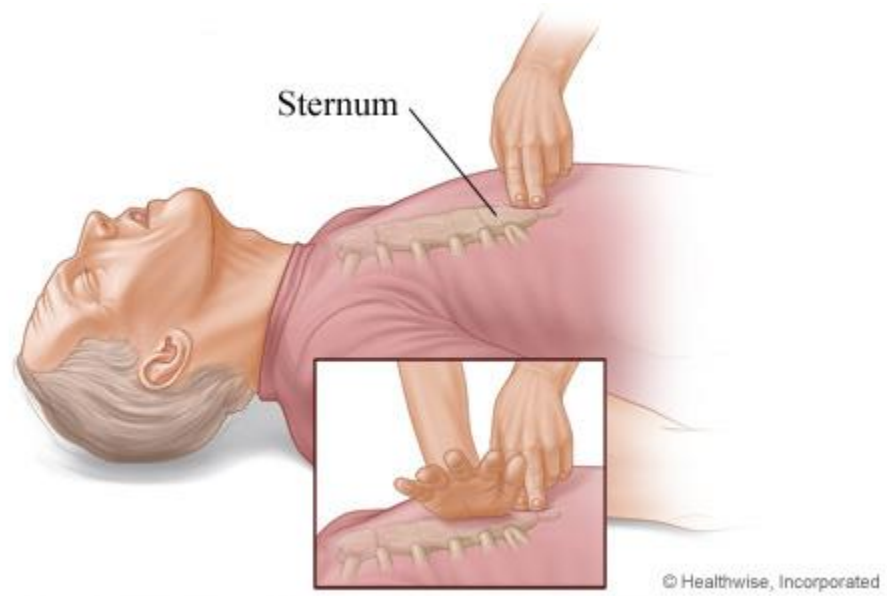
30 chest compressions

Chest compression

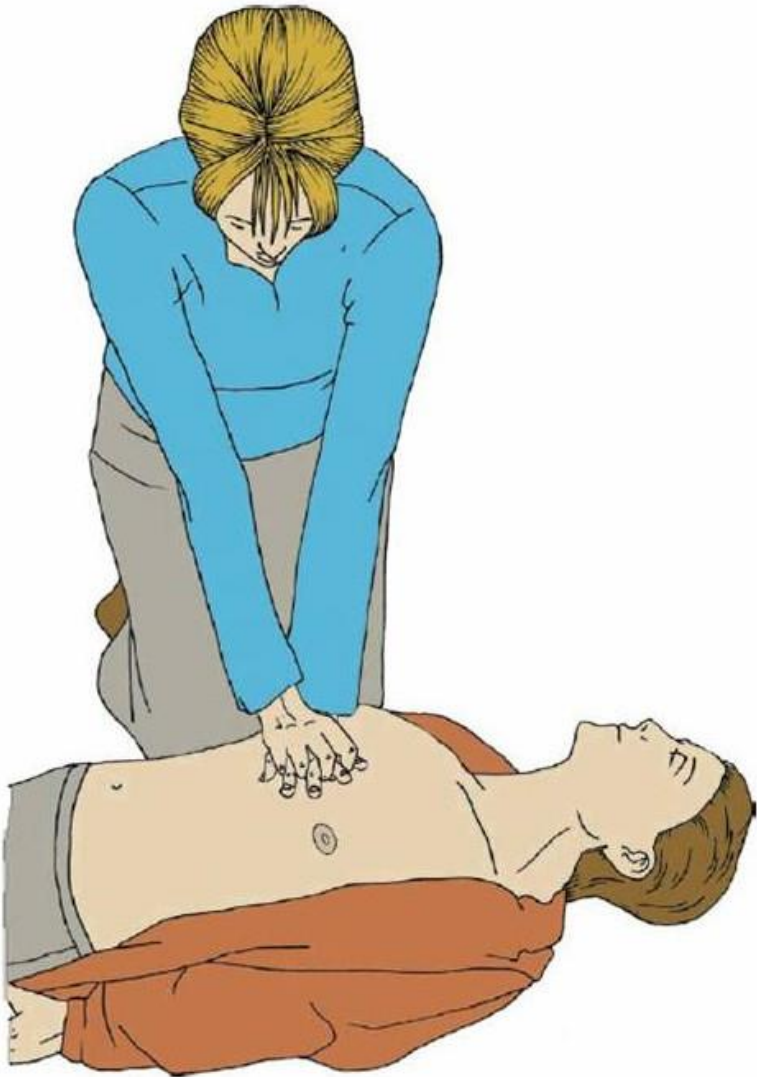


- **Place the heel of one hand in the centre of the chest**



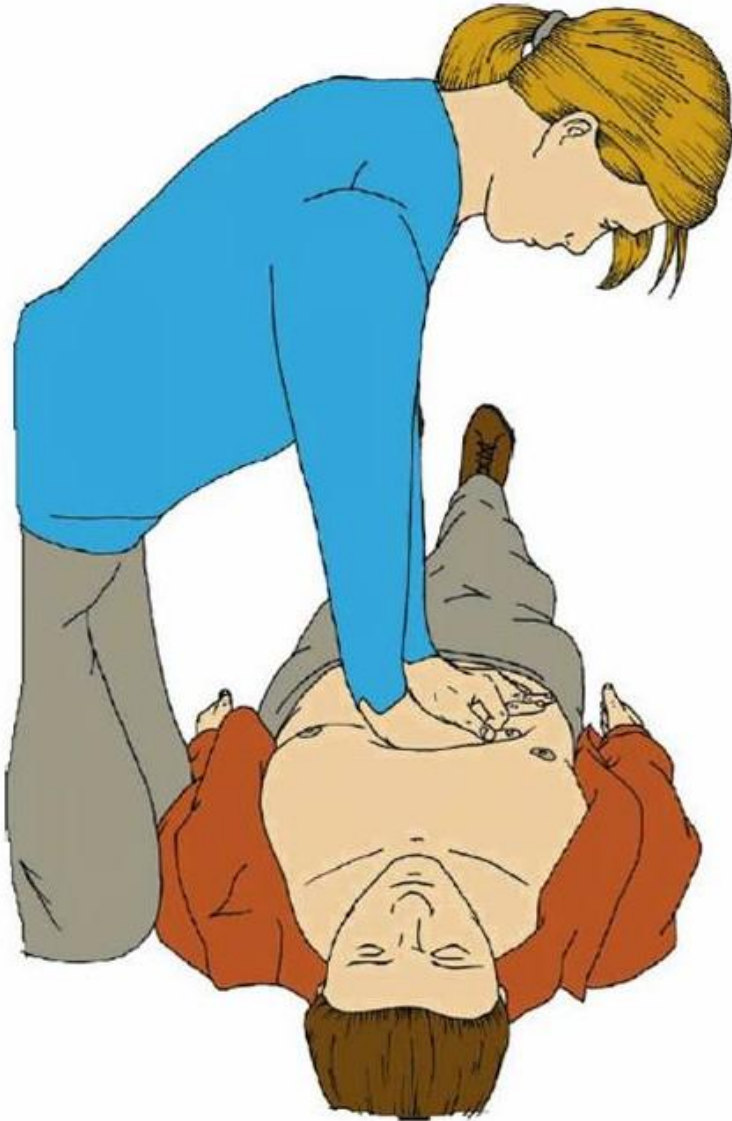


Chest compression



- Place the heel of one hand in the centre of the chest
- Place other hand on top
- Interlock fingers
- **Compress the chest**
 - **Rate 100-120 min⁻¹**
 - **Depth 5-6 cm**
 - **Equal compression : relaxation**

Chest compression



- **When possible (2 or more rescuers) change CPR operator every 2 min. to prevent fatigue**

BLS sequence



Unresponsive

Shout for help

Open airway

Check breathing

Call 112

30 chest compressions

2 rescue breaths

2 rescue breaths



Pinch nose

**Place and seal your lips
over the victim's mouth**

Blow until the chest rises

Takes about 1 second

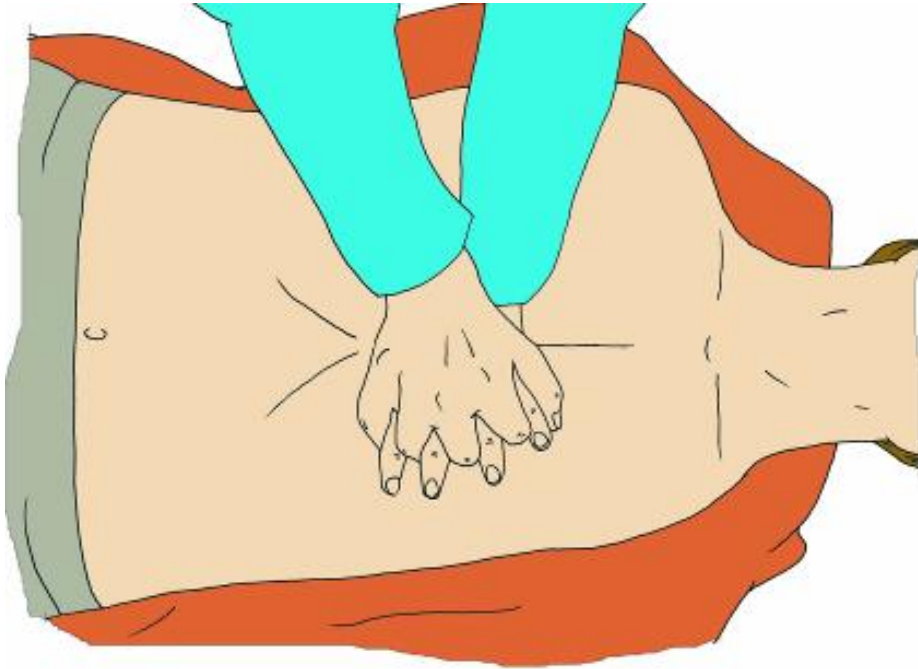
Allow chest to fall

**Repeat (10 – 12 times per
minute)**

Pocket mask



Continue CPR



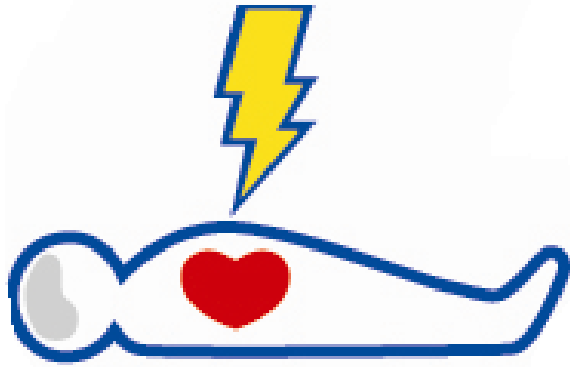
30 : 2

Ratio 30 : 2

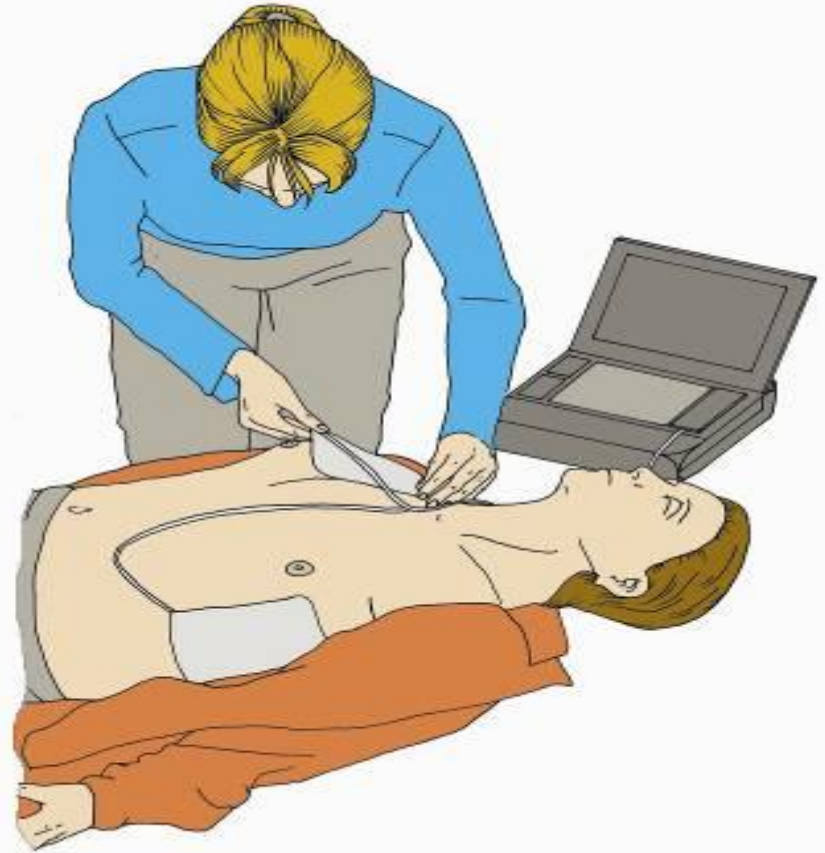
One uniform ratio

- **always in adults**
- **in children in the prehospital CPR**
- **in children when the rescuer is alone**

Defibrillation



Automated External Defibrillators (AEDs)

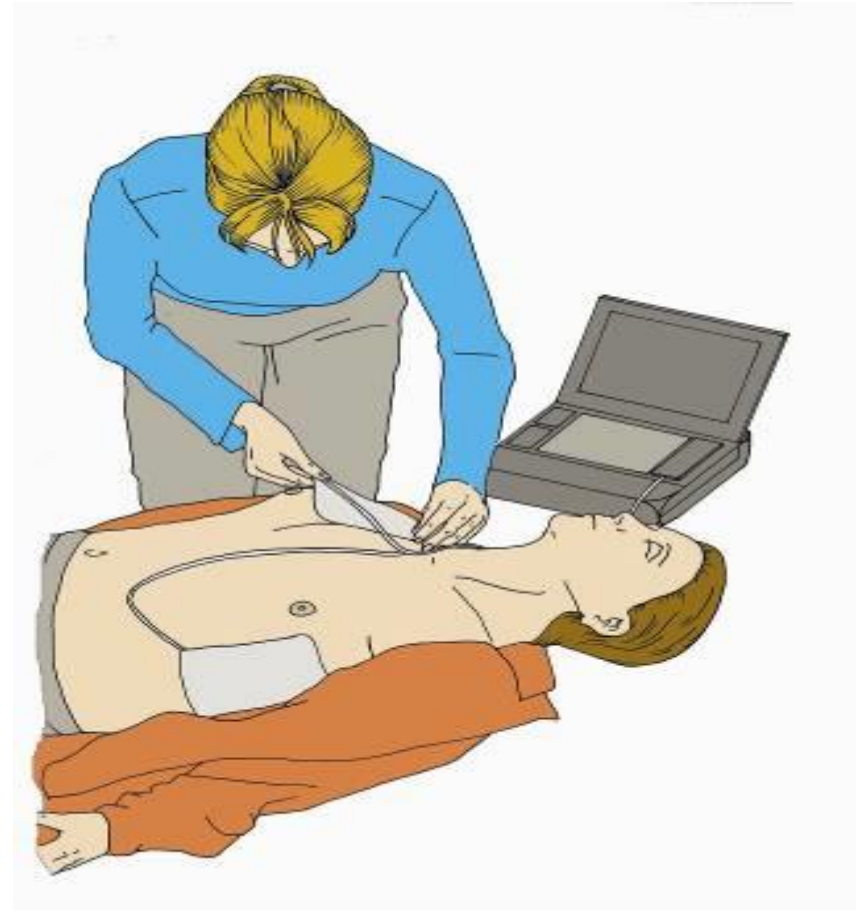


Switch on AED



AEDs will automatically switch themselves on when the lid is opened

Attach pads to casualty's bare chest



Analyse rhythm – do not touch victim



Shock indicated – stand clear



Rescuer giving defibrillation shock

- is responsible for his safety
- is responsible for the safety of other people surrounding the victim

Immediately resume CPR



30

:

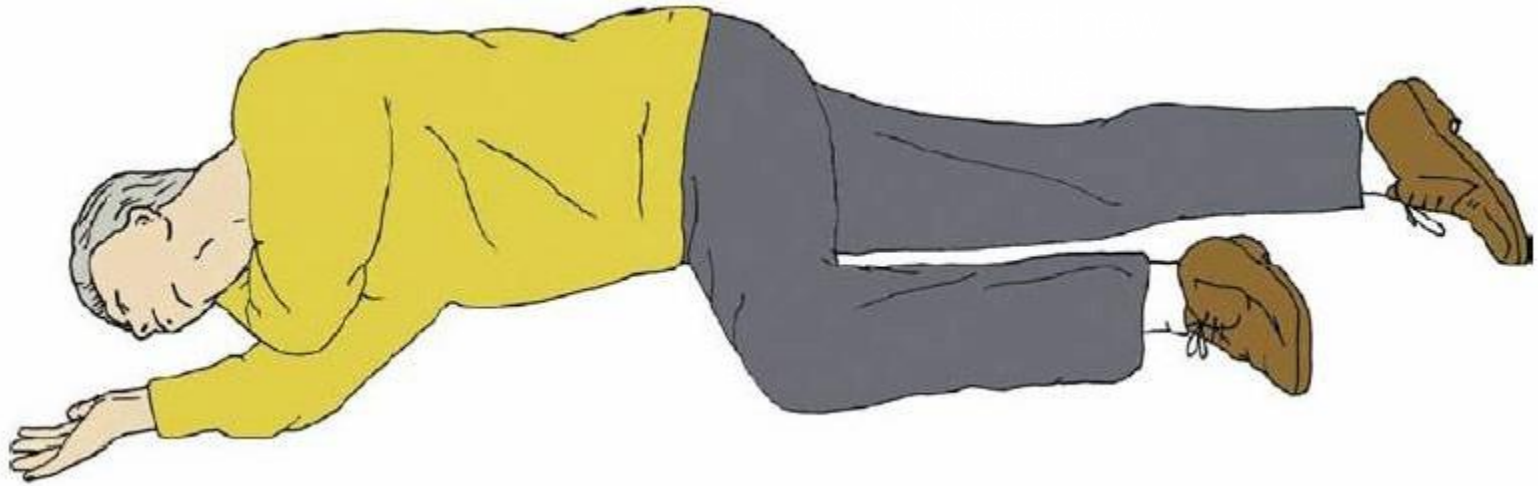


2

The Carotid Pulse

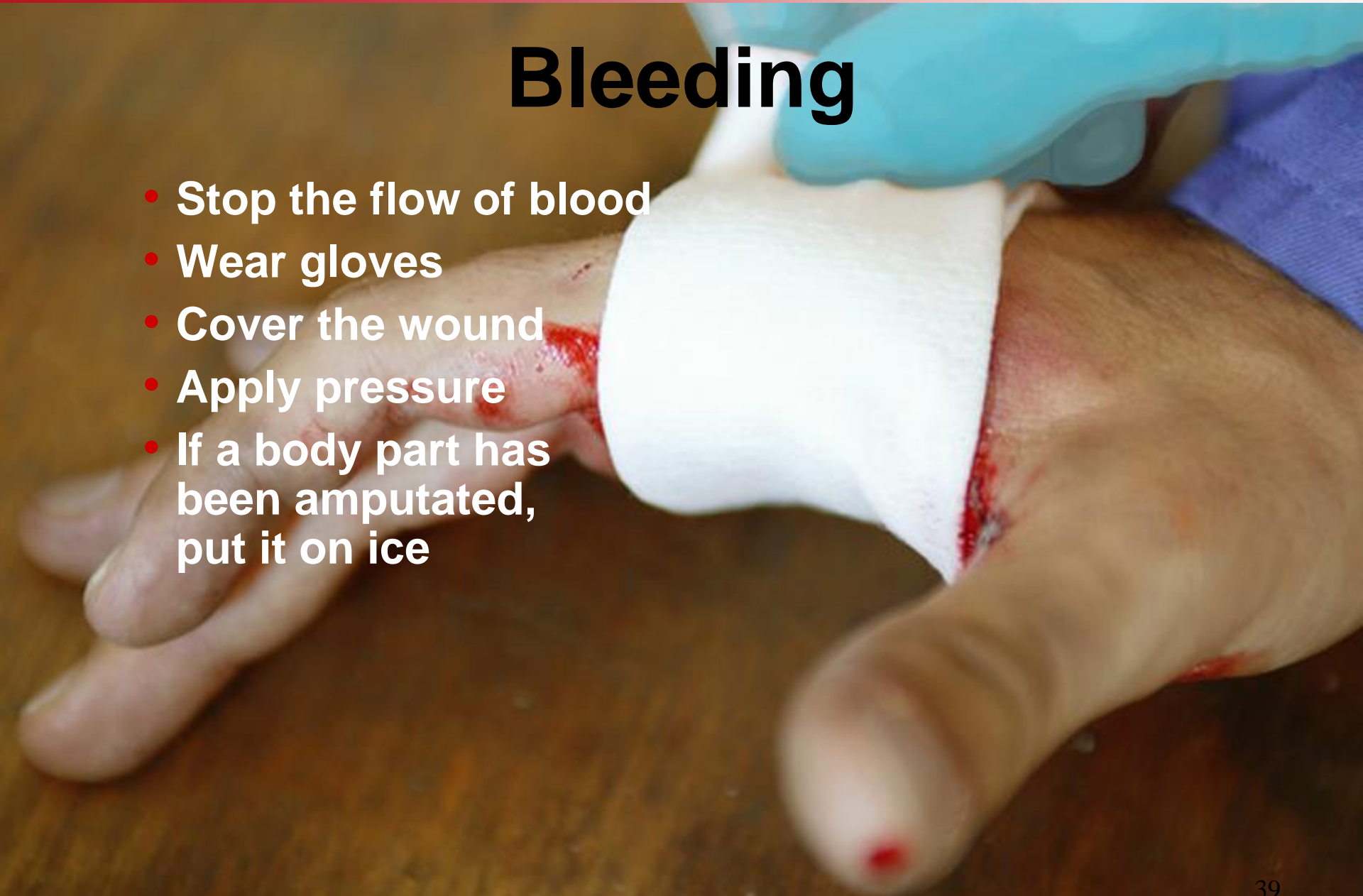


If victim starts to breathe normally place him in recovery position

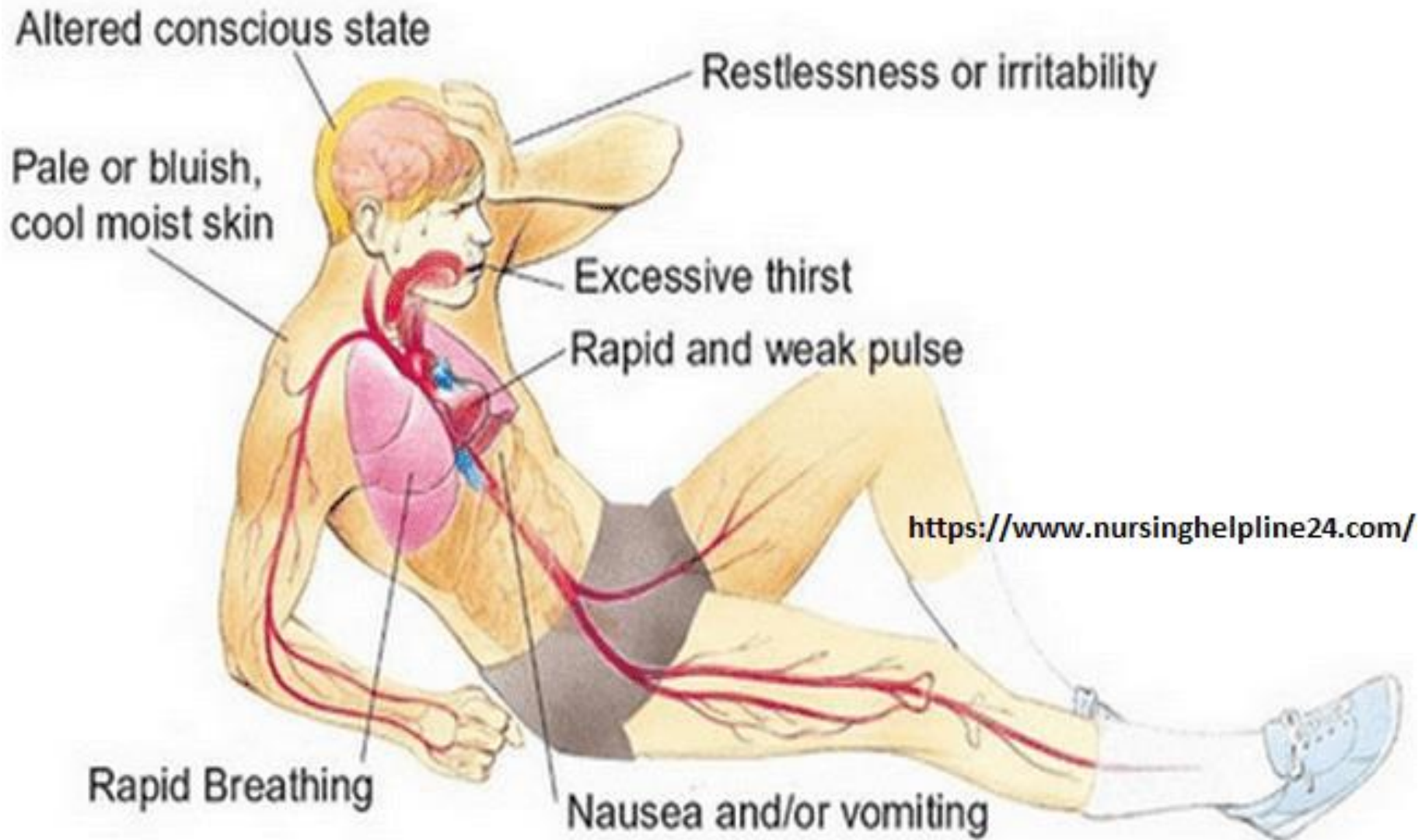


Bleeding

- Stop the flow of blood
- Wear gloves
- Cover the wound
- Apply pressure
- If a body part has been amputated, put it on ice



shock signs and symptoms



Shock

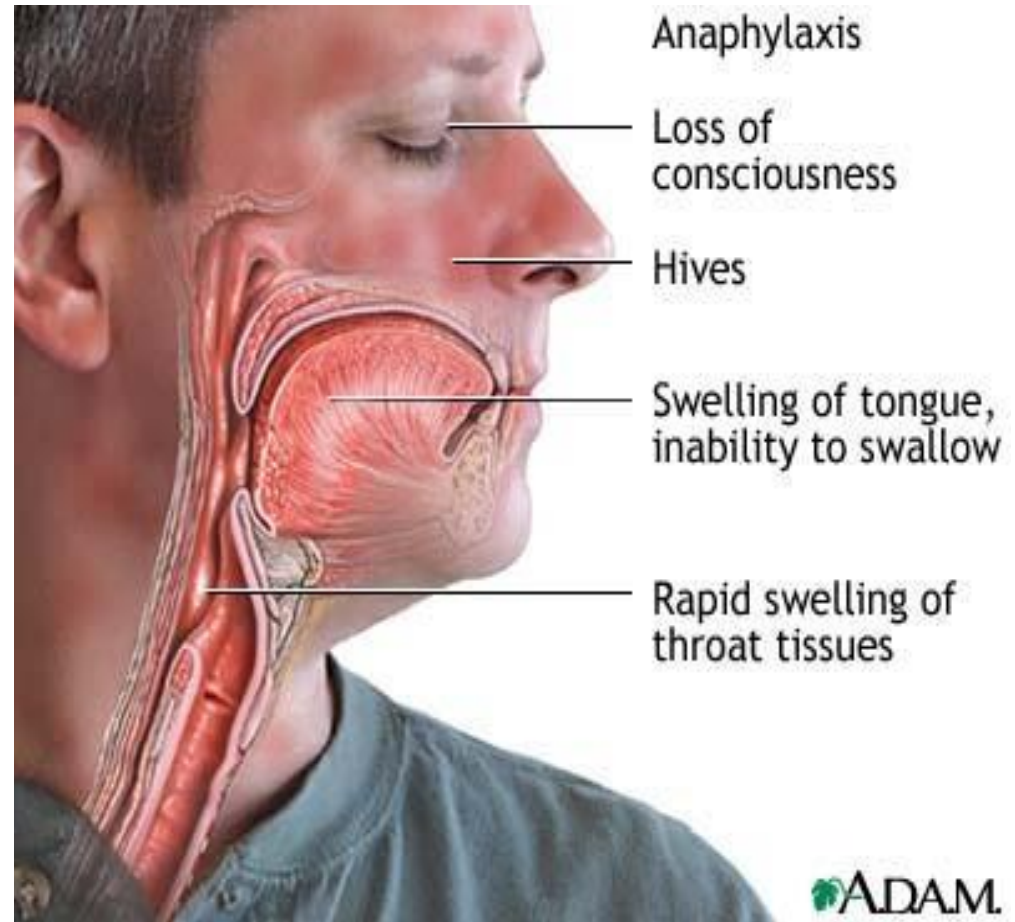
- Lay the victim down
- Cover
- Raise feet



Anaphylactic reaction

SIGNS OF MILD TO MODERATE ALLERGIC REACTION

- Swelling of face, lips and eyes Hives or welts
- Tingling mouth
- Abdominal pain, vomiting (these are signs of anaphylaxis for insect allergy)



Anaphylactic Shock

- Lay person flat
Do NOT allow them to stand or walk
- If unconscious, place in recovery position
- If breathing is difficult allow them to sit
- Give adrenaline auto injector
- Call for help 115
- Phone family/emergency contact
- Further adrenaline doses may be given if no response after 5 minutes
- Transfer person to hospital for at least 4 hours of observation
- Start CPR if the person stop breathing



Heart Attack

- Call 115
- Make victim comfortable
- Loosen tight clothing
- Check for medication
- Keep victim still
- Don't give stimulants

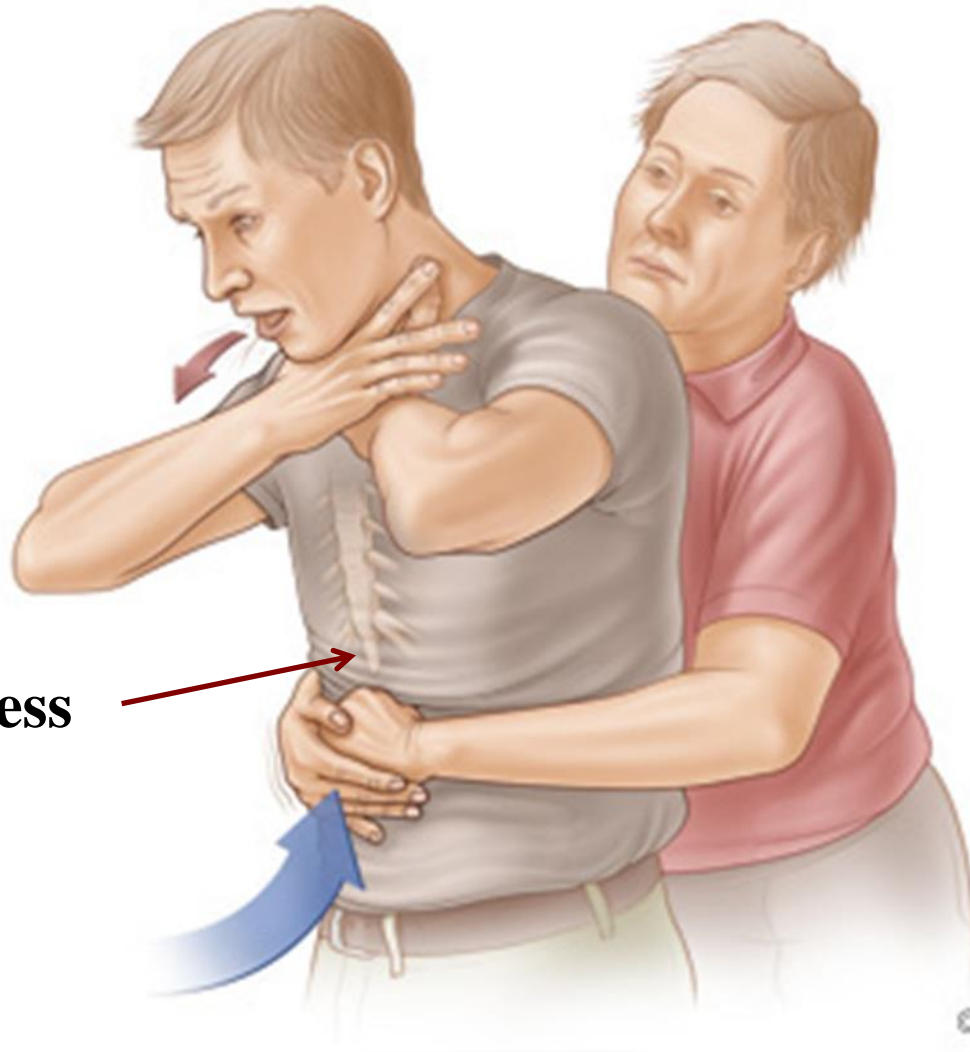


Choking

- Ask a person to speak or cough
- Deliver 5 back blows
- Perform abdominal thrusts
- Repeat sequence of back blows and abdominal thrusts



Heimlich maneuver

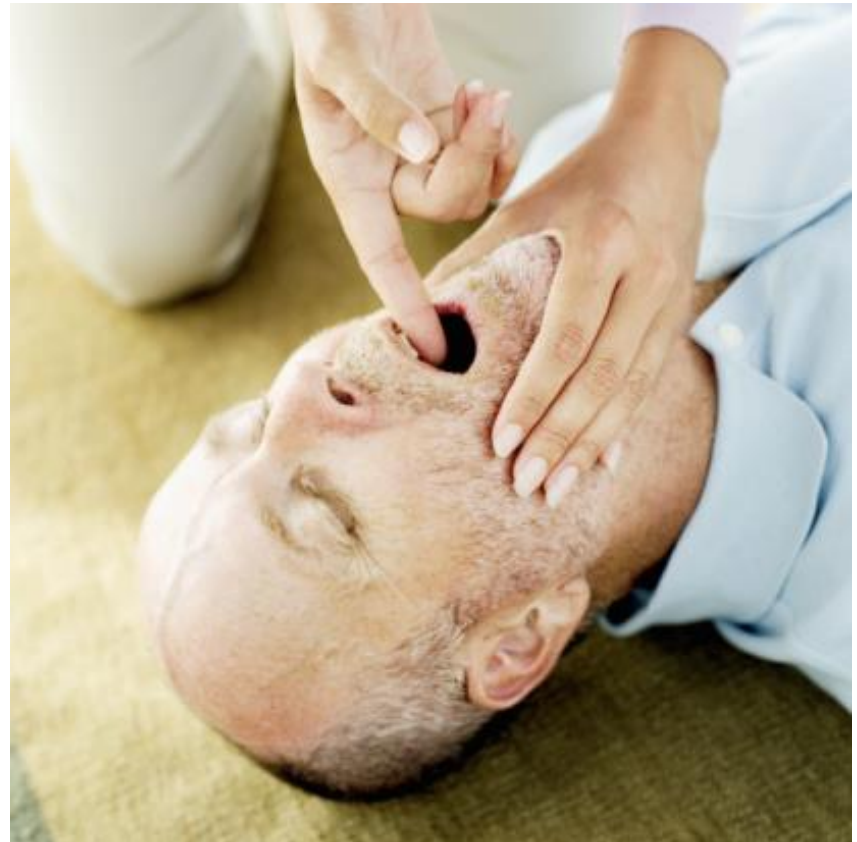


Xiphoid Process

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If Abdominal Thrusts Don't Work

- Call 115
- Finger sweep
- Check ABCs
- Perform CPR if not breathing



Electrical Shock

- 1.** Don't touch!
- 2.** Turn power off
- 3.** Call 115
- 4.** Remove person from live wire
- 5.** Check for breathing



Exercise

Match the problem with the correct first-aid procedure.

Bleeding	CPR
Choking	Elevate feet
No breathing	Keep victim still
Heart attack	Direct pressure
Shock	Abdominal thrusts

Review

Do you understand first-aid procedures for:

- No breathing?
- Bleeding?
- Shock?
- Heart attack?
- Choking?
- Electrical shock?



Eye Injuries

- **Splashes**
- **Particles in eye**
- **Blow to eye**
- **Cuts near eye**
- **Penetrating objects**



Chemical in the Eye



Washing



Burns

- First-degree burns—Reddened, painful skin
- Second-degree burns—Blistering
- Third-degree burns—Charring, deep tissue damage

third



Burns



A special kind of soft tissue injury

Classified by sources:

Heat

Chemicals

Electricity

Radiation (including by the sun)

Burns: Classified by Depth

Superficial (1st degree)
Sunburn

Partial (2nd degree)
Hot water, stove

Full thickness (3rd degree)
Fire



Burn Treatment

Check the scene

Remove person from the source of burn

Check for life-threatening conditions

Cool burn with large amounts of cold running water

Run cool water
over area of
burn



ADAM.

Call 115 if the burned person:



Has trouble breathing

Has burns covering more than one body part or a large surface area

Has burns to airway

Burns to head, neck, hands, feet or genitals

Don'ts for Burn Treatment

Touch a burn with anything but a clean dressing

Remove pieces of clothing attached to burn

Break blisters

Try to clean a severe burn

Use any kind of ointment on a severe burn



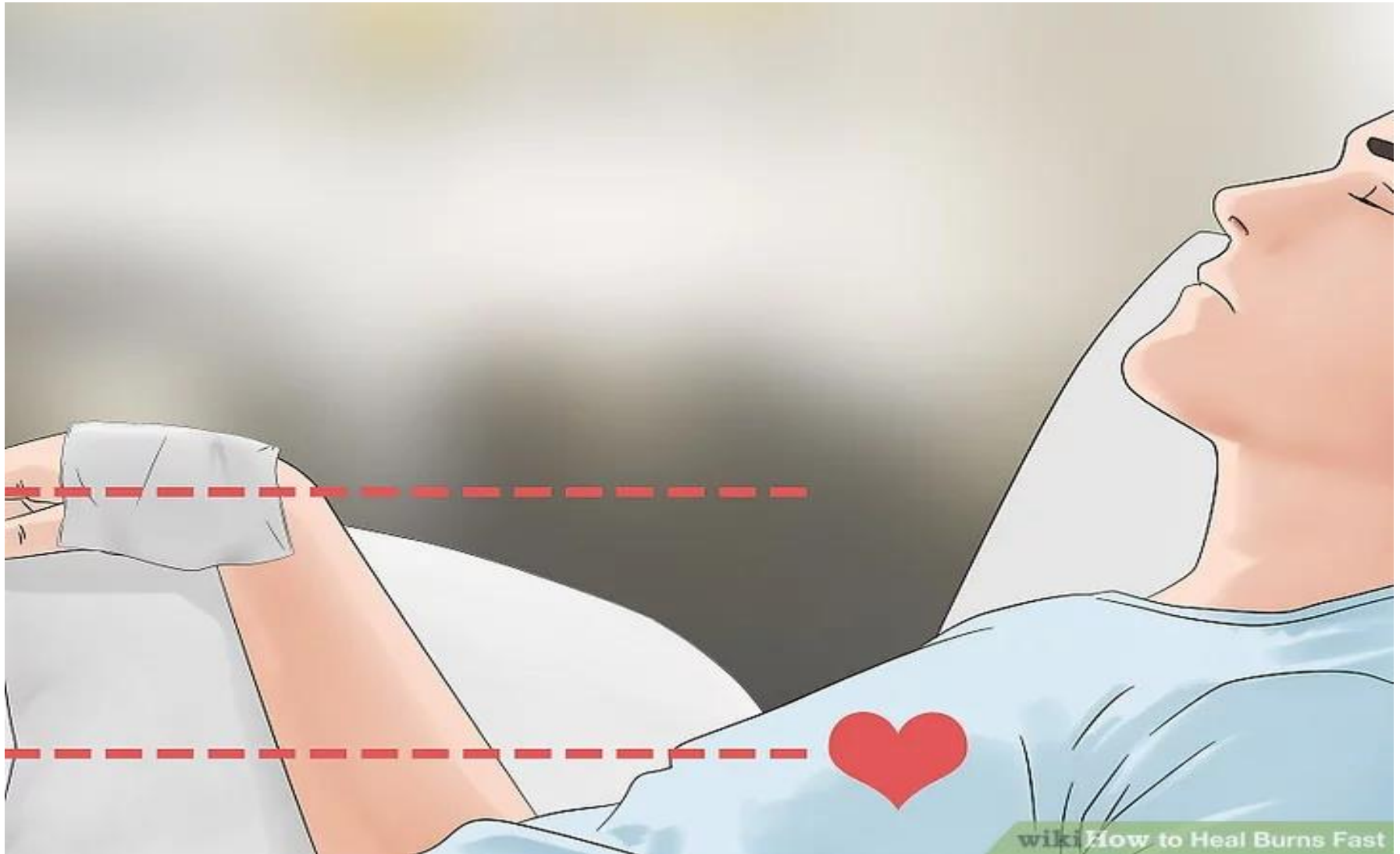
Run cool water over burns



Place a cool, clean cloth over a severe burn until emergency help arrives.



Elevate severely burned areas above the heart.



Take an anti-inflammatory medication.



wikiHow to Heal Burns Fast

Drink lots of water. Aim for at least 8 glasses a day



Maintain a nutritious diet.



Seek emergency treatment for any third-degree burn.



Seek emergency help if a burn covers a sensitive area of the body.



wikiHow to Heal Burns Fast

Following Your Doctor's Advice



Take any antibiotics or steroids as prescribed.

Following Your Doctor's Advice



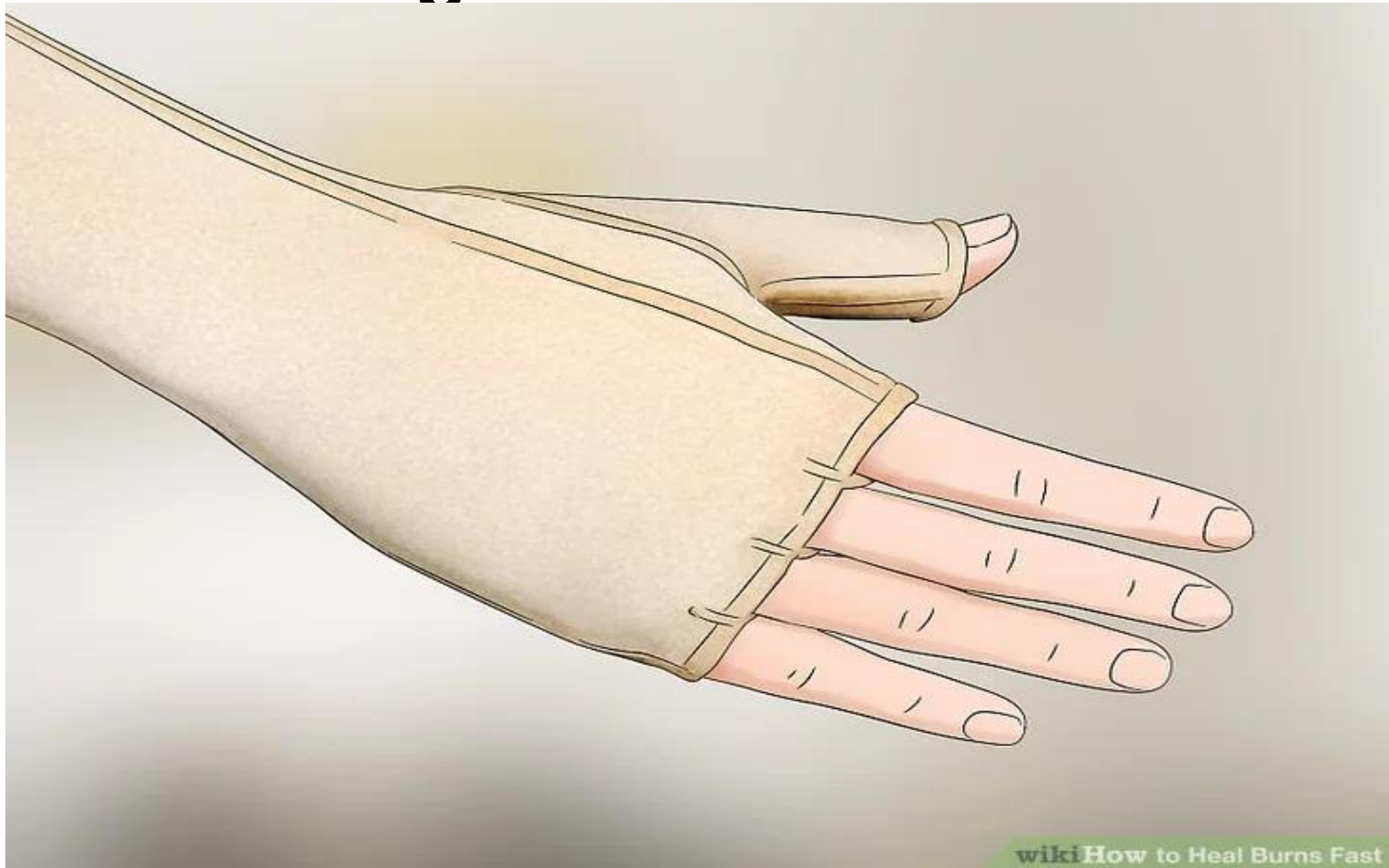
Massage the wound with a doctor-approved lotion.

Following Your Doctor's Advice



Change the dressings as directed by your doctor.

Following Your Doctor's Advice



Wear any pressure garments as directed for severe burns.

Exposure to Hazardous Materials

- Eyes
- Skin
- Inhalation
- Ingestion



Step 1. Stop the source

Remove the victim from contact with the chemical spill, airborne particles, or fumes. (Wear gloves or use other safety equipment as needed to protect yourself from exposure to the chemical.)

Take off any clothes or jewelry that have been in contact with the chemical. Chemical injuries, just like heat burns, continue to worsen as long as the source is in contact with the body.

Step 2. Clear the lungs

Take the victim to fresh air. This may mean going into another room or leaving the building.

Perform rescue breathing or CPR, if needed.

Step 3. Flush the eyes

Flush the affected eye with water for at least 15 minutes. Make sure the water is cool, especially if its source is an outside hose or eyewash station.

Don't accidentally flush chemicals into an unaffected eye. Hold the head so that the injured eye is on the bottom. Flush from the nose downward.

Don't brush away chemicals with your bare hands.

Step 4. Clean the skin

Brush water-activated chemicals, such as lime, from the skin, instead of using water. Be careful not to brush particles into the eyes.

If the chemical does not react with water, flush the affected skin with cool water for at least 15 minutes. Make sure the water flow is not forceful enough to cause pain or break blisters.

Broken Bones

- Look
- Ask
- Treat for shock



Broken Bones

Don't move someone with a back or neck injury. That should be left to paramedics or other professionals because permanent damage could result from improper handling. When a hunter has a broken leg, foot, arm, or hand, you can perform basic first aid that will allow the individual to be transported to a medical facility.

Broken Bones

- Keep broken bones stable by immobilizing them with splints. Any stiff material can be used—a bow; sticks; boards; tree limbs; arrows with the points removed; or even books, newspapers, or thick magazines.
- Use a belt, rope, or strips of torn clothing to bind the splints and broken bones together. But don't tie them so tightly that you cut off circulation.
- Move the victim carefully and only as much as necessary to reach professional medical help.





Heat Exhaustion

- Move to cool place
- Lay victim down
- Elevate feet
- Loosen clothing
- Give fluids
- Apply cool compresses



Heatstroke

A close-up photograph of a person's face, focusing on the eye and forehead. The skin is covered in numerous small, clear droplets of sweat, indicating heat. The person has a blue eye and is looking directly at the camera.

- Immediately call 115
- Cool the person down
- Monitor

Fainting

- Check for breathing
- Administer CPR if necessary
- Call 911 if more than a few minutes
- If conscious, lay the victim down with feet elevated



Epileptic Seizures



- Remove victim from hazards
- Check for breathing
- Nothing in the mouth
- Keep comfortable
- Call 115 if medical assistance is needed

POISON



Poisonings may be a result of:

- **Ingestion - medications, solvents, cleaners, etc.**
- **Contact - poison ivy, sumac, caustic chemicals**
- **Inhalation - carbon monoxide, scotch guard**
- **Injection - snakebite, insect sting**



Inhalation

Due mostly from carbon monoxide poisoning

Carbon monoxide a product of incomplete combustion from furnaces, gas heaters, kerosene heaters, gas, oil, etc.

COT - colorless, odorless and tasteless

Deadly - Carbon monoxide is more reactive with hemoglobin in red blood cells than oxygen

Effects of Carbon Monoxide poisoning and First Aid

Fatigue, nausea, headache

Similar to flu symptoms, without the fever

Discoloration of skin

Vomiting

Cessation of breathing

First Aid

- Get victim to fresh air as soon as possible**
- Call EMS**
- Monitor ABC's**

Signs of Swallowed Poisoning

Abdominal pain and cramping

Nausea or vomiting

Diarrhea

Burns, stains, odor near or in mouth

Drowsiness or unconsciousness

Poison containers

First Aid for Swallowed Poisons

(1 of 3)

1. Determine critical information
 - Age and size of victim
 - What was the poison?
 - How much was taken?
 - When was it swallowed?
2. If poison is corrosive or caustic, dilute by having victim drink water or milk

First Aid for Swallowed Poisons

(2 of 3)

3. For responsive victim, call poison control center
4. For unresponsive victim, check ABCs and call 1-1-5
5. Place victim in recovery position



First Aid for Swallowed Poisons

(3 of 3)

6. If advised, induce vomiting
7. If advised, give activated charcoal
8. Save poison containers, plants, and victim's vomit to help medical personnel identify poison

Snakebite



- ◇ **Venom**: A poisonous secretion injected by some type of snakes.
- ◇ Rattlesnakes, Copperheads, Cobras, Coral snakes, and water moccasins.



First Aid for Snakebites

- ◇ Call 115
- ◇ Keep victim still. Keep affected area below the level of the heart.
- ◇ Remove constricting items as swelling may occur.
- ◇ Use snakebite suction kit if available.

Exercise

Multiple choice

Which is the worst kind of burn?

- a. First degree
- b. Third degree

For a particle in the eye:

- a. Flush with water
- b. Rub eye

For inhalation of vapors or gases:

- a. Induce vomiting
- b. Move to fresh air

For heatstroke:

- a. Call 115
- b. Don't call 115

Review

Do you understand first-aid procedures for:

- Eye injuries?
- Burns?
- Exposure to hazardous materials?
- Broken bones?
- Heat exhaustion and heatstroke?
- Fainting?
- Epileptic seizures?



KEY POINTS To Remember!

- Medical emergencies can happen anytime.
- Act quickly, calmly, and correctly.
- Consider being certified in first aid and CPR.



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