



NERVOUS SYSTEM AND UNCONSCIOUSNESS

Indian Red Cross Society



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WHAT IS UNCONSCIOUSNESS?

- Unconsciousness is the state when someone is unable to respond to commands due to a disruption in their brain's normal functioning.
- A person has perhaps lost consciousness if he does not react to your action by opening his eyes or answering your questions.
- Longer periods of unconsciousness could cause head injuries, cardiac arrest, stroke or poisoning.
- **Loss of consciousness causes the muscles to relax. During the period of unconsciousness the tongue might fall backwards and block the breathing passage.**

FAINTING

- Fainting can occur due to various reasons such as:
 - a) Emotional distress
 - b) Tiredness
 - c) Hunger
 - d) Standing up for a long period
 - e) Sudden change in body position
 - f) Being in a hot environment for a long time
 - g) Specific medical conditions



- Pregnant women, children and the elderly can be more vulnerable to these causes.
- In fainting, the unconscious state is usually brief as in vasovagal syncope.
- In an unconscious state, the person will be unresponsive to your activities (touching, sounds or other stimulation).



CHECK THE FOLLOWING:

- Whether the person opens his eyes and responds to simple questions, like “What is your name”, “where do you live”, “how old are you”
- Whether the person responds to simple commands, like “Squeeze my hand”, “Move your arm/leg/feet/hand”
- If there is no response, pinch the person and see if he opens his eyes or moves.
- If the person does not react to any of these stimuli, he is in an unconscious state.

Note that a person might only partially respond to the stimuli you provide (sound, touch, pain); he might be in an in-between state.

When the person becomes conscious again after a period of unconsciousness, he might suffer from:

- Confusion
- Drowsiness
- Lightheadedness
- Headache
- Loss of bowel and bladder control (incontinence)
- Fits
- Difficulty speaking

The first aider can measure and record a patient's responsiveness and level of consciousness using the AVPU scale (see chapter on basic first aid techniques).

CAUSES OF UNCONSCIOUSNESS:

- Head injury resulting in a concussion of the brain or a compression of the brain due to swelling or bleeding
- Disturbance of the blood supply to the brain, as in fainting, shock or stroke
- Disturbance in the chemical composition of the blood, e.g. lack of oxygen as in asphyxia, abnormal blood sugar levels in diabetes or presence of poisonous substances in the blood
- Disturbance in the electrical activity of the brain, e.g. as in epilepsy

WHAT TO DO?

- Safety first and call for help: Make sure there is no danger to you, the person or bystanders
- Talk loudly to the casualty. Tap him on the shoulders and ask if he is ok. Do not shake the person too roughly
- Provide First Aid: Check if the casualty is conscious or unconscious and act accordingly



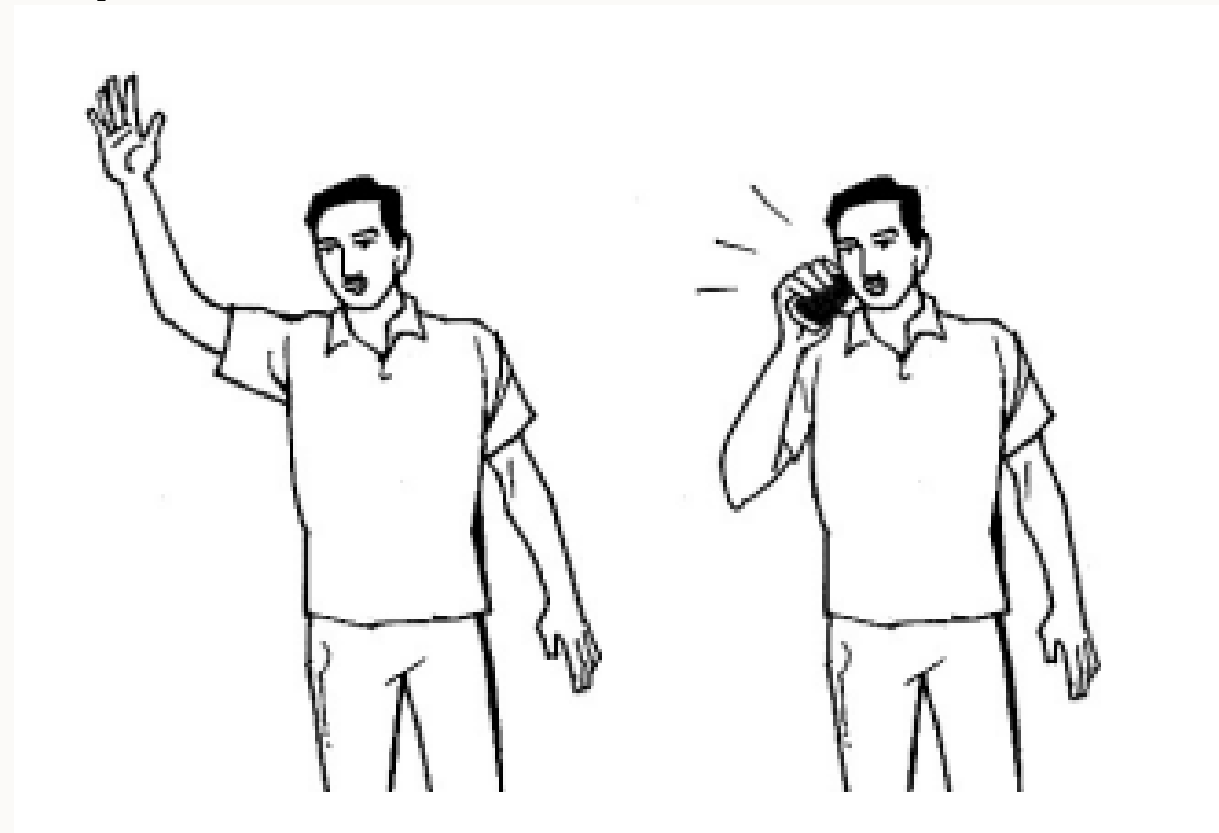
What to do when the casualty responds?

- Try not to change the position of the person if there has been a head, neck, back, leg or arm injury
- Try to find out what happened to the person
- Tell the person to stay calm and not to move (if at all possible)
- Look and feel for breathing
- Keep checking the casualty to make sure he is not getting worse
- Verify regularly the level of consciousness and breathing
- Find medical help for the person if needed



What to do when the casualty doesn't respond?

- Try not to change the position of the person in case of head, neck, back, leg or arm injury
- Shout or call for help and do not leave the person unattended. Ask a bystander to seek help



- If you have gloves, put them on. Do not search for gloves if not available.

- **Unblock the breathing passage:**

a) Gently roll the person over onto his back.

b) Carefully tilt his head back and lift the chin up with your hand on the bony part of the chin. This simple action lifts the tongue from the back of the throat.

c) Do not put your hand on the soft part under the chin to do this.



- **If the person is breathing, put him in the recovery position:**

a) Be careful when moving and turning the victim

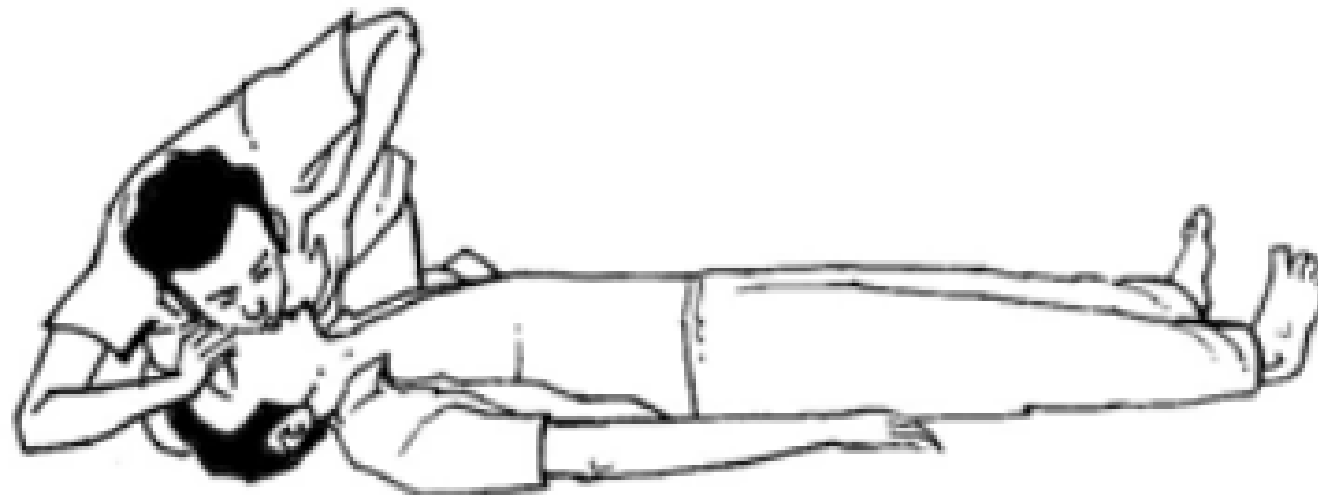
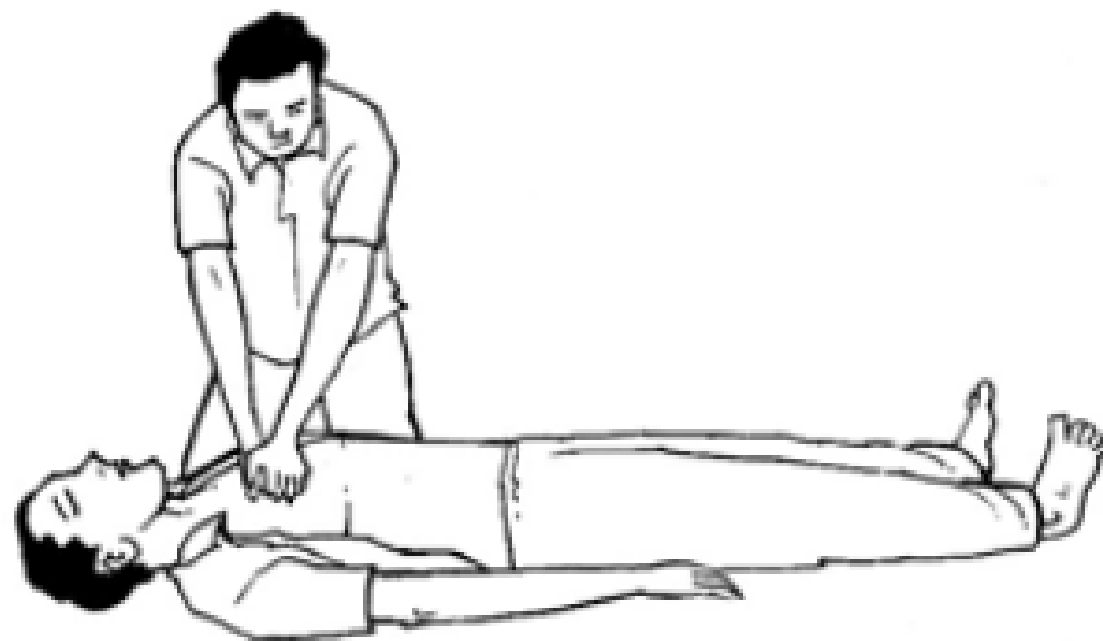
b) Do not leave the person alone and keep checking his breathing

c) Keep the injured person warm by taking off wet clothing, covering him with a blanket or other covering, taking care not to overheat him



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



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.



WHEN TO REFER TO A HEALTHCARE FACILITY?

**Always urgently transport an unconscious person to the nearest
healthcare facility.**

Anyone who has become unconscious or who is feeling sick, has pain after fainting (e.g. in the head or heart region, or from trauma resulting from the fall), is on medication or is being treated for a medical condition, should always seek medical help.

HEAD INJURIES

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**WHEN TO REFER TO A HEALTHCARE
FACILITY**



WHAT ARE HEAD INJURIES?

- Head injuries can be a concussion, a cerebral compression, or fracture of the skull
- All head injuries are potentially serious and require a proper assessment because they can impair consciousness



- **Assume always that casualty suffering from head injury might also be having a neck or spinal injury**

- **Head injuries can be associated with:**

- a) Damage to the brain tissue itself
- b) Damage to blood vessels inside the skull
- c) Skull fractures
- d) Brain concussions
- e) Compression of brain tissue because of built up pressure due to swelling or bleeding



CONCUSSION

- A concussion is a 'shake-up' of the brain inside the skull, caused by a blow on the head or a fall
- There is a brief period of impaired consciousness following the blow to the head
- The casualty might complain of dizziness, headache, blurred vision or nausea
- Usually, there is a brief loss of memory of any events that occurred at the time of, or immediately preceding, the injury

CEREBRAL COMPRESSION

- Some head injuries may produce a compression of brain tissue. The pressure inside the skull builds up by swelling or bleeding inside the skull
- Casualties show a deteriorating level of consciousness that may progress to unconsciousness
- Therefore, it is important to observe continuously the conscious level of a casualty that experienced a head trauma
- **This condition is life threatening**

- **Other signs and symptoms you may observe:**

- a) The person complains of an intense headache
- b) The person complains of dizziness
- c) The person complains of blurred or double vision
- d) The breathing gets noisy and becomes slow
- e) A slow but strong pulse
- f) Unequal pupil size
- g) Weakness and/or paralysis on one side of the face and/or body
- h) A change in the behaviour or the personality of the casualty



SKULL FRACTURE

- In case of a head wound or bruise, skull fracture is possible
- There is an underlying risk of brain damage and bleeding
- You might observe following signs and symptoms:
 - a) There is a soft area or a depression on the scalp.
 - b) Asymmetry of the head or skull.
 - c) There is bruising or swelling behind the ear(s).
 - d) Clear watery fluid (CSF) or blood is leaking from the casualty's ear or nose
 - e) The casualty has a deteriorating level of response which may progress to unconsciousness.

WHAT TO DO?

- Approach a casualty who experienced a period of impaired consciousness (as described in the chapter on unconsciousness).
- If there is a risk of fractures of the skull, neck or spine, treat the casualty accordingly (as described in the chapter on Injuries and fractures to the head, neck and spine).



WHEN TO REFER TO A HEALTHCARE FACILITY?

Always urgently transport an unconscious casualty to the nearest healthcare facility. Injured people suspected of having head, neck or spinal injuries should always be examined urgently in the nearest healthcare facility.

Anyone who has become unconscious or who is feeling sick, has pain after fainting (e.g. in the head or heart region, or from trauma resulting from the fall), is on medication or is being treated for a medical condition, should always seek medical help.

STROKE

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WHAT IS A STROKE

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**WHAT TO DO WHEN THE PERSON
STOPS BREATHING**

6

**WHEN TO REFER TO A HEALTHCARE
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WHAT IS A STROKE

- 'Stroke' is a rapid loss of brain function due to a disturbance in the blood supply to the brain
- It can be the result of bleeding or when a blood clot leads to a blockage in a blood vessel to the brain, blocking the blood flow
- Thus the affected part of the brain can't function normally and might result in difficulty in moving, speaking, understanding, etc.
- Symptoms occur suddenly and depend on the area of the brain affected
- Strokes occur commonly in later life and in patients that suffer high blood pressure or other circulatory disorder

WHAT TO SEE AND ENQUIRE:

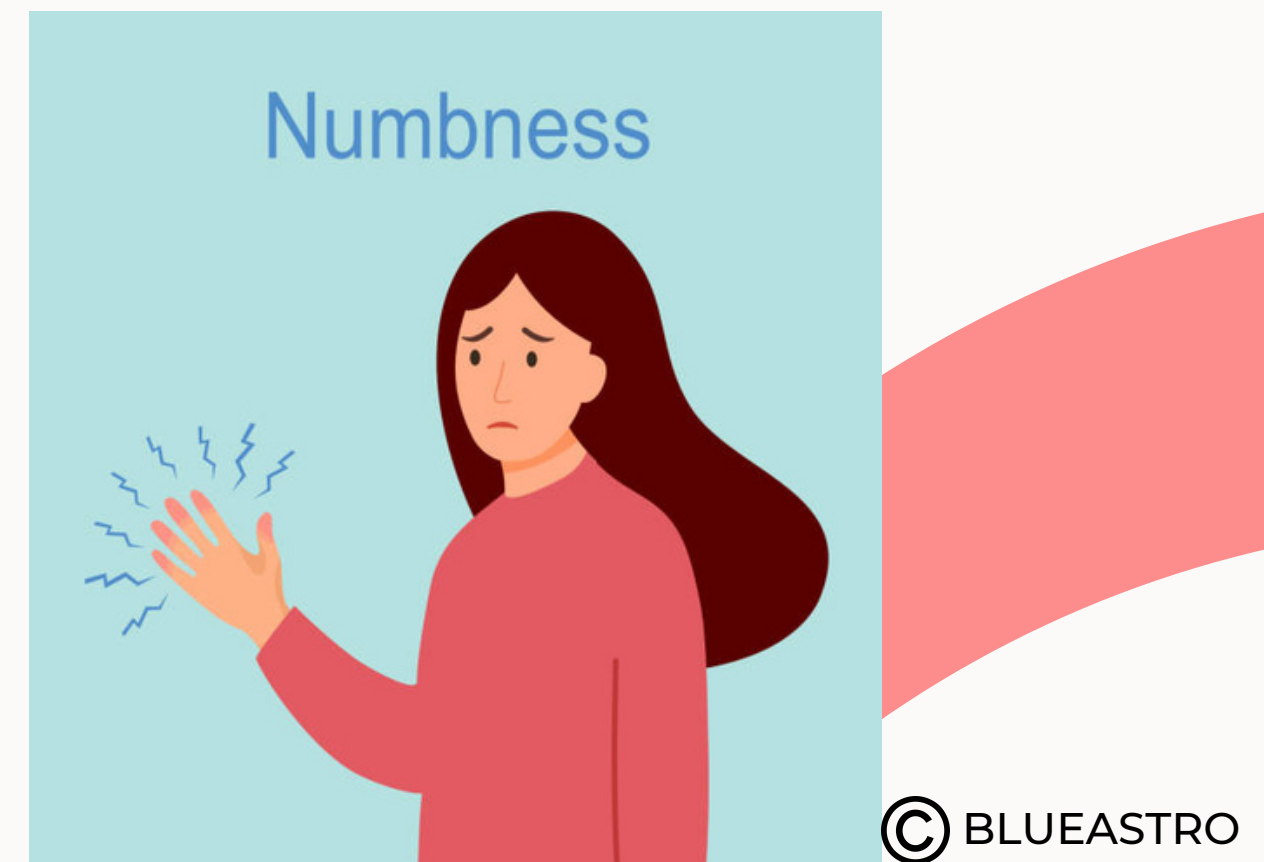
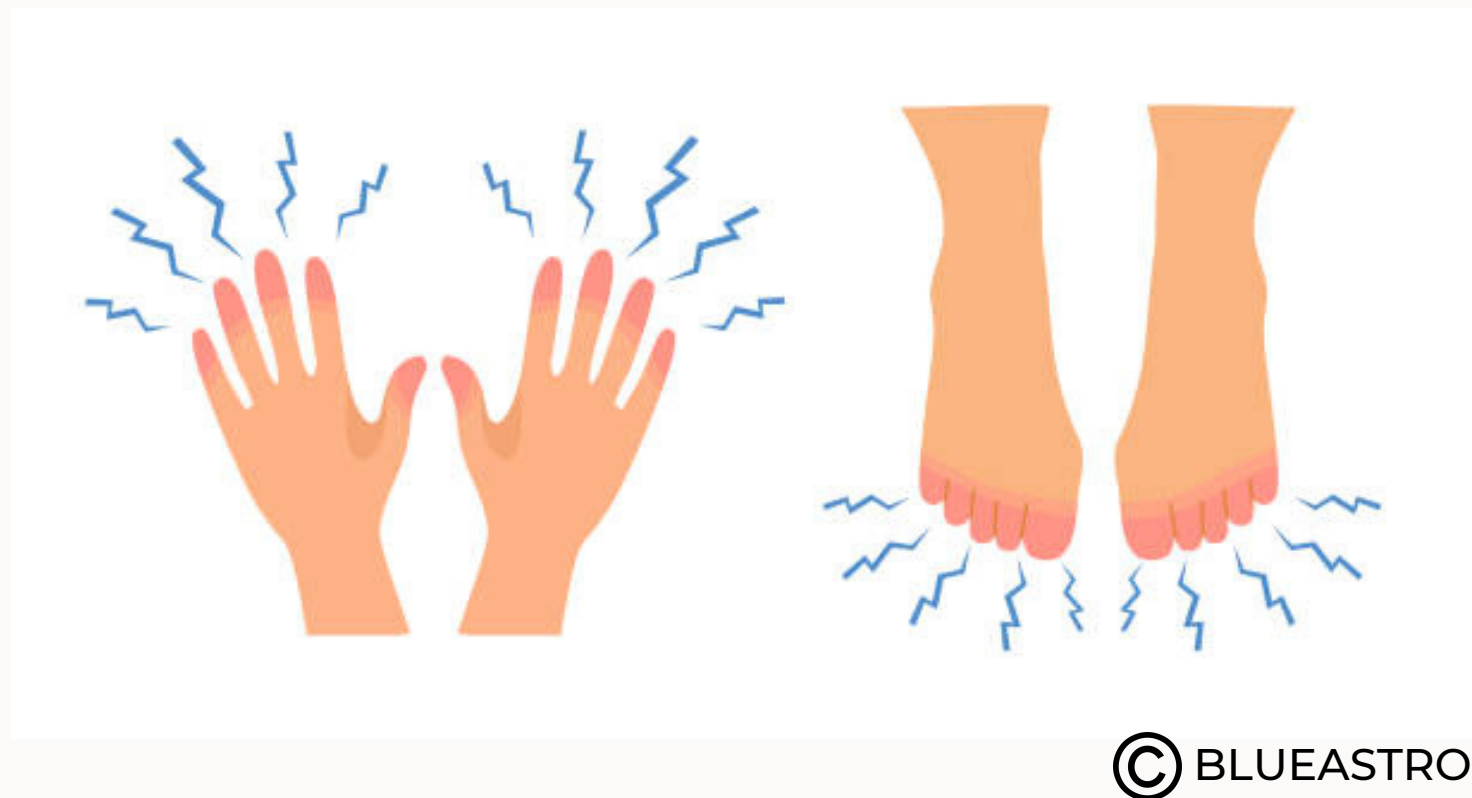
Signs and symptoms you may observe:

1. The person complains of numbness
2. The person complains of blurred vision
3. The person complains of severe headache
4. Slurred Speech
5. Confusion
6. Weakness or paralysis of the limbs
7. Weakness or paralysis in the face



The possibility of stroke should always be considered when there is a:

1. Sudden weakness or numbness of the face, arm or leg, especially on one side of the body
2. Sudden trouble in speaking, seeing or understanding.



WHAT TO DO?

If you think someone is suffering from a stroke, you can ask the person to perform **three simple actions** to check.

FAST: Face-Arm-Speech and Transport

F

Face

A

Arm

S

Speech

T

Transport

1

Place the person on the floor if not already there, and remove their spectacles if needed.

Check whether the mouth is crooked or drooping at one corner.

There might be saliva dribbling out of the mouth.

F



2

Ask the person to lift both arms to the same level.

Check whether he can do this without one arm dropping or drifting. One shouldn't be lower than the other.

A stroke often causes one side of the body to become weak or even paralyzed. The person might also have lost his balance.

A



3

Ask the person to repeat a simple sentence after you.

Check whether he can speak clearly or if he has problems in saying the words.

S



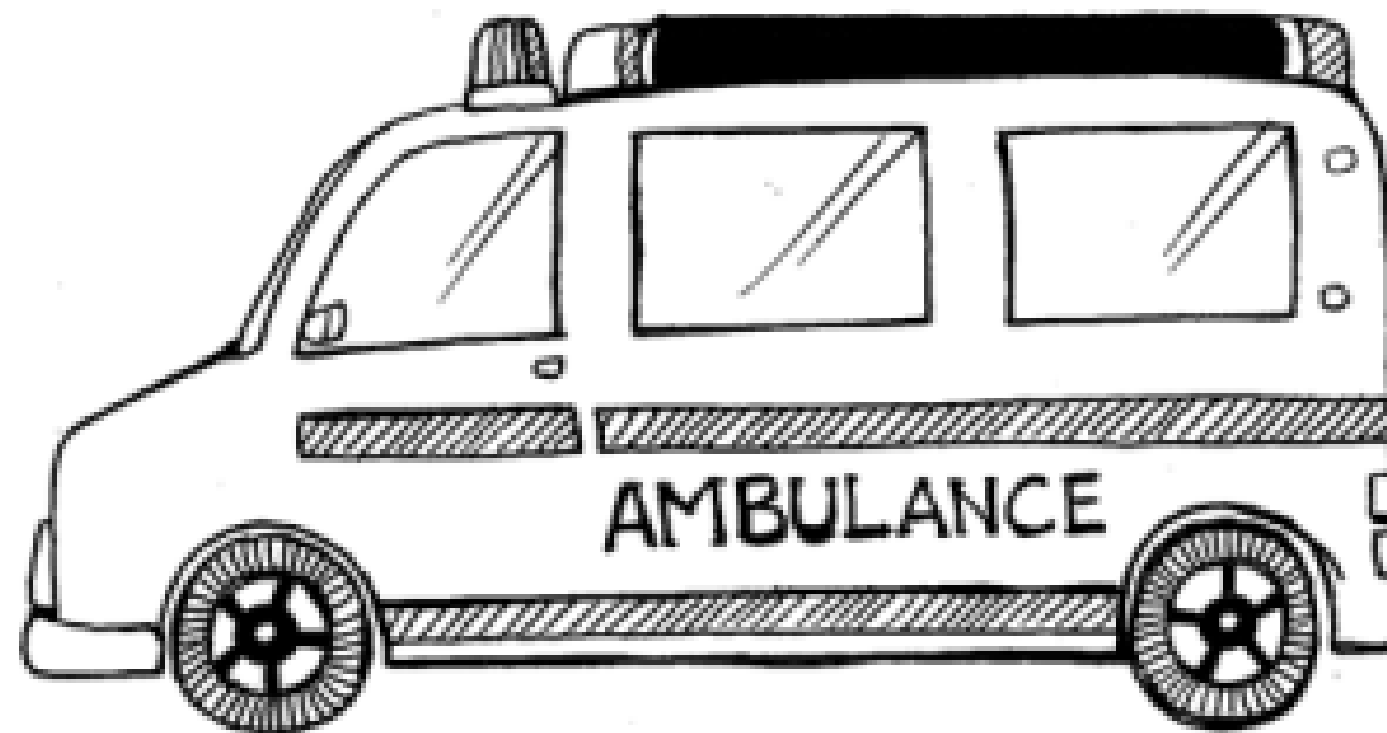
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A stroke is very likely if the person has difficulties with any of the above actions.

Arrange transport quickly. The earlier the person is treated, the better is the outcome.

Shout or call for help and do not leave the person unattended. Ask a bystander to seek help

T





5

If the person can sit up, make him sit upright.

This helps the person to breathe.

If the person cannot sit up, place him in the recovery position.

6


Do not give food or drink to the person having a stroke.

There is an increased risk of choking or vomiting.

7

Keep checking that the person is awake and breathing properly.





8

Always wash your hands after taking care of a person.

Use soap and water to wash your hands.

If no soap is available, you can use ash to wash your hands.

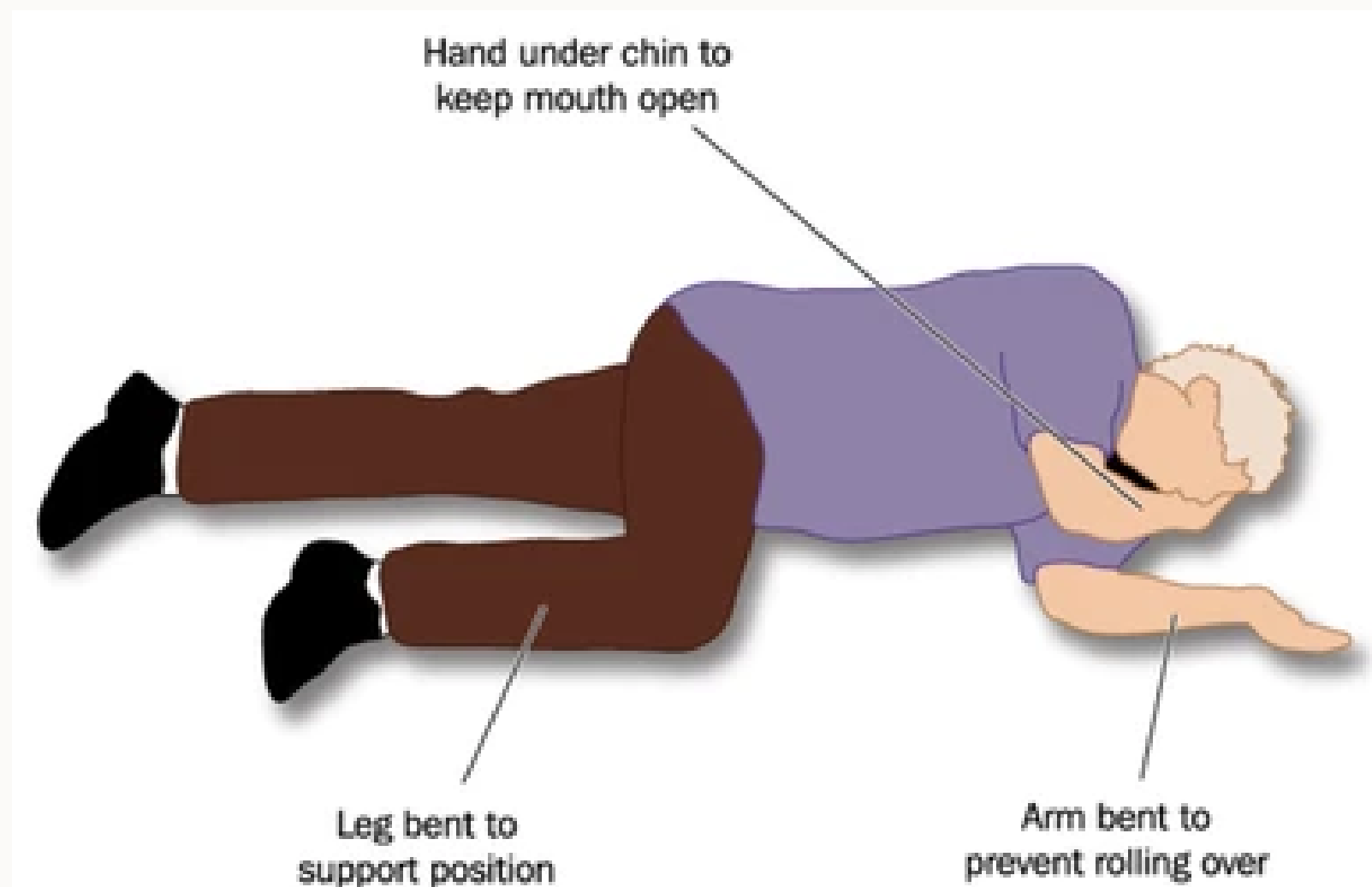
Alcohol Based sanitizers can also be used, if available.

Arrange urgent transport to a healthcare facility.



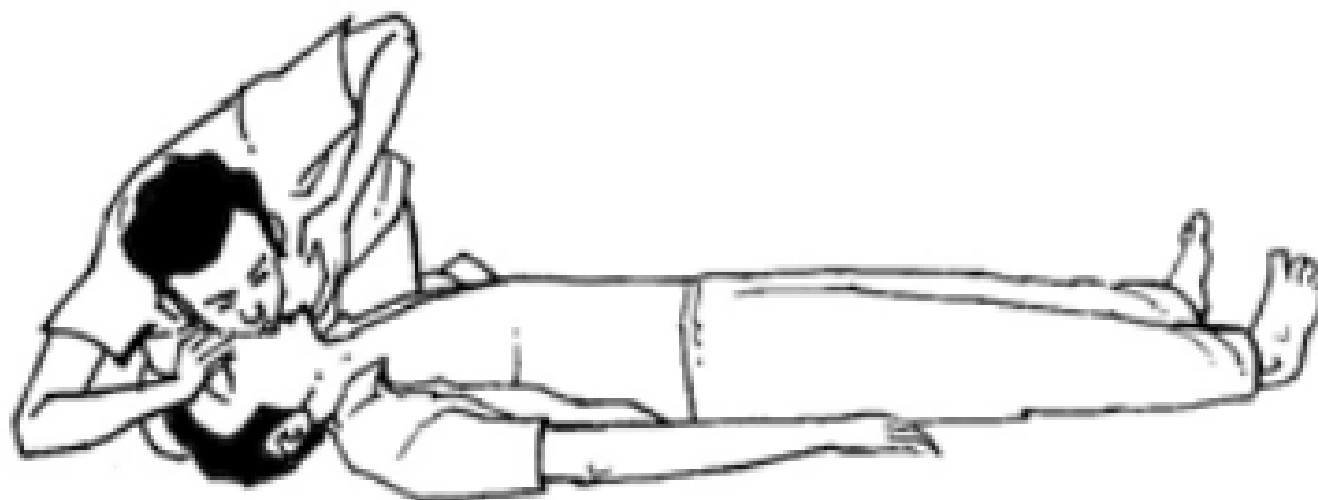
What do I do when the person is unconscious but still breathing:

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



WHAT TO 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



WHEN TO REFER TO A HEALTHCARE FACILITY?

Always arrange urgent transport to the nearest healthcare facility. This should be done even if the symptoms improve.

Anyone who has become unconscious or who is feeling sick, has pain after fainting (e.g. in the head or heart region, or from trauma resulting from the fall), is on medication or is being treated for a medical condition, should always seek medical help.