

# Paediatric First Aid



**SMARTT**

# What is first aid?

The immediate care given to a person who has been injured, or who has become ill prior to the arrival of qualified medical assistance

## The aims of first aid (3 P's)

P

Preserve Life

P

Prevent Worsening

P

Promote Recovery



# What is paediatric first aid?

**It is the direct care administered to an infant or child who has been injured, or who has taken ill before ambulance arrive**





## Paediatric first aid

**An infant is defined as being from the age of 0 - 1 and a child is defined as being from the age of 1 to the onset of puberty.**



# Role and Responsibilities of the Paediatric First Aider





# Role and Responsibilities of the Paediatric First Aider

**Make sure the first-aid equipment is fit for purpose and in date**

**Attend at the scene**

**Make sure the scene is safe to go in**

**Call 999/112**

**Prioritising any type of treatment**

**Clean up after the incident**












**Record and report**














First-aid  
equipment

# First aid equipment

-  plasters in a variety of different sizes and shapes (hypoallergenic)
-  small, medium and large sterile gauze dressings
-  sterile eye dressings
-  triangular bandages
-  crêpe rolled bandages
-  safety pins
-  disposable sterile gloves
-  tweezers
-  scissors
-  alcohol-free cleansing wipes
-  sticky tape (hypoallergenic)



# First aid equipment

-  thermometer (preferably digital)
-  skin rash cream, such as hydrocortisone or calendula
-  cream or spray to relieve insect bites and stings
-  antiseptic cream
-  painkillers such as paracetamol (or infant paracetamol for children), aspirin (not to be given to children under 16), or ibuprofen
-  cough medicine
-  antihistamine cream or tablets
-  distilled water for cleaning wounds
-  eye wash



# Contacting the emergency services



**contacting the emergency services**

**999/112**

# Contacting the emergency services



## 999: Emergencies Only

**999 has been used in the UK for over 80 years and was the world's first single emergency number.**

**contacting the emergency services**

**999/112**

# Contacting the emergency services



## **112: Emergencies Only**

**112 was introduced in April 1995 in the UK. It was introduced across Europe in order to give a standard number for travellers to call across the EU.**

contacting the emergency services

**112**

# Contacting the emergency services via text

## 999: How to Text in an Emergency

The number for contacting the emergency services is:

**999**

You can send a text to 999 (but you must pre-register for this service). To pre-register, text the word 'register' to 999.

You can only send a text from your own phone network. If you have a weak or intermittent signal on your home network sending a text to 999 could be a life saver.





# Contacting the emergency services

## **111: None Emergencies Only**

NHS 111 can help if you have an urgent medical problem that is not an emergency issue and you're not sure what to do.

The number for contacting the  
None emergency services is:

**111**

# Contacting the emergency services

## 101: Non-emergency number for the Police only



The number for contacting the  
None emergency services is:

**101**

101 is only available if you are calling from within England, Wales, Scotland or Northern Ireland. Calls are charged at 15 pence per call.

# Clearing up after an incident

Ensure that all used bandages and used items such as personal protective equipment are placed in a yellow clinical waste bag

Ensure that the area where any blood or other bodily fluids have been spilt is thoroughly cleaned

Restock any first-aid kit and replace any other equipment that may have been used during the incident

Record the incident.





# Minimising the risk of infection

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It's vital not to transmit infections or contract infections yourself. To help protect the risk of infection and cross-contamination such precautions we can be taken:

- 🧐 Have good personal hygiene
- 🧐 Use barrier devices and gloves
- 🧐 Cover up cuts or sores
- 🧐 Minimising your contact with blood and bodily fluids
- 🧐 Changing gloves
- 🧐 Washing hands thoroughly.



# Assessing an Emergency Situation Safely



# Primary survey

A primary survey is a process of

approach

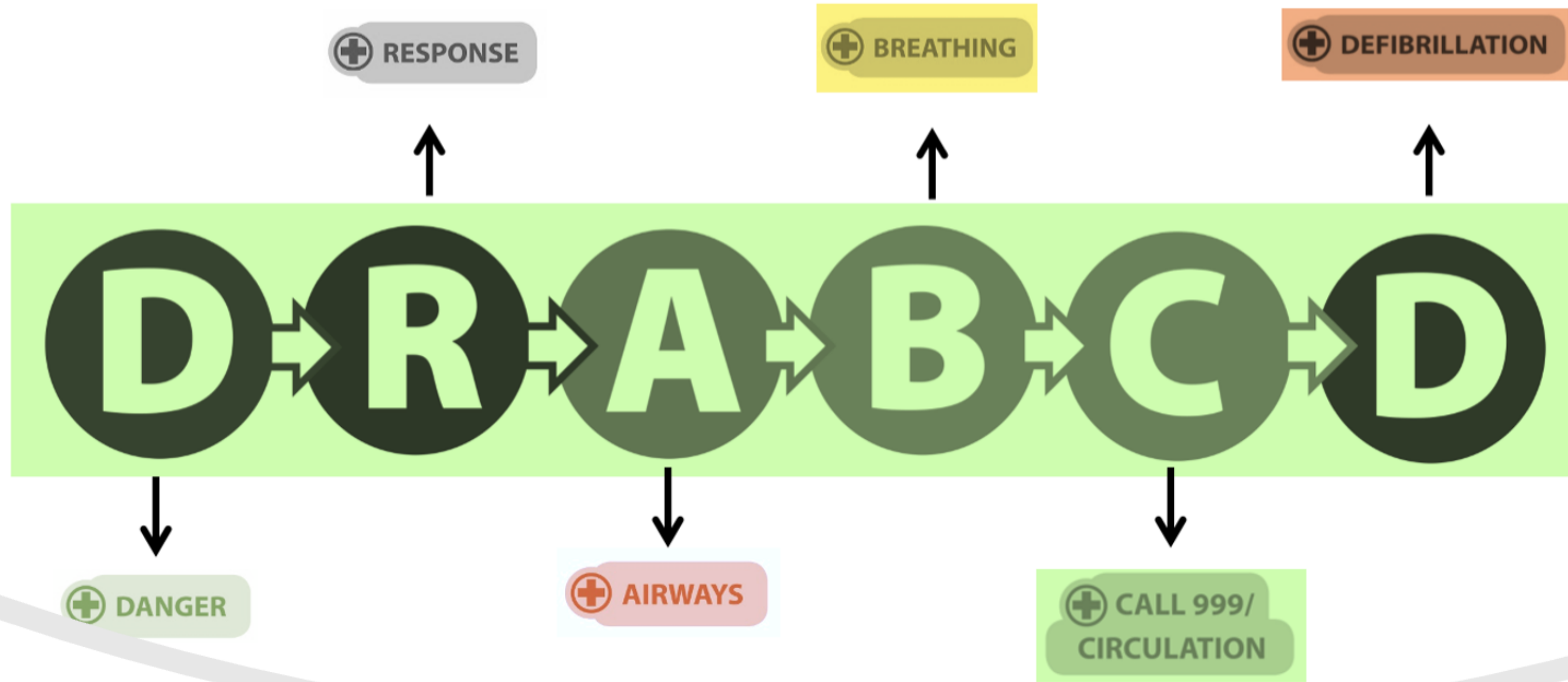
identify

dealing with immediate conditions



This can be remembered by the acronym **Doctor ABCD**

# *Doctor ABCD*







Remove or eliminating  
any danger to make it  
safe for you to approach



**DANGER**

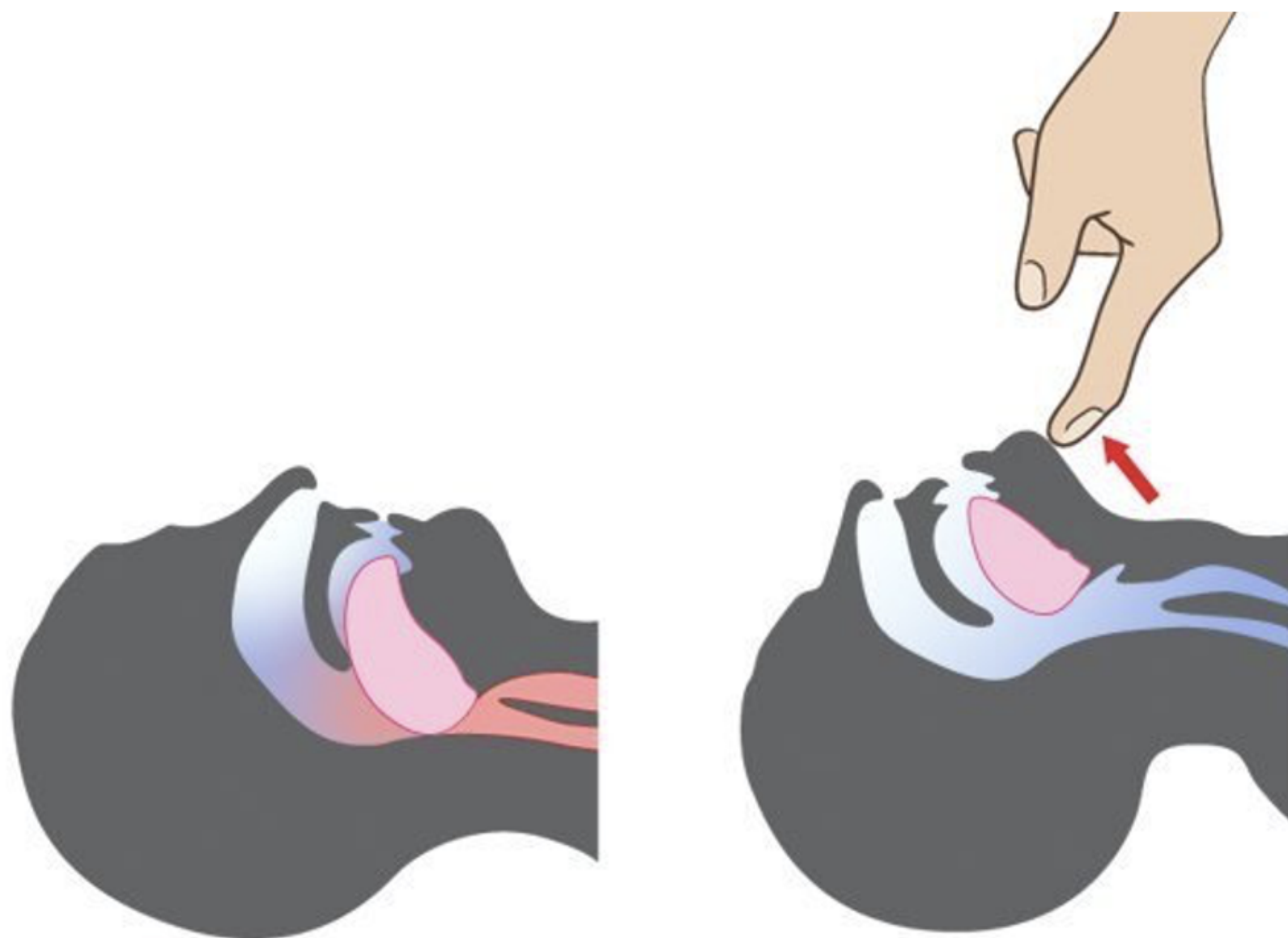


 RESPONSE

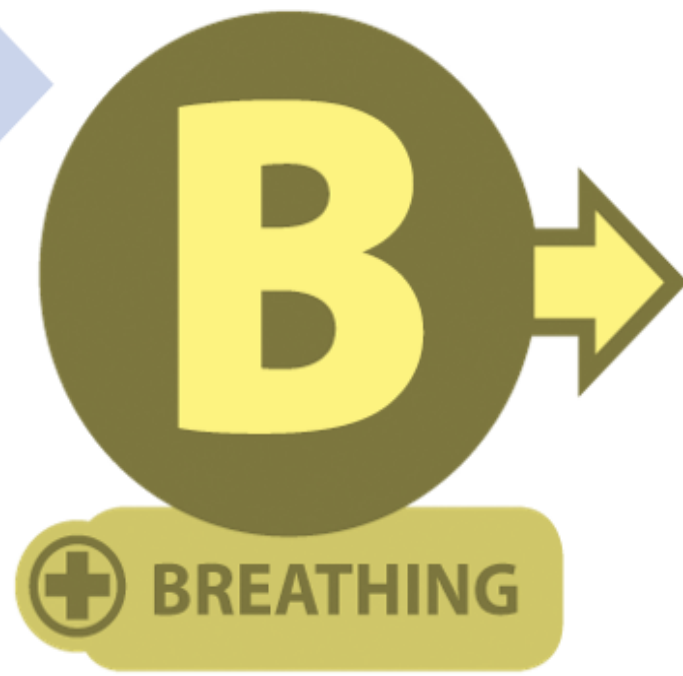
Check to see if you can get any type of response from the child



**Open the airway to  
assist the child to  
breathe**



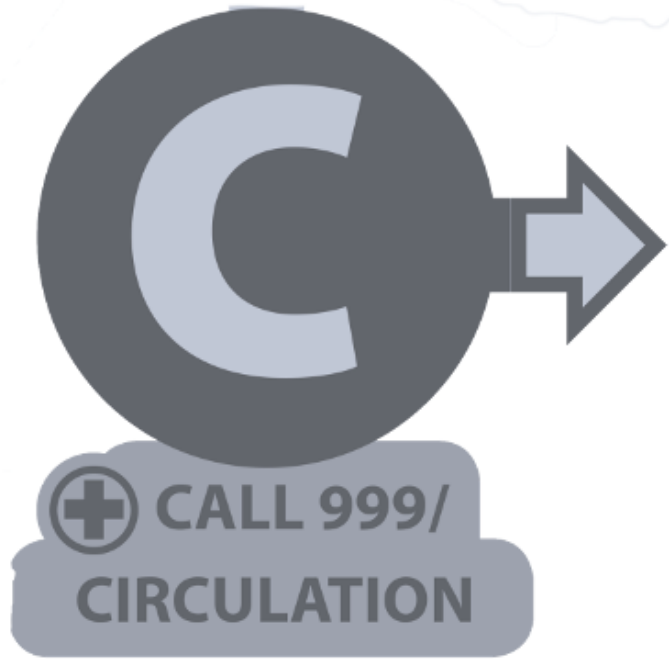




Check the child is breathing normally for 10 seconds.

1. Look - Look out for if the casualty looks to be breathing abnormally, infrequently Slow noisy gasps, know as agonal gasp
2. Listen – for noise
3. Feel – for air





**Compression only CPR. If you are untrained or unable to do rescue breaths, administer chest compression-only CPR.**

**Chest compressions should be at continuous rate and approximately 2 per second**

**Depth of CPR compressions:**

**Infant – one third of the depth of the chest, approx. 4cm**

**Child – one third of the depth of the chest, approx. 5cm.**



# Automated External Defibrillator (AED)

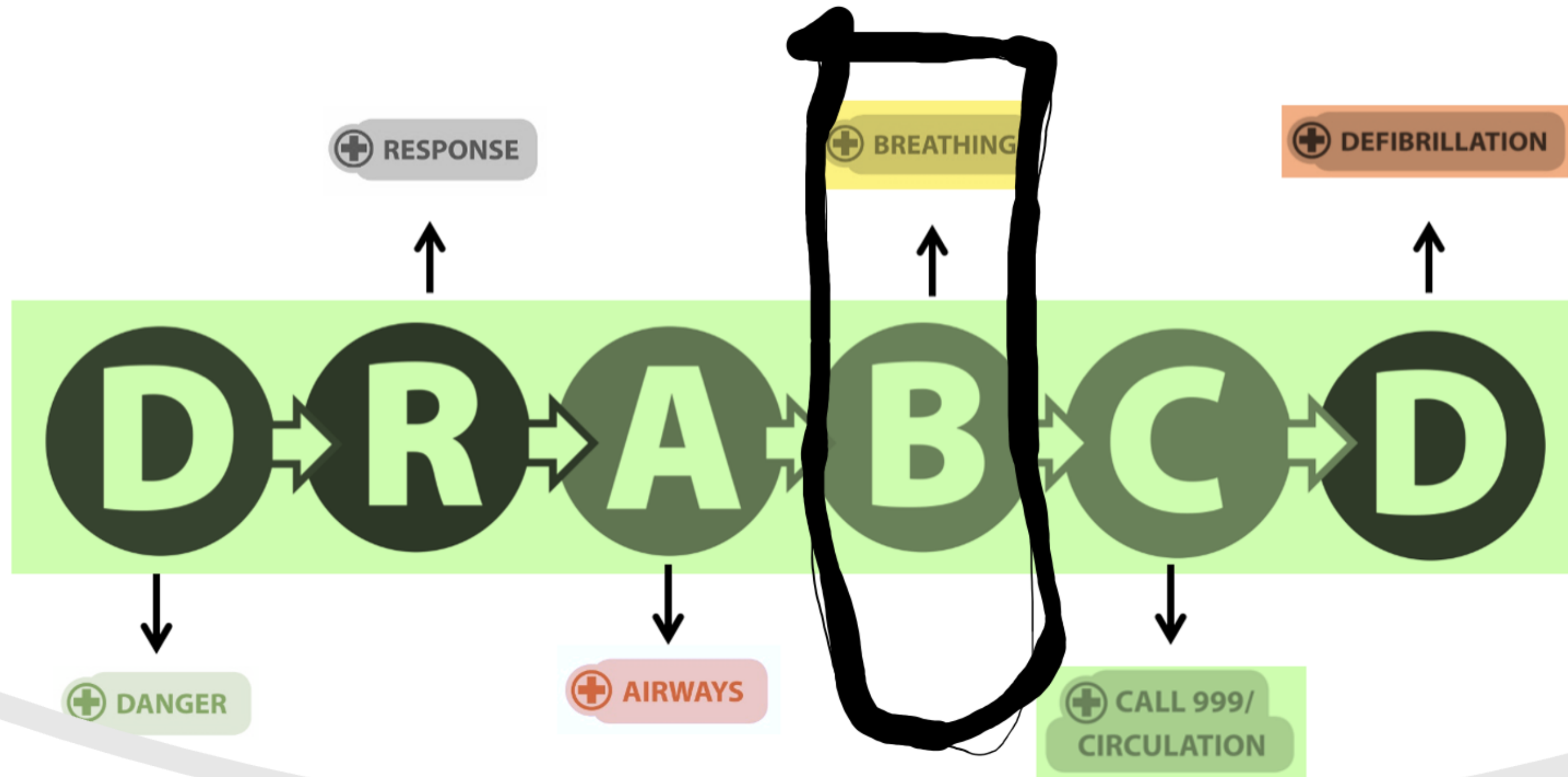


⊕ DEFIBRILLATION

**If you have an AED switch it on and follow the automated instructions. The AED is used in conjunction with CPR.**



# *Doctor ABCD*



If the casualty is breathing

# The recovery position

**Placing the casualty in the recovery position helps to:**

- **Maintain a clear airway**
- **Assist with natural breathing**
- **Clear the airway of excretions such as vomit if the casualty is breathing, but unresponsive**



# Recovery position Adult & Child

Bring the arm furthest away, across the chest and place the back of their hand onto their near side cheek, lift the far side leg over and roll them over towards you.



# Recovery position Adult & Child

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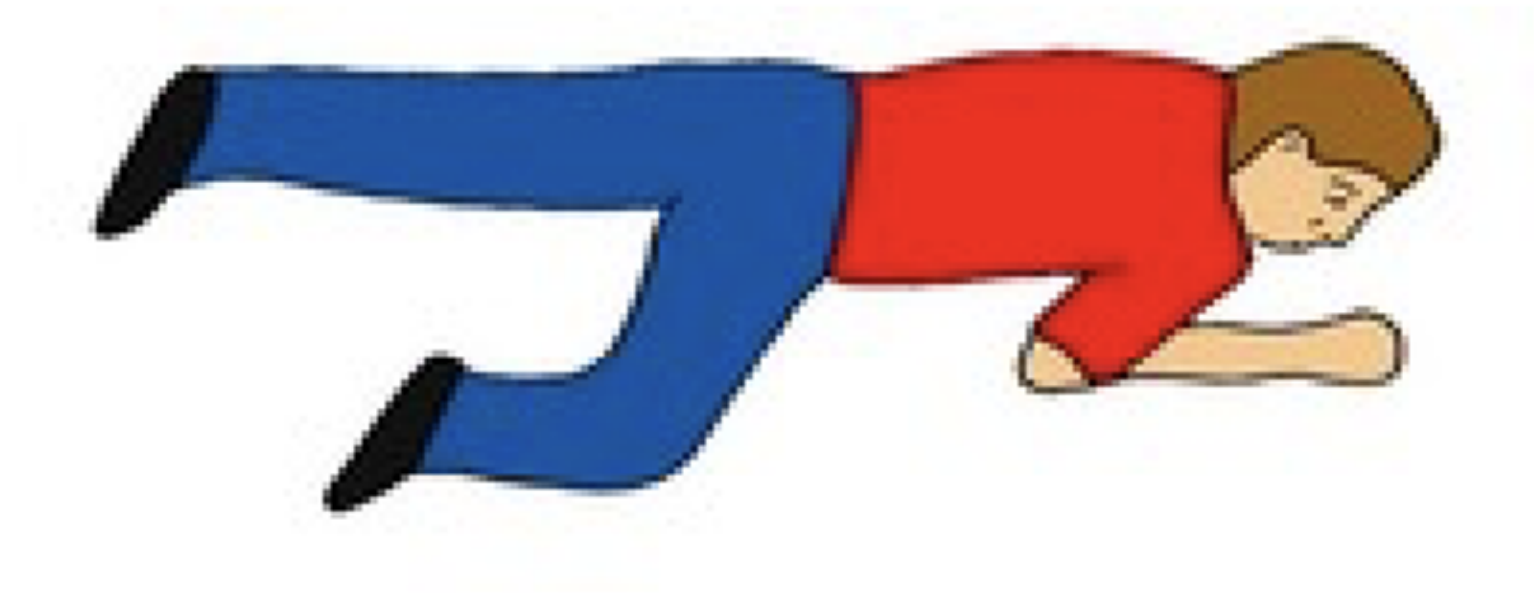
# Recovery position Adult & Child

Adjust the leg so that the knee and lower leg are at an angle – this will prevent the child rolling back on to their back



# Recovery position Adult & Child

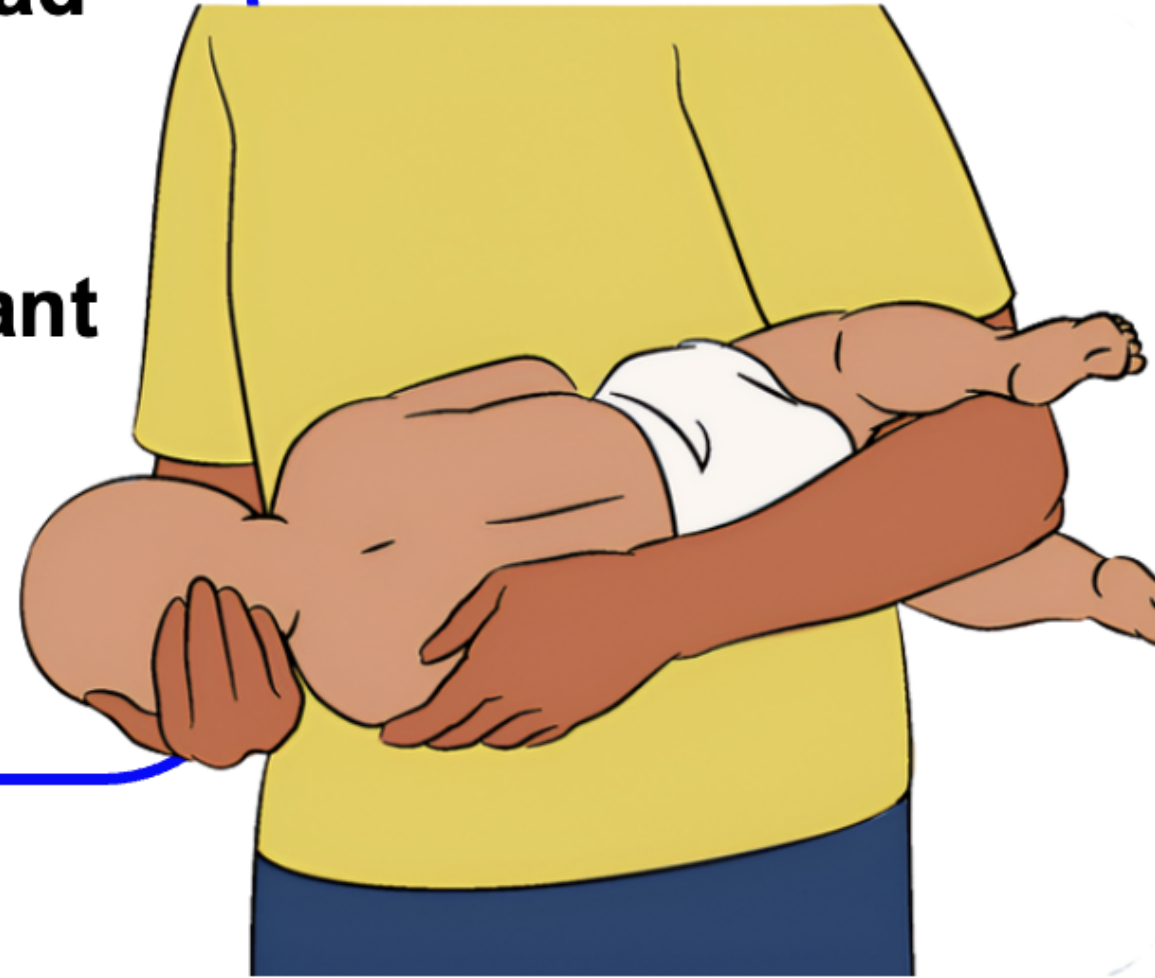
**Check breathing regularly,  
and be prepared to carry out  
CPR.**



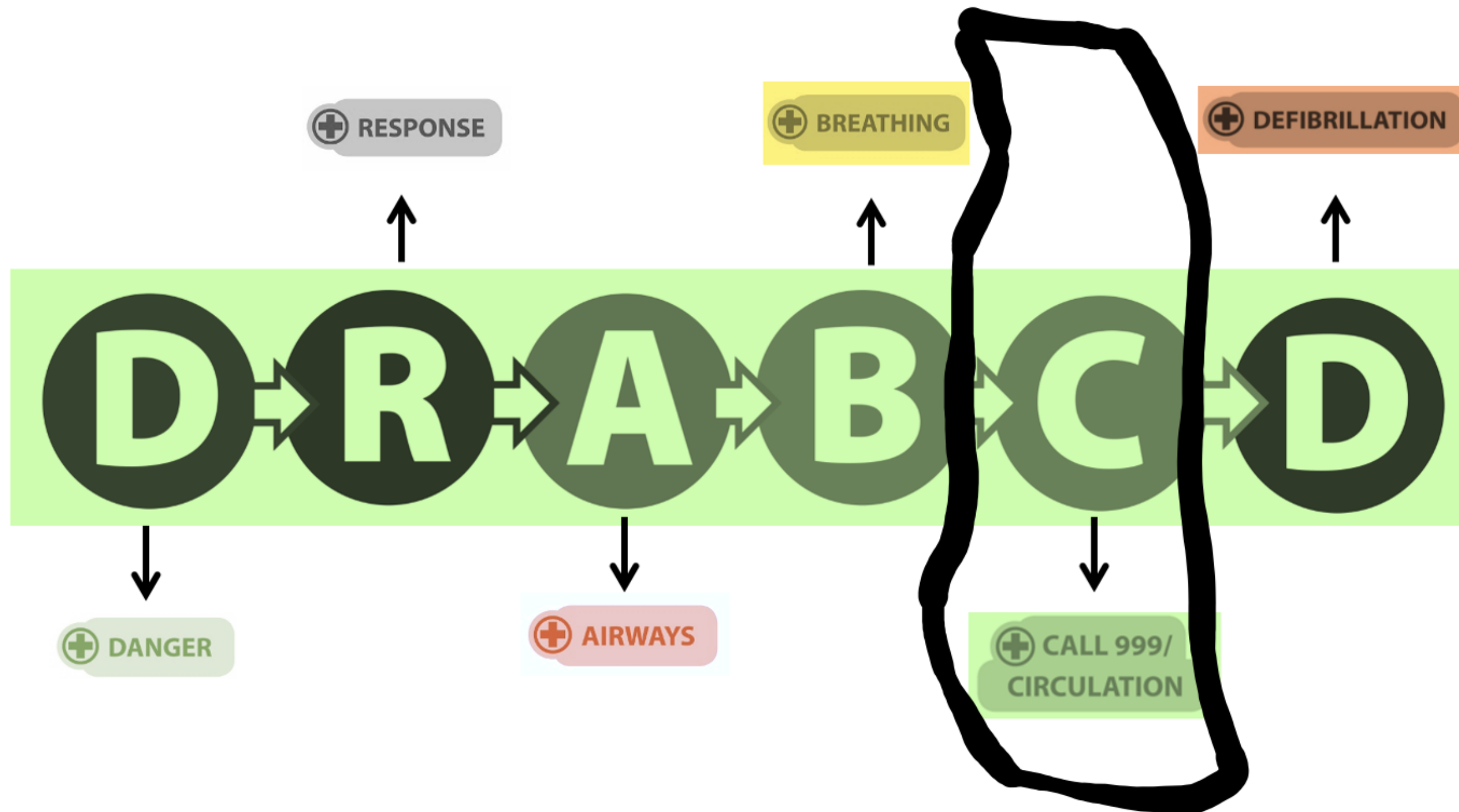
# Recovery Position Infant

**Hold the infant facing towards you with the head down.**

**This will allow fluids to flow away from the infant and will also help you monitor their breathing.**



# *Doctor ABCD*



If the casualty is NOT breathing



# Cardiopulmonary Resuscitation (CPR)

⊕ **CARDIO = 'heart'**


⊕ **PULMONARY = 'lungs'**

⊕ **RESUSCITATION = 'revive'**

# Cardiopulmonary Resuscitation (CPR)

If the child is not breathing, start the principles of resuscitation 

 Airway and breathing

 Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillation (AED).



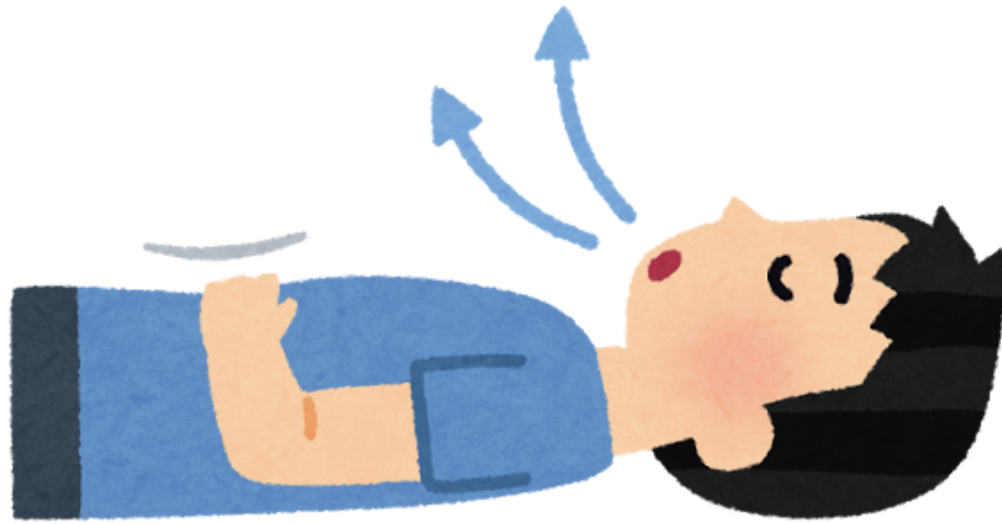
## What's in the air that we breathe?

### Air that we breathe in:

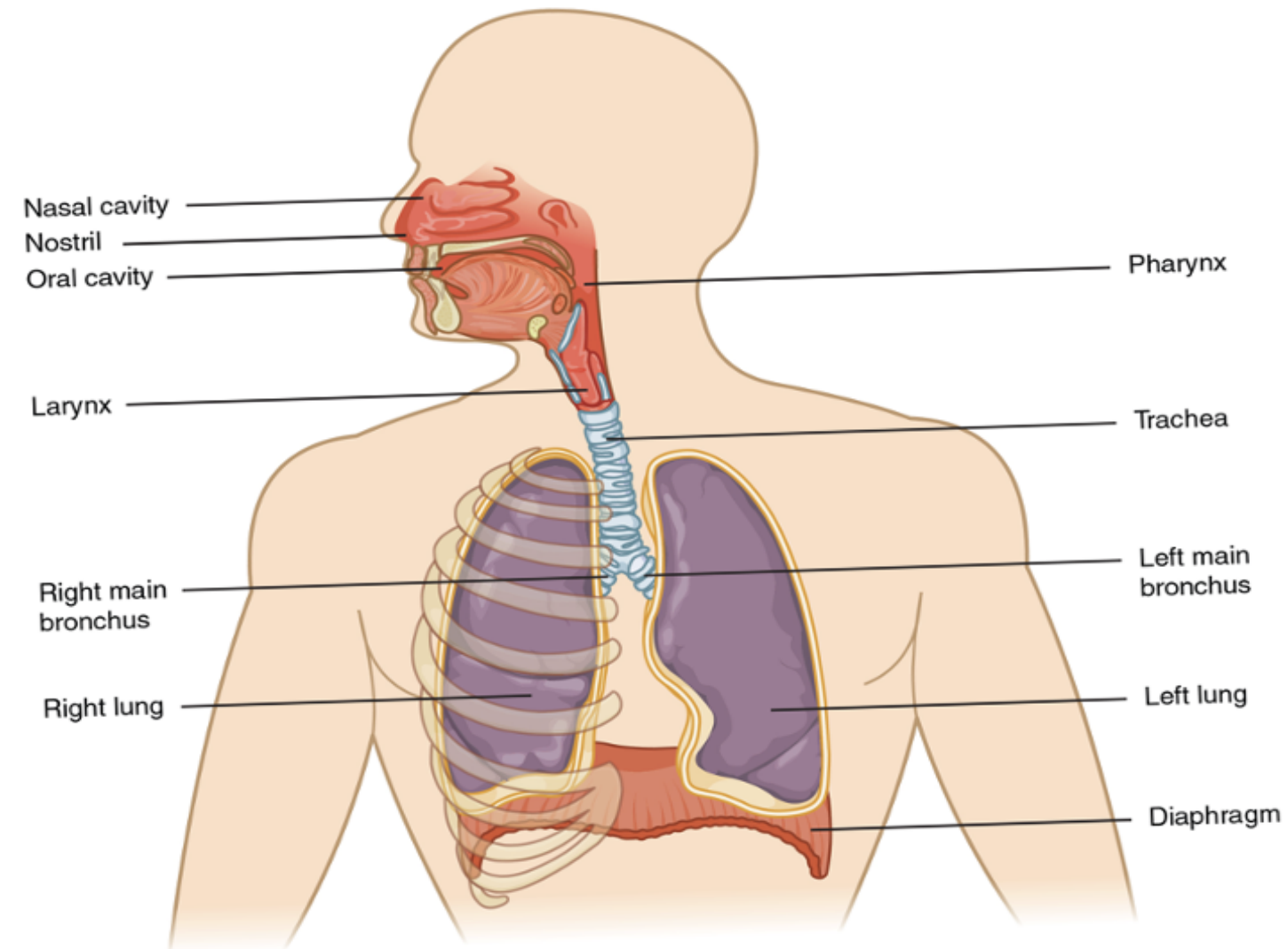
Oxygen	20%
Carbon Dioxide	Trace
Nitrogen	79%
Other Gases	1%

### Air that we breathe out:

Oxygen	16%
Carbon Dioxide	4%
Nitrogen	79%
Other Gases	1%



# The respiratory system







Airway

## CPR for Infants



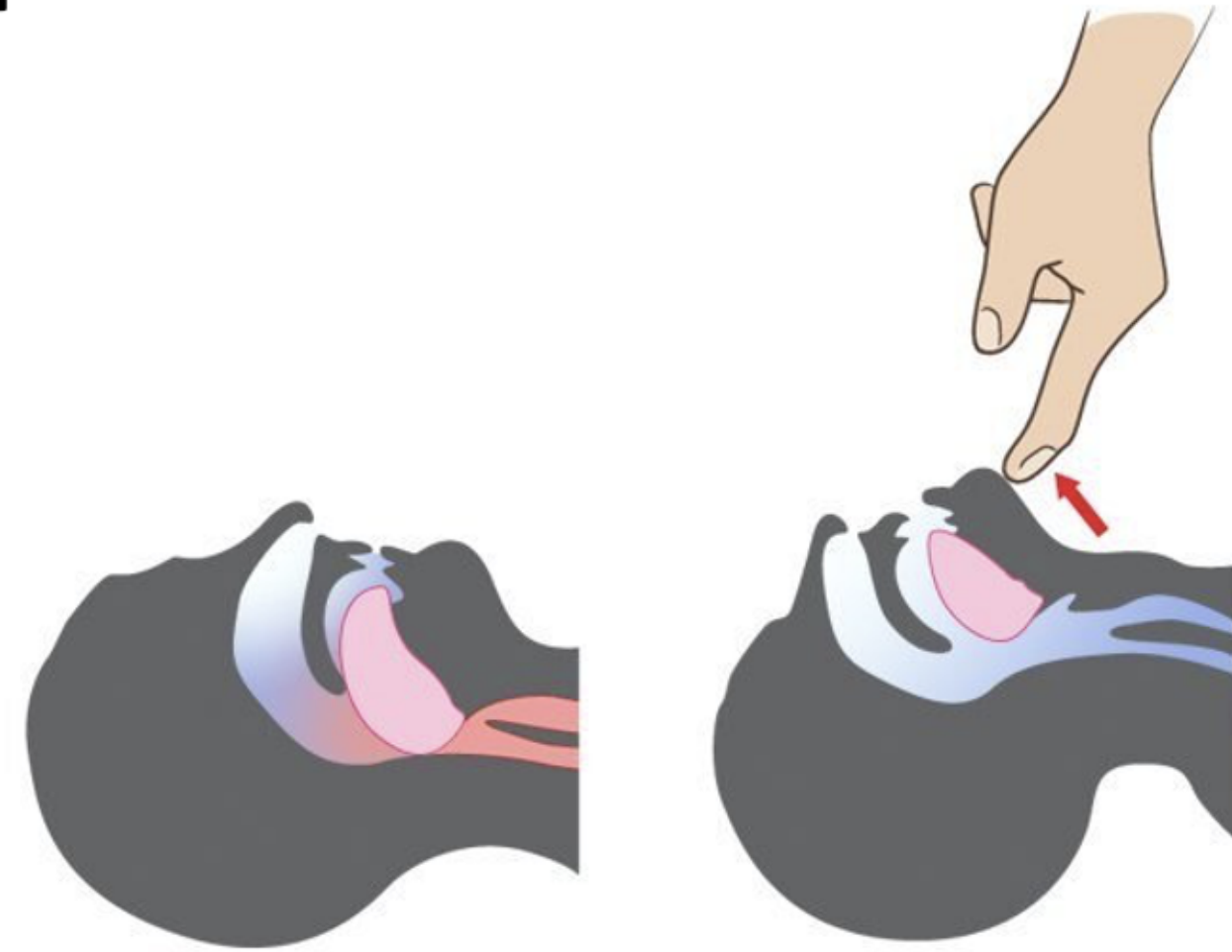
Breathing



Compressions

# Administer CPR

It is vital that the airway remains open





Airway blocked by the tongue.



Airway blocked by vomit.



# Checking for normal breathing

Whilst ensuring that the airway is open and maintained

## Checking for 3 things;

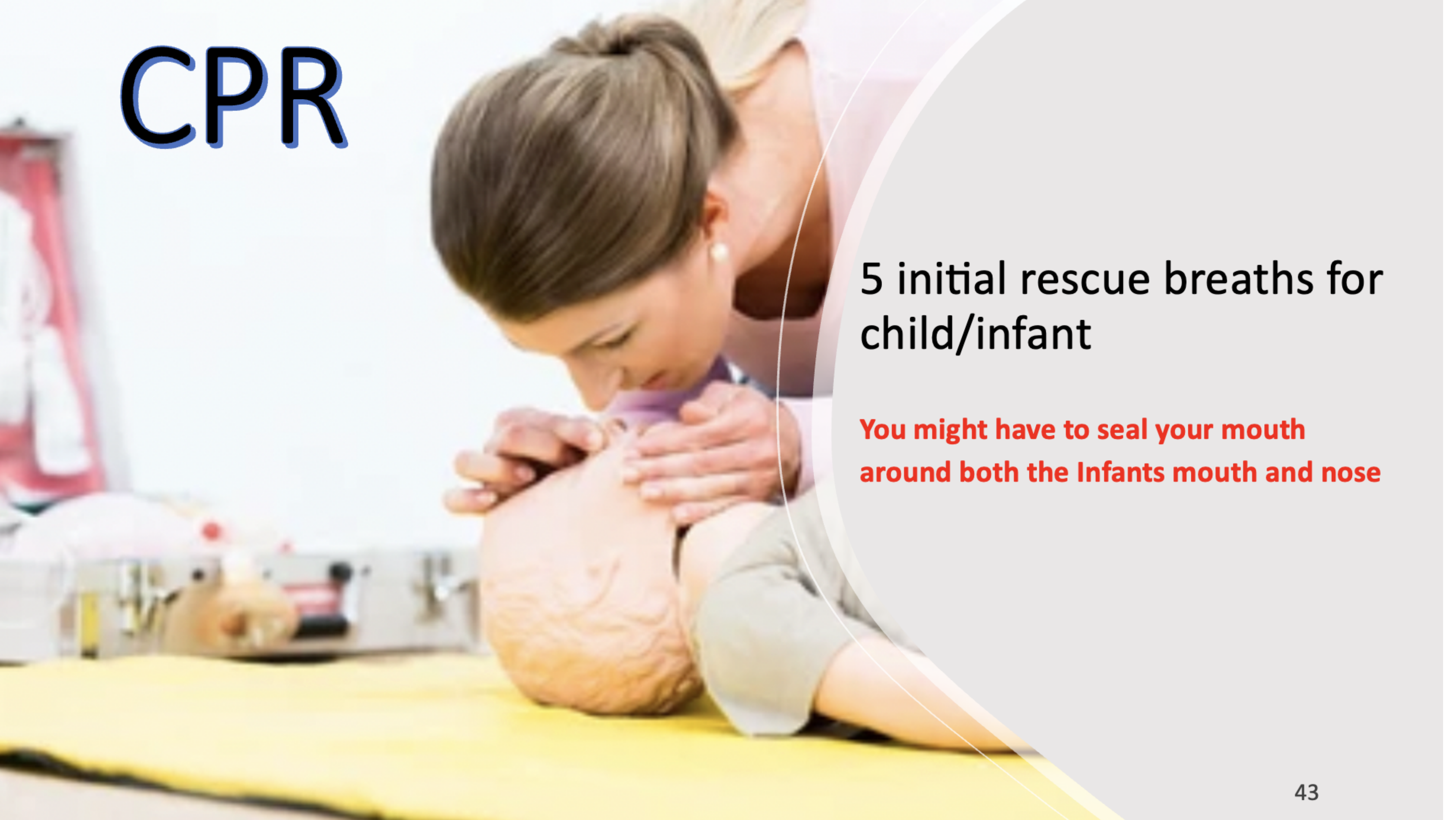
1. **LOOK** down the infant's/child's chest for any movement
2. **LISTEN** for normal breathing
3. **FEEL** for breath

Note; Carry out this action for no more than 10 seconds.





# CPR

A woman with brown hair tied back, wearing a pink shirt, is performing CPR on a baby mannequin lying on a yellow surface. She is leaning over the mannequin, with her mouth open and hands positioned to provide rescue breaths. The background is slightly blurred, showing a medical training environment.

5 initial rescue breaths for  
child/infant

**You might have to seal your mouth  
around both the Infants mouth and nose**



# Chest Compressions

Place two fingers on the middle of infants/child's chest. **Give 30 compressions approximately 2 compressions per second.**

Each compression push the chest down by about one third of their body size approx. 4cm. Hold the infants head to stop their chin dropping down



Place two fingers at the centre of child's chest. **Administrate 30 compressions at a rate of approximately 2 compressions per second.**

Each compression push the chest down by about one third of their body size approx. 5cm .





# Administer CPR

Compressions **MUST** only be given to a person who is not breathing or has an agonal gasp





# Automated External Defibrillator



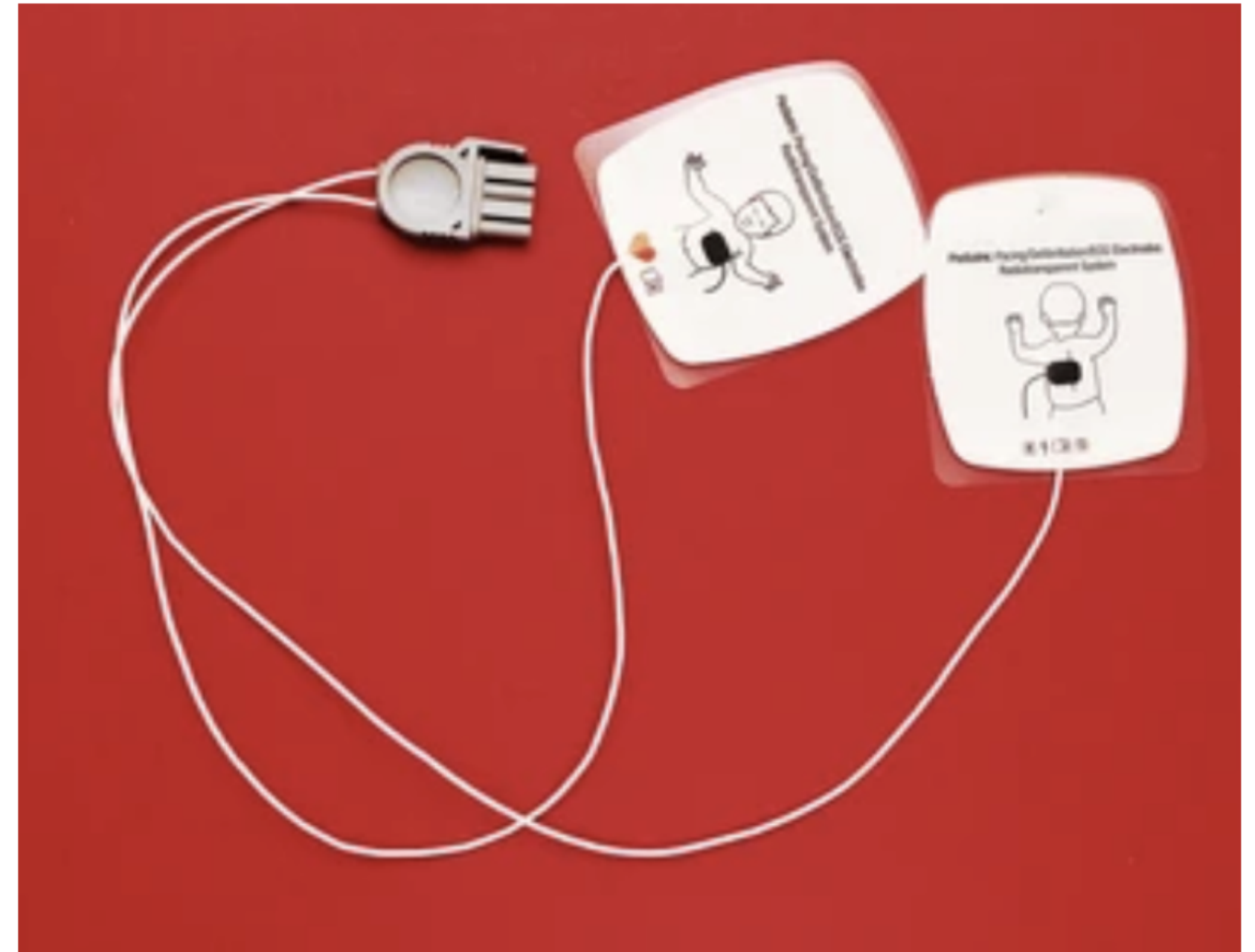
**Take the AED from the case and switch on**

**Follow the automated instructions**

**Apply the pads**

**The AED will analyse the heart rhythm and instruct you what to do next**





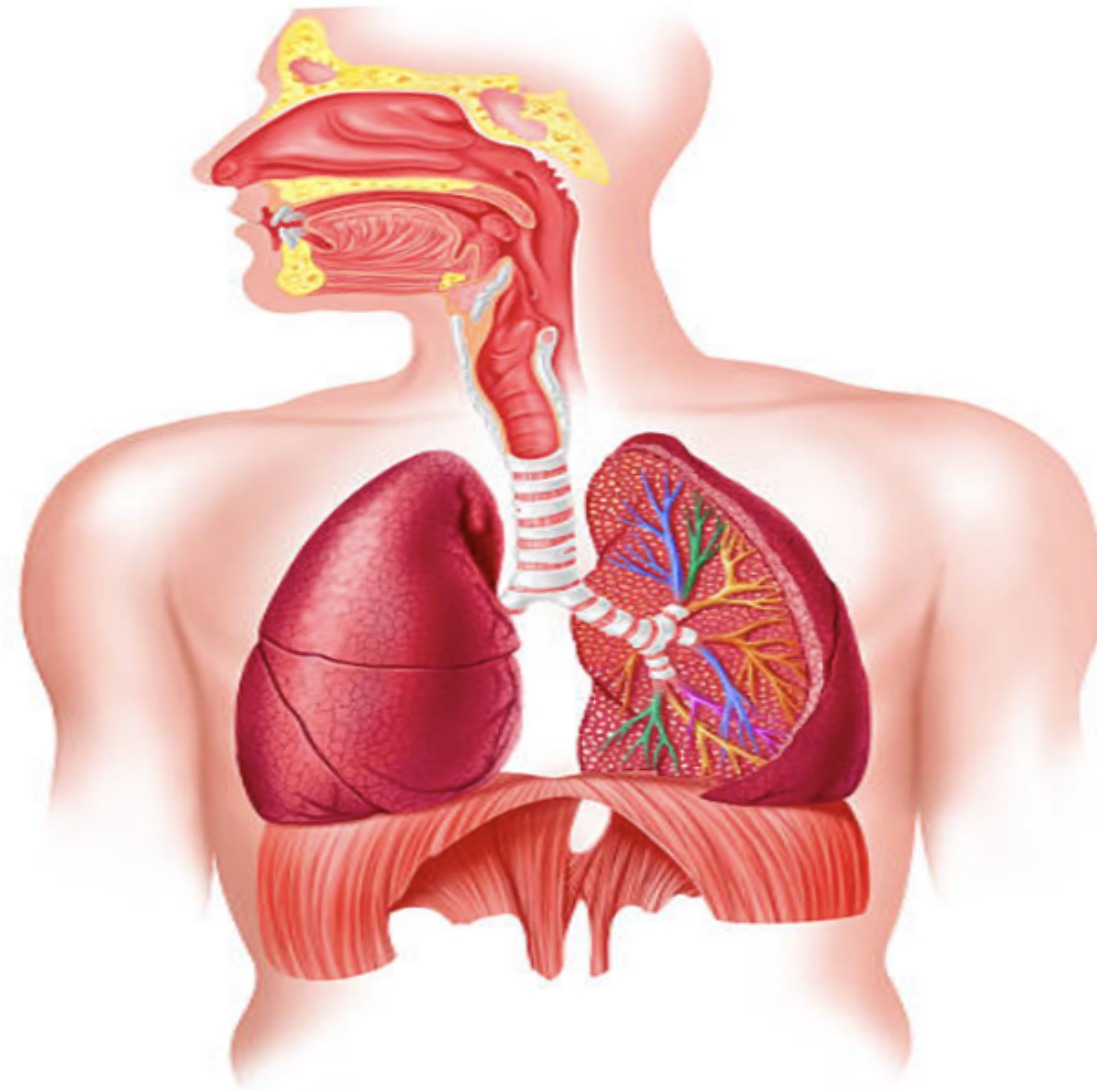
# Chain of Survival







# Respiratory System



# Choking



Choking can have many different causes such as,

- 🤢 food
- 🤢 foreign objects
- 🤢 allergic reactions
- 🤢 asthma attacks
- 🤢 severe bleeding
- 🤢 vomit/nausea
- 🤢 infections



# Choking

## Recognition



- 🙄 Grabbing at the throat area
- 🙄 struggling to breathing or speak
- 🙄 Cyanosis (blue/grey)
- 🙄 Eyes enlarged and watering
- 🙄 Signs of distress



# How to deal with choking

Try and encourage the infant/child to cough



# If this does not work deliver Back Blows (INFANT)

Try seated or kneeling position greatly assists in safely supporting the infant.

Support the infant's head by making a cradle with your fingers and thumb and supporting the jaw.

Give 5 sharp back blows with the heel of your hand in the middle of the back between the shoulder blades.

Checking the obstruction to see if it has dislodged with each blow.



## Back blows NOT successful (Infant)

### Administrate Chest thrusts

Support the infant down your arm

Give 5 chest thrusts on the lower sternum (use one or two fingers to carry this out). (Chest thrusts are similar to chest compressions but sharper and delivered slower).

Continue with 5 back blows and up to 5 chest thrusts until medical help arrives.

If the infant becomes unconscious, give 5 initial rescue breaths and commence CPR.



# If this does not work deliver Back Blows (child)

## BACK BLOWS

Lean the child forward and support their upper chest

Give 5 sharp back blows with the other hand.

Checking the obstruction with each blow has not dislodged

If after 5 back blows the obstruction has not removed, then administer up to 5 abdominal thrust (previously known as the Heimlich maneuver)





# Back blows NOT successful (Child)

## ABDOMINAL THRUSTS

Stand, sit or kneel behind the child.  
Place your arms under the child's arms  
and clench your fists placing it between  
the belly button and the lower part of  
the sternum.

Grasp both hands and pull sharply  
inwards and upwards.

If the obstruction has not cleared, call  
999/112 and continue with 5 back  
blows and 5 abdominal thrusts or until  
medical help arrives.

If the child becomes unconscious, give 5  
initial rescue breaths and commence  
CPR.





## Treating a choking child

**If the child is small, it may be easier to lay the child across your knee in to administer back blows. Children should be taken to receive medical attention**

**if they have received abdominal thrusts or, even with a cleared obstruction, they still have difficulty in swallowing or still feel as though they have an object stuck in their throat.**

## The circulatory system

### The circulatory system

The heart, blood vessels and blood for the main parts of the circulatory system. If the circulatory system malfunctions then this can lead to major life-threatening conditions and may cause health issues in the future. The amount of blood in an infant's or child's body is a lot less than an adult. With this in mind, extra care needs to be taken with an infant or a child who is bleeding

<b>Heart beats</b>	Infants <b>110-130</b>
<b>per minute:</b>	Children <b>90-110</b>

**The human body will malfunction if one third of blood has been lost. Blood pressure will fall very quickly and the situation will be critical.**



# BLEEDING

# Types of bleeding

## Internal bleeding

Happens when blood leaves from the circulatory system but remains inside of the body. Signs of internal bleeding can be visible, for example when the person coughs up blood or vomits blood

## External bleeding

Happens when the blood escapes from the circulatory system to the outside of the body for example, a cut.





## Arterial bleeding

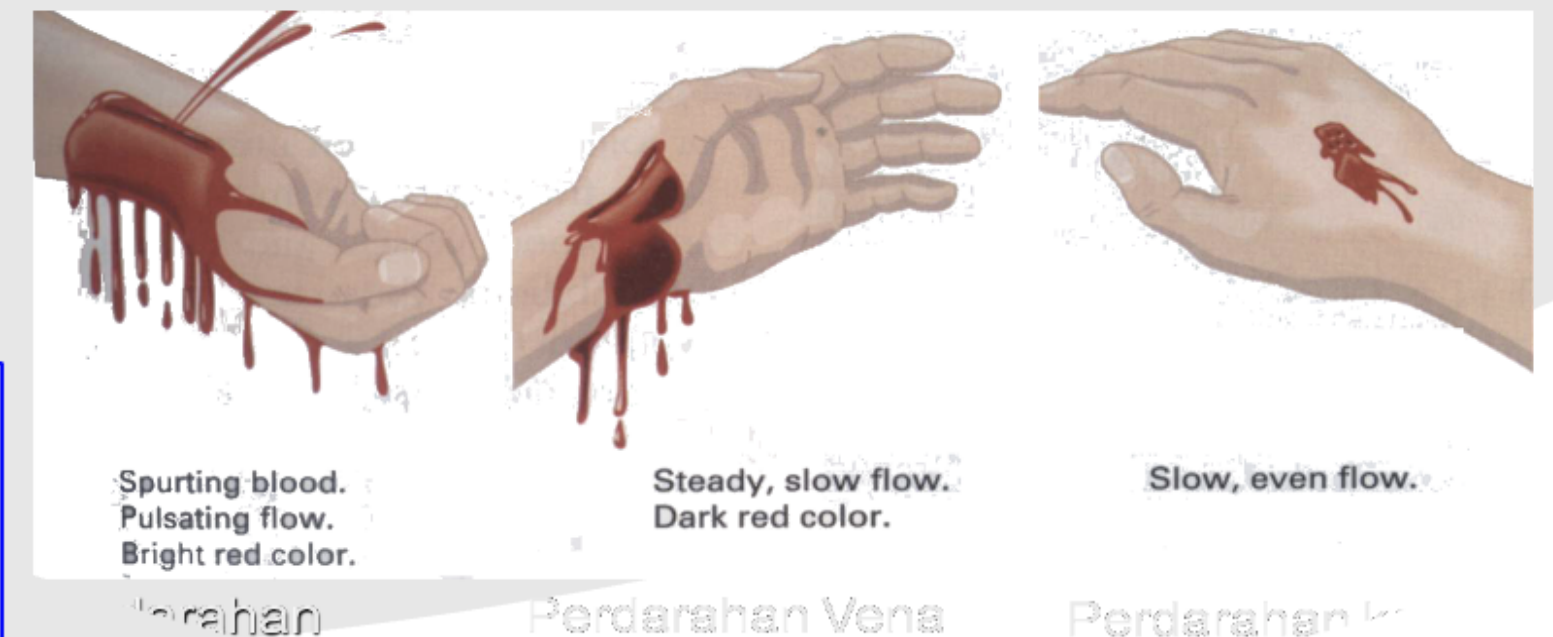
**Artery.** bright red in colour and the blood will pump from the cut/wound at the same time with the persons heartbeat (this is known as oxygenated blood)

## Venous bleeding

**Vein.** dark red in colour and will gush or flow from the cut/wound (this is known as deoxygenated blood)

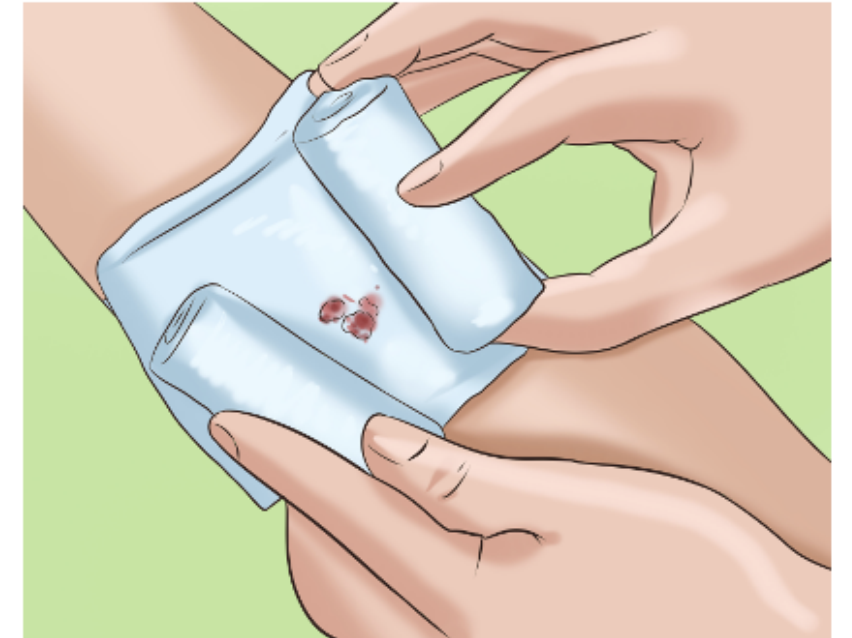
## Capillary bleeding


**Oozes from the cut/wound from underneath the skin, for example, bruising/contusion.**



# Treatment of bleeding

- B** Examine the wound
- B** Apply direct pressure onto the wound to try and stem the bleeding
- B** Apply a sterile dressing and elevate the injured part if possible
- B** If blood seeps through the first dressing apply a second
- B** Support and elevate the wound be prepared to treat for shock
- B** Do not allow smoking, eating or drinking , contact Emergency Services and monitor



- 
- B** If the blood seeps through a second dressing, then remove both dressings and start again.
  - B** Elevate the wounded part and if needed treat for shock
  - B** A triangular bandage can be folded to help support a limb. It also can be used to apply extra direct pressure over a sterile dressing

## Wounds with an embedded foreign object



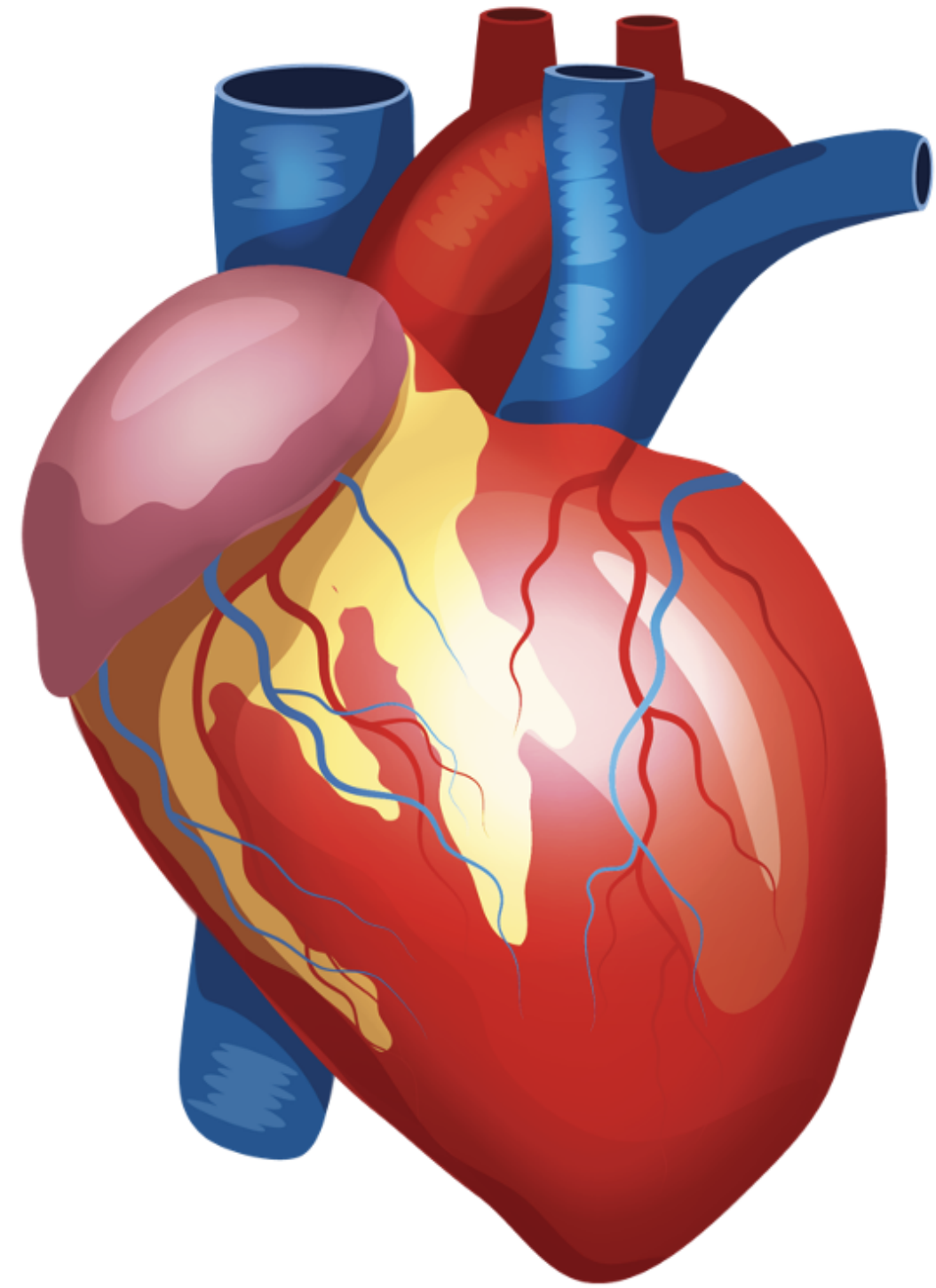


Use a rolled cloth or triangular bandage to make a donut ring



Call (999/112), monitor the infant or child and if required treat for shock

# Shock



# Physiological shock

## Recognition

A number of things can trigger Physiological Shock such as:

- 🤢 Major bleeding
- 🤢 Diarrhoea and/or vomiting
- 🤢 Poisoning
- 🤢 Witness an accident
- 🤢 Spinal or head trauma
- 🤢 Heart attacks and strokes





# How To Recognise

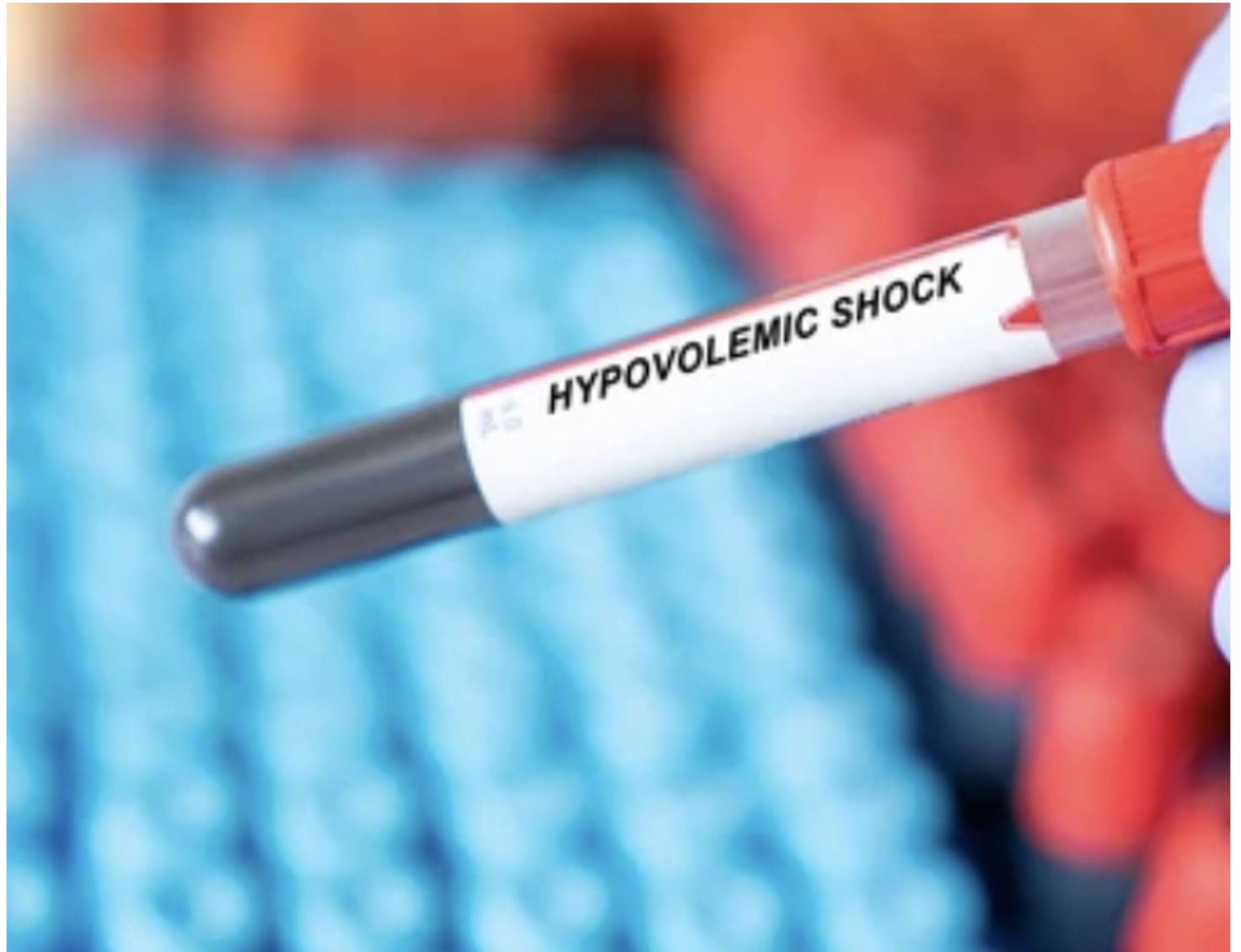
- 😬 A possible visible wound
- 😬 Blue/grey, cold, and clammy skin
- 😬 Fast weak pulse
- 😬 Narrow breathing
- 😬 Nausea/sick and thirsty

# Treatment

- Lay on a flat surface and raise the leg of the child and above the level of the heart
- Loosen any restricted clothing
- Keep the child warm and comfortable
- Monitor the child
- Never give food or drink as it may induce vomiting
- Call 999/112)



# Hypovolemic shock





## Hypovolemic shock may be caused by

loss of blood  
diarrhoea  
vomiting  
heat stroke  
Burns  
poor fluid intake





# Recognition



Pale and clammy skin

Fast breathing

Anxious

Weak pulse

Need to urination

General weakness

# Treatment

Call **999/112**

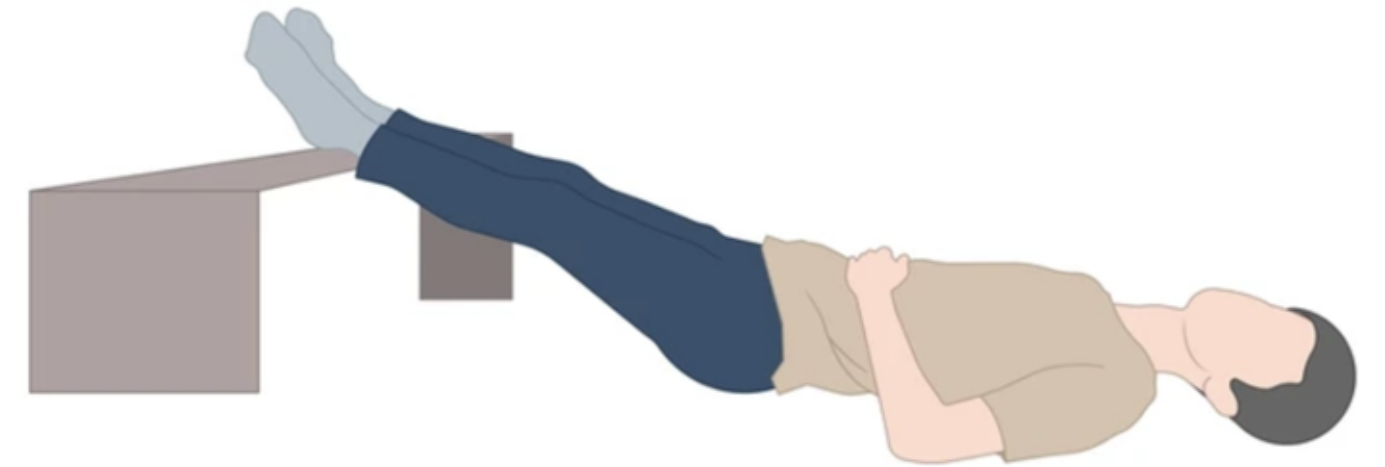
Treat for any bleeding

If possible lay the child down and raise their legs

Keep them warm

Do not give any fluids or food

Check their airway and breathing





# Minor injuries



Minor injuries are not life-threatening conditions; however, if they are left untreated, they may lead to infection and other complications.

They are common for infants and children and are an unhappy part of growing up.

The most common minor injuries are:

😓 minor cuts

😓 grazes

😓 bruises



# Minor cuts and grazes

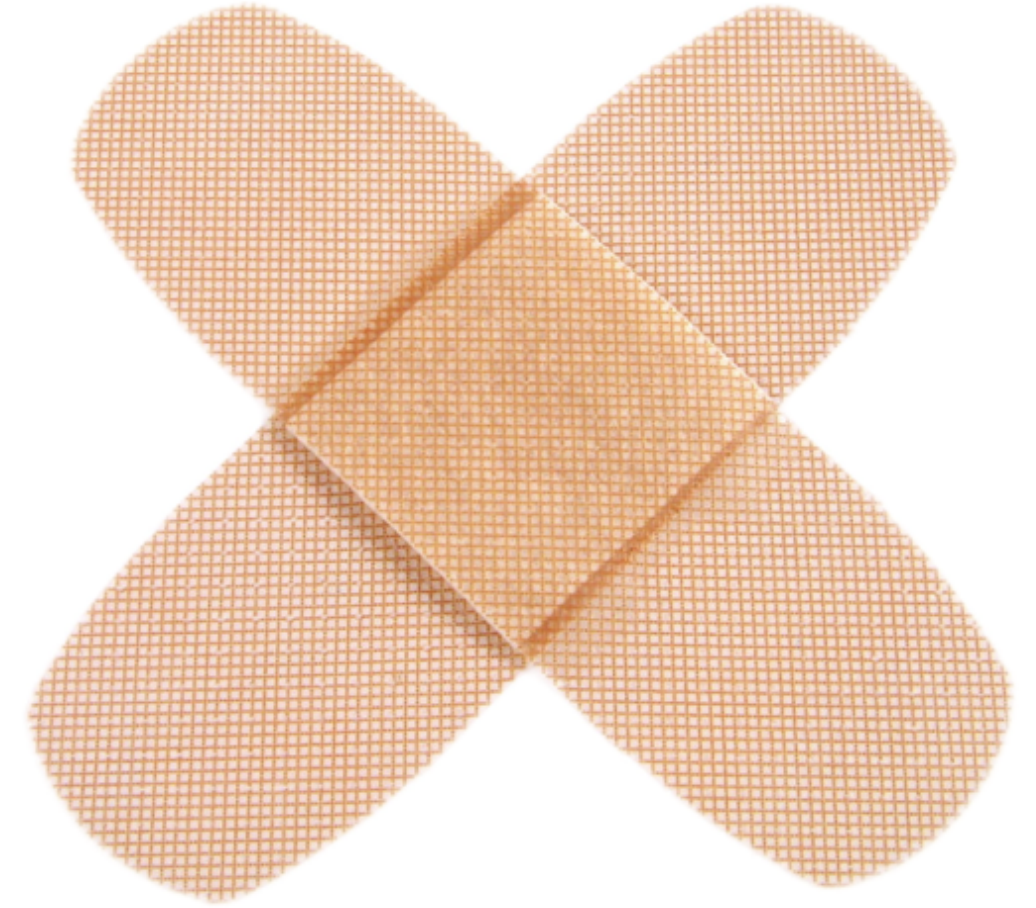
## Minor cuts

**Minor cuts seem to be the most painful and sometimes hardly bleed however.**

## Grazes

**A graze (or abrasion) is a scraping or rubbing away of the skin surface. Grazes are superficial and usually heal within 2 weeks with self-care.**

# Treatment Minor cuts and grazes



- 👨⚕️ Check for any type of embedded objects
- 👨⚕️ Clean around the affected area with a sterile cleansing wipe
- 👨⚕️ Apply direct pressure to the wound
- 👨⚕️ Apply a dry sterile dressing or hypoallergenic plaster to the wound



# Bruises

## Contusions (bruises)

The medical term for a bruise is a contusion. **Injuries to bones, muscles, and the tissue just under the skin** can cause bruises.

### Treatment

**Rest** *the area where the bruise is*

**Apply Ice**, inside a bandage/sock

**Compress** *the area*

**Elevate** *where at all possible*

# Small splinters



**Splinters are an object that is embed into the skin. It can be either fully or partially**

**Splinter can often be painful and are a common occurrence that can be caused by things like;**

- 👉 pieces of glass
- 👉 wooden splinters
- 👉 plastic splinters
- 👉 metal splinters

# Treatment (partially embedded)

- ✓ Clean the area around the splinter
- ✓ check that your tweezers are sterile
- ✓ Draw the splinter out in the direction of the entry
- ✓ check for signs of possible infection.





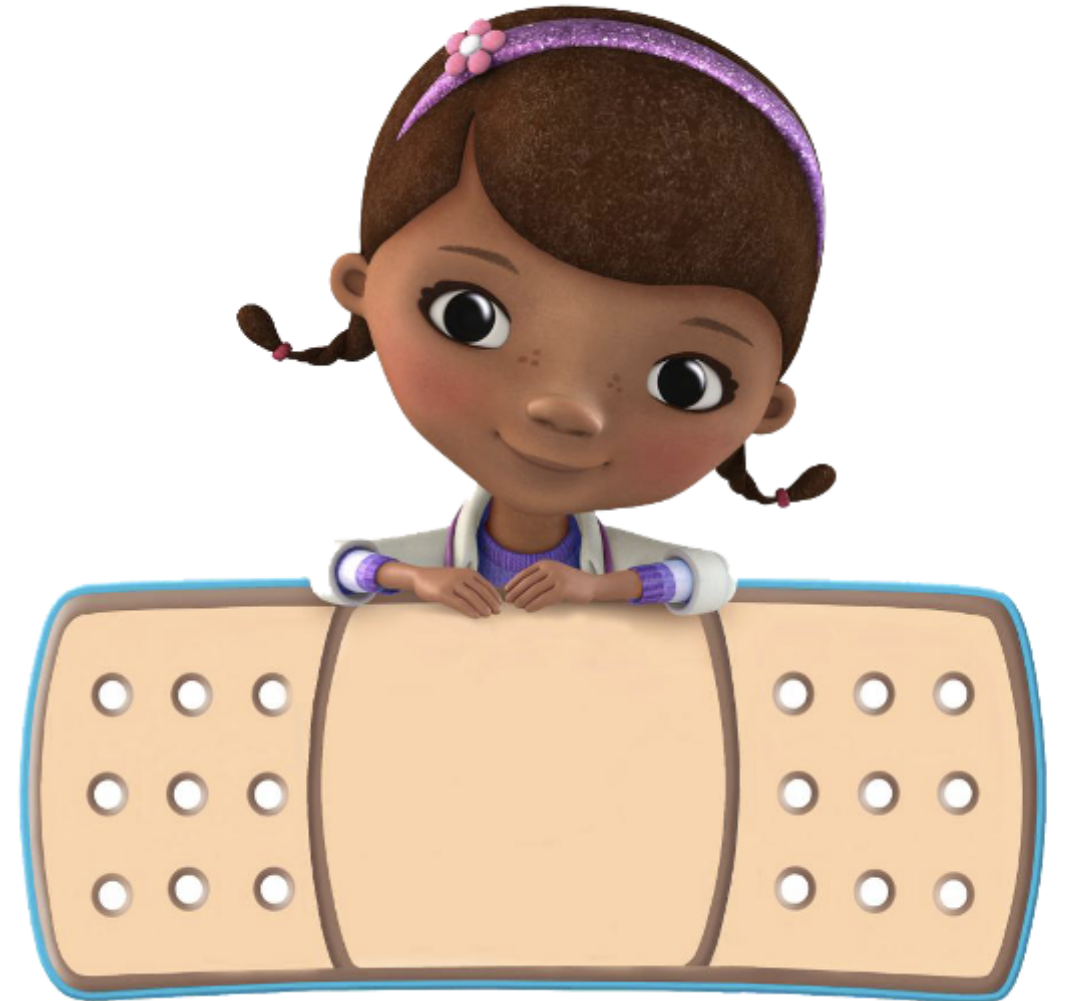
# Treatment (fully embedded)

Clean the area in and around the splinter

Fully embedded splinters use what's called the 'drawing technique'

👉 put a plaster over the splinter and leave overnight

👉 remove the plaster and check if the splinter has been drawn



# Nosebleed

**Nosebleeds are often caused by:**

- 🔴 direct blow anywhere on the nose
- 🔴 vessels in the nose bursting due to picking or blowing
- 🔴 increase in high blood pressure



# Treatment



👉 try sitting the child down and get them to lean forward. For an infant you may have to position them

👉 pinch the soft part of their nose. If they can't you will need to do it for them

👉 keep the pressure for about 10 minutes and release slowly

Repeat if the bleeding is still present

don't allow them to blow  
or pick their nose

after 20 minutes and the  
nose is still bleeding then  
seek medical help







## **Paediatric Illness, Injuries & Emergencies**



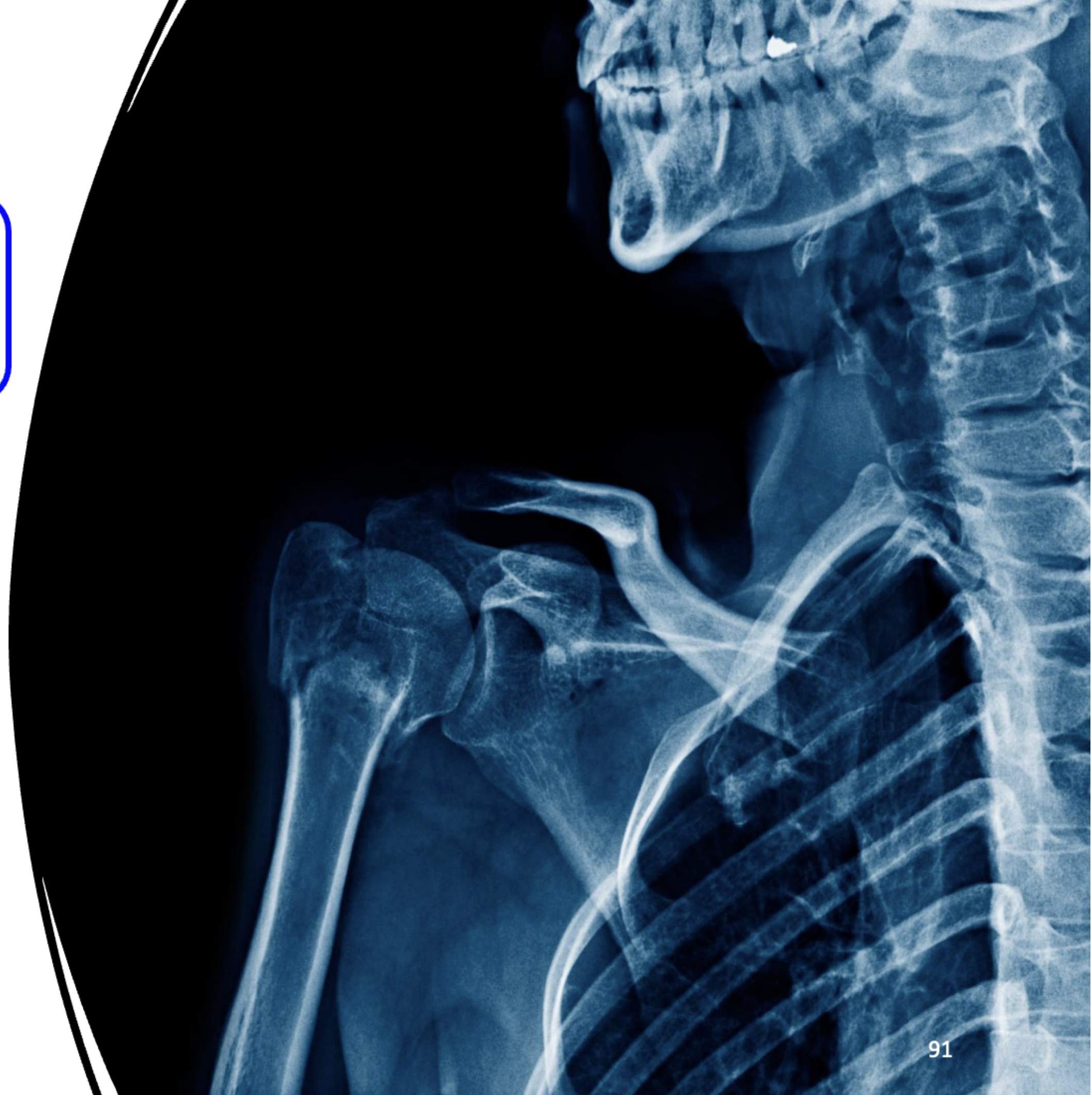


**Muscles Joints & Bones,**



# Fractures

**A fracture can be a chip, crack or break in a bone and often caused by direct or indirect force**





# Types of fractures for children



Greenstick



Simple



Open



Comminuted



# Recognition

- 😞 Painful with possible bruising or/and swelling
- 😞 an open fracture, maybe bleeding
- 😞 loss of mobility & deformity
- 😞 Nausea, pale and clammy skin
- 😞 Crepitus or creaking of the bone or joint
- 😞 not be able to move the injured limb.



# Treatment for fractures

- ✓ Put your PPE on
- ✓ Treat any any bleeding
- ✓ Immobilise in the position found
- ✓ Check for signs shock
- ✓ Call **999/112**



# Dislocations

A joint dislocation occurs when there is an abnormal separation in the joint

## Recognition

**Painful**

**Swelling around the area**

**Loss of any movement**





# Treatment

- ✓ **Put your PPE on**
- ✓ **Treat any bleeding**
- ✓ **Immobilise in the position found**
- ✓ **Check for signs shock**
- ✓ **Call 999/112**



**Treat dislocations the same as a fracture**

Apply a sling to  
keep it elevated







# Sprains and strains

The difference between a sprain and a strain is that a **sprain injures the bands of tissue that connect two bones together**, while a strain involves an injury to a muscle or to the band of tissue that attaches a muscle to a bone

## Recognition

### SPRAIN

Possible injury which is caused by the ligaments being over stretched

-  Pain at the site on the injury
-  Swelling around the injury
-  Bruising
-  Loss of mobility.



# Treatment

R



Rest

I



Ice

C



Compress

E






Elevate





# Head, Neck & Back Injuries

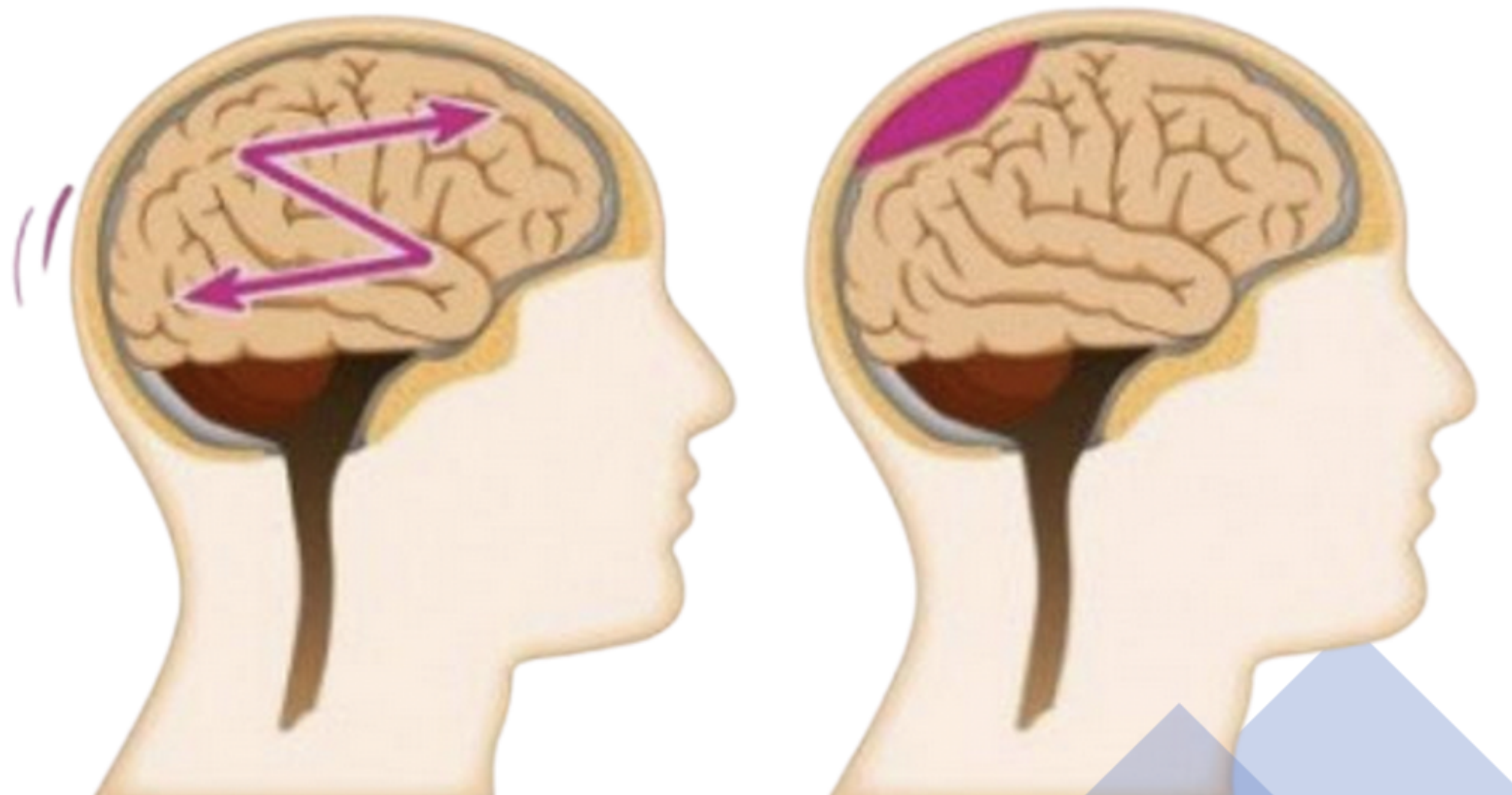
# Main types of head injuries

-  cerebral compression
-  concussion
-  skull fracture.

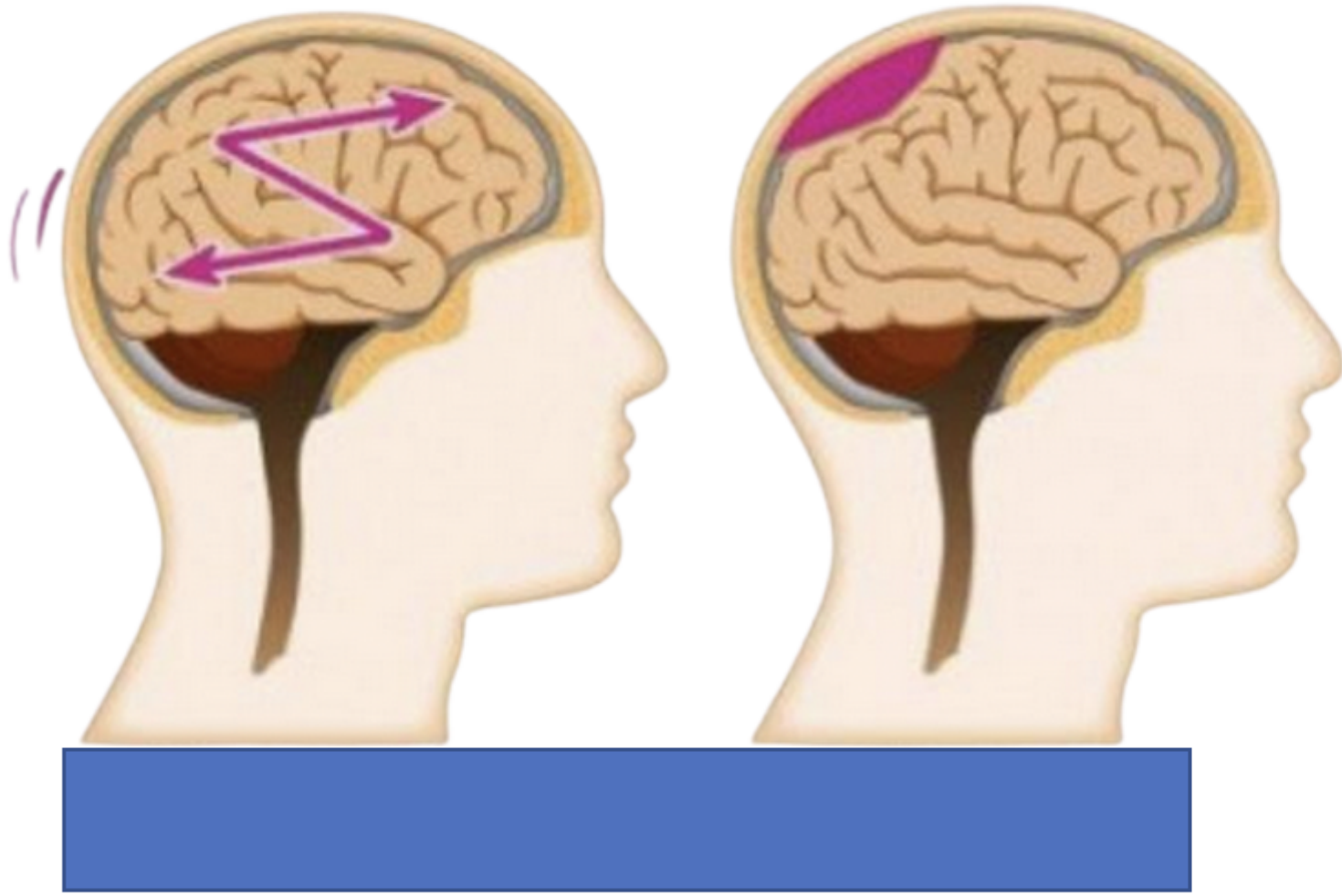


# cerebral compression

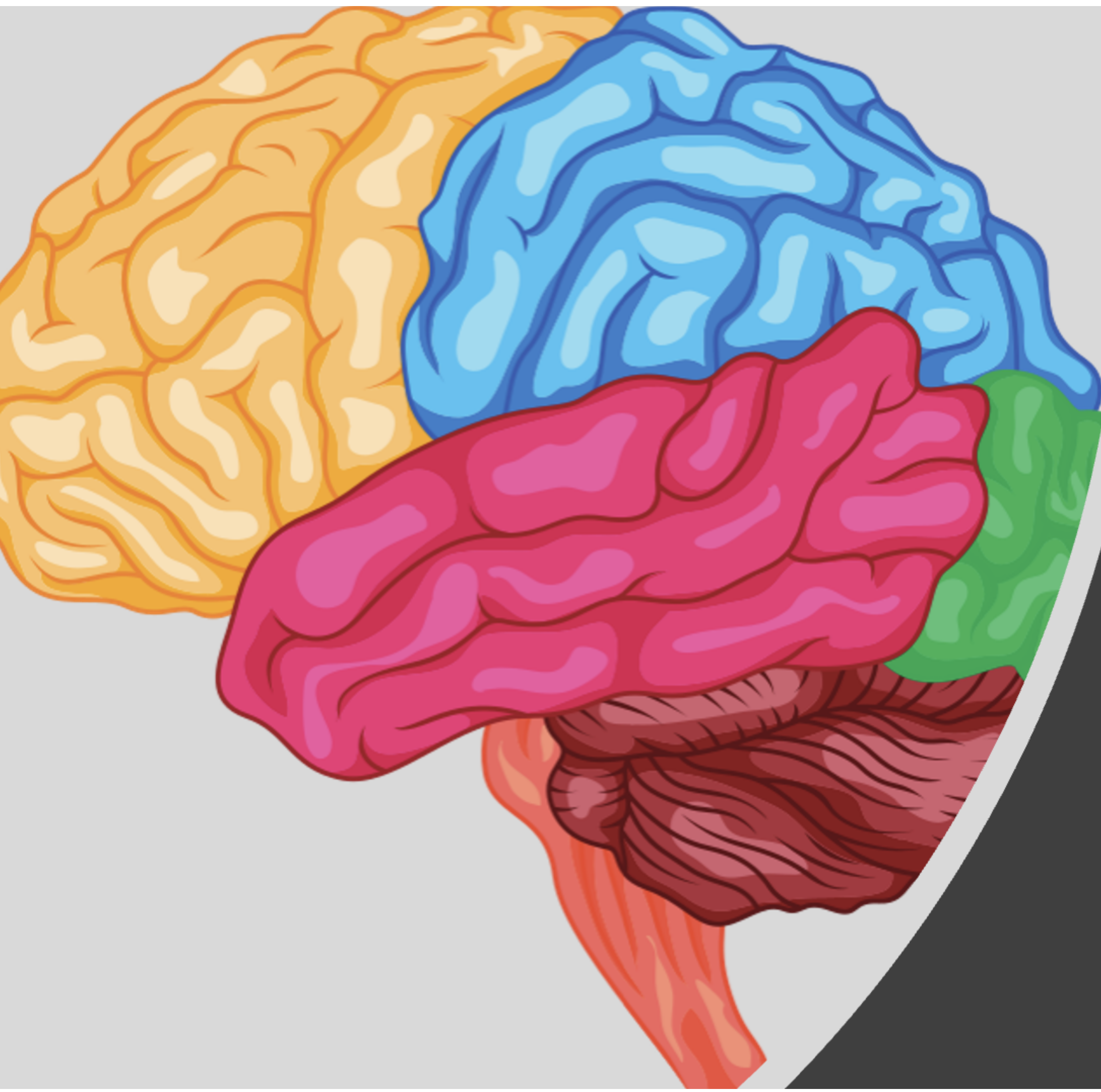
Cerebral compression is a build up of pressure on the brain. This is caused by the brain tissue swelling or a growth/build up of blood.



# Recognition



- strong headaches
- drowsiness
- Fast pulse
- pupil sizes been unequal
- weakness or paralysis down the body
- Heavy breathing.



# Concussion





- A brief loss of consciousness
- Dizziness
- Pain & Headache
- Short memory loss
- Blurry vision

# Skull fracture

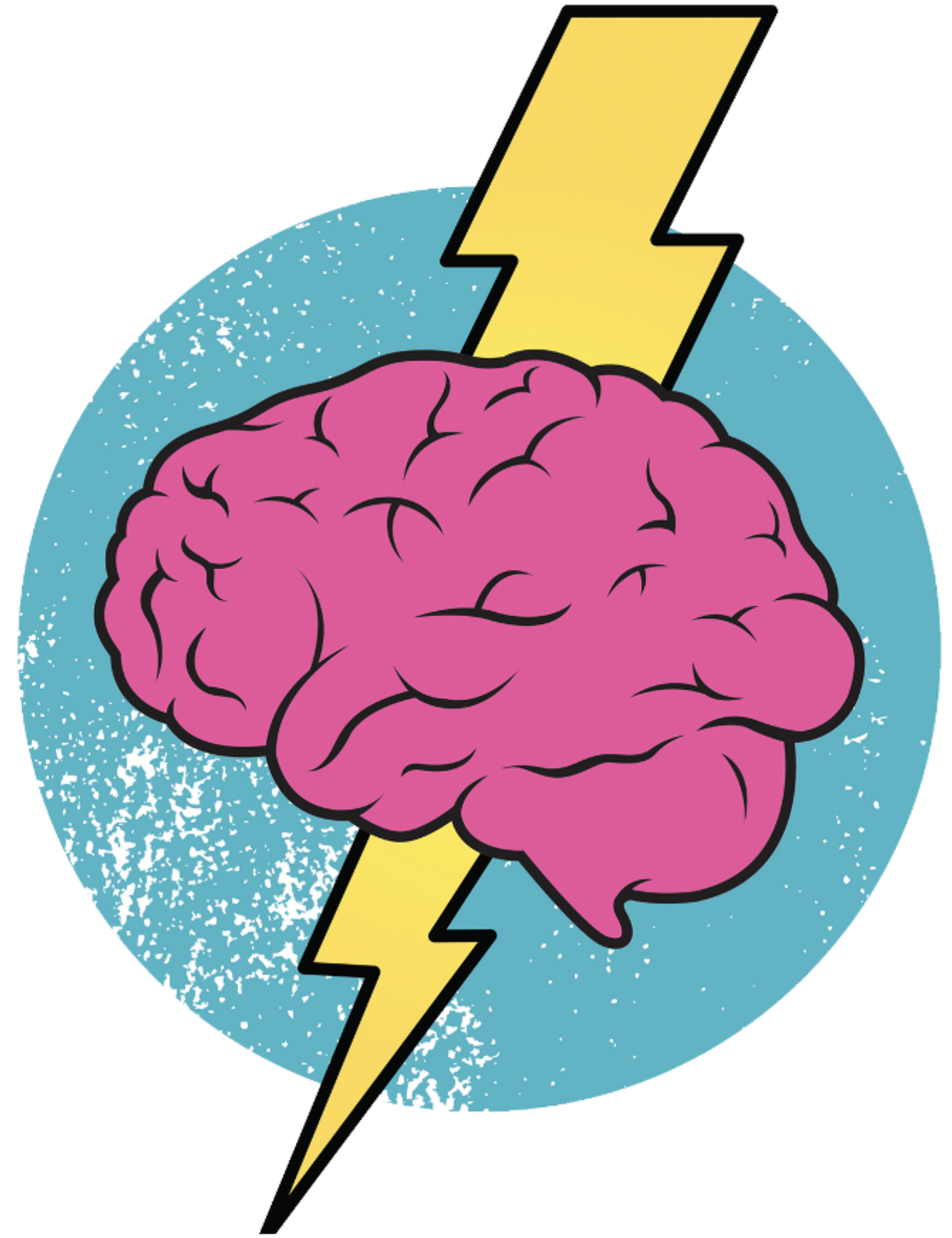
Can be open or closed and caused by a direct or indirect blow to the head





# Recognition

- ⚡ Signs of a wound
- ⚡ Very Painful
- ⚡ Depression visible in the skull
- ⚡ Bruising and/or swelling
- ⚡ Cerebrospinal fluid (CSF) discharging from the from ears and nose





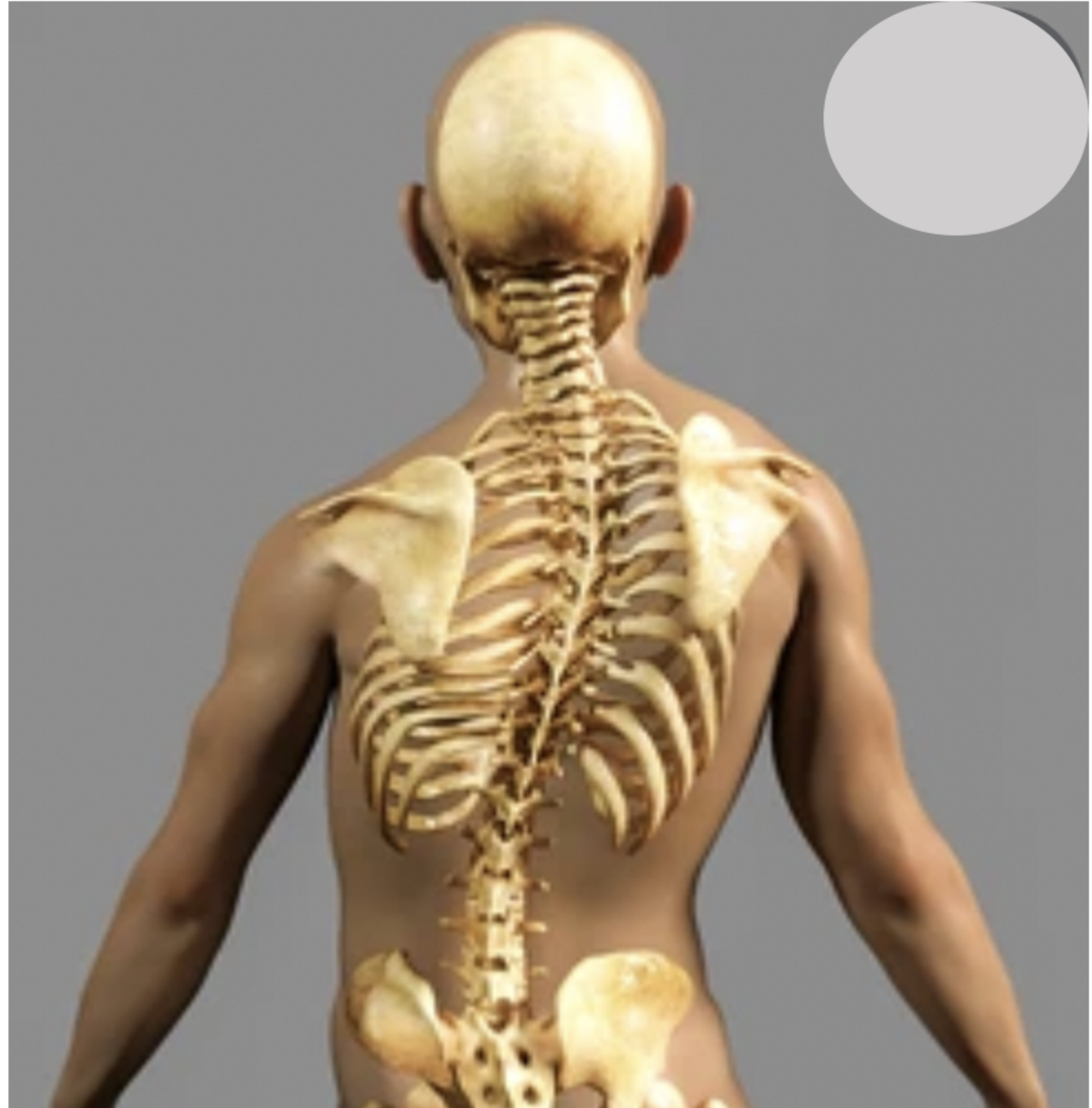
# Treatment in general

- 🧑🏻 Call 999/112
- 🧑🏻 Control any bleeding and CSF
- 🧑🏻 Place the child on a flat surface and their head and shoulders raised
- 🧑🏻 Monitor and be prepared to carry out CPR



## Neck and back injury

A serious injury where the spinal cord becomes damaged. It could result in paralysis or even death





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## Recognition

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- 👩 Painful around at the site of the injury
- 👩 loss/lack of mobility
- 👩 weakness and pins and needles sensations
- 👩 loss of bladder control
- 👩 Possible signs of shock.

**Treatment - conscious  
INFANT or CHILD**

**Call 999/112**

**Leave them in the position found  
and try keeping them still**

**Don't ask questions that require  
a shake of the head**

**Monitor and Keep them warm**

**Treatment – unconscious  
INFANT or CHILD**

**Check breathing; if not,  
commence CPR**

**If breathing NEVER move unless  
in danger**

**Call 999/112**

**Keep them warm and monitor**

**Keep the head and spine in line**








# Seizures

A seizure is a **sudden, uncontrolled electrical disturbance in the brain**. It can cause changes in your behaviour, movements or feelings, and in levels of consciousness. Having two or more seizures at least 24 hours apart that aren't brought on by an identifiable cause is generally considered to be epilepsy.





## Causes of epilepsy in infants include:

-  lack of oxygen, from birth and infection of the brain
-  genetic
-  Unusual brain development in the mothers womb
-  Meningitis/septicaemia
-  febrile seizures

# Partial (minor) seizures

---

A partial (focal) seizure happens when **unusual electrical activity affects a small area of the brain**. When the seizure does not affect awareness, it is known as a simple partial seizure. Simple partial seizures can be, Motor - affecting the muscles of the body. Sensory - affecting the senses.



# Recognition

- 👤 Staring into thin air
- 👤 Mood swing changes
- 👤 The feeling of déjà vu
- 👤 Pins and needles
- 👤 Twitching





# Treatment

- ☹️ Ensure that they are safe and clear everything around
- ☹️ Remain with them and time the episode
- ☹️ If it is the first seizure get them medical attention immediately



# Generalised seizure (major)



Convulsive movements



Rigidity and arching of the back



Sudden unconsciousness, and often lets out a cry



Cyanosis (blue/greyness around the lips)



Possible loss of bladder or bowel control



Frothy saliva may appear at the mouth. This could be blood-stained if they have bitten their tongue or lips

*After a few minutes, the muscles may relax, and breathing will return to normal*

*They could recover not knowing what has just happened*

*They will be tired and could fall into a prolonged sleep*

- Support or ease the casualty's fall
- Make space around the casualty
- Keep bystanders away
- Protect the child's head
- Record the duration of the seizure
- NEVER** restrain the child
- Do not put anything in their mouth

**Call 999/112 if,**  
**Seizures are repeated**  
**Seizure lasts longer than 5 minutes**  
**First seizure**





# Acute Conditions

---

Acute conditions are **severe**  
**and sudden in onset.**



# Sickle-cell anaemia

A severe hereditary form of anaemia in which a mutated form of haemoglobin distorts the red blood cells into a crescent shape at low oxygen levels. It is commonest among those of African descent.



Normal red blood cells

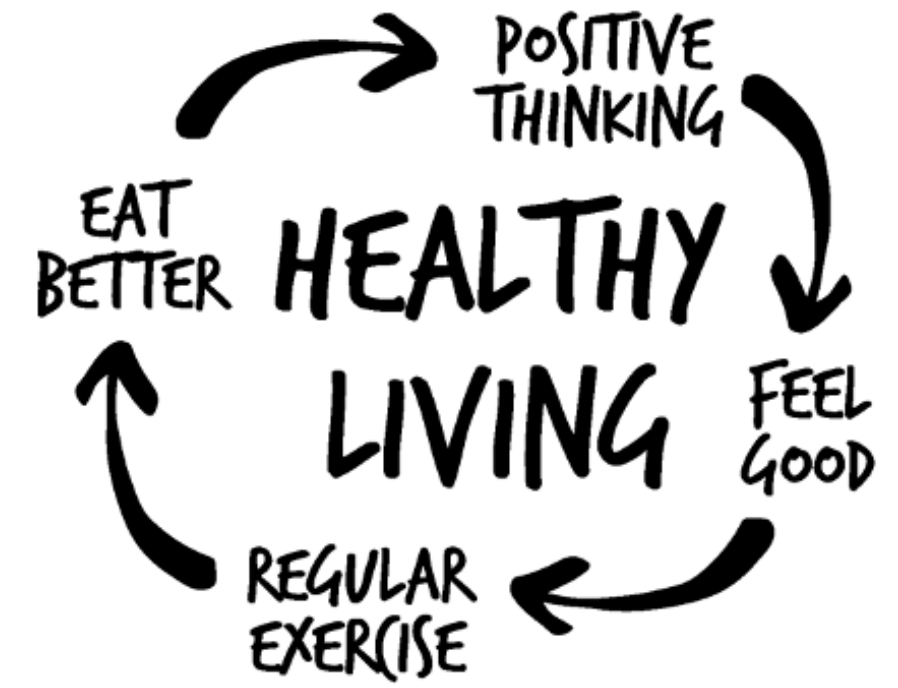


Sickled red blood cells

**Protective measures can help assist minimising the possible risk of a sickle-cell anaemia occurring such as,**

- 🍏 drink plenty of water
- 🍏 exercise regularly
- 🍏 eat a healthy balanced diet

*avoid common triggers such as,  
extreme heat or cold  
stressful events*





# Signs and symptoms

- 👤 Swelling in the hands and/or feet
- 👤 Drowsiness
- 👤 Fever and high temperature
- 👤 Associated infection (pneumonia or meningitis)
- 👤 Struggle to breath
- 👤 Jaundice



## Treatment

- 👤 Implement the child's care plan
- 👤 Give medication as in the care plan
- 👤 If the infant or child has severe pain call **999/112**
- 👤 If no care plan is in place call **999/112** immediately.

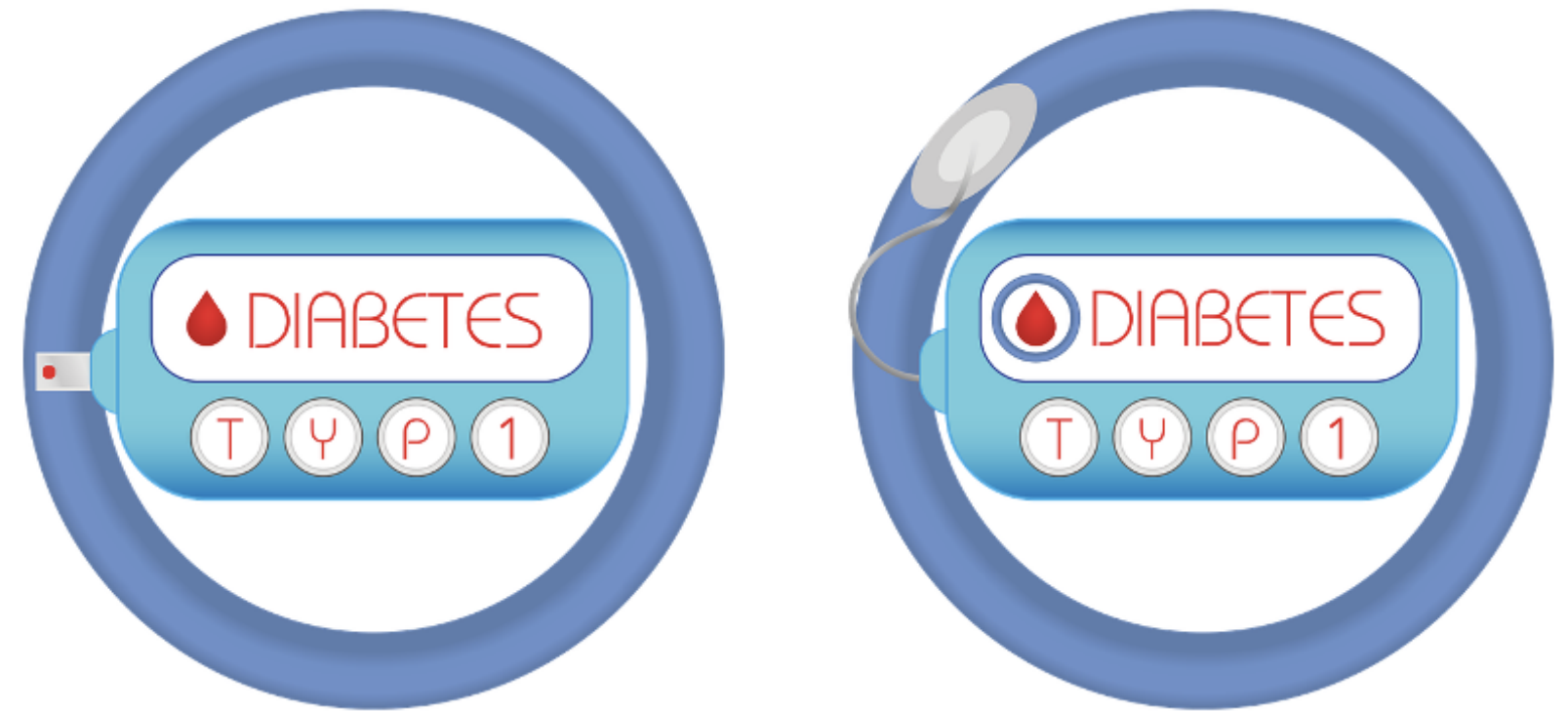


# Diabetes

**Diabetes is a disease that occurs when your blood glucose, also called blood sugar, is too high or too low**

**Diabetes is placed into two categories:**

- 👤 hypoglycaemia
- 👤 hyperglycaemia.





## **HYPOGLYCEMIA** (too little sugar)

Shakiness



Dizziness



Nervousness



Sweating a lot



Hunger



Headache



Pale face



Clumsiness



Confusion



Trouble paying attention



Tingling around the mouth



Passing out (fainting)



## **HYPERGLYCEMIA** (too much sugar)

Going to the bathroom a lot



Really thirsty



Feeling tired



Feeling weak



Blurry vision (hard to see clearly)



Feeling hungry even after a meal





# Hypoglycemia

Ask the child to take their glucose tablets. If glucose tablets are not available, use other dietary forms of sugar (e.g. jelly babies/non-diet fizzy drinks).

---

If there is no improvement in their condition then call **999/112**



# Hyperglycaemia

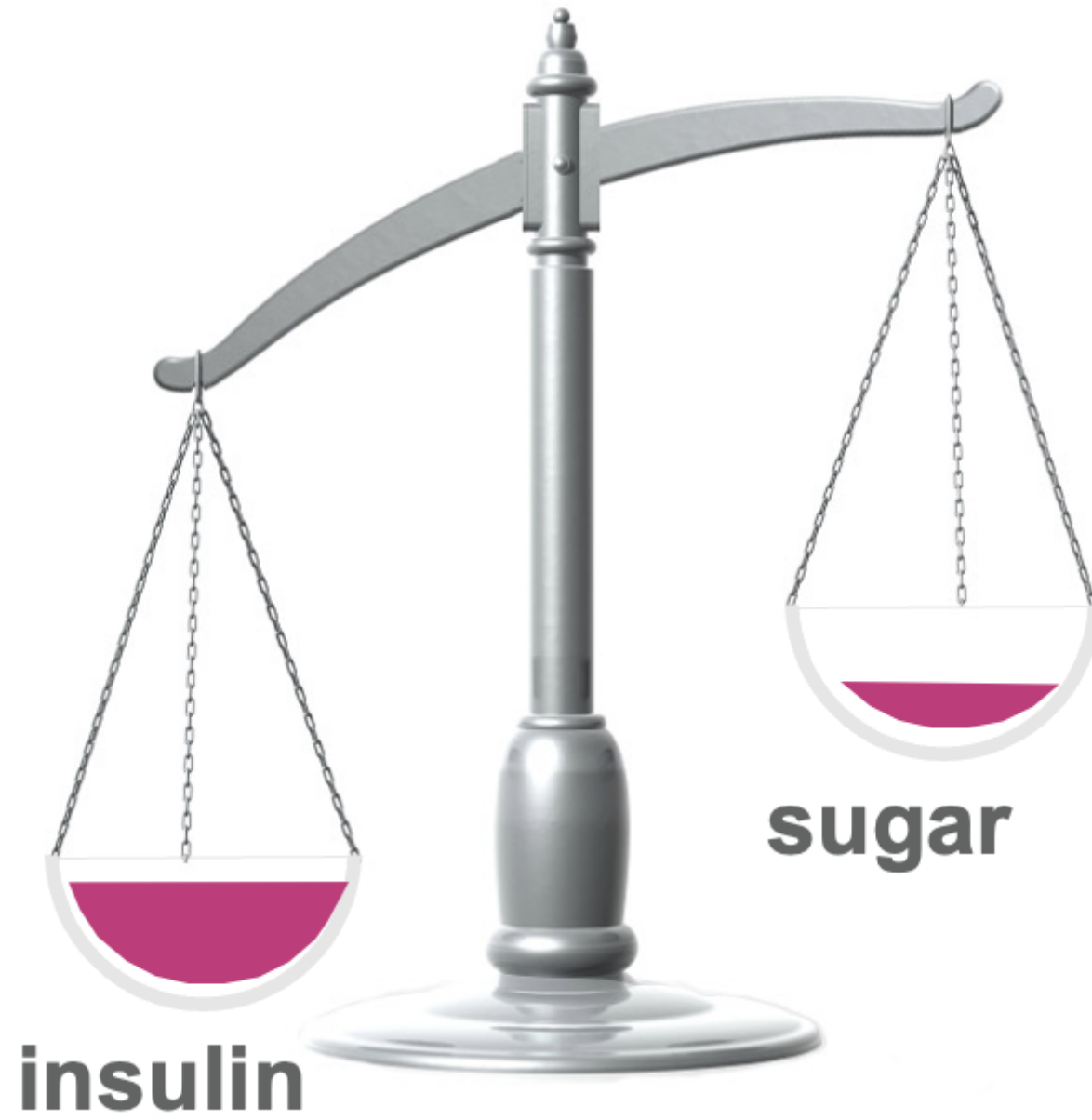
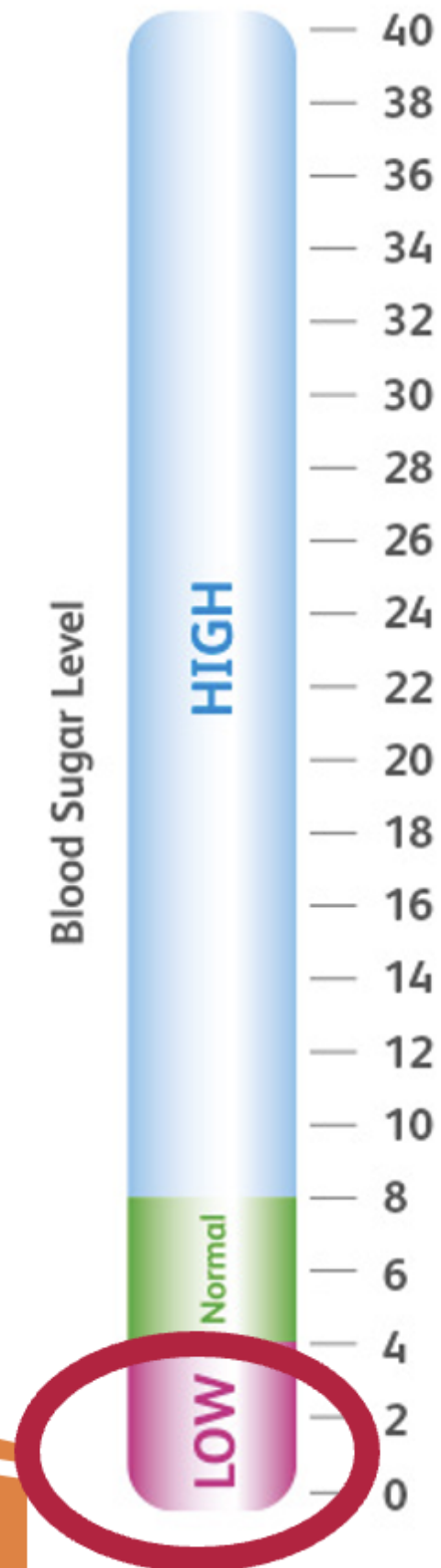
Encourage the child to take their medication

If the child has not been diagnosed then call **999**

Monitor the child; if they become unconscious carry out CPR







Overdosed  
on insulin

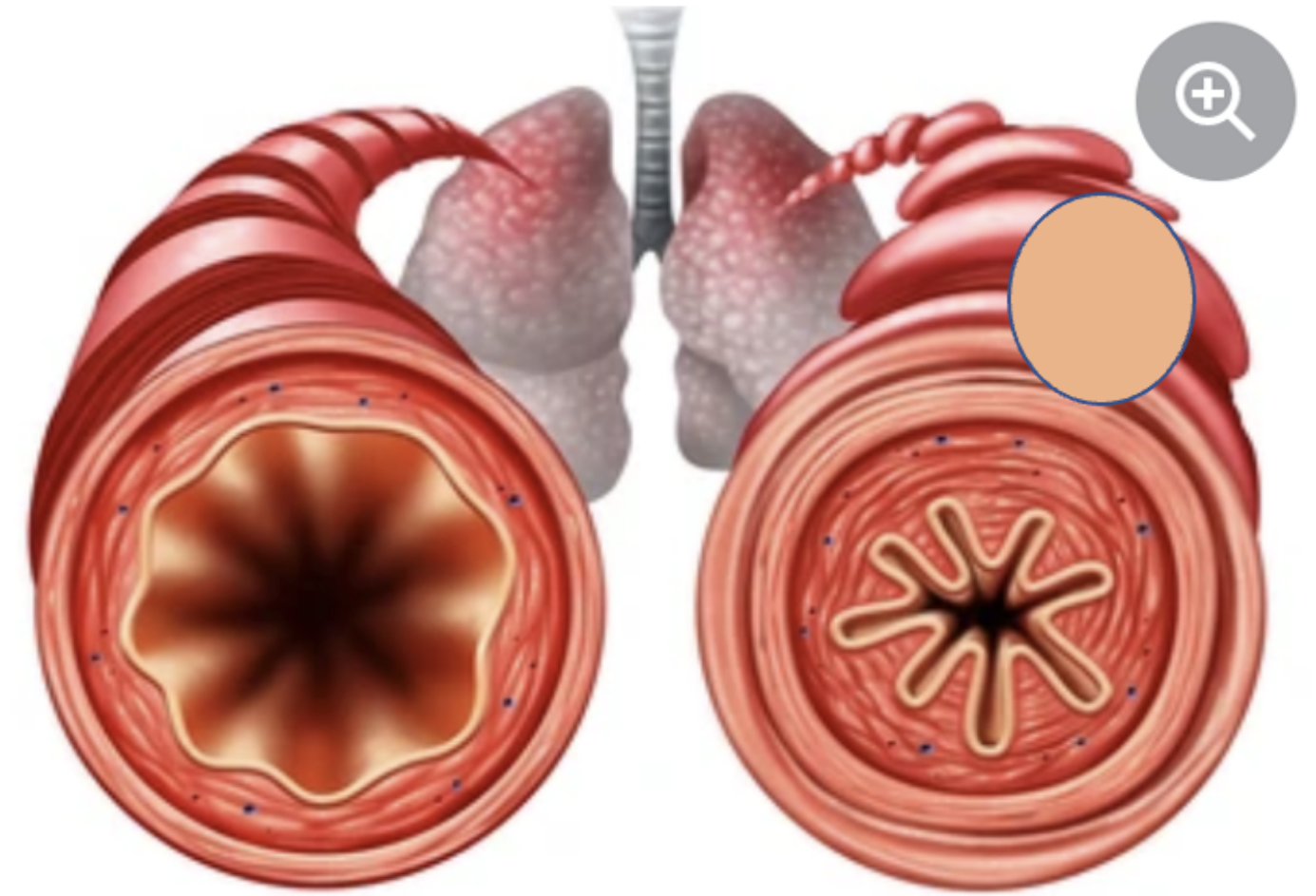
Or not eaten  
enough food;

Or over  
exercised.

# Asthma

Asthma is a condition that affects the airway.

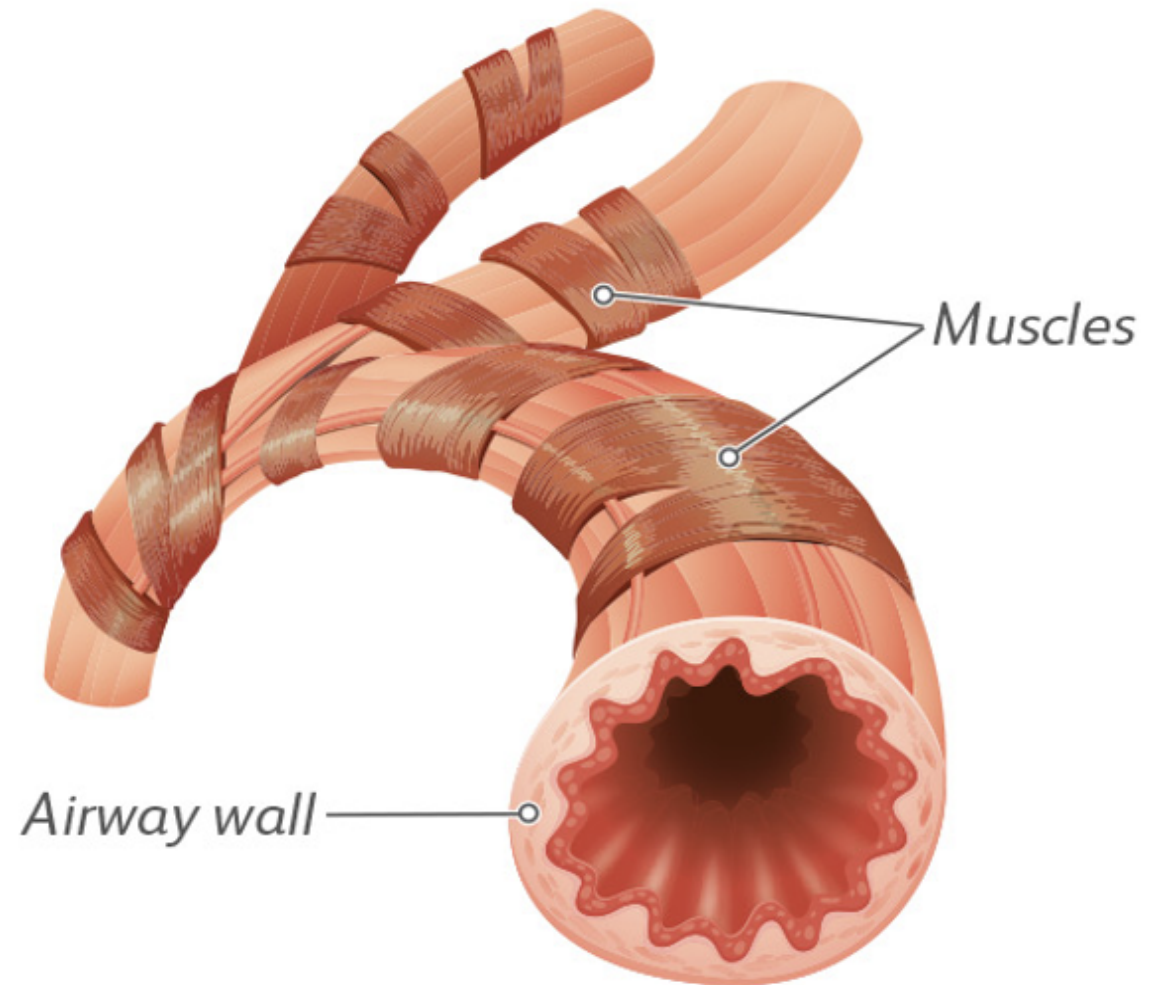
During an asthma attack the muscles around the respiratory system go into spasm



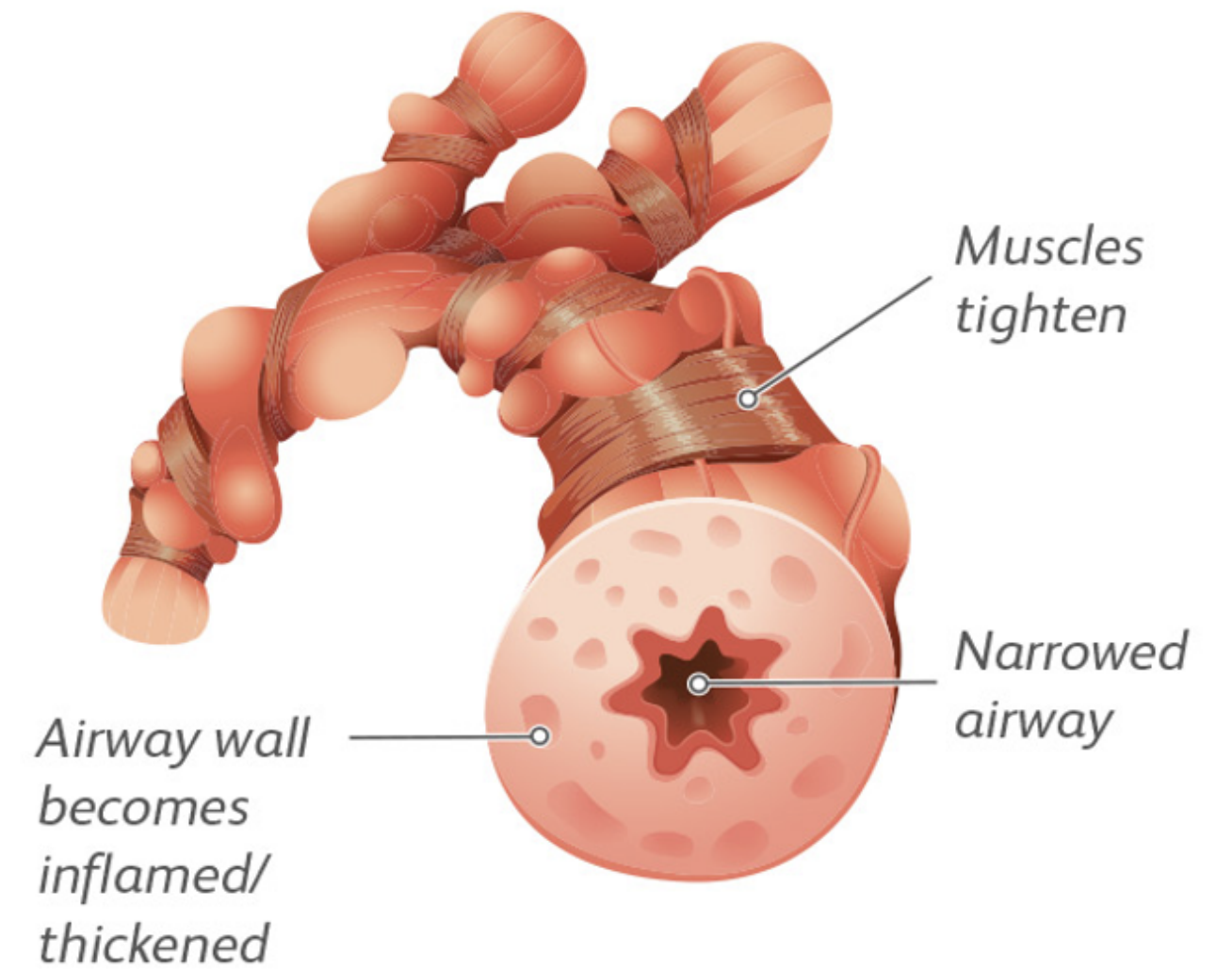
**there are several 'asthma triggers' such as dust,  
pet fur and house dust**

# Asthma

Normal airway








Airway during asthma attack





# Signs

-  Gasping for breath
-  Wheezing
-  Tightness in the chest area
-  Coughing
-  Cyanosis (grey/blue lips and skin colour)



# Treatment

- 🩺 Help them to sit down
- 🩺 Make sure they use/take their medication (inhaler)
- 🩺 Reassure them
- 🩺 If the attack is prolonged call **999/112**
- 🩺 Be prepared to carry out CPR



**Silence** in asthma  
is not good.  
It is **deadly**.





## DO:



- Keep the casualty upright
- Use a spacer device if possible

## DO NOT:



- Lay the casualty down
- Take them outside in cold air



# Meningitis and Septicaemia

## Meningitis

**Meningitis is the inflammation of the membranes and linings which protects and surrounds the spinal cord and brain**

## Septicaemia

**Meningitis and septicaemia can occur together. Septicaemia (blood poisoning) is the bacterial infection of the blood caused by meningitis.**



# Red Flag early warning signs!

---

- 🚑 Cold hands and feet
- 🚑 Pain in the limbs or joints
- 🚑 Abnormal skin colour (pallor or mottling)

## Other signs, which can occur later:

- 🚑 Fever and vomiting
- 🚑 Rash that doesn't fade with tumbler test
- 🚑 Drowsiness or lowered levels of consciousness
- 🚑 Severe headache
- 🚑 Stiff neck
- 🚑 Dislike of bright lights





			Meningitis	Sepsis
Earlier Signs	<ul style="list-style-type: none"> <li>Initial source of infection</li> </ul>	Spreads from a localised infection e.g. meningitis, a chest infection, or urinary infection		✓
	<ul style="list-style-type: none"> <li>High temperature (<i>fever</i>)</li> <li>Chills / shivering</li> </ul>	Brain raises body thermostat to try fight infection	✓	✓
	<ul style="list-style-type: none"> <li>Low temperature</li> </ul>	Less commonly, body temperature can become very low		✓
	<ul style="list-style-type: none"> <li>Rapid heartbeat / fast pulse</li> </ul>	To try maintain blood pressure		✓
	<ul style="list-style-type: none"> <li>Fast breathing</li> </ul>	Response to impaired respiration		✓

			Meningitis	Sepsis
Severe Sepsis	<ul style="list-style-type: none"> <li>Severe difficulty in breathing</li> </ul>	Damaged blood flow in the lungs		✓
	<ul style="list-style-type: none"> <li>Pale, mottled skin</li> <li>Blue tinges to skin (<i>cyanosis</i>)</li> </ul>	Reduced blood flow to the skin		✓
	<ul style="list-style-type: none"> <li>Confused, agitated or delirious</li> <li>Slurred speech</li> <li>Dizzy or faint</li> <li>Sleepy, vacant or difficult to wake</li> </ul>	Reduced blood flow to the brain  Pressure on the brain with meningitis	✓	✓
	<ul style="list-style-type: none"> <li>Cold hands and feet</li> <li>Pain in limbs or joints</li> </ul>	Blockages in blood flow to the limbs		✓
	<ul style="list-style-type: none"> <li>Rash (<i>anywhere on the body</i>) may start like pin pricks</li> <li>Does not fade when squashed with a glass tumbler</li> </ul>	Damaged capillaries bleeding under the skin <i>With meningitis, this may happen if the infection spreads into the bloodstream, causing sepsis.</i>	✓	✓



# Septicaemia Rash





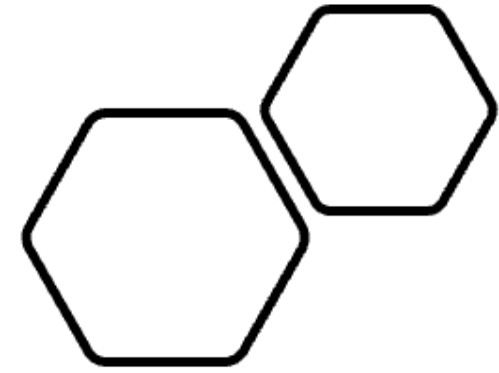
# Glass test

- ❏ press a glass over the spots/rash
- ❏ if the spots/rash don't fade under the pressure of the glass then this could indicate meningococcal septicaemia Call **999/112** immediately
- ❏ if the spots/rash fade when the glass is rolled over the skin, the condition may not be as serious, however keep checking as it may develop into a rash that does not fade.



# Anaphylactic shock

Anaphylaxis is a serious, potentially fatal allergic *reaction* and medical emergency that is rapid in onset and requires immediate medical attention.







Triggers



# Signs of Anaphylactic shock

- 🐛 Swollen eyes, lips, hands, and feet
- 🐛 Itching
- 🐛 Sore, red, itchy eyes
- 🐛 Changes in heart rate
- 🐛 Anxiety or apprehension
- 🐛 Itchy skin or nettle-rash (hives)
- 🐛 Unresponsive due to very low blood pressure
- 🐛 Abdominal cramps, vomiting or diarrhoea
- 🐛 Nausea and fever





## ALLERGY SYMPTOMS



RUNNY NOSE



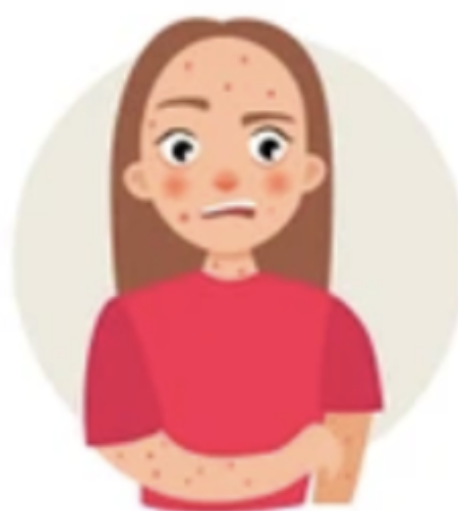
SNEEZING



LACRIMATION



HEADACHE



RASH



COUGH



EDEMA



# Anaphylaxis has three main characteristics:

1. A rapid onset – the casualty usually becomes very ill, very quickly.
2. A life-threatening **Airway, Breathing or Circulation** problem *(or a combination of them)*.
3. A skin rash, flushing and/or swelling *(but not all casualties have this)*.





# Treatment

---

- 👤 Call **999/112**
- 👤 Allow/Assist to take their own medication
- 👤 If they can't you may use the autoinjector
- 👤 Remove cap and hold in your fist
- 👤 Press firmly on the casualty's thigh for 3 secs, or as directed on autoinjector
- 👤 Remove and depending on autoinjector massage area for 10 seconds
- 👤 Procedure can be repeated after 5 minutes
- 👤 Be prepared to carry out CPR



# Auto injectors



Emerade

EpiPen

Jext



# Emergency Anaphylaxis Kit

## Contents

Autoinjectors (AAI)

Instructions on auto injector usage

Instructions on auto injector storage

Manufacturer's information

List of autoinjectors, identified by batch number and expiry date

Monthly checklist

Replacement of auto injector arrangements

Pupil list of who auto injectors can be administered too



Emerade



EpiPen



Jext





**Please [Click here](#) to see our online training on  
Safe use and control of Anaphylaxis and Auto  
injectors**

# Febrile convulsions

A febrile convulsion is a fit or seizure that occurs in children when they have a high fever. This can happen in children aged 6 months to 6 years. The fit can last a few seconds or up to 15 minutes and is followed by drowsiness. Most fits last less than 2 to 3 minutes.



# Signs

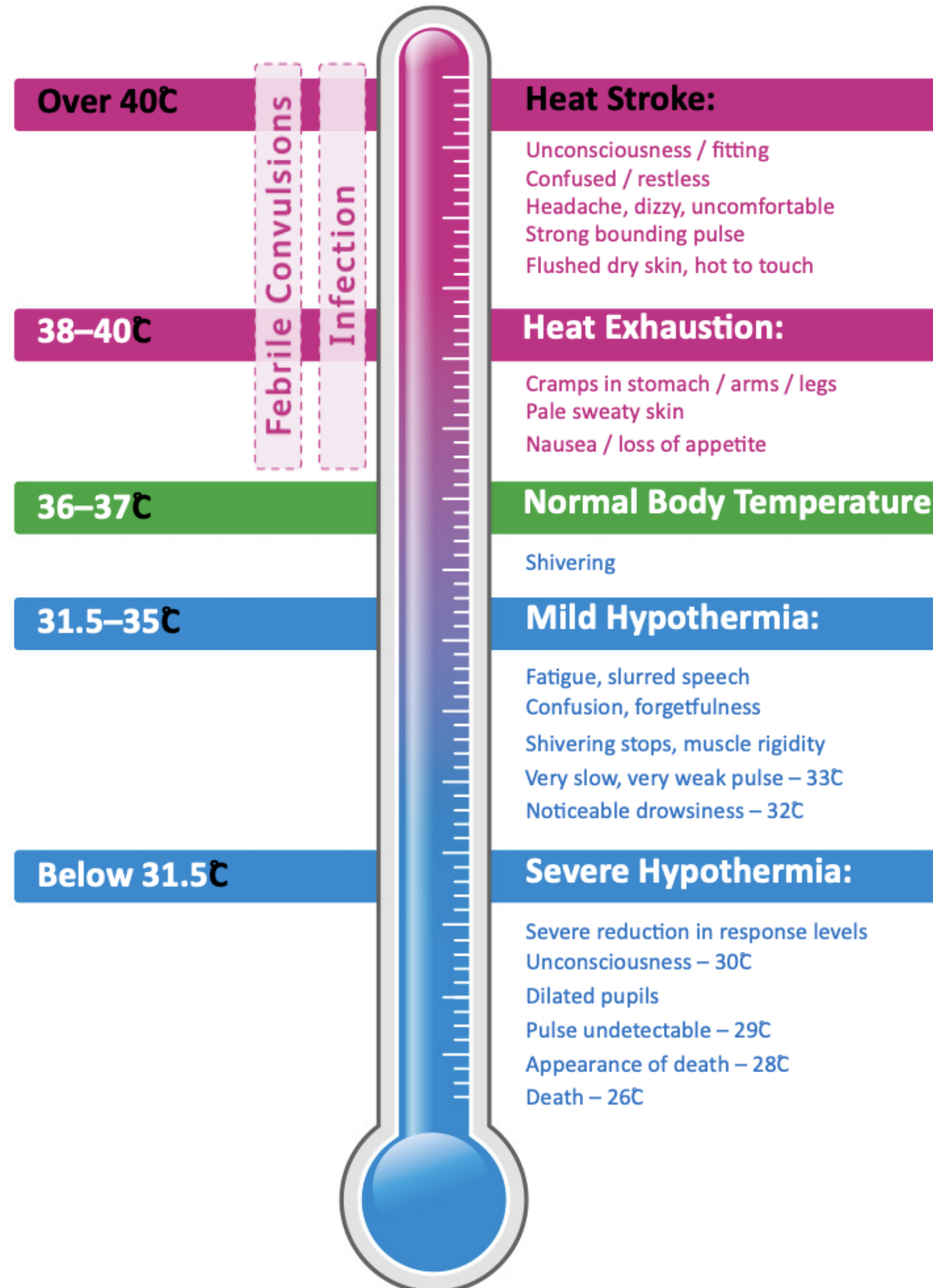


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loss of consciousness and stiffening  
legs and arms jerk as well as the the head  
Pale skin colour

After a couple of minutes, the convulsion  
will subside, and the infant/child will go  
limp and skin colour will return to normal





# Treatment

- 👩 Protect the child from possible injury by removing danger around them
- 👩 Time the convulsion
- 👩 Cool them down by removing excess clothing and opening a window may also help
- 👩 When the convulsion subsides, open the airway and check for normal breathing and then place the infant/child in the recovery position.



# Hot and Cold Injuries

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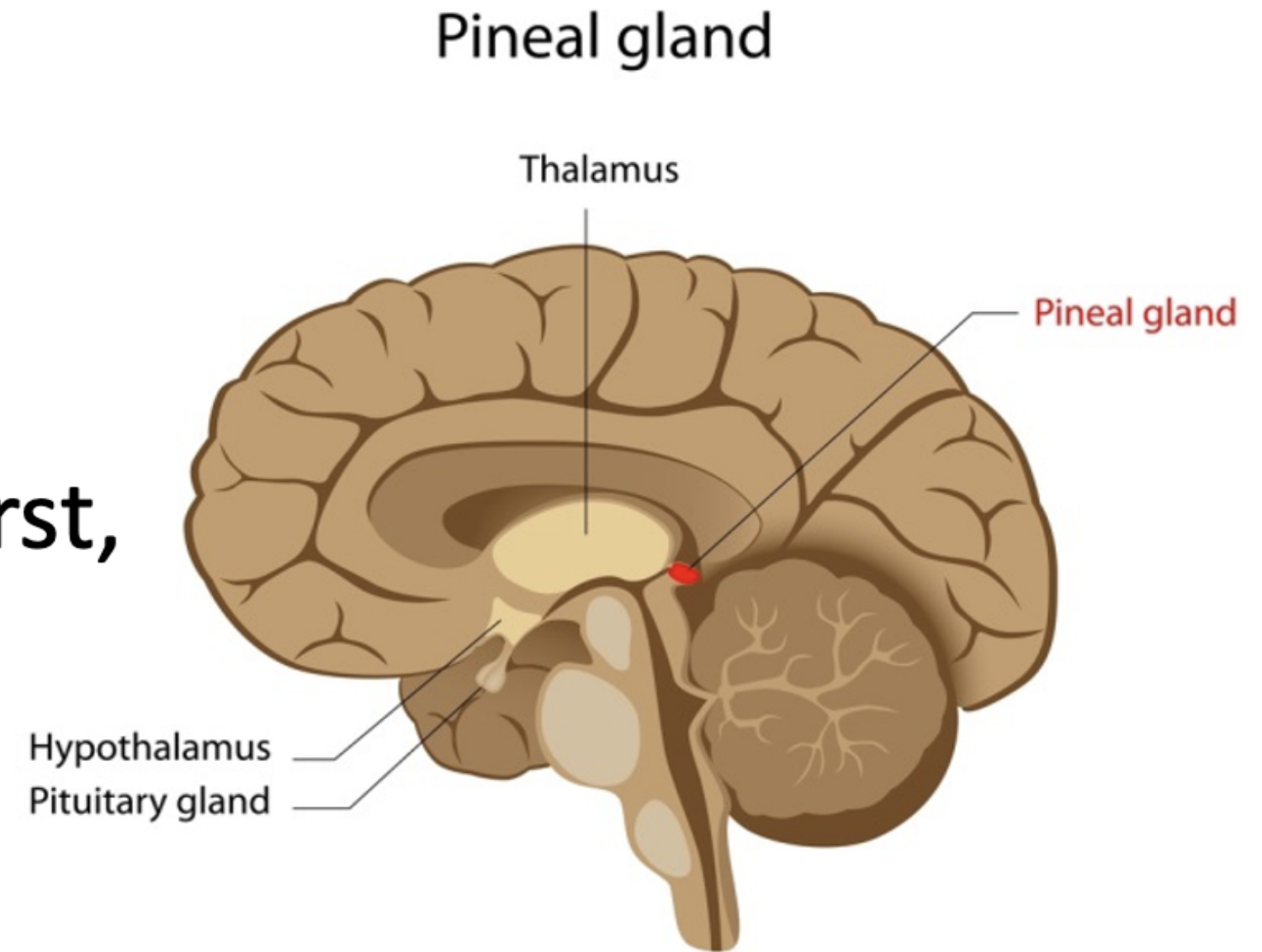
HOT



COLD



*The hypothalamus* which is in the brain controls body temperature and acts like a thermostat, hunger, important aspects of parenting and attachment behaviours, thirst, fatigue, sleep, and circadian rhythms.



The normal working range for the human body is between  
36.5°C and 37°C

# Heat Exhaustion

If the body temperature rises between 37.5c - 40c then heat exhaustion occurs. Caused by loss of body salts and water typically through excessive sweating.





# Heat Exhaustion

## Recognition

---

- ☀️ Skin feels hot and flushed
- ☀️ Excessive sweating
- ☀️ Child may feel tired and confused
- ☀️ Urine will be darker than normal
- ☀️ Feeling of nausea and vomiting





# Treatment

- ❄️ Move the infant or child to a cool place
- ❄️ Give water to rehydrate
- ❄️ Remove all excessive clothing
- ❄️ Monitor their responses
- ❄️ Seek medical attention call **999/112**



# Heat Stroke

Heat Stroke occurs when the body temperature exceeds 40c

## Recognition

- ☀️ Hot, dry skin with no sweating
- ☀️ Rapid breathing and heart rate
- ☀️ Confusion, difficulty speaking
- ☀️ Nausea
- ☀️ Seizures
- ☀️ Possible loss of responsiveness





# Treatment heat stroke

- 
- ☀️ Call 999/112
  - ☀️ Move to a cool area and remove excessive clothing
  - ☀️ Cool the skin, by showering or wet towels
  - ☀️ Give the water (isotonic sports drinks)
  - ☀️ If seizures start, move nearby objects out of the way to prevent injury
  - ☀️ If they are unresponsive place in the recovery position

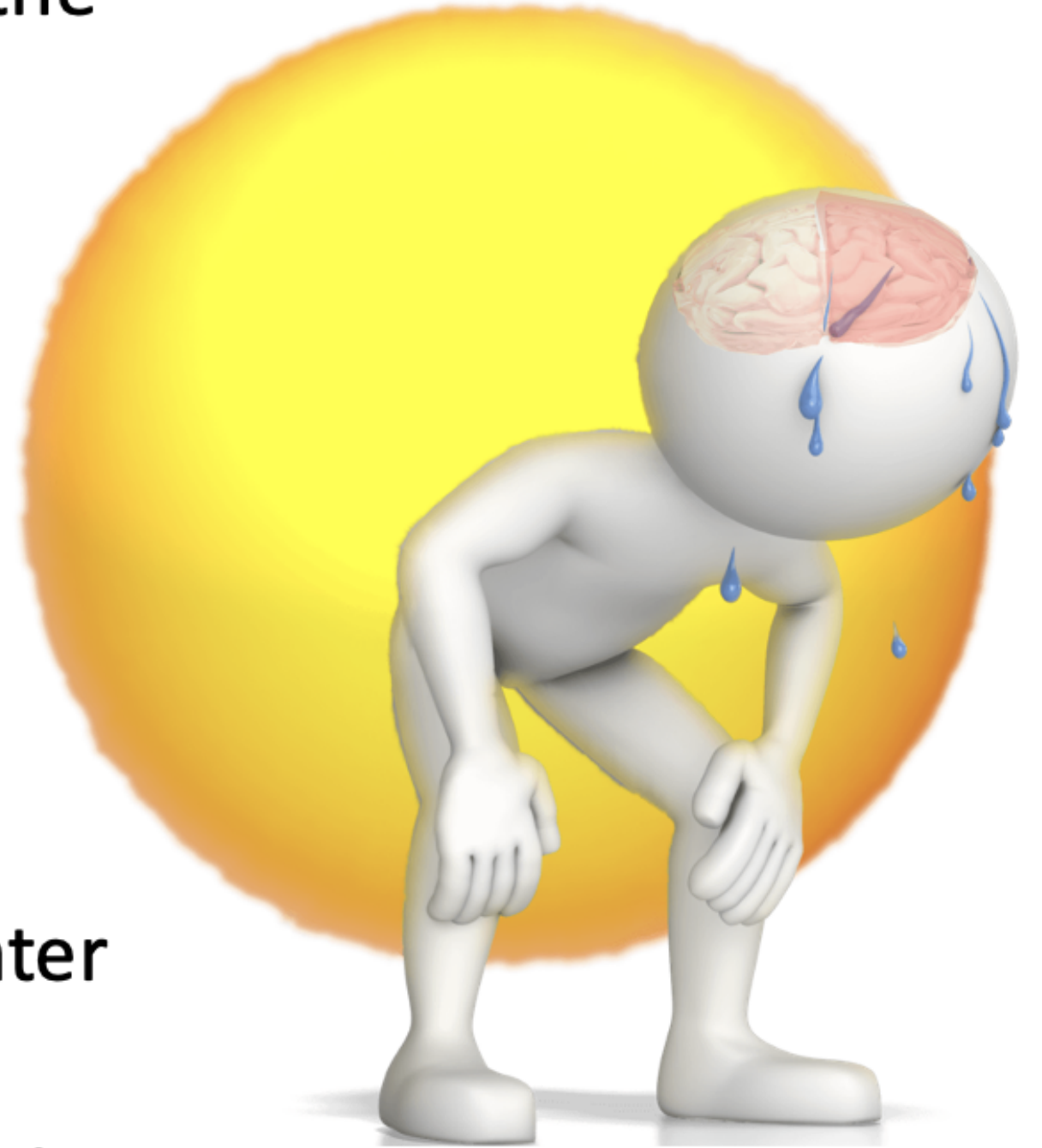




# Preventing heat exhaustion and heatstroke

---

- ☐ Keep children out of the sun during the hottest parts of the day, usually between 12am and 4pm
- ☐ Keep them in the shade, apply sunscreen to them and promote wearing a hat
- ☐ **NEVER** leave them in a parked car
- ☐ Do not allow any physical exertion
- ☐ Encourage to take plenty of cold drinks, avoiding drinks that may contain caffeine
- ☐ Give cold foods, particularly salads and fruit with high water content
- ☐ Keep a damp cloth on the back of their neck and keep their environment cool.



# Hypothermia

Hypothermia occurs when the core temperature drops below 35C.

## Recognition

- ❄ Shivering
- ❄ Cold, pale skin
- ❄ Tiredness and low energy
- ❄ Lack of coordination
- ❄ Drowsiness
- ❄ Slurred speech



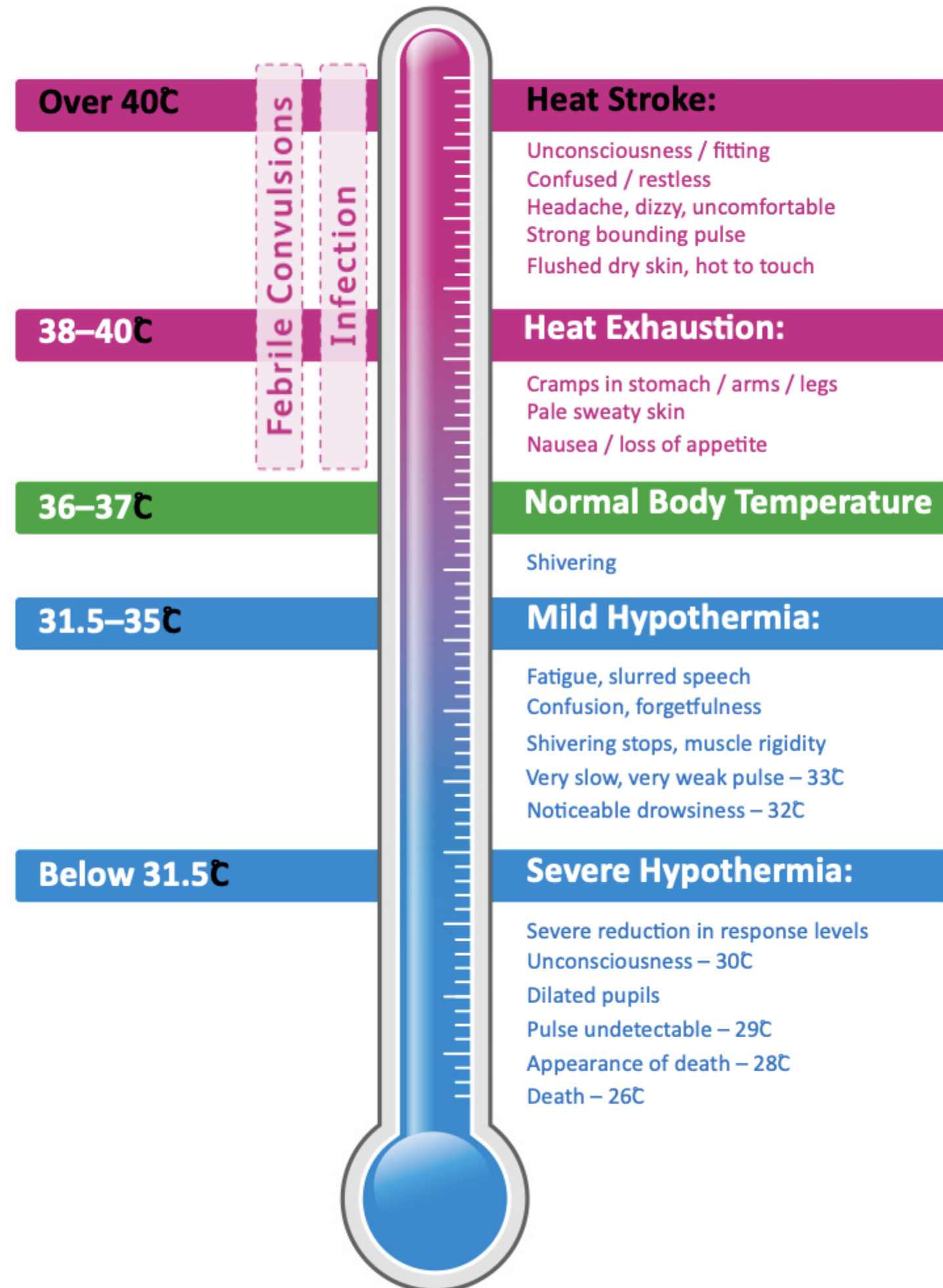
# Hypothermia

## Treatment

- ❄️ Remove the child from the source of the cold;
- ❄️ Remove wet clothing and dry them
- ❄️ Wrap them in blankets, towels and coats and ensure the room is warm (24-25°C)
- ❄️ If the infant or child is outdoors, then insulate them from the ground
- ❄️ If possible and give warm or high energy foods such as chocolate
- ❄️ If condition does not improve or worsens call 999/112

**Warm the child up slowly. Do not place them near any direct heat as blood may draw to the skin's surface and could put stress on the heart.**





# STAGES



HEALTHY SKIN



1ST DEGREE



2ST DEGREE



3ST DEGREE

NOSE  
TOES

FINGERS  
EARS



# FROSTBITE

# FIRST AID



REMOVE ANY  
WET CLOTHES



WARM WATER  
FOR HANDS



BLANKET



DRINK WARM TEA



WARM WATER  
FOR LEGS

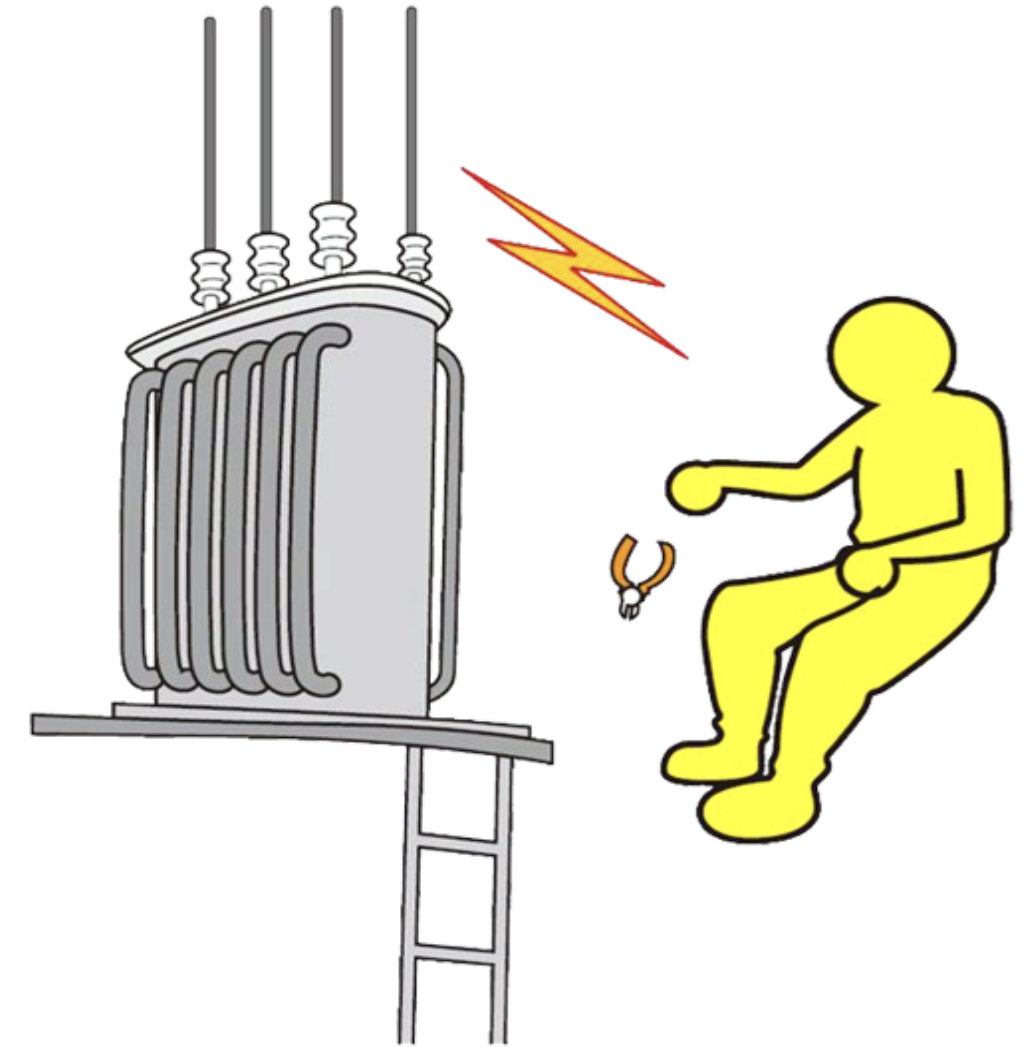


CALL THE DOCTOR

# Treating low voltage injuries

- ⚡ Switch off from the MAINS supply
- ⚡ Break the contact between the electricity and the casualty
- ⚡ If unable to do this insulate yourself before attempting to free the casualty from the supply
- ⚡ Look for entry and exit wound and treat any injuries

**Call 999/112**





# Treating high voltage injuries

Keep everyone at least 18 meters away from the electrical source

Call 999/112

When safe to approach assess the casualty



# Burns and Scalds

Burns and scalds are damage to the skin caused by heat. A burn is caused by dry heat, for example, by an iron or fire. A scald is caused by something wet, such as hot water or steam. Burns may also be caused by chemicals and electricity.



# Burns and scalds – radiation

---



## Examples:

Direct sunburn

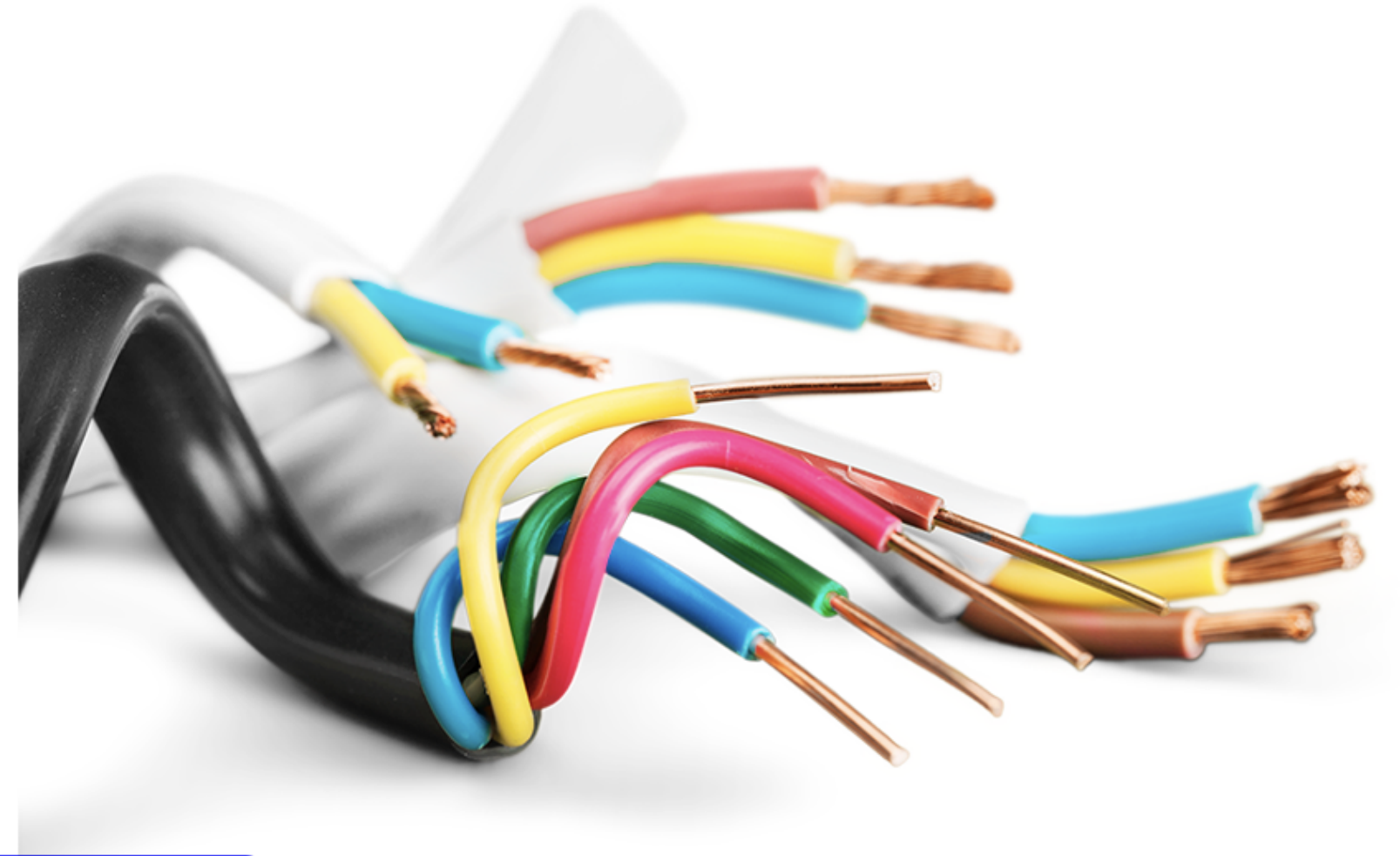
Ultraviolet lamps/lights

Over exposure to X-rays.



# Burns and scalds – electricity

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## Examples:

Domestic appliances

Lightning

High voltage

Electrical cables.

# Burns and scalds – extreme colds

---

## Examples:

Extreme freezing temperatures  
Frozen objects  
Refrigerants.



# Burns and scalds – chemicals

---



## Examples:

Acids & alkalis

Domestic & industrial cleaning  
products

Industrial chemicals



# Burns and scalds – dry heat

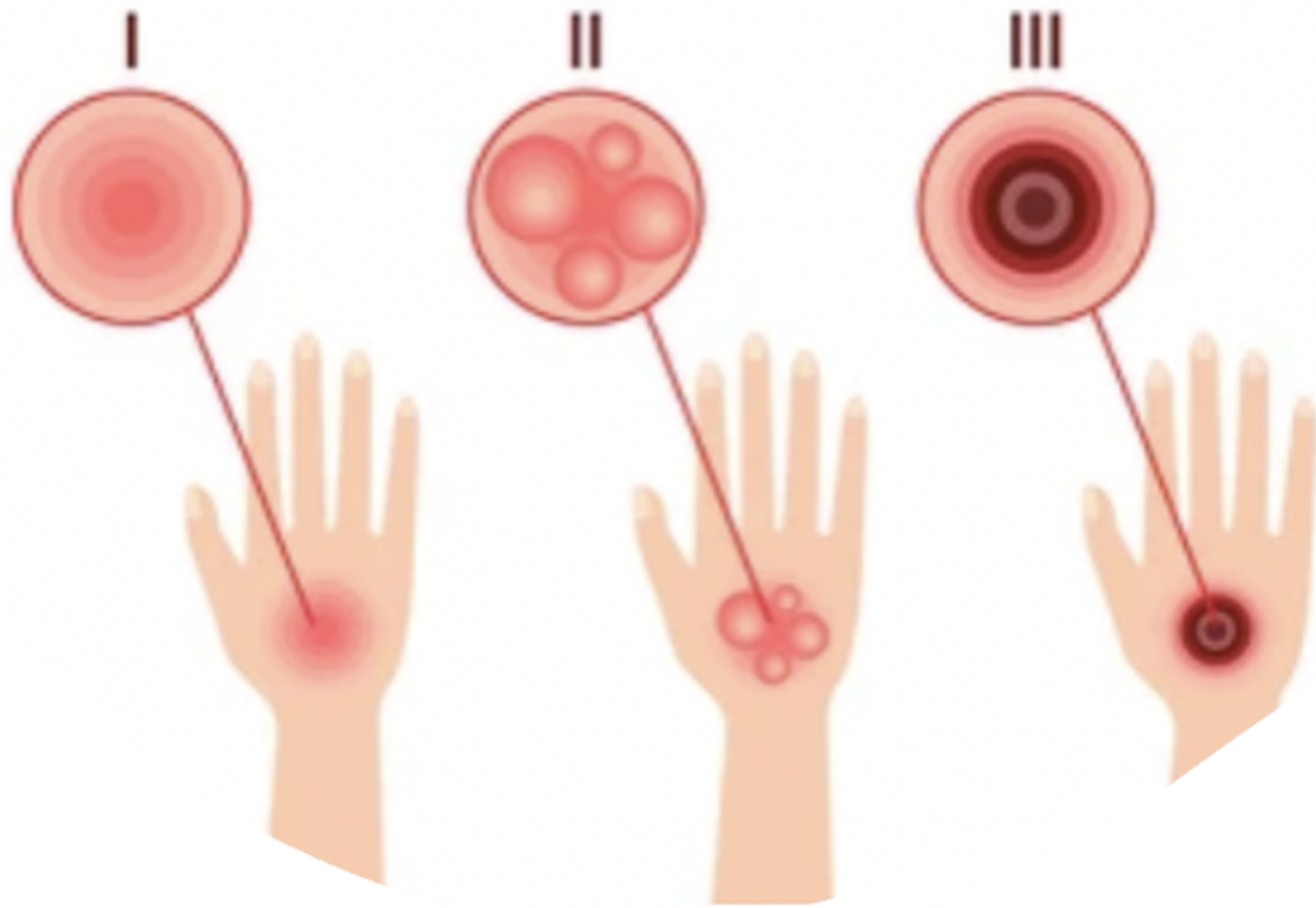
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## Examples:

Hot surface/plates  
Direct fire  
Friction  
Appliances



## DEGREE OF BURN



## Burns management



### **Superficial burn (1st degree burn)**

The outer layer of skin is burnt causing redness, tenderness and inflammation. Typical factors causing this would be sunburn or touching a hot iron. The skin is not broken or blistered.

### **Partial thickness burn (2<sup>nd</sup> degree burn)**

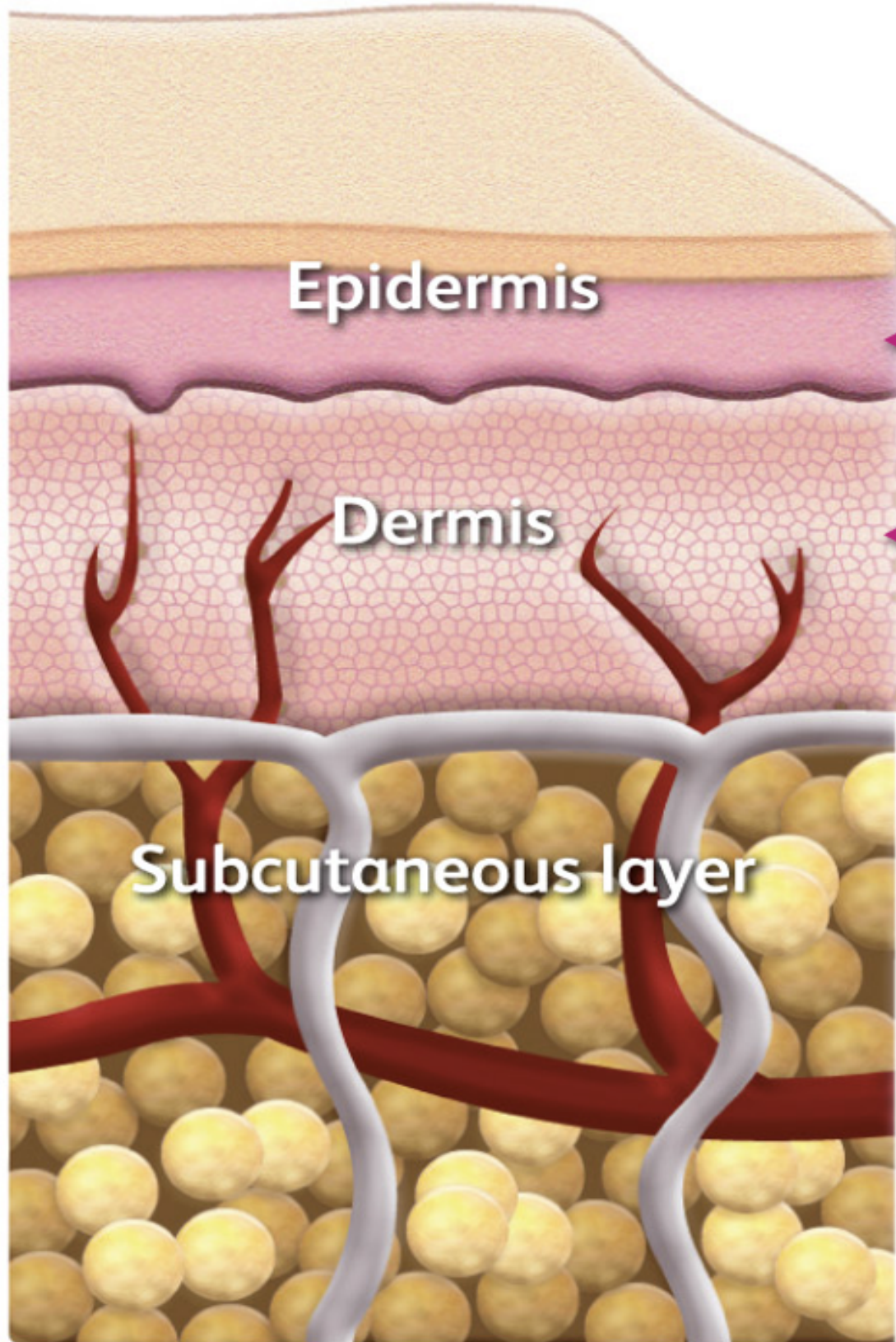
The outer layer of the skin is burnt and broken causing blistering, swelling, pain and rawness.

### **Full thickness burn (3<sup>rd</sup> degree burn)**

All the layers of skin have been damaged causing the skin to look pale, charred and waxy with fatty deposits. There may also be damage to the nerves.





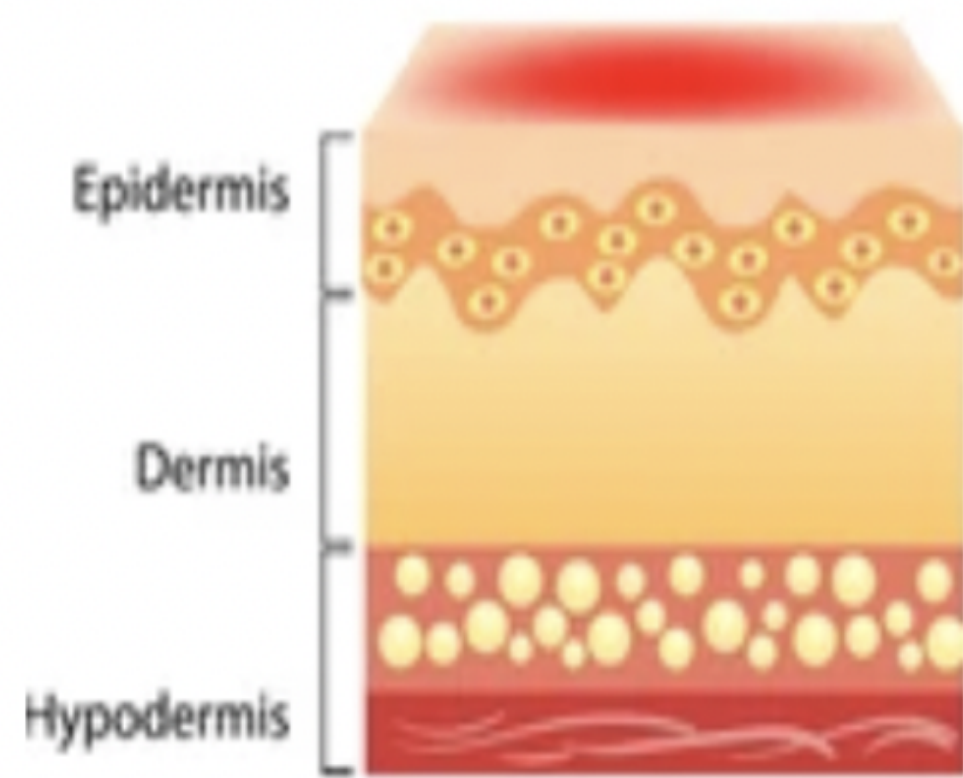


Superficial

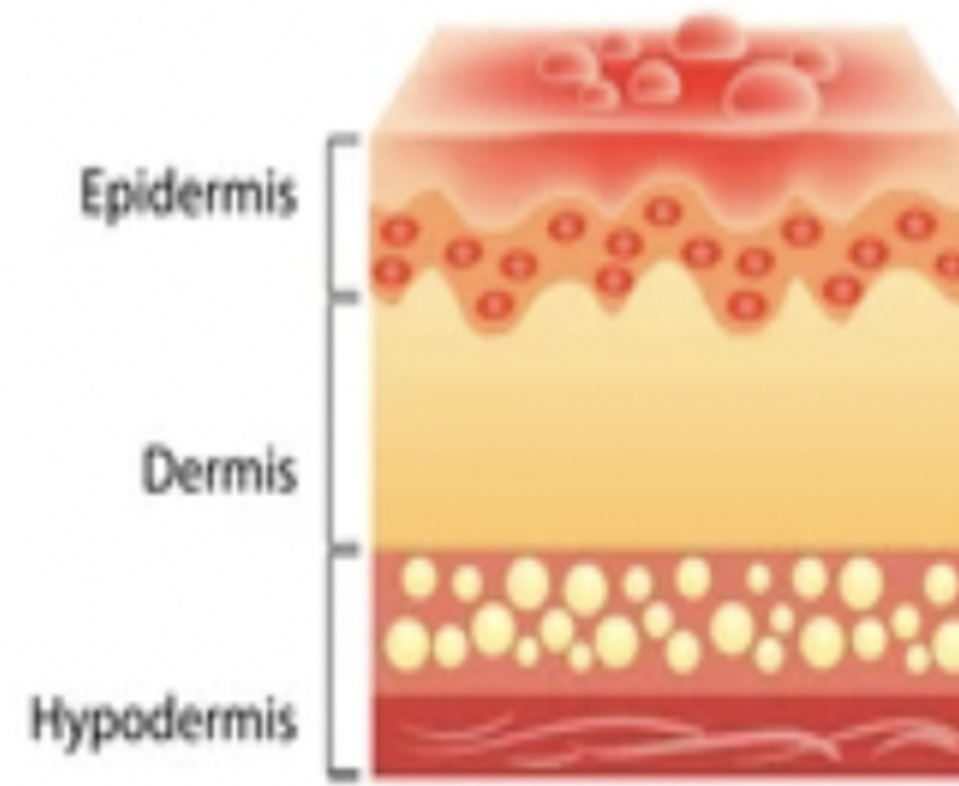
Partial Thickness

Full Thickness

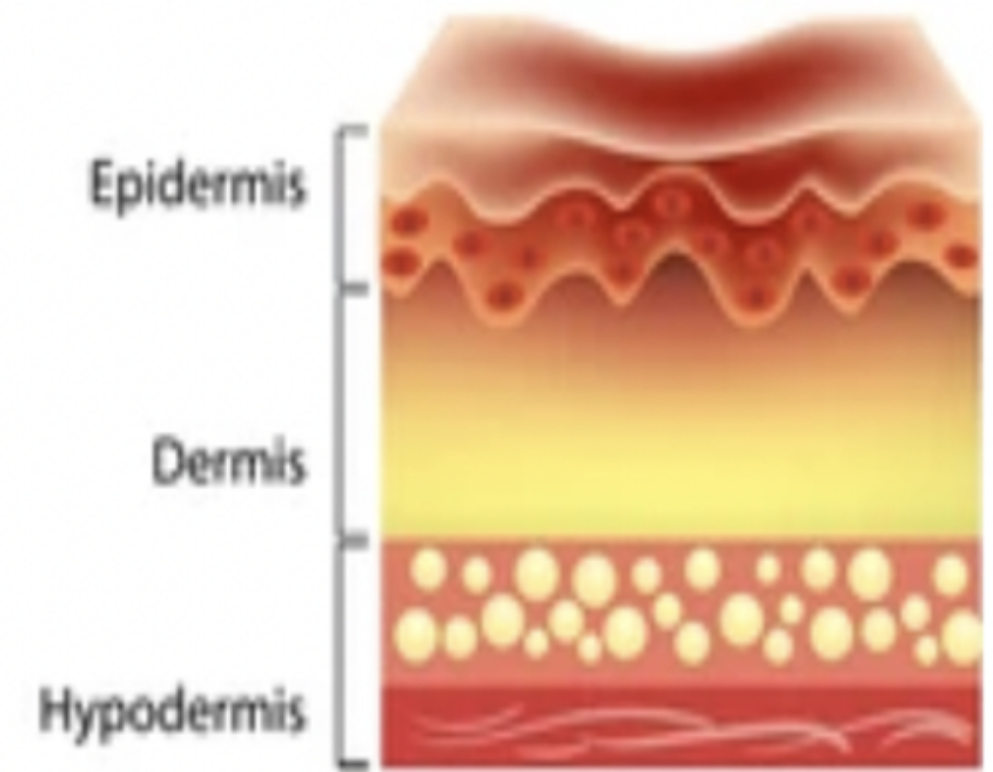




**1<sup>st</sup> degree burn**



**2<sup>nd</sup> degree burn**



**3<sup>rd</sup> degree burn**



# Superficial burn (1<sup>st</sup> degree burn)

## Recognition



Painful









Redness, tenderness and possible swelling



Possible blistering around the burn



# Superficial burn (1<sup>st</sup> degree burn)

-  Move away the burn
-  Cool the area of the burn with water (20 mins)
-  Remove any restrictive clothing or jewellery
-  **NEVER** remove anything that is stuck on the burn
-  Cover the burn with a sterile dressing or if unavailable then place a layer of cling film over the burn
-  Seek medical attention immediately if the burn covers more than 5% of the body. (SEE FIGURE OF BURNS)

# Partial-thickness burn (2nd degree burn)

## Recognition



The skin will be raw and swollen



The burn will be very painful



Blisters and clear fluid may be present

# Partial-thickness burn (2nd degree burn)



Move away the burn



Cool the area of the burn with water (20 mins)



Remove any restrictive clothing or jewellery



**NEVER** remove anything that is stuck on the burn



Cover the burn with a sterile dressing or if unavailable then place a layer of cling film over the burn







Seek medical attention immediately if the burn covers more than 5% of the body. (SEE FIGURE OF BURNS)



# Full-thickness burn (3rd degree burn)

## Recognition

-  The burn will look a brown/black colour and looks scorched
-  The texture will look dry and leathery
-  Stiffness in and around the burned area
-  Pain at the site of the burn



# Full-thickness burn

---

- 👨 ensure that the source has been disconnected or turned off
- 👨 Remove clothing, if not stuck to the burnt skin, and then flush the area of the wound with water for a minimum of 20 minutes
- Remove any restrictive clothing or jewellery
- 👨 **NEVER** remove anything that is stuck on the burn
- 👨 Cover the burn with a sterile dressing or if unavailable then place a layer of cling film over the burn
- 👨 Seek medical help immediately



# Hospital treatment if

- ✦ Burns to children and infants regardless of depth
- ✦ Full thickness burns
- ✦ Burns that extend around the arm or leg or to the face, genitals, hands and feet
- ✦ All partial thickness burns larger than 1% of the body surface
- ✦ All superficial burns larger than 5% of the body surface
- ✦ Mixed depth pattern

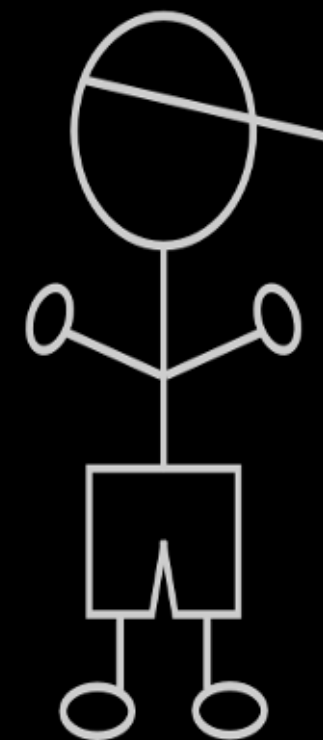
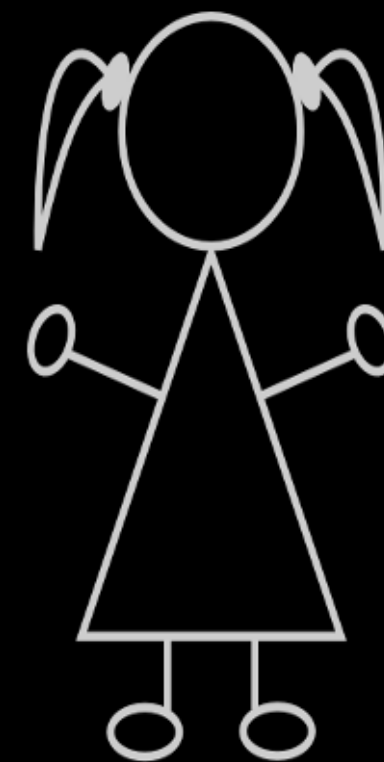
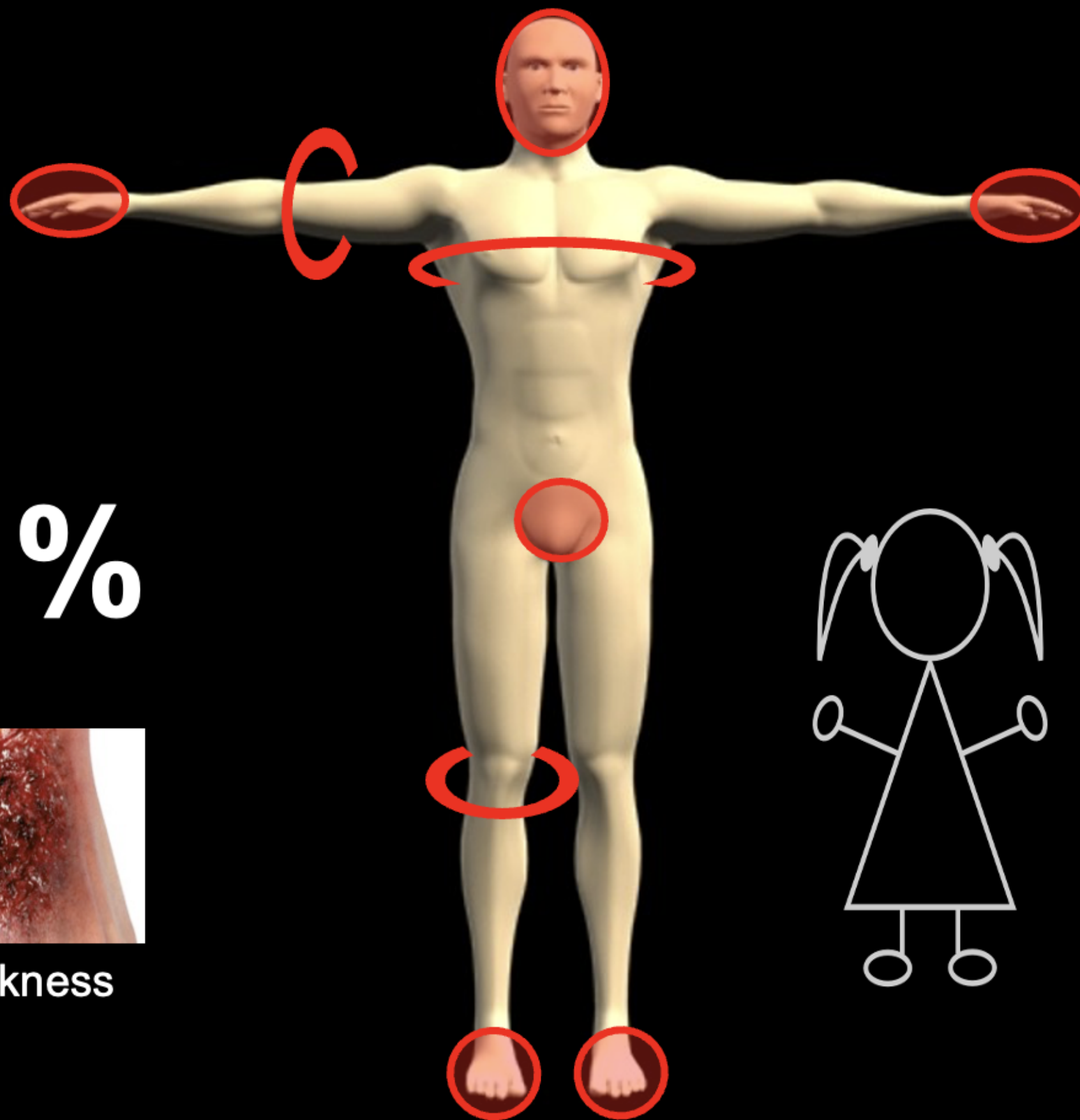




**>1%**



Full Thickness







# Chemical burns to the eye

- 👁️ Wash the chemical from the eye for at least 20 minutes with fresh running water
- 👁️ Make sure the chemical does not run into the other eye
- 👁️ Cover with sterile eye pad and seek medical assistance





# Poisoning

Poisoning happens when you take into your body, a substance that damages your cells and organs and injures your health.

**Poisons can enter the body in several ways:**

Inhaled Gases, fumes etc

Swallowed Food, alcohol, drugs etc

Injected Drugs, medicine, sting's etc





Absorbed Chemicals, vapors etc - through the skin

Instilled Chemicals and gases etc - via the eyes










# Poisoning

Poisons can include:

-  household chemicals
-  alcohol and drugs
-  industrial chemicals
-  foods and plants







## Recognition in general

-  Pains in the stomach
-  Decreased vision
-  high/low heart rate
-  Smell of poisons or chemicals
-  Burns or rashes
-  Nausea
-  Hard to breathing





## Treatment in general

-  Call **999/112**
-  Remove either the cause or child from the area
-  Try and identify what the poison is
-  Be prepared to carry out CPR



**DO NOT encourage vomiting or moving around.**



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## Phonetic Alphabet

A Alpha

B Bravo

C Charlie

D Delta

E Echo

F Foxtrot

G Golf

H Hotel

I Indigo

J Juliette

K Kilo

L Lima

M Mike

N November

O Oscar

P Papa

Q Quebec

R Romeo

S Sierra

T Tango

U Uniform

V Victor

W Whiskey

X X-ray

Y Yankee

Z Zulu

