



FIRST AID

Uzm. Bio. Olcay Irmak

FIRST AID

What's the aim of first aid?

- The aim is to save lives, to prevent the situation getting worse and if possible, get things to a better position.

What is the difference between “emergency assistance” and “first aid”?

- **Emergency assistance** is what health professionals do using medical equipment.
- **First aid** is help given to a sick or injured person until full medical treatment is available.

What are the three steps of first aid?

1. Protection

- It covers the evaluation of the scene in order to prevent aggravation of the accident results.
- The most important transaction event to create a safe environment by identifying the dangers that may occur.

What are the three steps of first aid?

2. Seeking help

- This is giving a phone call to ask for further help from health professionals. In Turkey the number for this is **112**.
- The call sounds easy but we must be as calm as we can in order to give right information. We must wait till the other side puts down the telephone.

What are the three steps of first aid?

2. Seeking help

- Giving the **exact address** is very important. Also detailed information about **the event** is crucial.
- According to this detailed information health professionals can decide which equipments to bring.

What are the three steps of first aid?

3. Rescue (response)

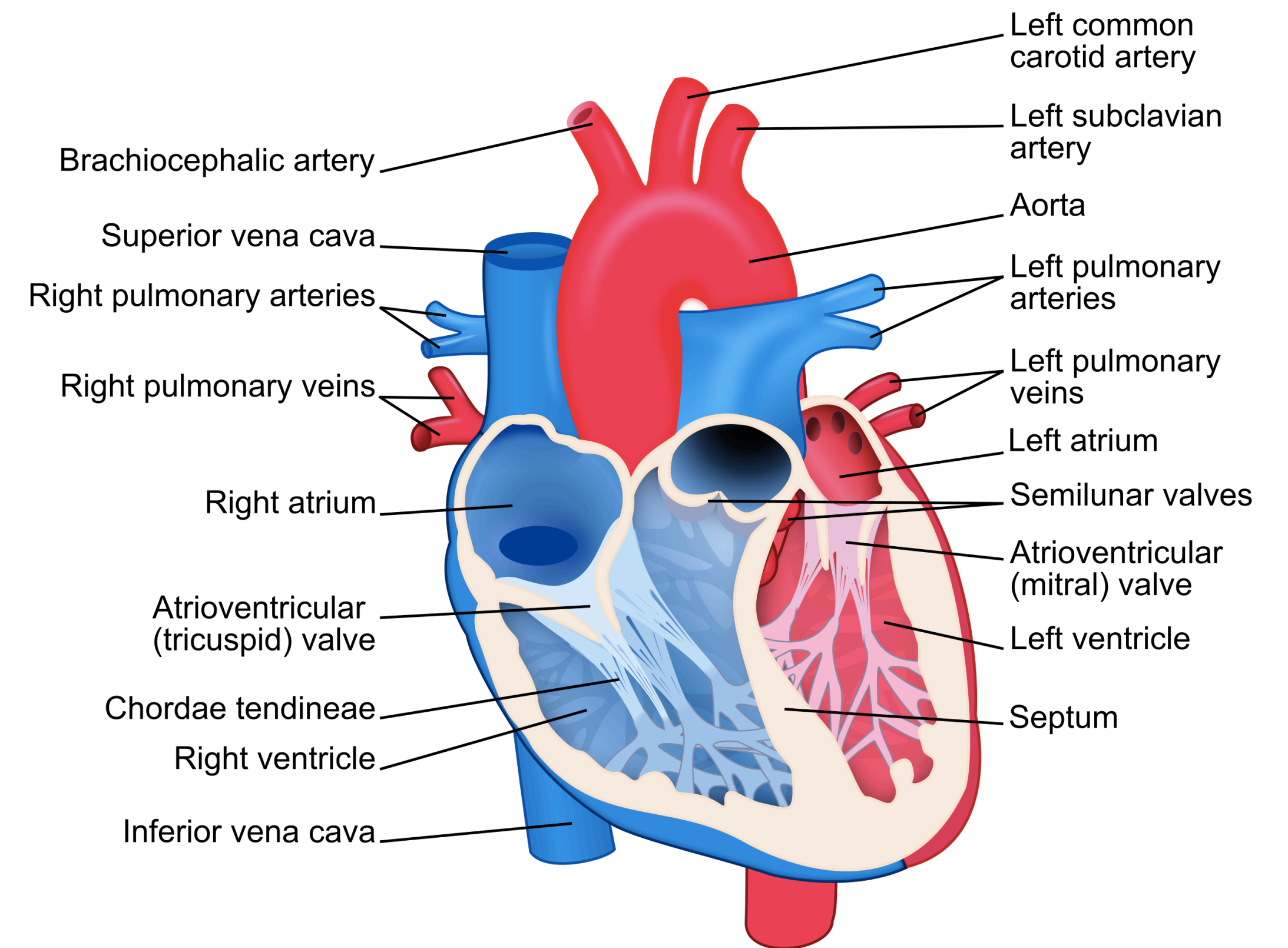
- Final step is to save lives.
- At the scene, the intervention should be done quickly and calmly.

First aid for bleeding

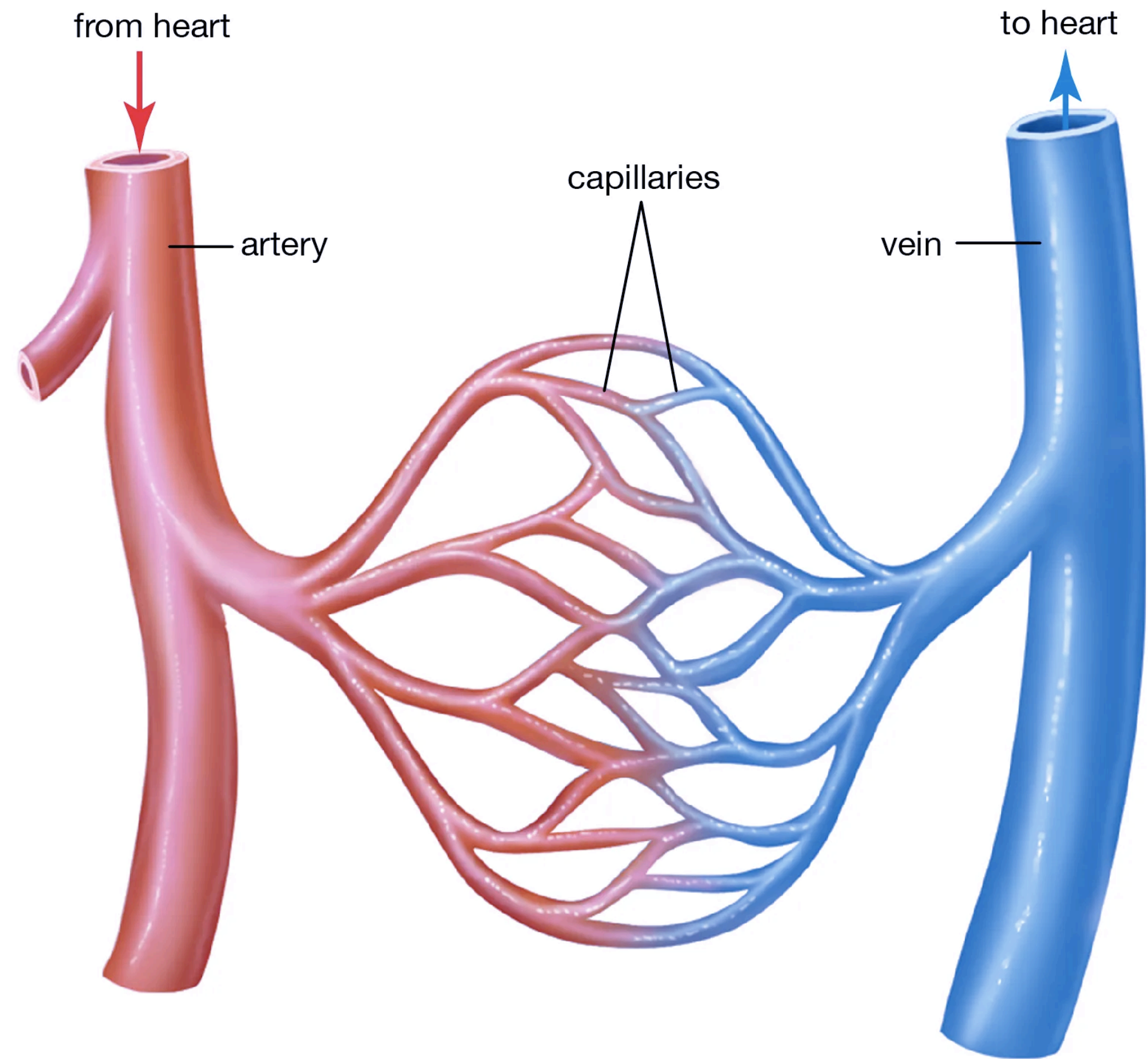
What's the main organ of the circulatory system?

Heart

- It is a muscle which makes blood circulate in the body. So it works as a pump in the circulatory system.



How many types of vessels are there?



There are three types of vessels:

- Arteries
- Veins
- Capillaries

How many types of vessels are there?

Arteries

- These are the vessels carrying oxygenated blood; pumped from heart to the body. Thus, the pressure is high in arteries.
- When there is an arterial injury; **we observe a strong bleeding which flows, stops and flows again with the rhythm of heart.**

How many types of vessels are there?

Veins

- These are the vessels carrying deoxygenated blood; from body to the heart. Venous blood flow works against gravitational force and the blood pressure is lower than that of arteries.
- We do not observe a bleeding as strong as the one seen in arteries.

How many types of vessels are there?

Capillaries

- These are the vessels which make the connection between arteries and veins. These have the least blood pressure.
- In case of capillary injury **bleeding usually stops by itself.**
Moreover, the patient may notice the bleeding after it stops.

What will we do when there is a bleeding?

- First of all, we need to apply pressure to the bleeding point with a clean cloth. When the first cloth is full of blood, we need to put another one over it without removing the first as not to disturb blood clotting.



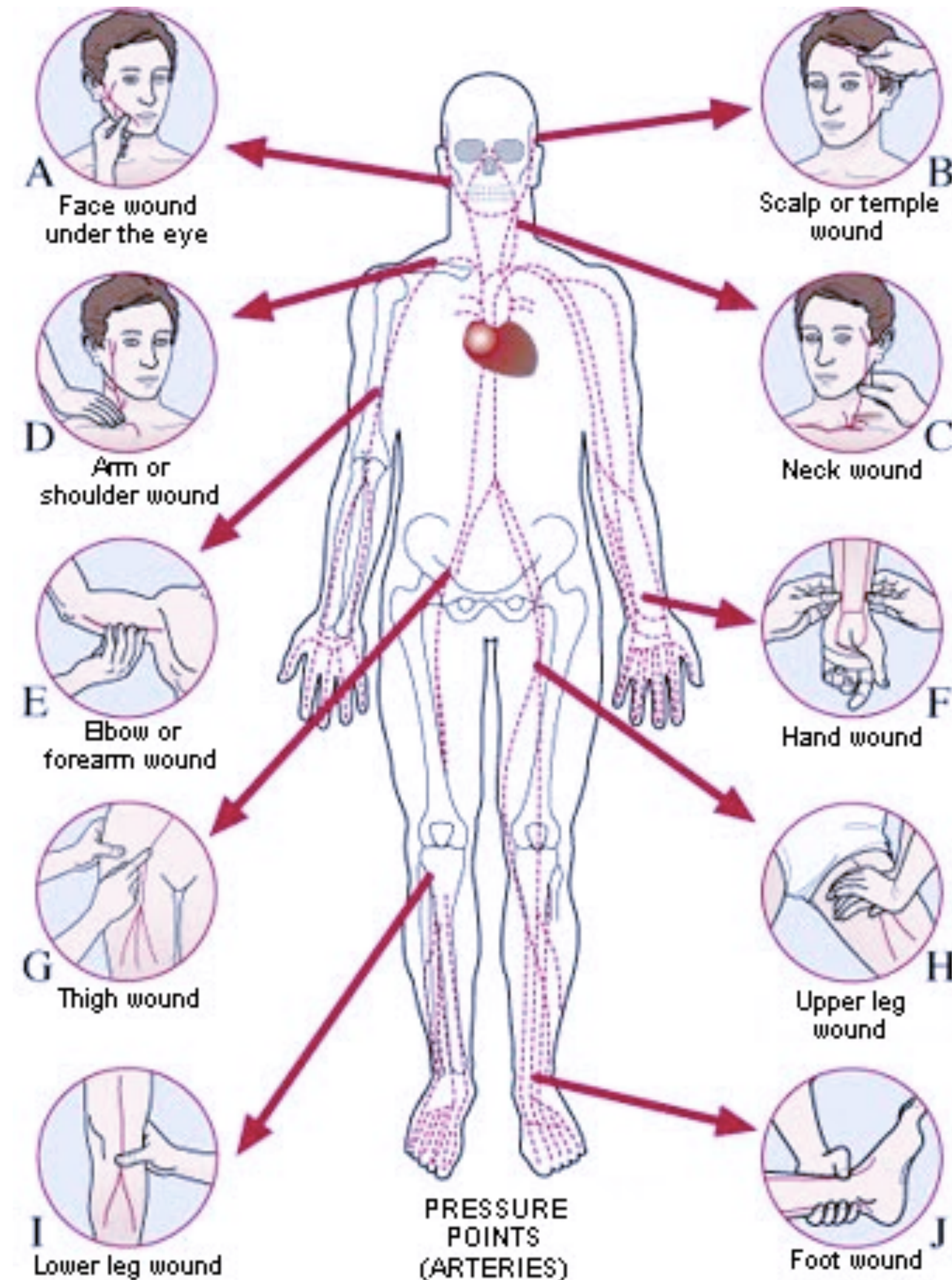
Apply direct pressure on external wounds with sterile cloth or your hand, maintaining pressure until bleeding stops

What will we do when there is a bleeding?

- We can bandage over the bleeding part. Then we elevate the injured point above the heart level.
- And if this not enough, we apply pressure from another point closer to the body. This is like compressing a water hose to prevent water coming out.

Where are the pressure points?

- Over the collarbone
- Axillary artery (armpit)
- Neck artery
- Upper arm artery
- Pubic artery
- Thigh artery



Nosebleeds

- **Sit upright and lean forward**
 - By remaining upright, you reduce blood pressure in the veins of your nose. This reduces further bleeding. Sitting forward will help you avoid swallowing blood, which can irritate your stomach.
- **Pinch your nose**
 - Use your thumb and index finger to pinch your nostrils shut. Breathe through your mouth. Continue to pinch for 10 to 15 minutes. Pinching sends pressure to the bleeding point on the nasal septum and often stops the flow of blood.

Nosebleeds



- If the bleeding continues after 10 to 15 minutes, repeat holding pressure for another 10 to 15 minutes. Avoid peeking at your nose.
- If the bleeding still continues, seek emergency care.

First aid for burns

Types of Burns

- Burns may result from: Friction (flame), ultraviolet (UV radiation), hot liquids, *electricity* and certain chemicals.
- There are three different types of burns that can occur:
 - 1. Superficial Burns (First-Degree Burns)**
- These burns cause damage to the top layer of skin only. The burn area will be red and painful. E.g. sunburn

Types of Burns

2. Partial Thickness Burns (Second-Degree Burns)

- These burns cause damage to the first and second skin layers. The burnt area will be red, peeling, blistered and swelling with clear or yellowy-colored fluid leaking from the skin.



Types of Burns

3. Full Thickness Burns (Third-Degree Burns)

- This involves damage to both the first and second skin layers, plus the underlying tissue.
- The burn site generally appears black or charred with white exposed fatty tissue.
- The nerves are destroyed and the pain will not be as strong.



First Aid For Burns

- The management of burns can depend on the *type* and *extent* of the injury.
- While most minor burns can be treated at home using cool running water for 20 minutes, more serious burns may require medical treatment and medication.
- The main aim when managing a burn is to control pain, remove dead tissue, prevent infection and reduce scarring.

First Aid For Burns

If a burn or scald does occur and requires treatment, *first aid* for burns is the same for all types:

- **REMOVE** all jewellery from around the burn area. Remove any clothing around the burn area unless stuck to the skin
- **COOL** the burn under cool running water for no more and no less than 20 minutes

First Aid For Burns

- **DO NOT** use ice or creams as this can further damage the skin
- **COVER** the burn loosely with a clean, damp lint-free cloth
- **SEEK** immediate medical attention if the burn is:
 - large
 - on the face, hands, groin or feet
 - deep or infected
 - caused by chemicals or *electricity*

First aid for foreign object penetration through the skin

Foreign object in the skin: First aid

- **Seek prompt medical help** for a foreign object that seems to be more deeply embedded in the skin or muscle.
- Follow these precautions and steps first:
 - ▶ Don't try to remove the object. Doing so may cause further harm.
 - ▶ Bandage the wound. First put a piece of gauze over the object. Then, if it helps, put clean padding around the object before binding the wound securely with a bandage or a piece of clean cloth.
 - ▶ Take care not to press too hard on the object.

Foreign object in the skin: First aid

- In addition, **seek medical help if:**
 - ▶ The object is hard to see (as with clear glass) or doesn't come out easily
 - ▶ The injury involves an eye or is close to an eye
 - ▶ The wound is deep or dirty and the injured person's last tetanus vaccination was more than five years ago. The doctor may recommend a booster.

First aid in hypoglycemia

First aid in hypoglycemia

What are the symptoms of hypoglycemia?

- Sweating
- Shivering
- Paleness
- Anxiety
- Tachycardia
- Loss of consciousness

First aid in hypoglycemia

What do we do when blood glucose level comes down?

- First check the vital signs of the patient (ABC)
- If the patient is conscious, give sugar — Liquid or cubic.
- Usually it is difficult to decide; whether the patient has **low** or **high** blood sugar:
 - What can we do if we are not sure? — *Also give sugar.*
 - Because low glucose levels are more dangerous when compared to high glucose levels.

First aid for chest pain

First aid for chest pain

- What are the causes of severe pain in the chest?
 - **Heart spasm** (angina pectoris) and **heart attack** (myocardial infarction).
 - Both are caused by a decrease in the amount of blood that is sent to a certain part of the heart muscle.

First aid for chest pain

Symptoms of Heart Spasm (Angina Pectoris):

- Symptoms occur after physical movement, physical strain, excitement, sadness or over-eating.
 - Distress or shortness of breath
 - Feeling of pain usually begins from the middle of the chest, moves towards arms, neck, back and chin.
 - Pain is of short duration. It takes about 5-10 minutes; stops when you relax.
 - The shape and severity of pain does not change by breathing.

First aid for chest pain

Symptoms of Heart Attack (Myocardial Infarction):

- The patient feels a serious fear of death and intense distress.
- Sweating, nausea, vomiting findings are seen.
- Pain is anywhere in the chest or stomach cavity.
- Pain spreads to shoulders, neck, chin and left arm.
- Pain of the heart attack is very similar to pain of heart spasm. The property and severity of pain does not change by breathing.
- Pain can be confused with gas pain or muscle pain.

First aid for chest pain

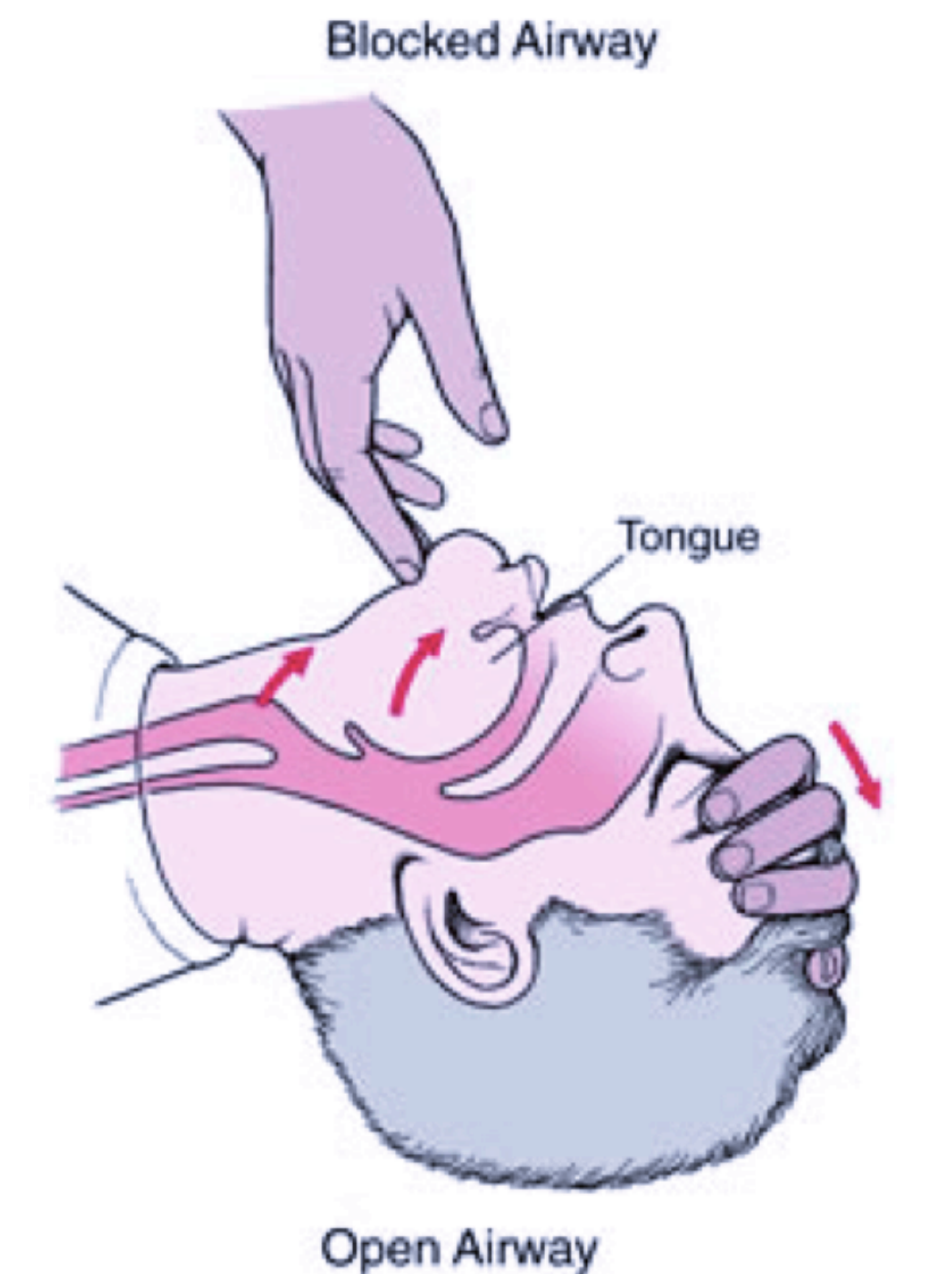
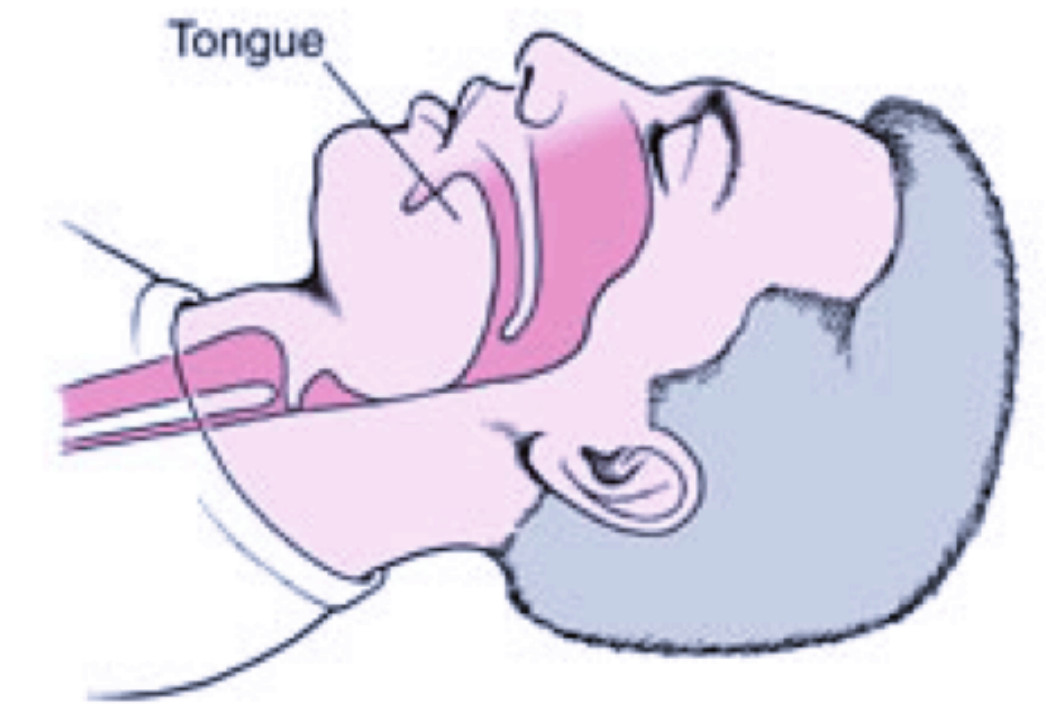
- Check vital signs of the patient (ABC)
- The patient should immediately rest and calm down
- Half-sitting position
- Help the patient to take their medications. Call emergency services
– **112**



ABC of First Aid : Airway, Breathing, Circulation

Airway, Breathing, Circulation

- If the patient loses consciousness, the tongue can block the airway. In this situation a very simple movement can save a life.
 - We put one hand on patient's forehead; and two fingers of the other hand under patient's chin. Then we tilt patient's head. The jawbone should be perpendicular to the ground.
- This simple movement opens the airway.



Cardiopulmonary resuscitation (CPR)

Before starting CPR, check:

- Is the environment **safe** for the person?
- Is the person **conscious** or **unconscious**?
- If the person appears unconscious, tap or shake his or her shoulder and ask loudly, "**Are you OK?**"
- If the person doesn't respond and two people are available, have one person call **112** or the local emergency number **6666** (in Bilkent University)

Cardiopulmonary resuscitation (CPR)

- When the heart stops, the lack of oxygenated blood can cause brain damage in only a few minutes. A person may die within 5 minutes.
- **CPR is aimed at preventing brain damage.**
 - First — check to see if there is a pulse and breathing. If there is no breathing or a pulse within 10 seconds, begin CPR.

Cardiopulmonary resuscitation (CPR)

- Lie down the person on a firm ground.
- Kneel down near the patient.
- Loosen anything tight like tie, belt or collar.
- Control patient's mouth to see whether there is any foreign body or not.
- Perform the **head-chin position** to open the airway.



Look, listen and
feel for breathing

Cardiopulmonary resuscitation (CPR)

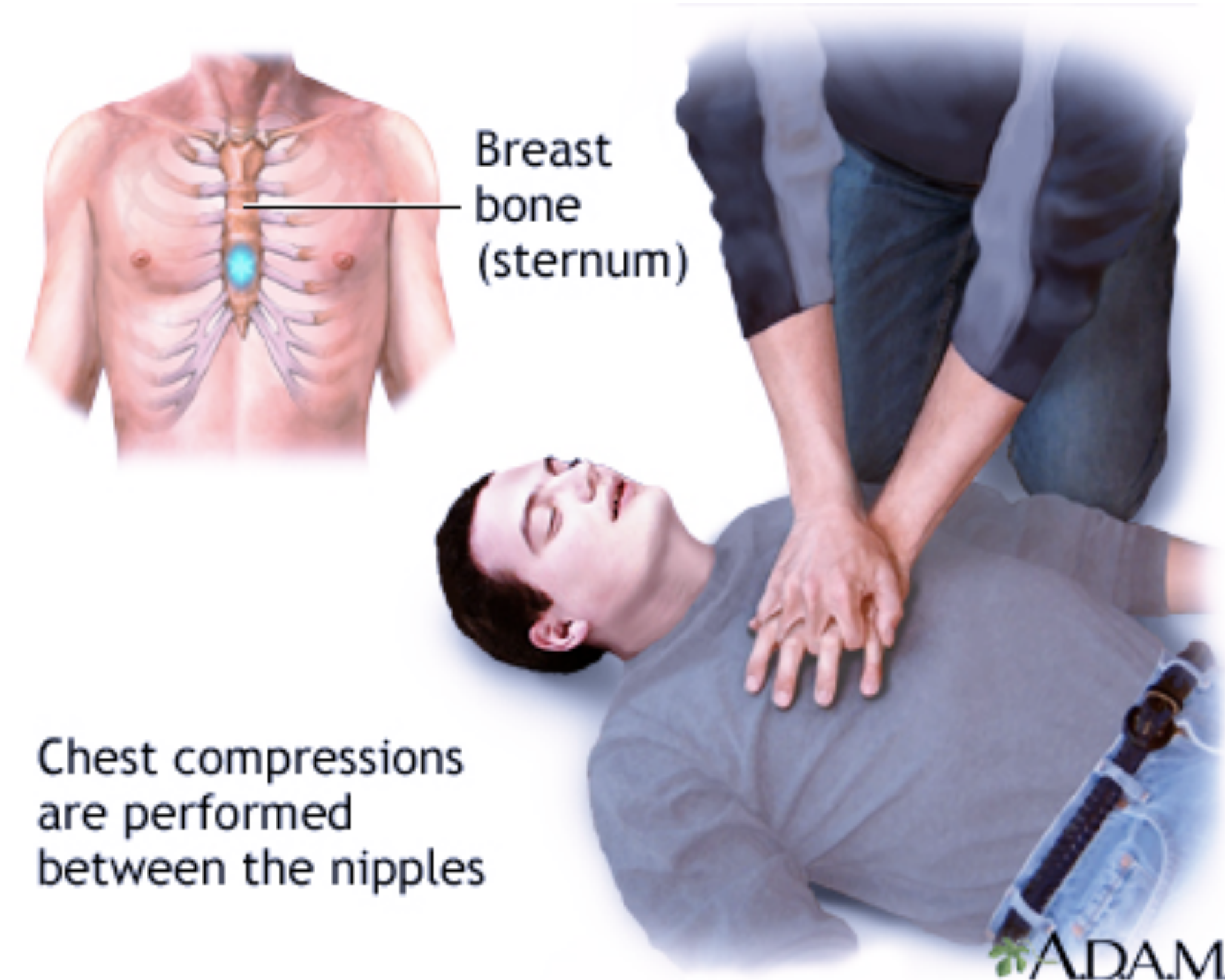
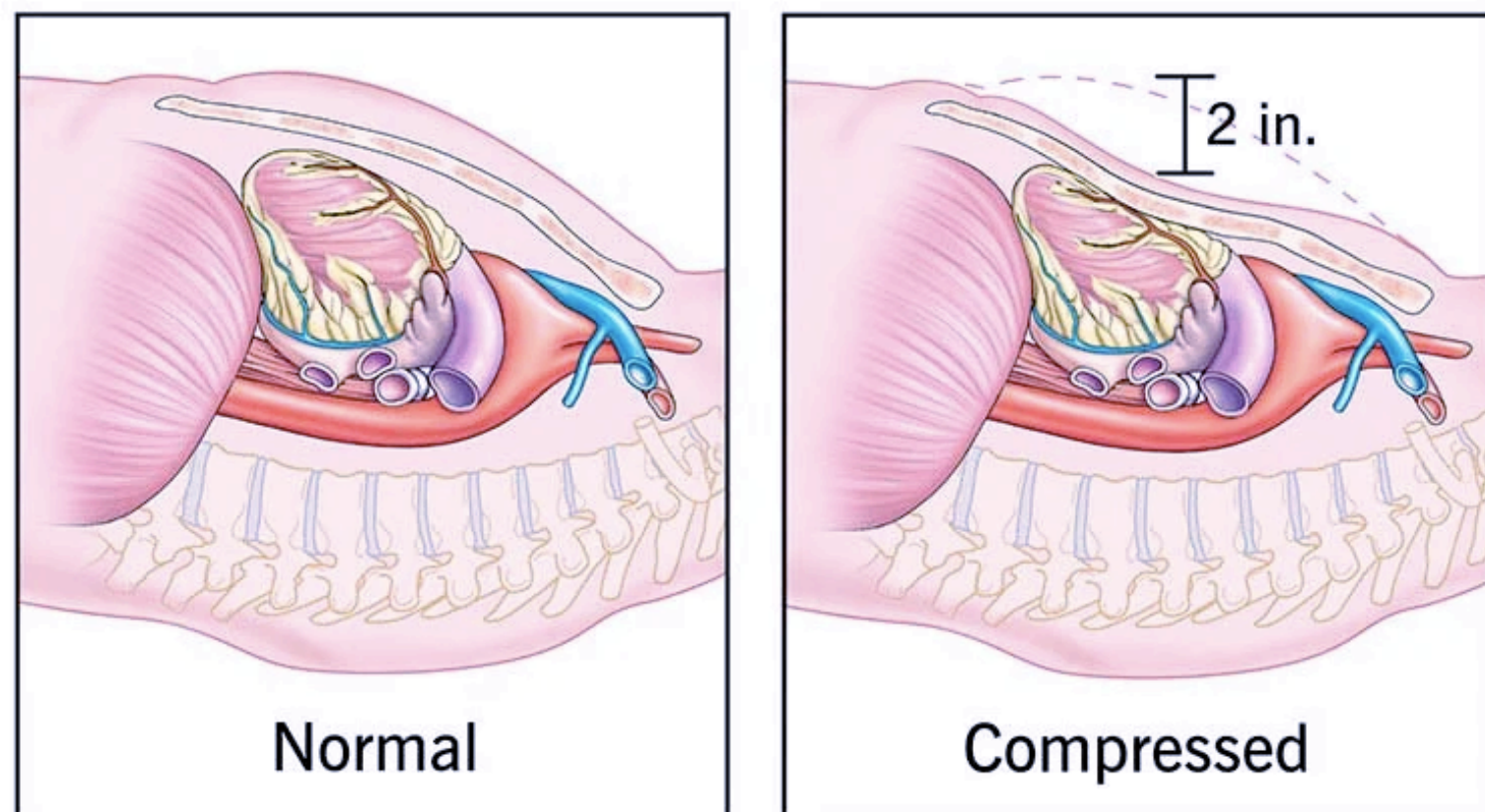
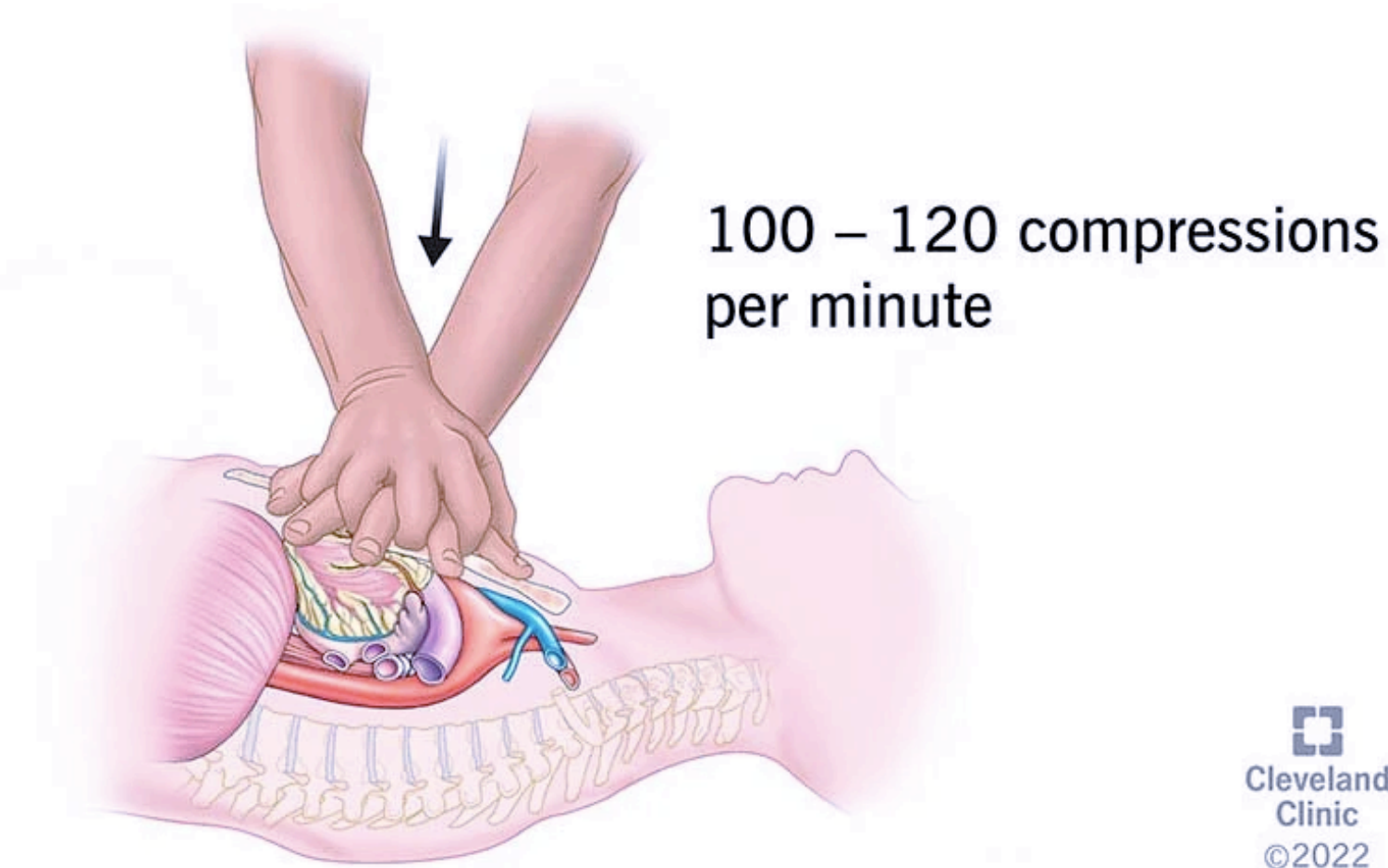
- Control patient's breathing for about 10 seconds. We do this with **look-listen-feel** method. If there is no breathing — Start with giving **two rescue breaths**.
 - Pinch the nose to close it and cover the patient's mouth with your mouth. Give **two rescue breaths**. Spend one second for each breath.
 - Look if the chest rises. If you don't see the chest rise; change the position of head and chin and try again.

Cardiopulmonary resuscitation (CPR)

- After two rescue breaths start **compressions**:
 - ▶ Think of the the patient's sternum as having two equal parts. Then place the heel of your hand on the lower half.
 - ▶ Place the other hand over the first; interlacing your fingers for support. With your arms straight and shoulders positioned over the patient's chest.
- Push down the patient's chest. For an adult push down five centimeters. We want one hundred compressions in a minute.

Cardiopulmonary resuscitation (CPR)

Cardiopulmonary resuscitation (CPR)



Cardiopulmonary resuscitation (CPR)

- After 30 compressions — give two more rescue breaths.
- If the patient has no pulse; continue the CPR cycle. *Thirty compressions and two breaths make one cycle*, till **112** comes.
- To learn CPR properly, take an accredited first-aid training course.

