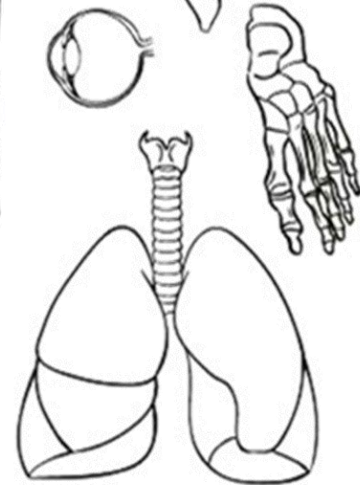
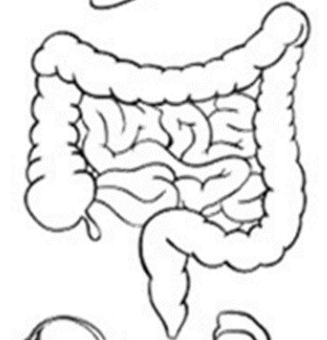
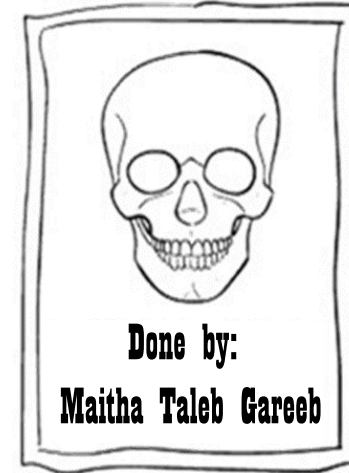
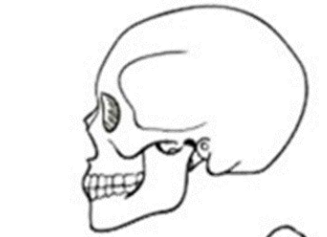
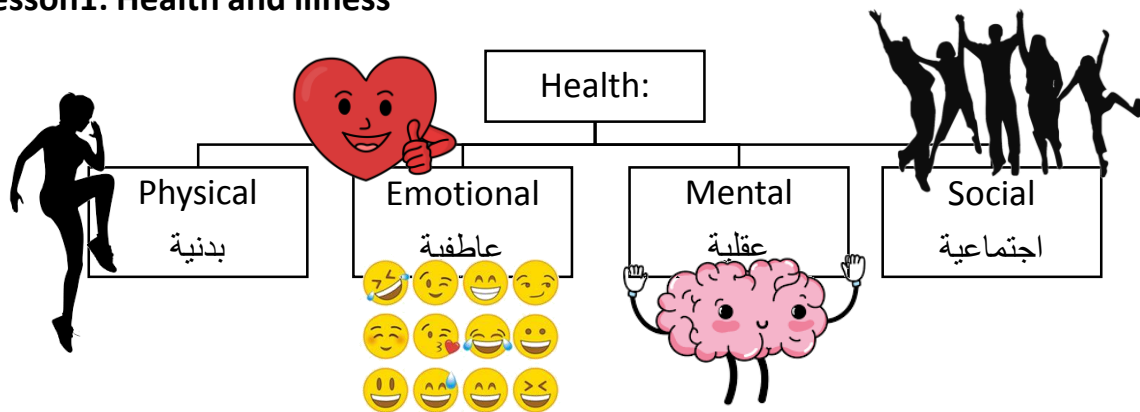


Health Sciences
Grade1 1
Term1
(2021_2020)



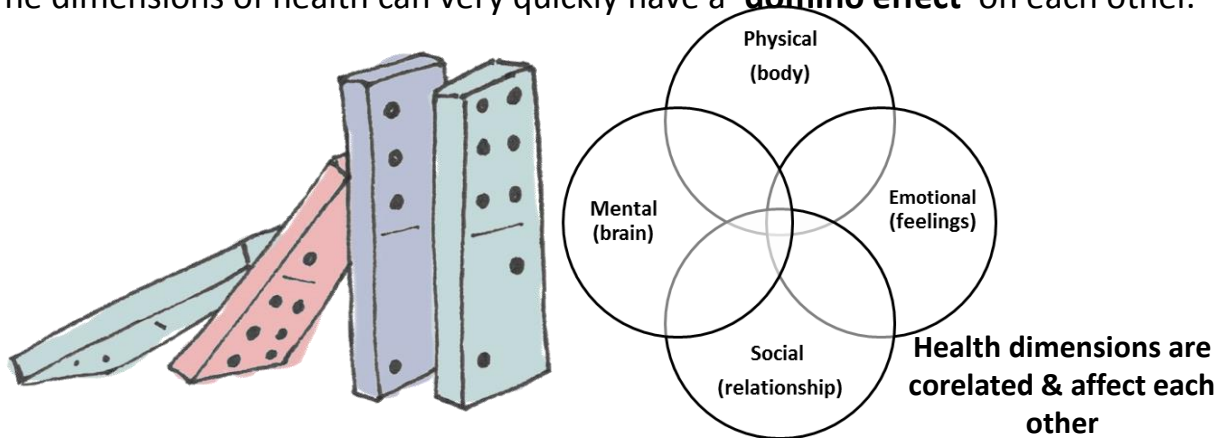
Unit1: Introduction to health

Lesson1: Health and illness



To be healthy you should keep 4 dimensions of health in good state

The dimensions of health can very quickly have a 'domino effect' on each other.



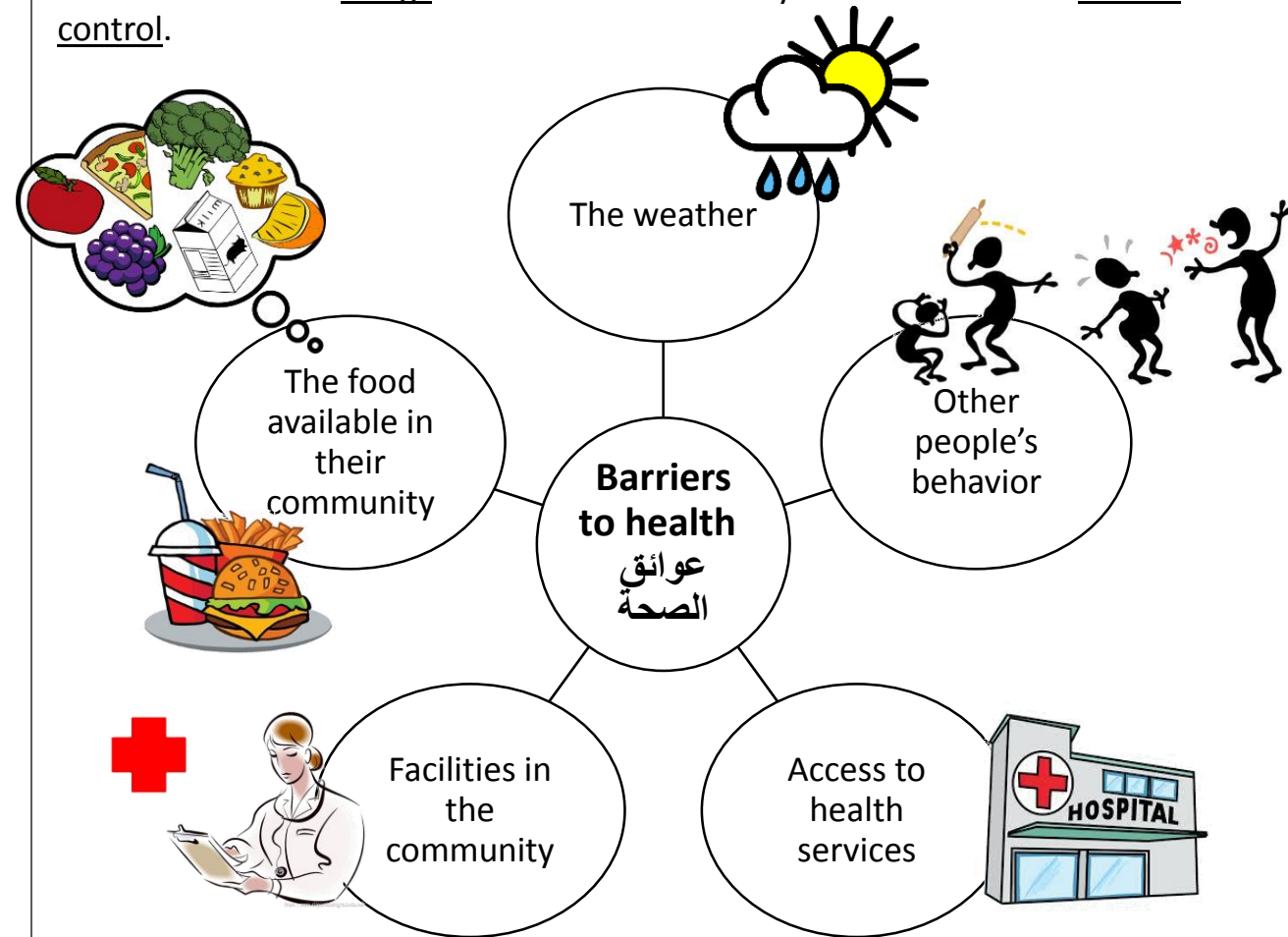
What is health?

The **World Health Organization (WHO)** describes health as: "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

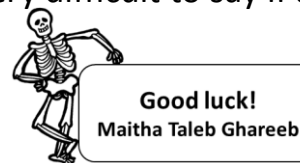
Unit1: Introduction to health





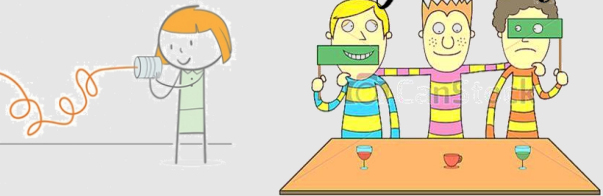

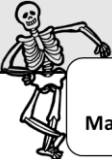
Lesson2: Dimensions of health

Barriers to health: things that affect health that you as an individual cannot control.

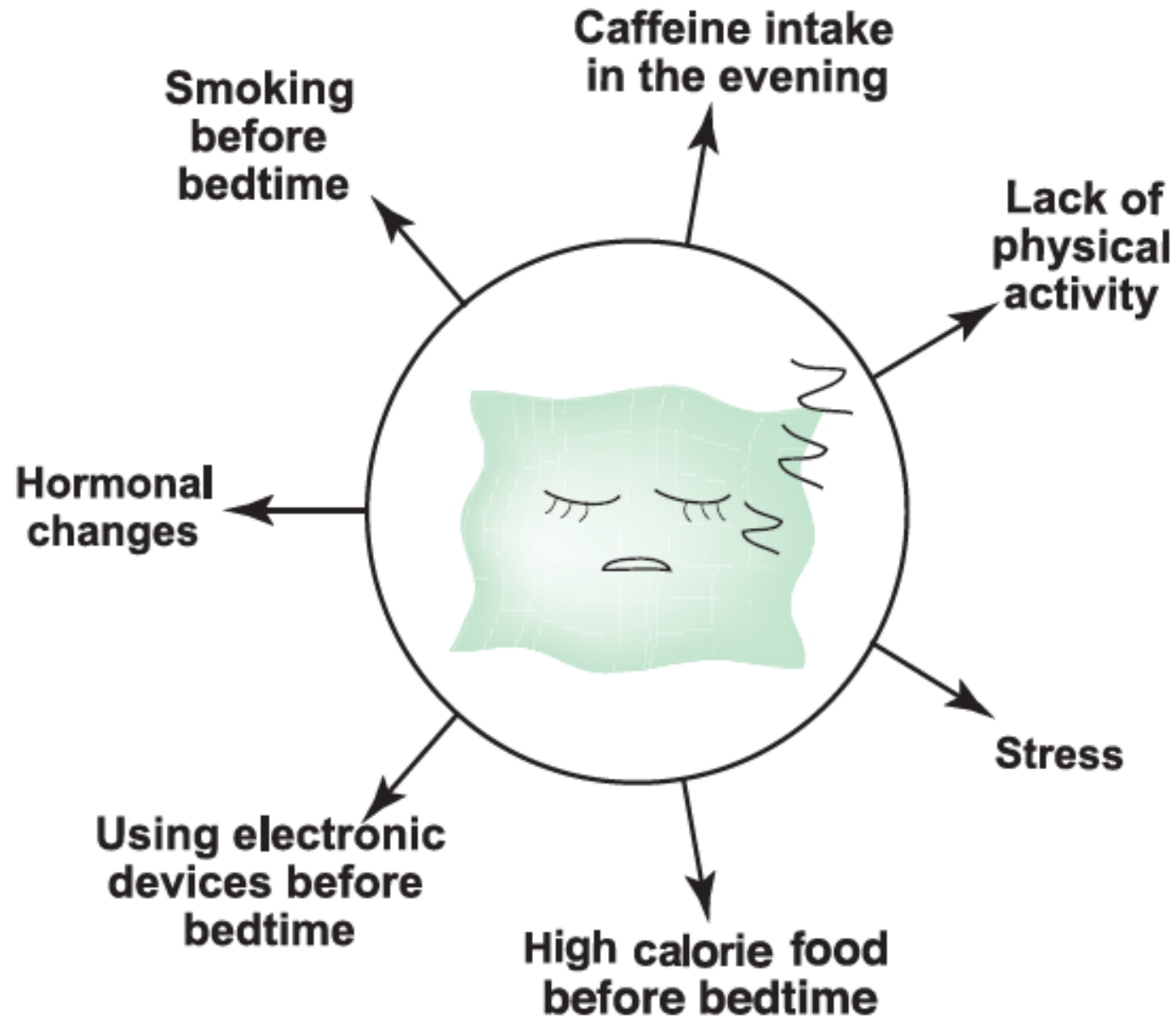


Everybody's health status is constantly changing. It is very difficult to say if a person is 'healthy' or 'unhealthy' at any one time.



Health dimension	Definition	How to improve it?	Medical condition
Physical health	How the <u>body</u> works 	Eat a healthy balanced diet Get enough physical activity (75 min of vigorous/ 150 min of moderate exercises weekly) Stay hydrated (drink plenty of water) Avoid harmful substances (cut down caffeine + quit smoking) Keep a healthy body weight (healthy BMI “Body Mass Index”) Get enough sleep (7-9 hours)	 <i>be yourself</i>
Social health	How well <u>people</u> get along with others 	Give your time, effort and energy Have a good level of self-esteem Be yourself Be positive Good communication skills 	
Mental health	How the <u>brain</u> functions		Eating disorders (e.g. Anorexia) Stress Anxiety disorders Mood disorders (e.g. depression) Dementia الخرف (Alzheimer’s disease): (signs & symptoms: memory loss/ confusion/ difficulty planning + speech + moving + doing everyday tasks/low mood + depressed/ being aggressive/ hallucinations + delusions)
Emotional health	how people <u>feel</u> about themselves & manage their feelings	Practice emotional regulation (meditation/ listening to music/ talking to a friend or family member/ writing a journal/ reading a book) Exercise (e.g. walking can help to clear negative thoughts) Strengthen connections (spend time with family and friends, either in person or on the phone) Be mindful (take a few minutes of your day to give your brain a break)	 <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;"> Good luck! Maitha Taleb Ghareeb </div>

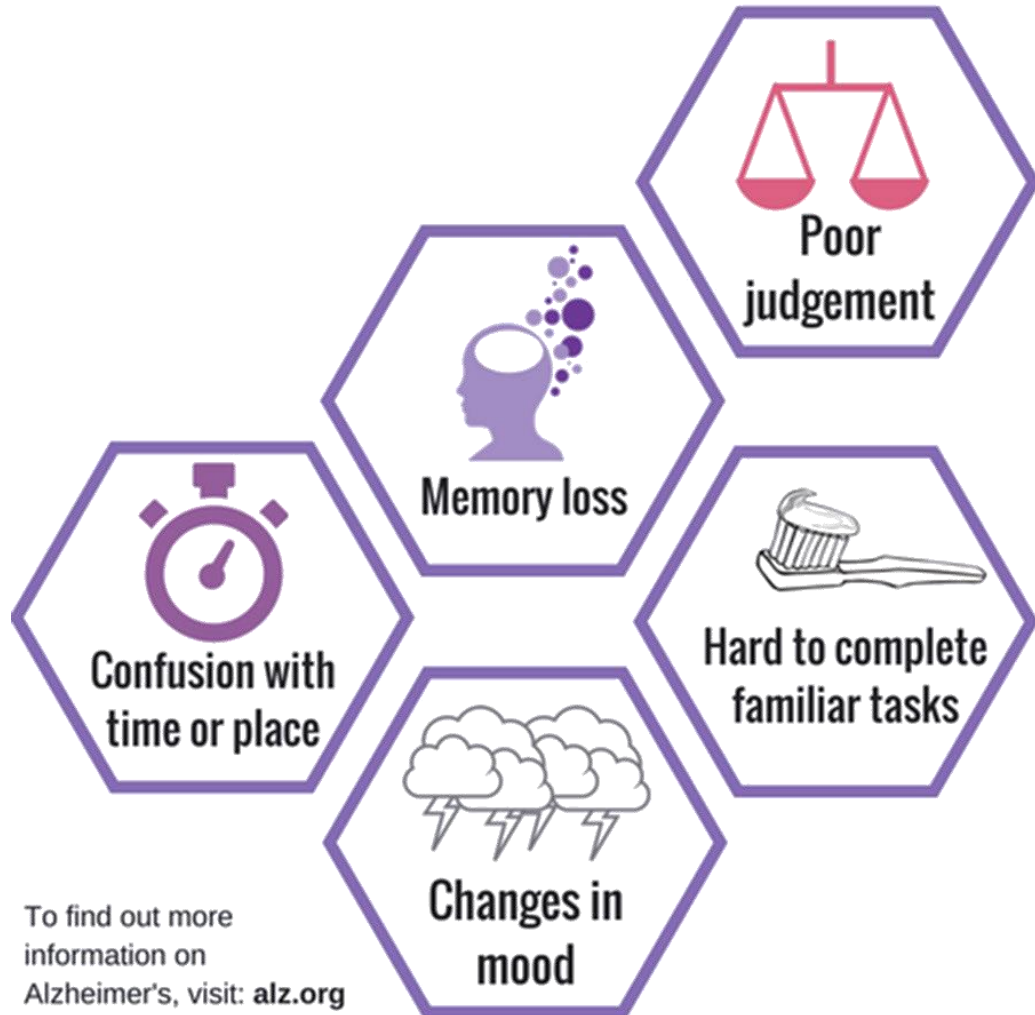
Causes of poor sleep



5 EARLY SIGNS AND SYMPTOMS OF ALZHEIMER'S



A z h e i m e r ' s



The **WHO** says that “Mental health is a state of well-being in which a person realizes their own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to their community.”

To find out more information on Alzheimer's, visit: alz.org

Unit1: Introduction to health
Lesson7: Human growth and development

1) Fetal development
 التطور الجنيني
 (fetus in the womb
 ≈ 9 months)

2) Infancy
 الرضاعة
 (0 – 2 years)

3) Childhood
 الطفولة
 (2 – 11 years)

4) Adolescence
 المراهقة
 (12 – 17 years)

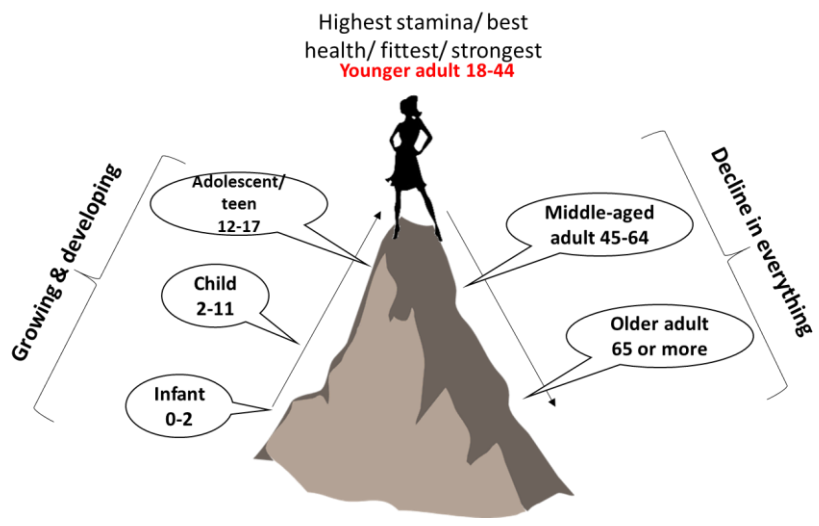
5) Adulthood
 الرشد/ البلوغ

- Younger (18 - 44 years)
- Middle aged (45 - 64 years)
- Older (over 65)

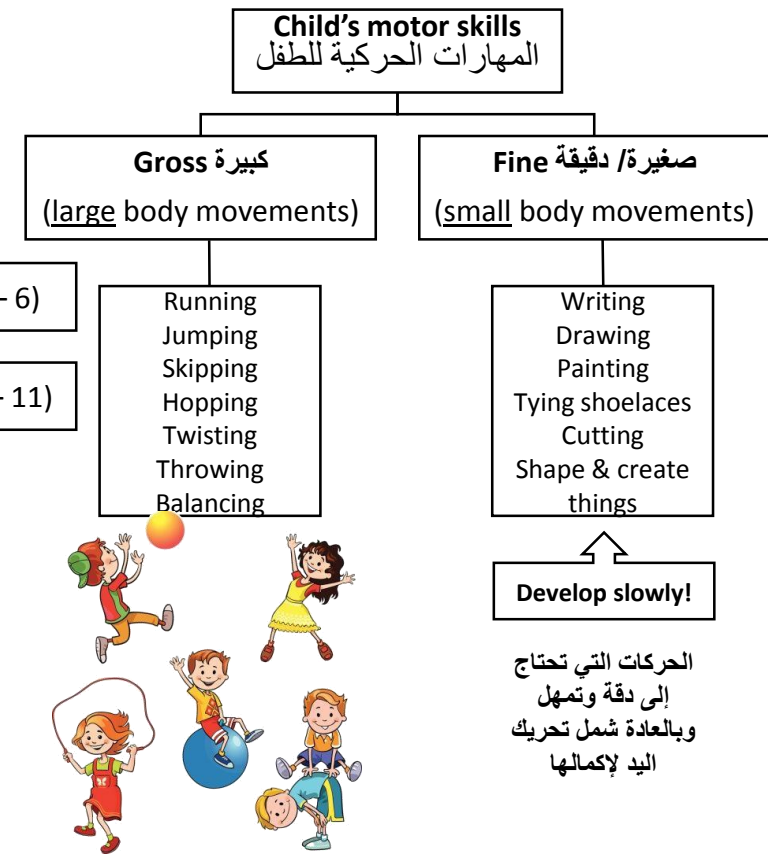
Physical changes: Decline in: تراجع وضعف
 Physical fitness اللياقة البدنية
 Energy levels
 Muscle mass الكتلة العضلية
 The immune system المناعة
 Senses (eyesight النظر/ hearing)
 Motor skills & reflexes الحركة وردود الفعل

Physical changes during puberty عملية البلوغ (process of maturing to an adult)

Boys	Girls
Grow taller Voice gets deeper Skin gets oily Facial and body hair grows Pubic hair grows	Grow taller Hips widen Breasts develop Menstruation cycle starts (periods) Pubic hair grows



Human life cycle
 دورة حياة الإنسان



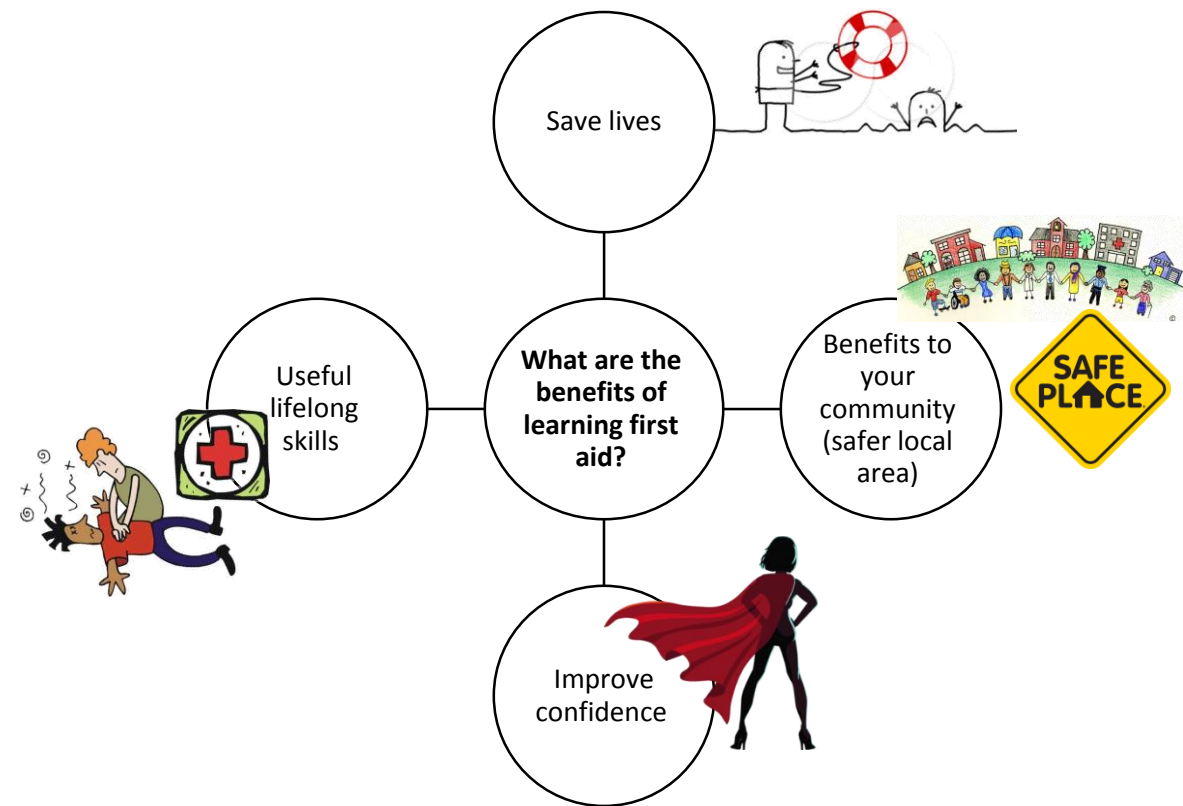
Good luck!
 Maitha Taleb Ghareeb

Unit2: Introduction to first aid

Lesson1: The benefits of learning first aid

First aid: emergency help given to the victim until they get fully treated in hospital.

Emergency: dangerous situation that needs immediate action.



Notes:

- First aiders must be certified & remember to ask for permission before providing help.
- If you want to be certified, you can do that in Dubai Center for Ambulance Services (DCAS).



Good luck!
Maitha Taleb Ghareeb

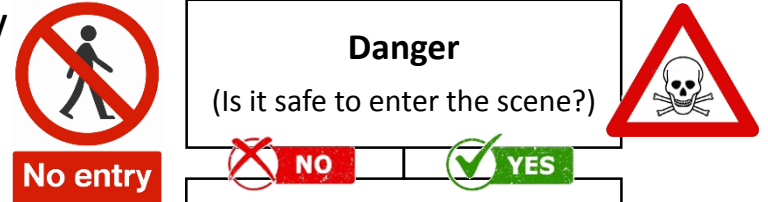
Unit2: Introduction to first aid

Lesson2: First aid kit

First aid kit contents:

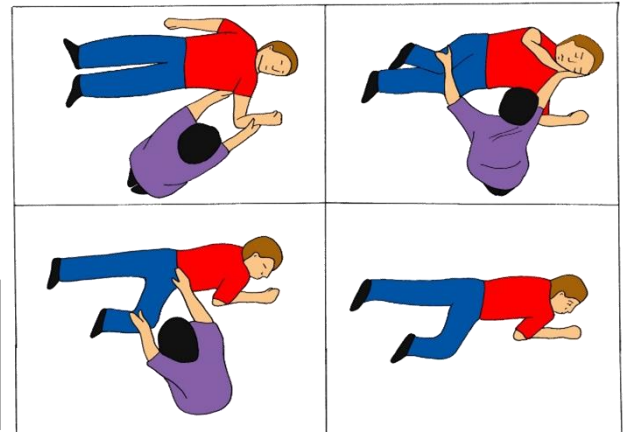
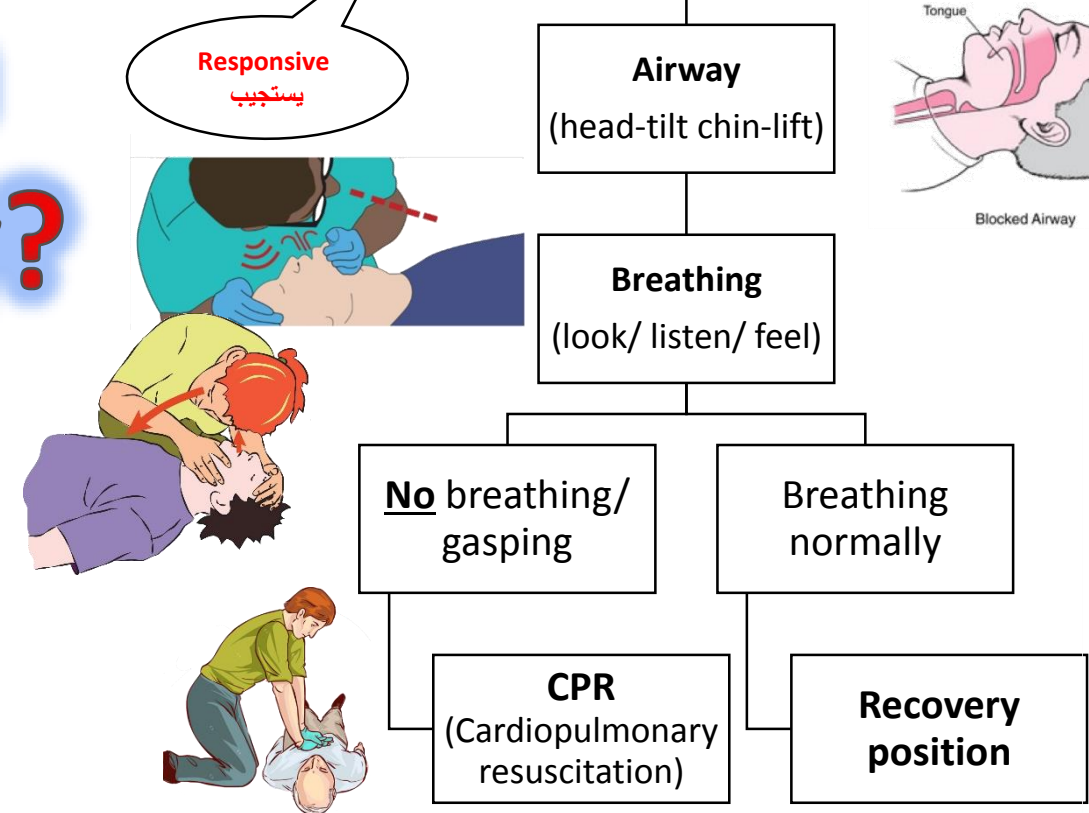
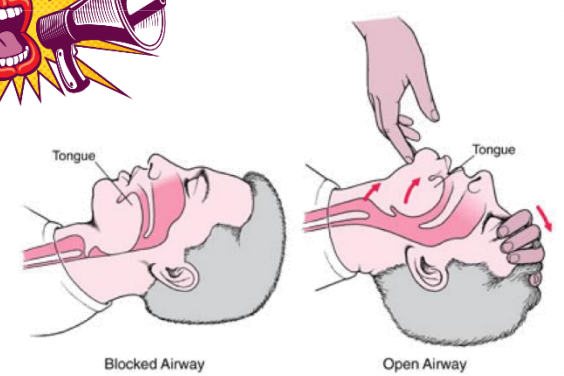
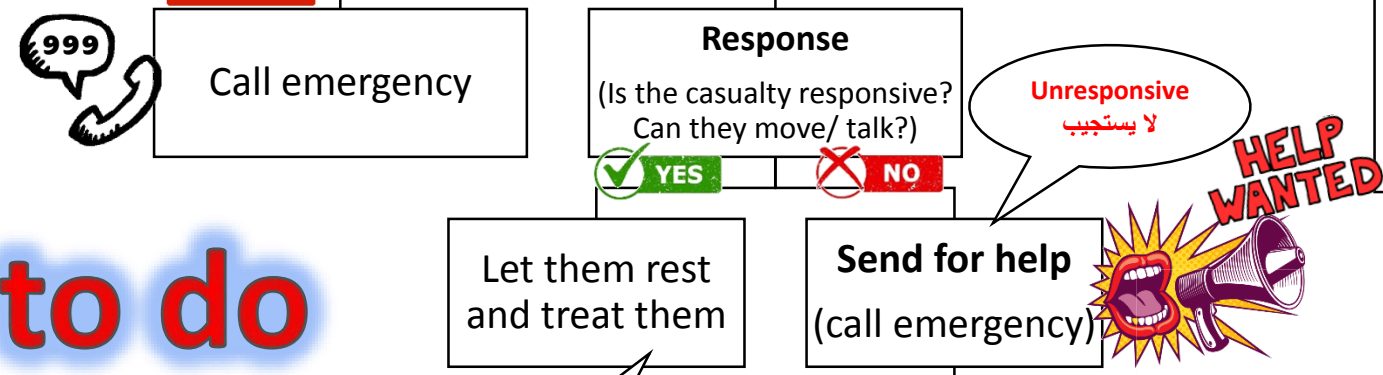


- | | | |
|------------------------------------|-------------------------|---------------|
| 1) CPR mask | 11) Sterile gauze pads | 21) Cold pack |
| 2) First aid manual | 12) First aid box | |
| 3) Flashlight | 13) Antibiotic ointment | |
| 4) Thermometer | 14) Antiseptic wipes | |
| 5) Cream (hydrocortisone ointment) | 15) Bandages | |
| 6) Blanket | 16) Safety pins | |
| 7) Scissors | 17) Plasters | |
| 8) Tweezers | 18) Triangular bandage | |
| 9) Eyewash/ eye drops | 19) Medical tape | |
| 10) Aspirin | 20) Gloves | |



- Emergency action plan:**
Remember: **DRS AB**
- 1) **Danger** خطر
 - 2) **Responsiveness** الاستجابة
 - 3) **Send/ shout for help** طلب المساعدة
 - 4) **Airway** مجرى الهواء
 - 5) **Breathing** التنفس

What to do during an emergency?



Lesson3: Attending the scene of an emergency

Your safety first! If the scene is dangerous do not enter!

Danger: Assess the scene
(is it safe?/ check for hazards)

1 2 3 4 5
DR ABC

How to act during an emergency?

Don't forget to wear PPE before dealing with the victim!
Casualty = victim = injured person = patient = ضحية

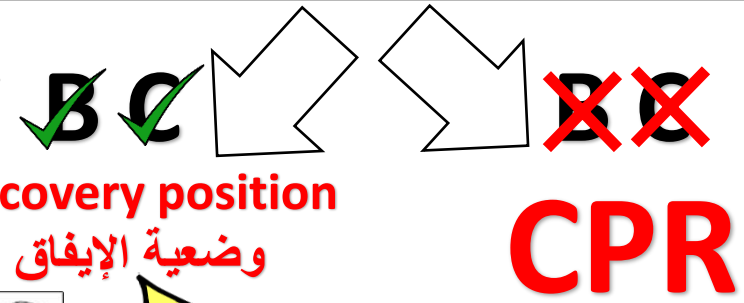
Assess the casualty:

- R**esponse (tap the shoulder of the casualty and ask: Are you OK?)
- A**irway (check if there is something blocking the airway)
Head tilt chin lift
- B**reathing (look/ feel/ listen)
- C**irculation (check pulse/ injuries or bleeding)

Possible hazards:	
Traffic	
Unstable electric lines	
Fire	
Smoke	
Violent behaviors	
Extreme weather	
Dangerous fumes	
Biochemical products	
Falling rocks	

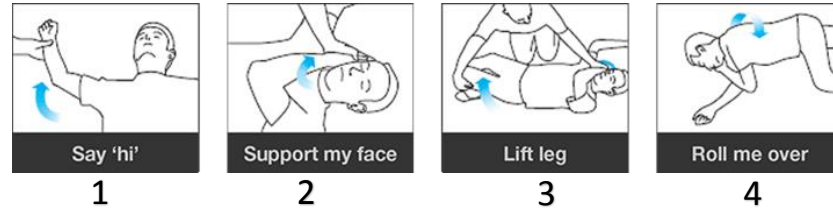
Good luck!
Maitha Taleb Ghareeb

But the person is unconscious!
الشخص مغمي عليه



CPR

Cardiopulmonary resuscitation
الإنعاش الرئوي القلبي



Check for any "medical information jewelry" (tells you about existing medical condition)

The Recovery Position First Aid



Good luck!
Maitha Taleb Ghareeb

1



2



3



4



5



6



7



8



Recovery position

1. Kneel down in front of the casualty
2. Remove any bulky item inside their pockets
3. Take the arm closest to you & place it at a right angle to their body "say hi"
4. Move the other hand across their chest & place the back of their hand on their cheek
5. Lift the far knee up until the foot is flat on the floor
6. While keeping the casualty hand pressed against their cheek, hold the raised knee & roll them towards you
7. Once fully over, re-adjust the head position if needed & place the top leg at a 90° angle

إذا أغمى على الشخص كل عضلاته ترتخي بما فيها اللسان اللي ممكن يسد مجرى التنفس فلا بد من وضع الشخص في وضعية الإيفاق لفتح مجرى التنفس

How to wash and dry hands with liquid soap and water

1 Duration of the entire procedure: 40-63 secs.

4 Wet hands with water

5 apply enough soap to all hand surfaces

6 rub hands palm to palm

7 right palm over left dorsum with interlaced fingers and vice versa

8 palm to palm with fingers interlaced

9 backs of fingers to opposing palms with fingers interlocked

rotational rubbing of left thumb clasped in right palm and vice versa

rotational rubbing, backwards and forwards with clasped fingers of right hand in palm and vice versa

rinse hands with water

10 dry thoroughly with single use towel

11 use towel to turn off faucet

12 ...and your hands are safe.

- 3) Palm to palm
- 4) Palm over dorsum + fingers interlaced
- 5) Palm to palm + fingers interlaced
- 6) Inter-lock
- 7) Rotational + thump
- 8) Rotational + clasped fingers

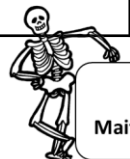
For rubbing process remember:

3 Palm لتسهيل حفظ عملية الفرك

Lock

2 Rotation

How to wash hands properly?	
1	<u>Wet</u> your hands
2	Apply <u>soap</u>
3	Rub hands <u>palm to palm</u>
4	Rub <u>palm over dorsum</u> with <u>fingers interlaced</u>
5	Rub <u>palm to palm</u> with <u>fingers interlaced</u>
6	Rub back of fingers with the opposite palm, fingers <u>interlocked</u>
7	<u>Rotational</u> rubbing of <u>thumb</u> against opposite palm
8	<u>Rotational</u> rubbing of <u>clasped fingers</u> against the opposite palm
9	<u>Rinse</u> hands with water
10	<u>Dry</u> hands with a towel
11	Use the same towel to <u>close</u> the <u>tap</u>



Good luck!
Maitha Taleb Ghareeb

How to remove gloves safely?



1) Pinch & hold the outside of the glove near the wrist area.



2) Peel downwards away from the wrist turning the glove inside out.



3) Pull the glove away until it is removed from the hand & hold "the inside-out glove" with the gloved hand.



4) With your ungloved hand, slide your fingers under the wrist of the remaining glove. Take care not to touch the outside of the glove.



5) Again, peel downwards away from the wrist turning the glove inside out.



6) Now both gloves should be inside out one glove inside the other



7) Wash your hands immediately.



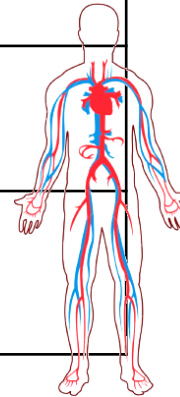
Good luck!
Maitha Taleb Ghareeb

What makes up your circulatory system?

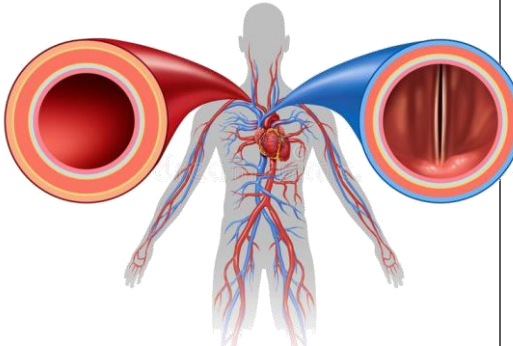
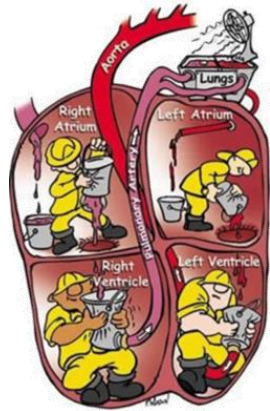
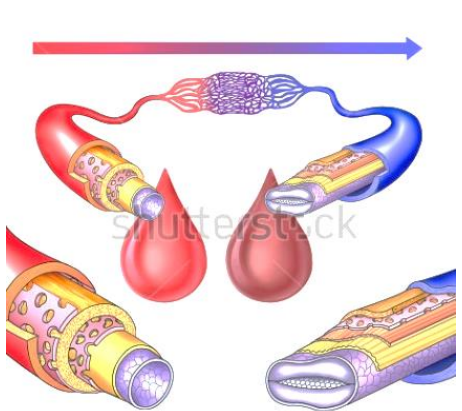


Good luck!
Maitha Taleb Ghareeb

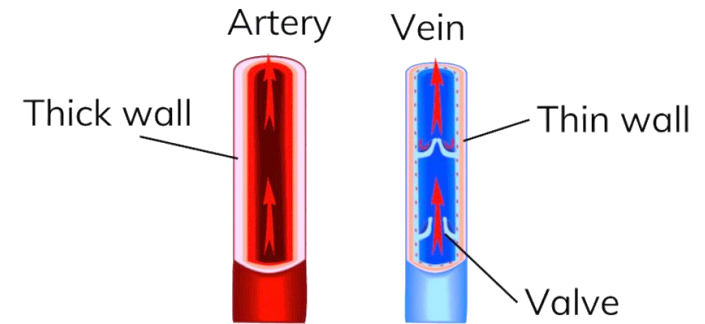
Transportation system	Circulatory system
Road/ street	Blood vessels: Veins/ Arteries/ capillaries
Car	Blood
Engine	Heart



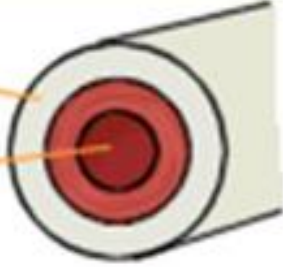


Blood vessel	Vein	Artery	Capillary
Cross section	 Thickness: thin outer wall and muscle layer Lumen: large	 Thickness: thick outer wall and muscle layer Lumen: large	 Thickness: a single layer of cells Lumen: very small
Blood color	Dark red	Bright red	Both
Bleeding type			
How blood acts?	<ul style="list-style-type: none"> ✓ Oozing ✓ Steady, slow flow 	<ul style="list-style-type: none"> ✓ Spurting ✓ Pulsating flow 	<ul style="list-style-type: none"> ✓ Slow flow ✓ Clot by itself
How serious is it?	Slightly serious injury & rarely result in death	Very serious, the cut will bleed very fast & the patient may die in minutes	The cut clot and stops by itself
What does it do? (function)	Return blood <u>into</u> the heart	Take blood <u>out</u> of the heart	<u>Exchange gases</u> & provide cells and tissues with <u>nutrients</u>

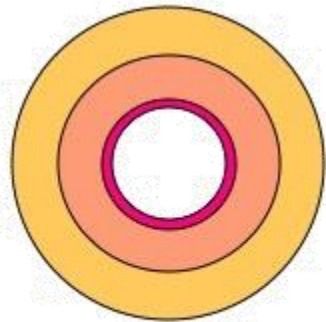


Note: veins have **valves** صمامات that stop blood from flowing back.



Blood Vessels

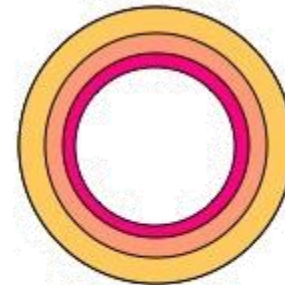
Artery	thick, elastic wall small lumen 
Vein	thin wall large lumen valve 
Capillary	single cell wall 



Arteries

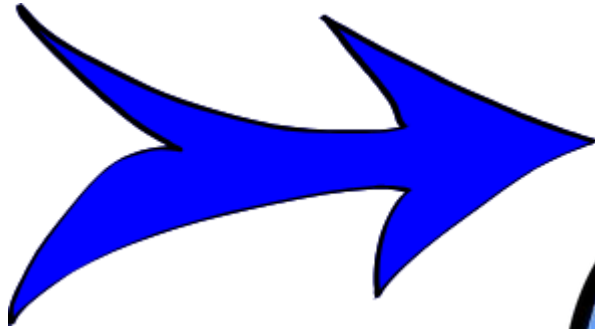


Capillaries

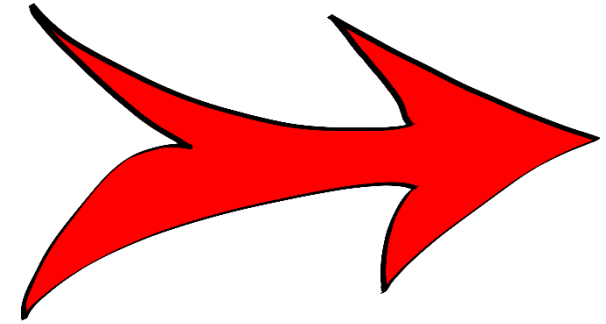


Veins

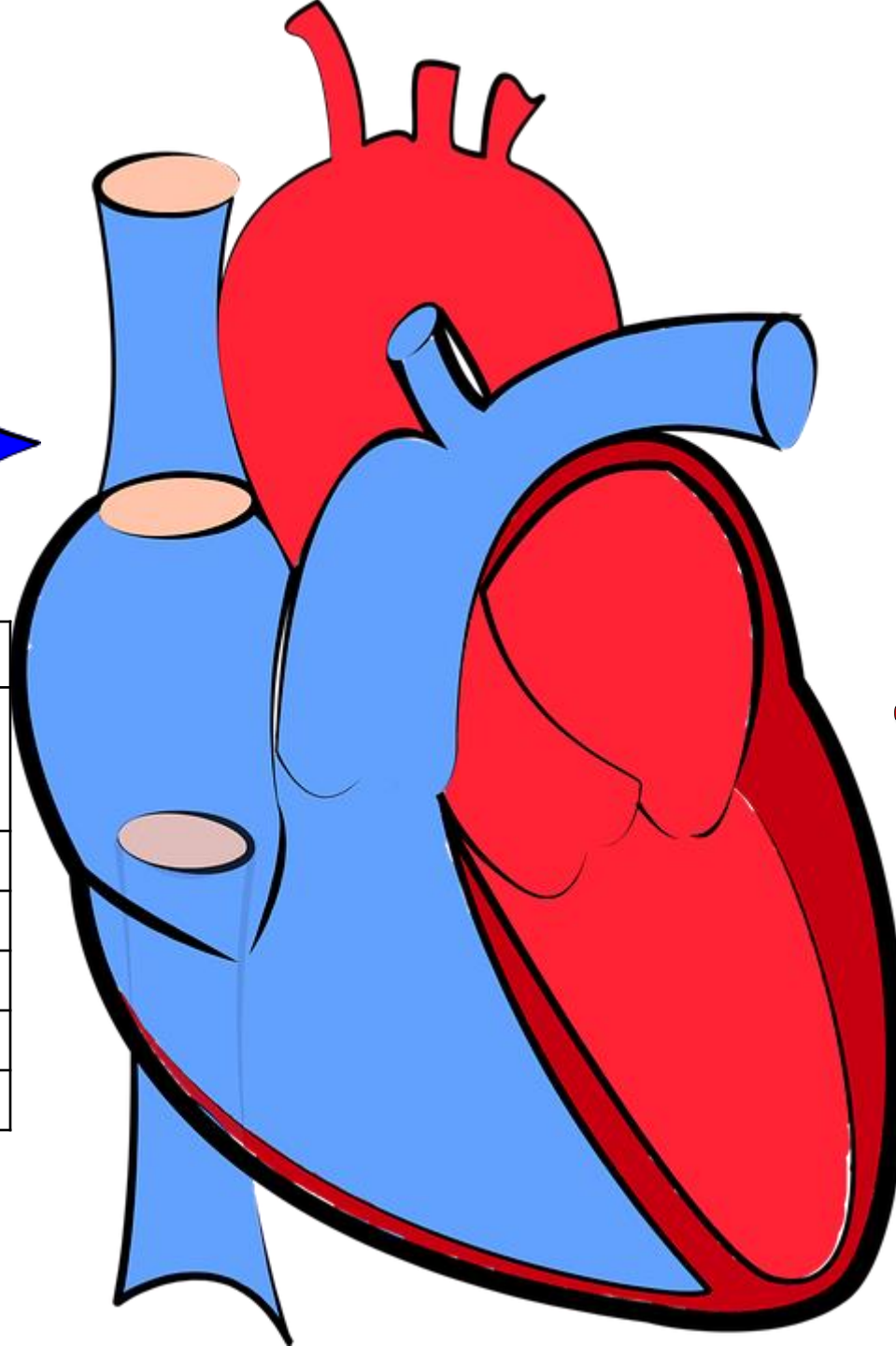
Vein



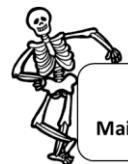
Artery



The opposite



Blood vessel name:	<u>Vein</u>
Function:	Bring blood into (towards/ return back/ inside) the heart
Wall color:	Blue
Blood color:	Dark red
Blood pressure:	Low
Bleeding flow:	Oozing/ track smoothly
Wall thickness:	Thin walled



Good luck!
Maitha Taleb Ghareeb

Category of soft tissue injury	Description/ definition	Types/ examples	Picture
Abrasion كشط	Scraping/ grazing the skin on a rough surface	Knees/ elbow/ hands	
Laceration تمزيق	A cut in the tissue. Could be deep or superficial	If it is deep it may damage nerves & blood vessels	
Avulsion قلع	A tear in the tissue		
Puncture وخز	Penetrating of flesh by sharp object such as: knife/ splinter	Perforated (if the object goes through the body & out the other side) Impaled (if the object stays in the body & sticking out)	
Amputation بتر	Complete removal of tissue from the body	Limbs such as legs/ arm/ fingers	

Soft tissue injuries are injuries to any skin, muscle, tendon, or ligament in the body.

Body tissues

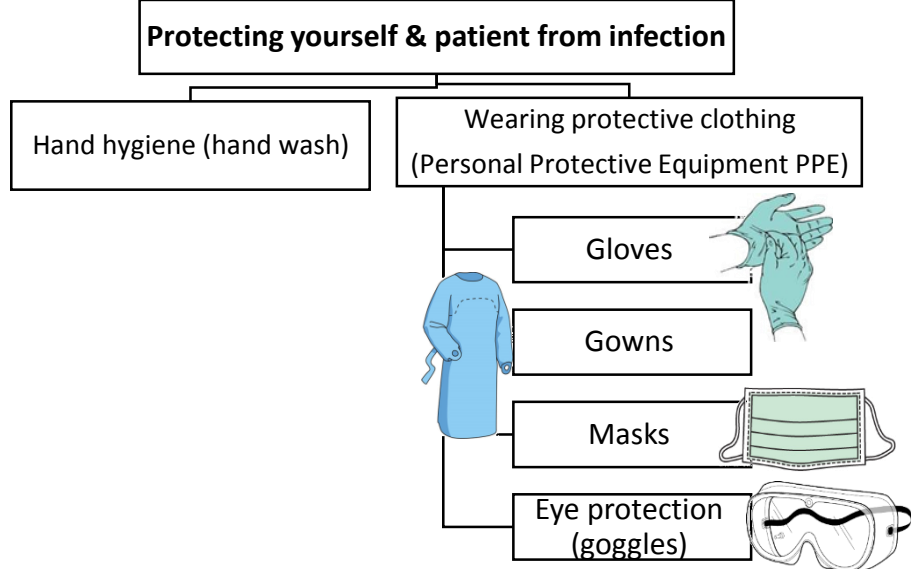
- Hard:**
Bones
- Soft:**
Skin/ muscle "flesh"/ tendon/ ligament

Hand-drawn diagrams and notes for various injuries:

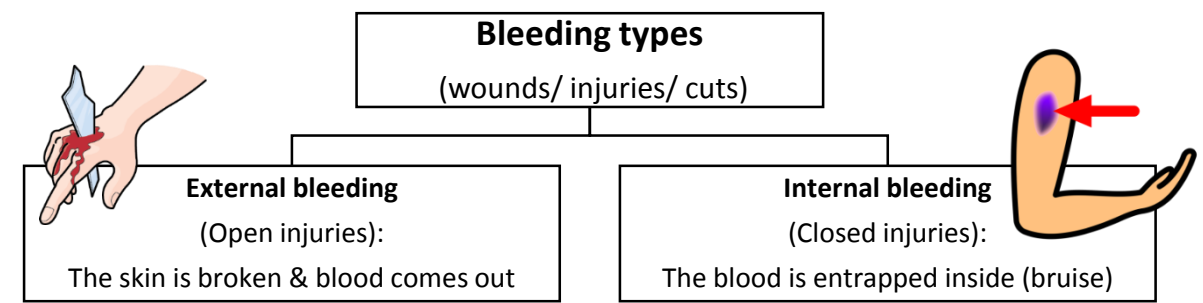
- Tyre puncture:** بنسك التاير (tyre puncture)
- Impaled:** طعت (impaled)
- Perforated:** الاباء مع الباء والتاء مع التاء (perforated)
- Amputation:** بيتر (amputation)
- Laceration:** قطع (laceration)
- Abrasion:** تفشير/كشط (abrasion)
- Notes:** "sounds like" pointing to a hand with a red mark.



How to protect yourself & casualty from cross infection "contamination"?



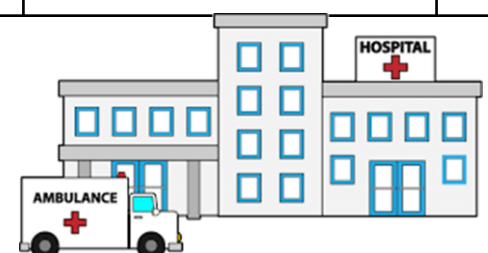
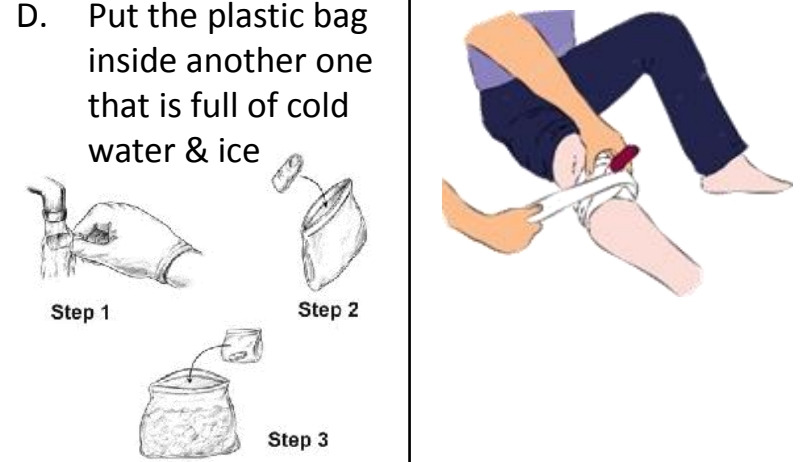
Lesson7: Applying a dressing to a wound



Dressings vs. bandages:

	Dressing	Bandages
What is used for?	Stops bleeding	Applies pressure/ keeps or fixes the dressing in place
Examples	Gauze pads/ plaster/ clean cloth	Gauze rolls/ triangular bandages/ elastic bandages/ clean cloth

Soft tissue injury type	Amputation	Puncture injuries
First aid	1) Call 998 2) Get first aid kit + wear PPE (personal protective equipment, such as: gloves) 3) Try to stop the bleeding using a dressing and a bandage	
	For amputated part: A. Wash it B. Wrap it with a clean cloth C. Put it inside a plastic bag D. Put the plastic bag inside another one that is full of cold water & ice	If there is something sticking out of the wound: Do not pull it! But fix it by wrapping a bandage around it.



Good luck!
Maitha Taleb Ghareeb

How to stop bleeding?

1. Assess the scene for danger
2. Ask for permission to give first aid
3. Get a first-aid kit & wear PPE (Personal Protective Equipment) such as gloves
4. Apply dressing such as gauze and press with your palm to stop the bleeding.
5. Start bandaging from the gauze
6. Wrap in a circular motion until the wound & the gauze are fully covered
7. Tuck or tie the end of the bandage
8. Be careful not to tie it too tight (we do not want to stop circulation)

Apply a tourniquet الرباط الضاغط

1) Wrap the strap around the limb about 5cm above the wound

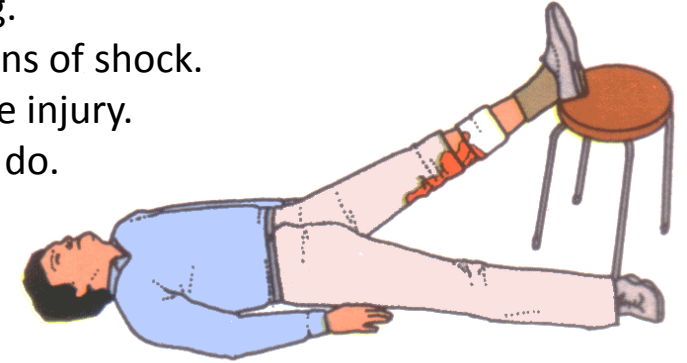
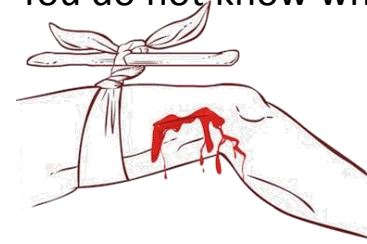
2) Tighten it using the windlass عصا

3) Secure the windlass in place with the Velcro strap provided and make a note of the time



When to call emergency services for bleeding?

- 1) There is a lot of bleeding.
- 2) You can not stop bleeding.
- 3) The person is showing signs of shock.
- 4) Suspect head/ neck/ spine injury.
- 5) You do not know what to do.



APPLYING A TOURNIQUET

AN INCORRECTLY APPLIED TOURNIQUET CAN LEAD TO AMPUTATION.



PLACE A BANDAGE ON THE WOUND AND HOLD DOWN STRONGLY.

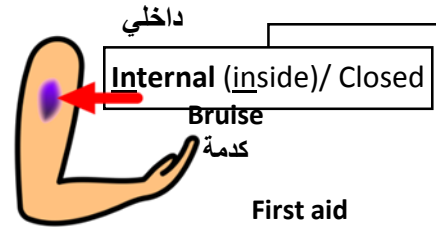


BRIGHT SIDE

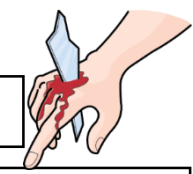


Good luck!
Maitha Taleb Ghareeb

جرح Injuries/ wounds



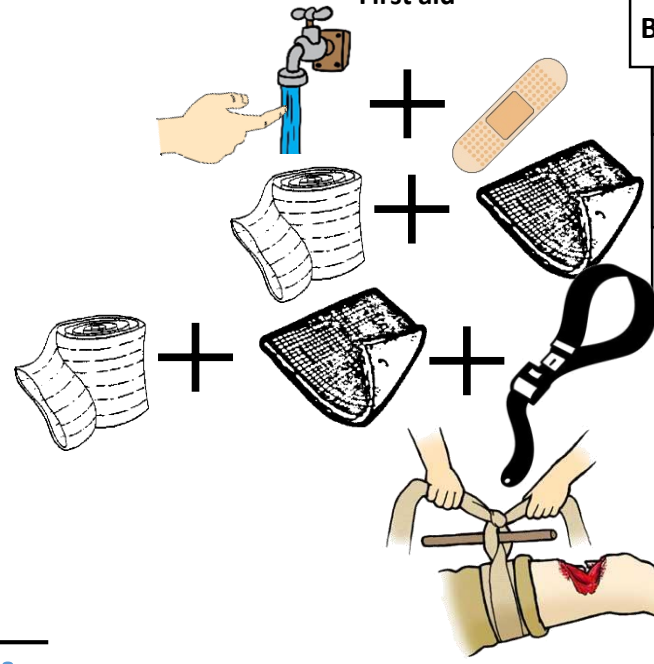
خارجي External (exit)/ Open



Shapes (soft tissue injuries)

- Puncture وخز
بنشر التاير
- Amputation ميكتور
- Abrasion خدوش
بشارة
- Laceration قطع
- Avulsion / تمزق
قلع

First aid



Bleeding types:

- Capillary
- Vein
- Artery

1 APPLY PRESSURE WITH HANDS

2 APPLY DRESSING AND PRESS

3 APPLY TOURNIQUET

WRAP WIND SECURE TIME

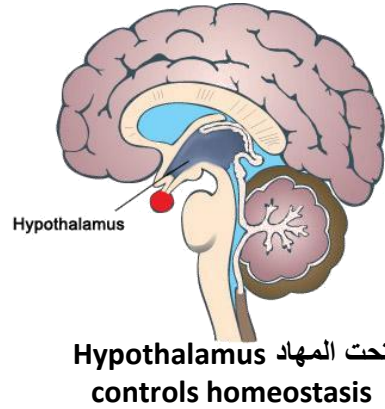
Item	Picture
Dressing	
Bandage	
Tourniquet	

Good luck!
Maitha Taleb Ghareeb

How the body reacts to heat and cold? (body's temperature regulation)

Homeostasis examples:

1. Concentration of salt
2. Blood glucose level
3. Body composition (fat%)
4. Amount of water
5. Blood in the body
6. Body temperature

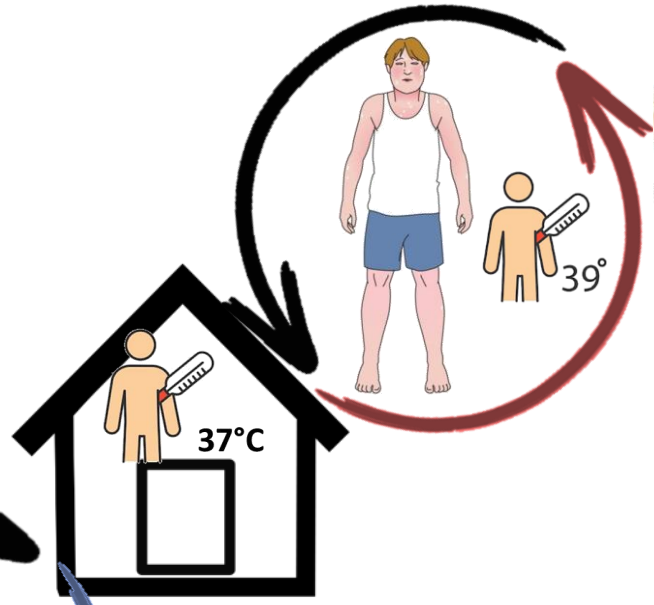


Sweating التعرق: fluids from sweat glands to cool the body.

Flat hair to let heat escapes

Table 1. Vital signs: normal values in adults

Temperature	37°C
Heart rate	60-99 beats per minute
Pulse	60-99 beats per minute
Blood pressure	120/80mmHg
Respiratory rate	12-16 breaths per minute
Oxygen saturation	95-100%
pH	7.3-7.5

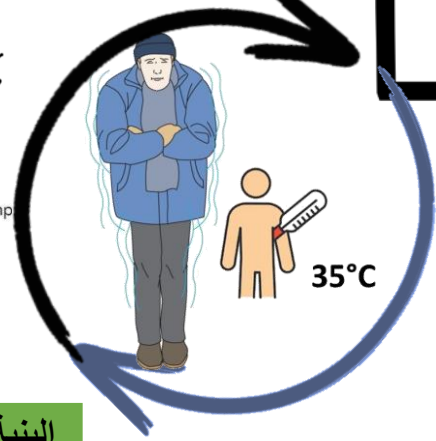
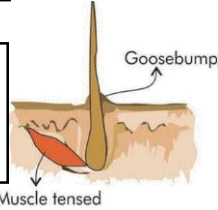


Homeostasis: regulation process عملية الاتزان (sounds like **Homestay**)

Shivering الإرتجاف: this movement helps the body gains more heat



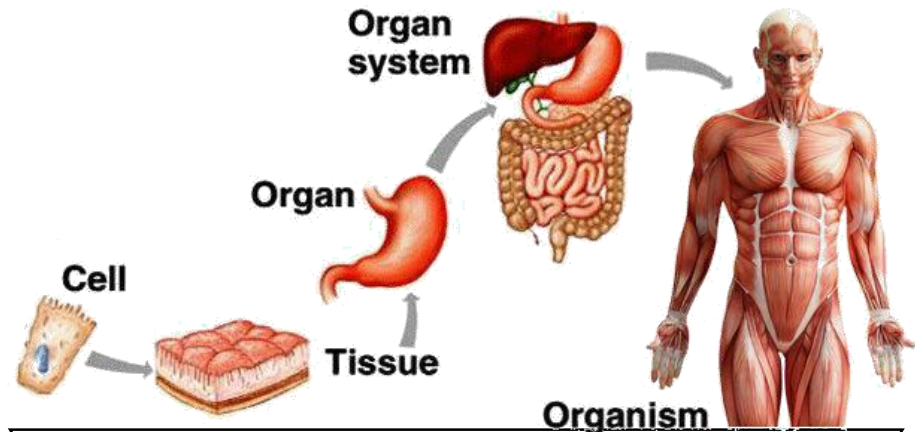
Hair stands up to keep the heat in



Homeostasis sounds like **"Home Stay"**
 Wherever you go you will return eventually home and stay in there we can apply the same concept to "homeostasis" as it is the original point
Homeostasis = عملية الاتزان

Good luck!
 Maitha Taleb Ghareeb

Anatomy	البنية التشريحية
Physiology	وظيفة الأعضاء



Respiratory تنفسي

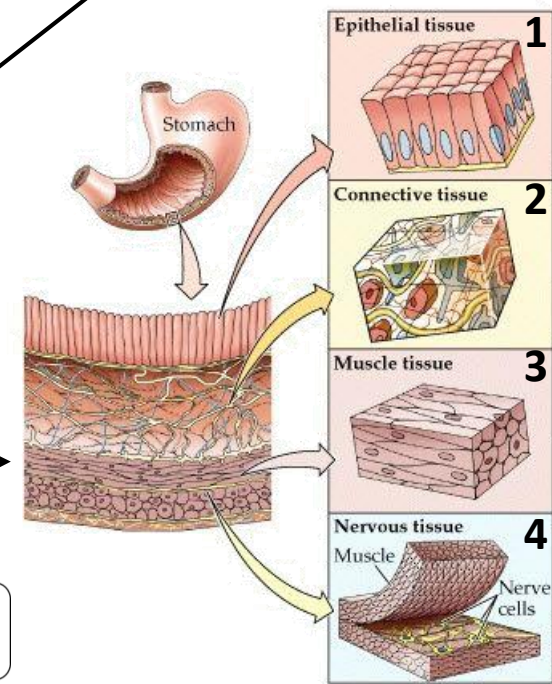
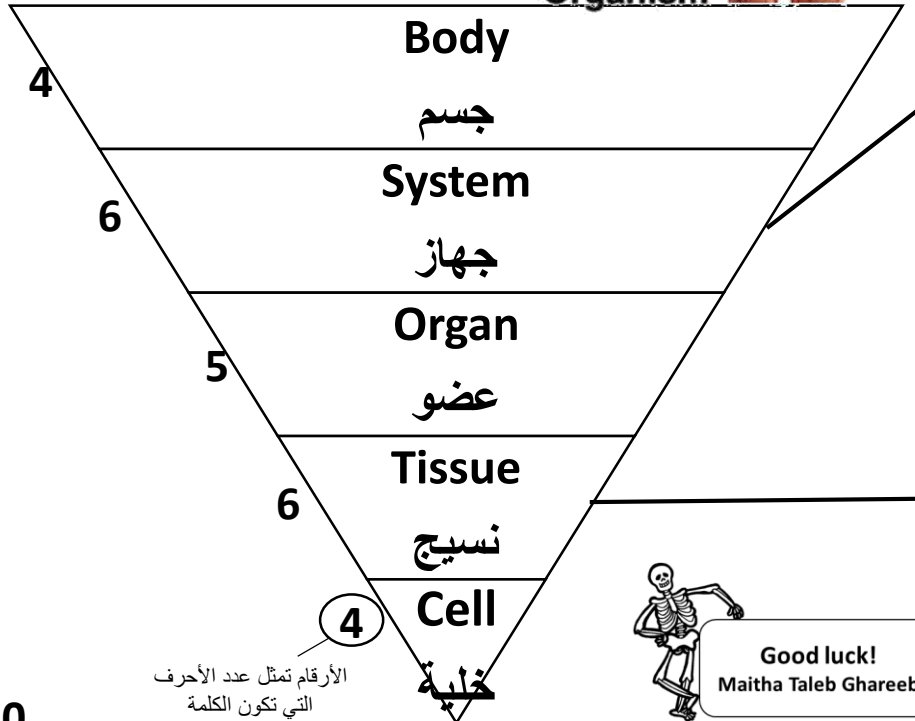
Circulatory/ cardiovascular وعائي قلبي/ الدوري

Immune مناعي أمن

Digestive هضمي

Nervous عصبي

Muscular عضلي Skeletal هيكلية
Musculoskeletal system الجهاز الهيكلي العضلي

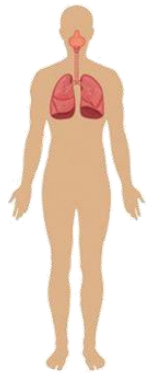


Tissue type:	Example:
Epithelial: ظاهري / طلائي / طبقة خارجية للحماية	Skin جلد / lining of organs بطانة الأعضاء
Connective: ضام يجمع الأنسجة ويربطها ويقدم الدعم والحماية مثل الكولاجين	Fat دهن / tendon وتر / ligament رباط / bone عظم / blood دم
Muscular: عضلي المسؤول عن الحركة	Smooth muscle ملساء / cardiac muscle عضلية / skeletal muscle هيكلية
Nervous: عصبي يوصل الاحساس	Nerves أعصاب / brain دماغ / spinal cord حبل شوكي

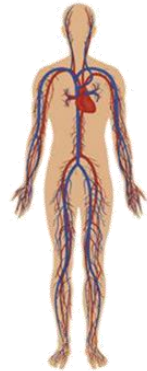
Good luck!
Maitha Taleb Ghareeb

الأرقام تمثل عدد الأحرف التي تكون الكلمة

Respiratory تنفسي



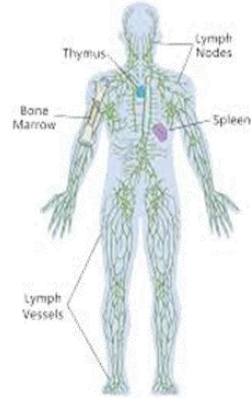
Circulatory/
cardiovascular
وعائي قلبي / الدوري



Immune مناعي



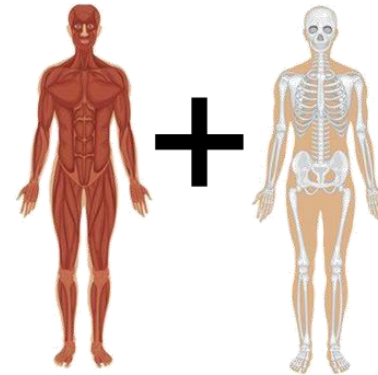
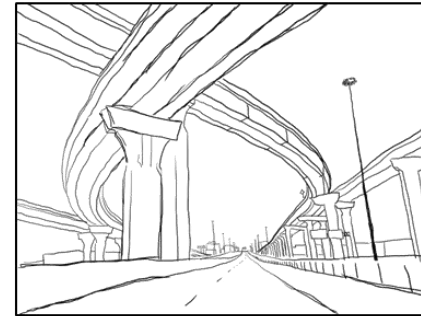
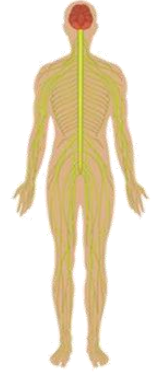
أمن



Digestive هضمي



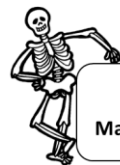
Nervous عصبي



Muscular عضلي Skeletal هيكلية

Musculoskeletal system

الجهاز الهيكلي العضلي

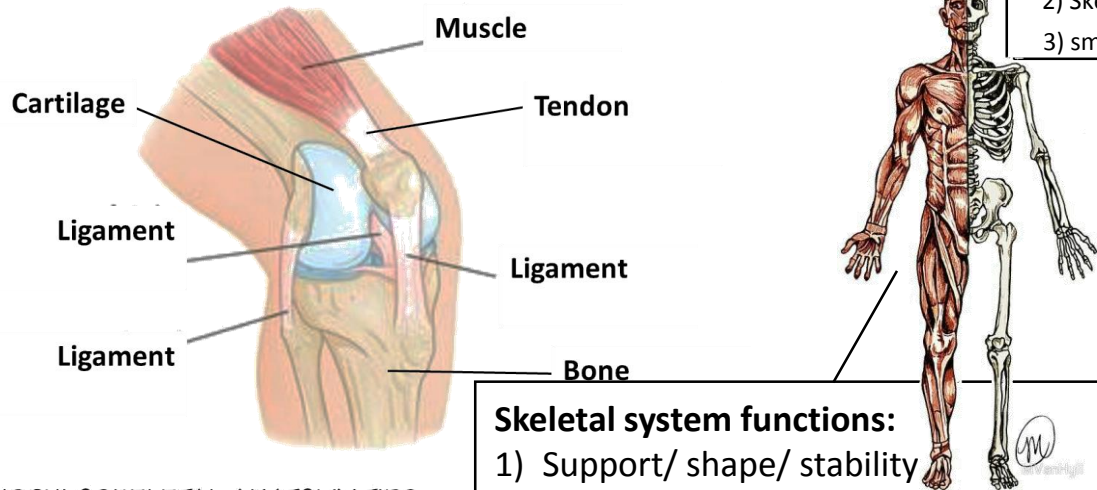
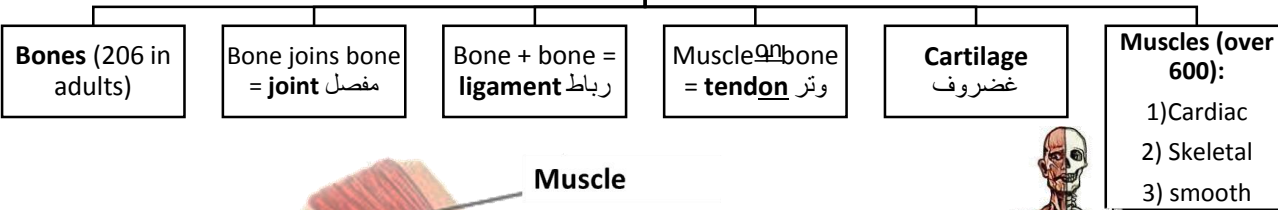


Good luck!
Maitha Taleb Ghareeb

Unit3: Anatomy and physiology

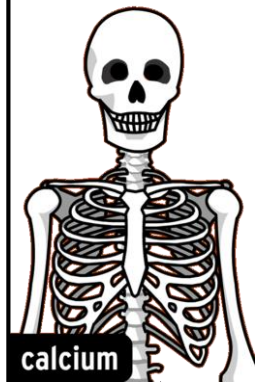
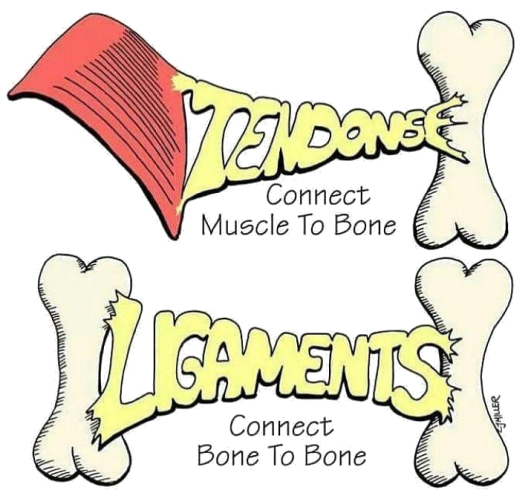
Lesson3: The musculoskeletal system

Musculoskeletal system parts (anatomy):



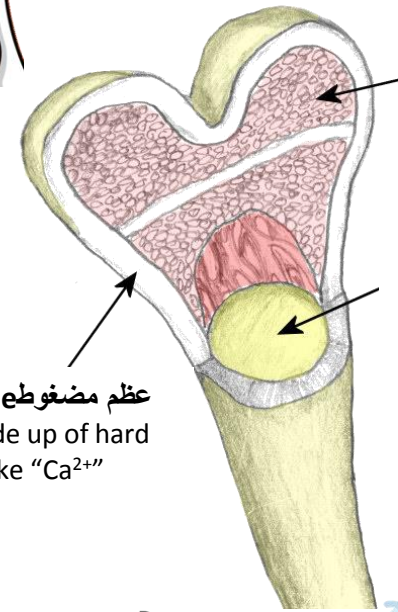
- Skeletal system functions:**
- 1) Support/ shape/ stability
 - 2) Movement with the help of muscles
 - 3) Protects vital organs: heart/ brain/ lungs
 - 4) Store calcium and phosphorus
 - 5) Produce blood cells

MUSCULOSKELETAL ANATOMY TIPS



What are bones made of?

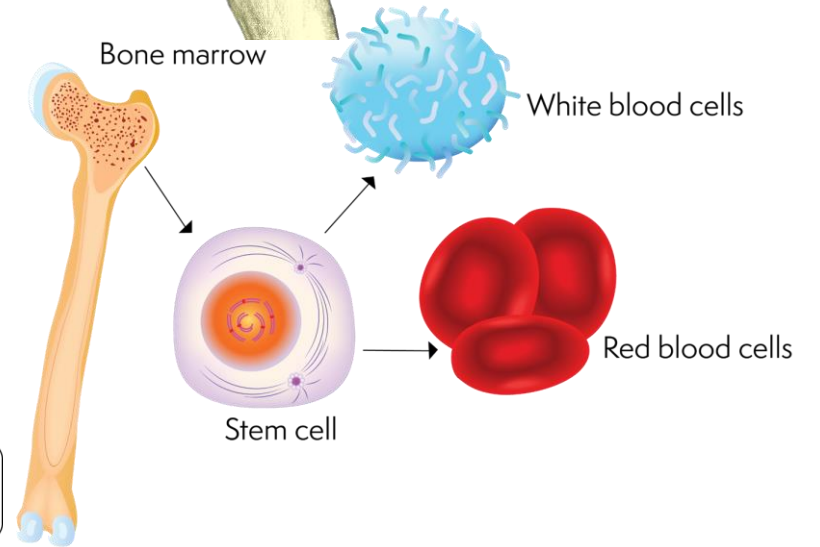
- ✓ Make bones lighter
- ✓ Move easily
- ✓ Slightly bendable "flexible" قابلة للثني
- ✓ Hard to break



Spongy bone (Trabecular bone)
عظم إسفنجي
"porous" = lots of holes

Bone marrow نخاع العظم
(produces white & red blood cells)

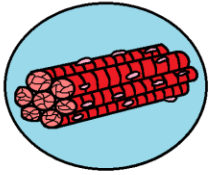
Compact bone عظم مضغوط
Bones are made up of hard minerals like "Ca²⁺"



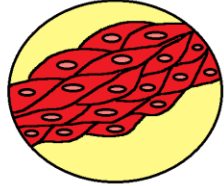
Good luck!
Maitha Taleb Ghareeb

Unit3: Anatomy and physiology
Lesson3: The musculoskeletal system

3 Types of Muscle Tissue



Skeletal
Can be attached to bone

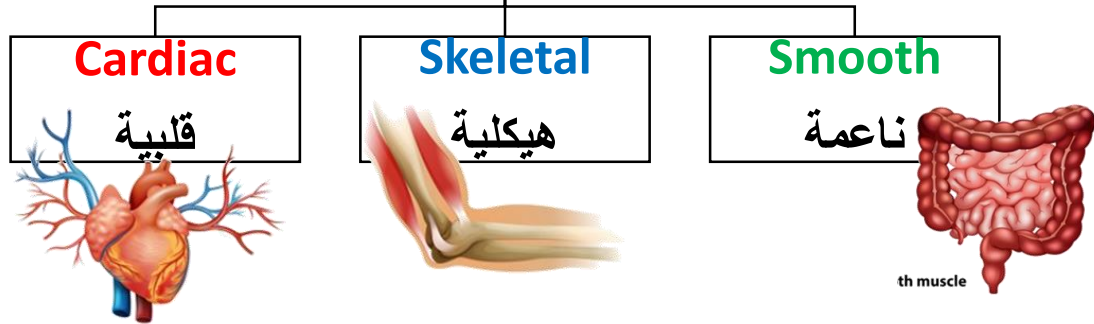


Smooth
Can line esophagus



Cardiac
In heart

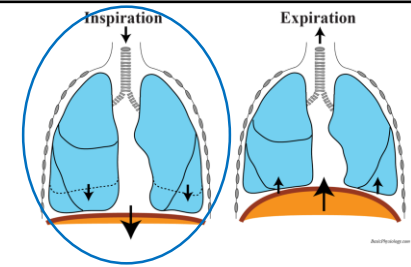
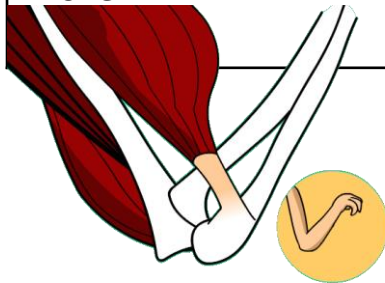
Muscle type



Muscle = Move
(M & M)

Contract + relax
انقباض / انكماش استرخاء / استقالة

Functions of the muscular system			
Bone movement حركة الجسم	Circulation الدورة الدموية	Respiration التنفس	Digestion الهضم
Allows the body to move (skeletal muscles). When they contract (get shorter), they pull on the bones and make them move.	1) The cardiac muscles in the heart pumps blood. 2) Smooth muscles in arteries and veins control blood pressure.	The diaphragm الحجاب الحاجز contracts (get smaller) pushing down & forcing air in (inhalation) <u>The opposite is true</u>	Smooth muscles in the body's stomach and intestines help to move and digest food.

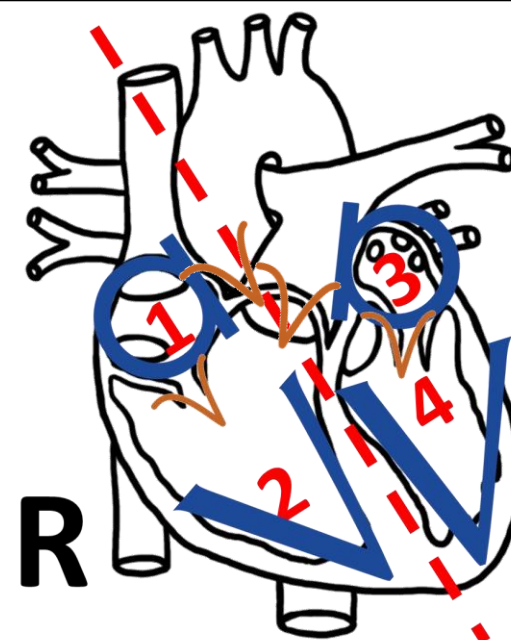
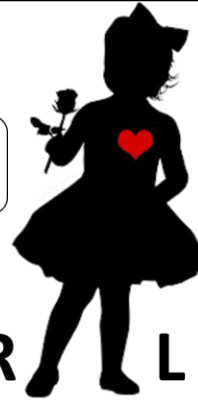


Unit3: Anatomy and physiology

Lesson4: The cardiovascular system



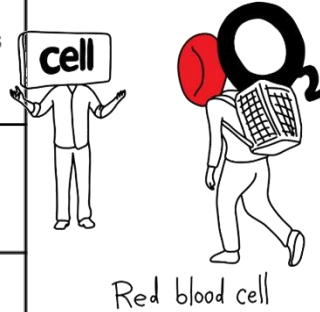
Good luck!
Maitha Taleb Ghareeb



Atrium أذين **A**
Ventricle بطين **V**
Valve صمام **V**

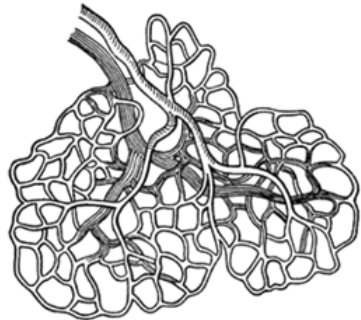
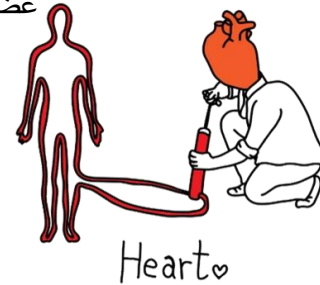
تذكري: نعكس الاتجاه
لأن القلب لشخص يقابلك

Transportation system	Circulatory system
Road/ street 	Blood vessels: Veins/ Arteries/ Capillaries
Car 	Blood
Engine 	Heart



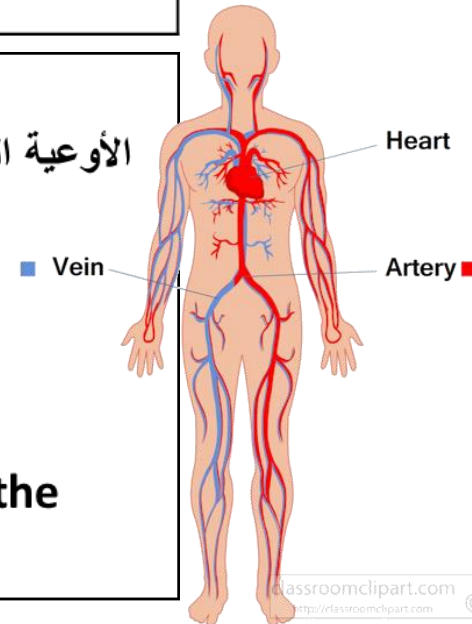
Red blood cell

- ❑ The heart is a muscular organ of the size of your fist. عضو عضلي.
- ❑ Heart rate = impulse = 60 – 80 BPM when resting.
- ❑ Made up of 4 chambers + 4 valves. مكون من أربع غرف وصمامات.
- ❑ Heart chambers are separated by valves. صمامات.
- ❑ Pumps blood through (contracting/ squeezing) and relaxing.
- ❑ The left side of the heart fills with clean/ oxygenated blood from the lungs.



الأوعية الدموية Blood vessels

- 1) Vein وريد
- 2) Artery شريان
- 3) Capillary شعيرات



■ Vein

■ Artery

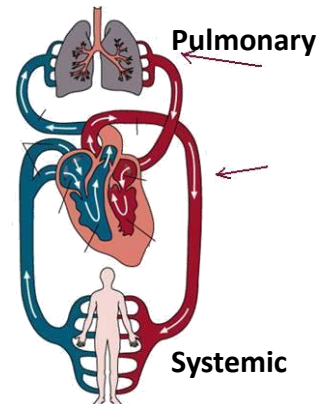
Blood circulation

Pulmonary circulation الدورة الرئوية

The heart pumps deoxygenated blood to lungs

Systemic circulation الدورة الجسمية

The heart pumps oxygenated blood to all body systems

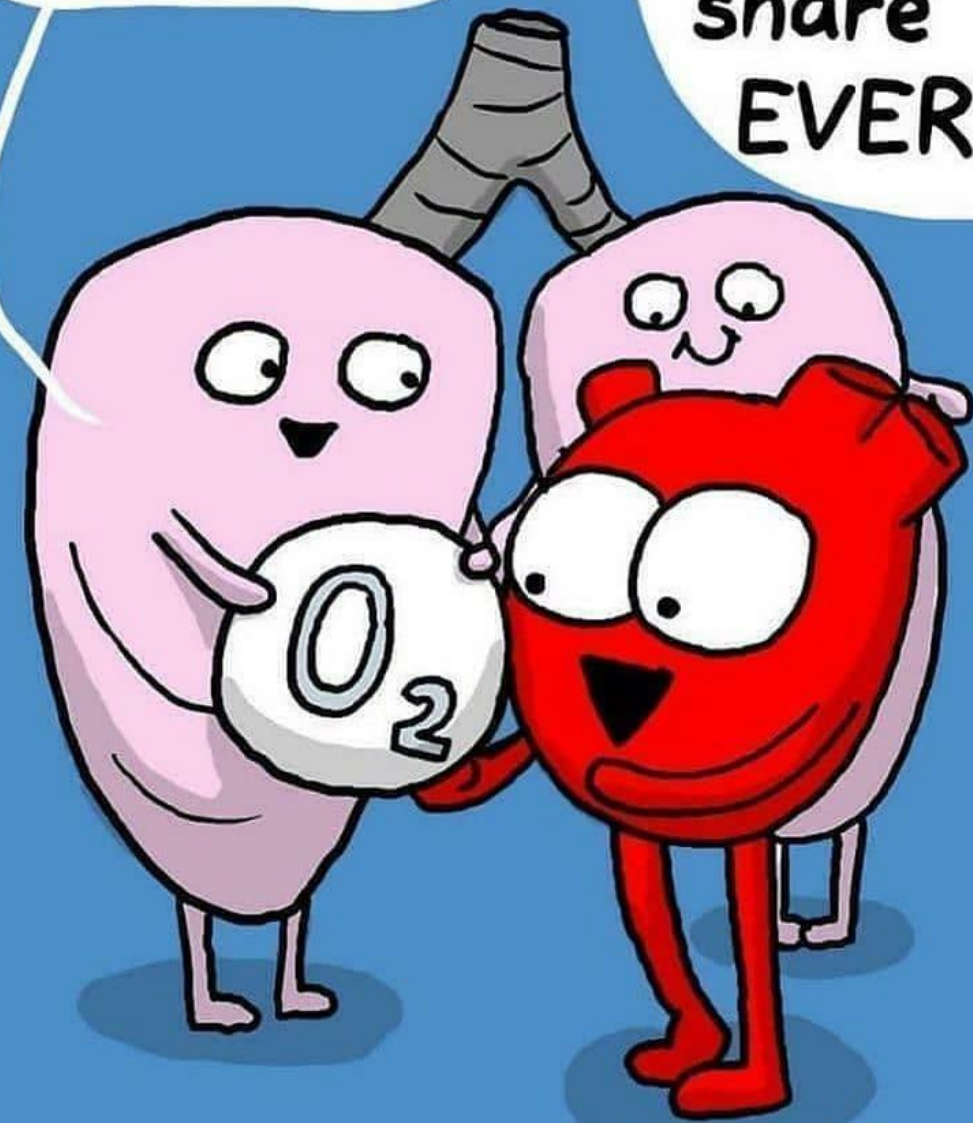


Systemic

Note: the shortest word goes with the shortest word in Arabic and so on...

We got you something.

I love it!
I'm going to share it with **EVERYONE!**

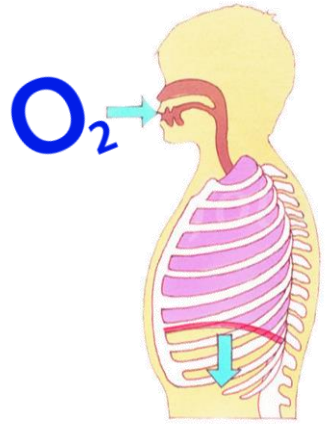
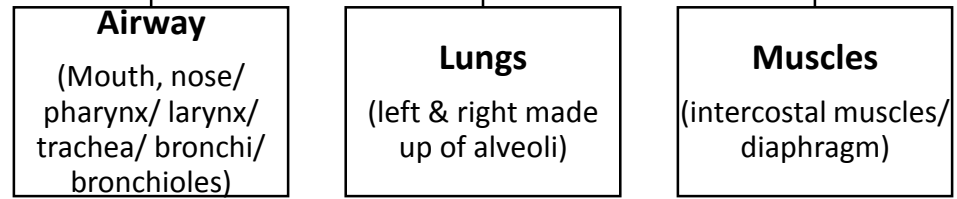


Unit3: Anatomy and physiology

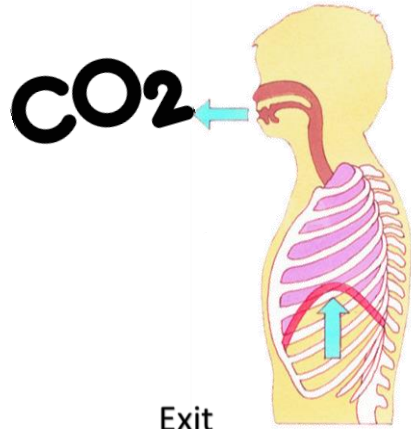
Lesson5: The respiratory system



Respiratory system



Inhale شهيق
Breathe in air



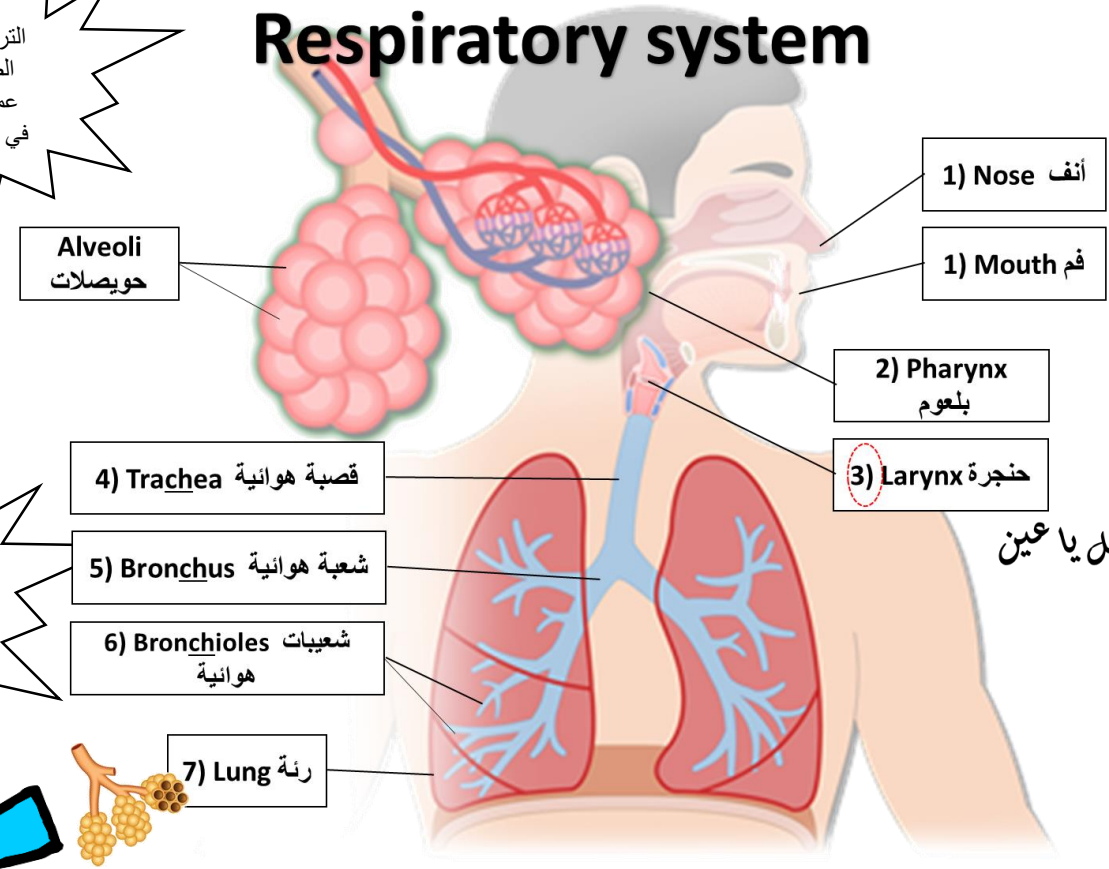
Exit زفير
Breathe air out

1 respiration/ breath/ نَفَس = in_halation + ex_halation

	Breaths count during rest
Toddlers/ children/ infants	20-30 breaths/ minute
Adults	12-20 breaths/minute

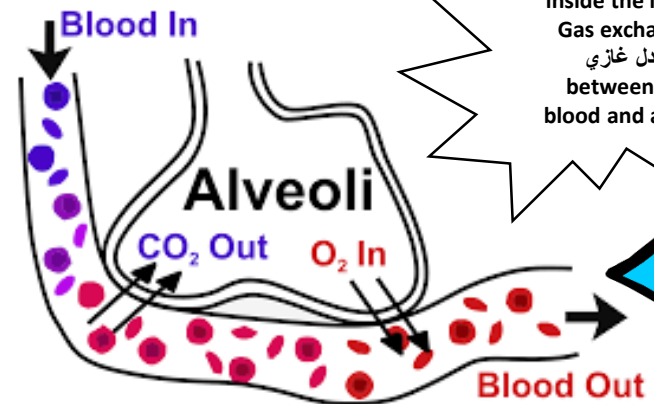
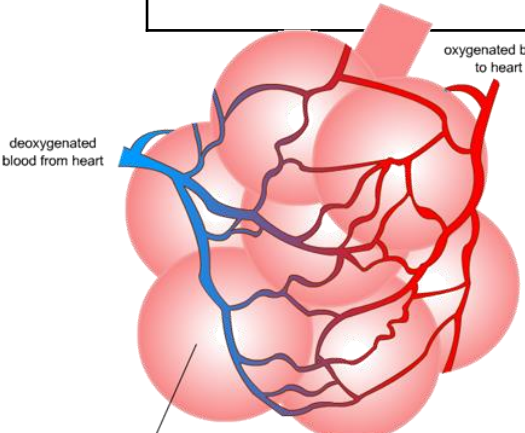
الترتيب اللي في الصورة يمثل عملية الشهيق. في الزفير نعكس الترتيب

Respiratory system



ليل يا عين

What happens inside the lungs?
Gas exchange
تبادل غازي
between the blood and alveoli



Air pathway in inhalation: 1) nose/ mouth 2) pharynx 3) larynx 4) trachea 5) bronchus 6) bronchioles 7) lung "alveoli"

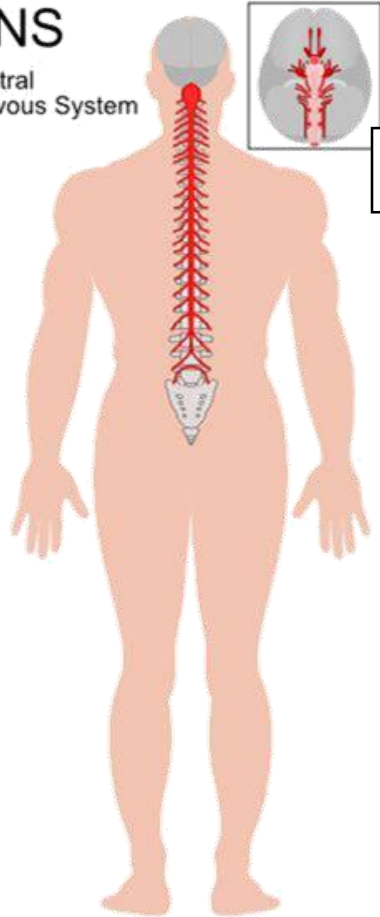
Nervous system (NS)

Central nervous system (CNS)
الجهاز العصبي المركزي

Peripheral nervous system (PNS)
الجهاز العصبي الطرفي

PNS
Peripheral Nervous System

CNS
Central Nervous System

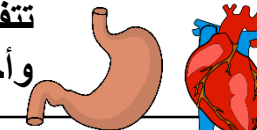


Brain الدماغ

Spinal cord
الحبل الشوكي

Peripheral nerves
أعصاب طرفية

تتفرع في كل أطراف الجسم وأجزاءه الداخلية والخارجية



Forebrain (the largest part) الدماغ الأمامي:
cerebrum قشرة المخ + cortex قشرة المخ + thalamus + hypothalamus المهاد وتحت المهاد

Midbrain الدماغ المتوسط:
manages all the messages going in and out of the brain (بدالة نفس السنترال) (الهاتف)

Hindbrain الدماغ الخلفي:
responsible for balance and coordination. (cerebellum مخيخ)

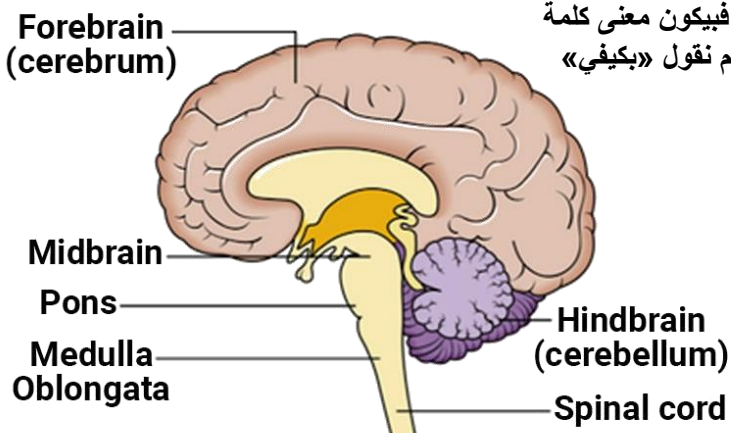
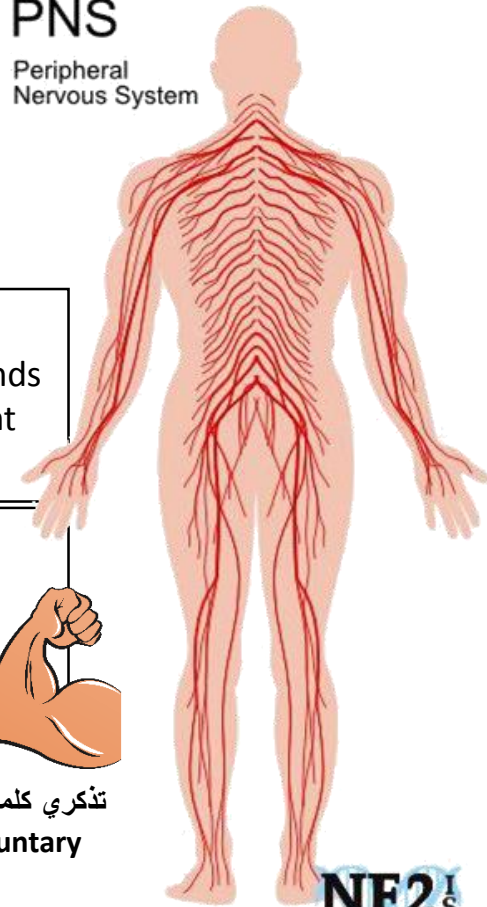
Brainstem جذع الدماغ:
Includes: midbrain + parts of the hindbrain (the pons قنطرة and the medulla oblongata النخاع المستطيل)

ينظم عمل الأعضاء الداخلية
Autonomic nervous system
الجهاز العصبي الذاتي

- ✓ Controls smooth/ cardiac muscles + glands
- ✓ **Involuntary** movement
- لا إرادي الحركة

Somatic nervous system
الجهاز العصبي الجسمي

- ✓ Controls skeletal muscles
- ✓ **Voluntary** movement



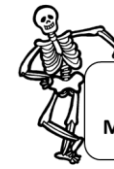
تذكرني كلمة volunteer معناتها تطوع فيكون معنى كلمة voluntary طوعي أو إرادي أو مثل م نقول «بكيفي»



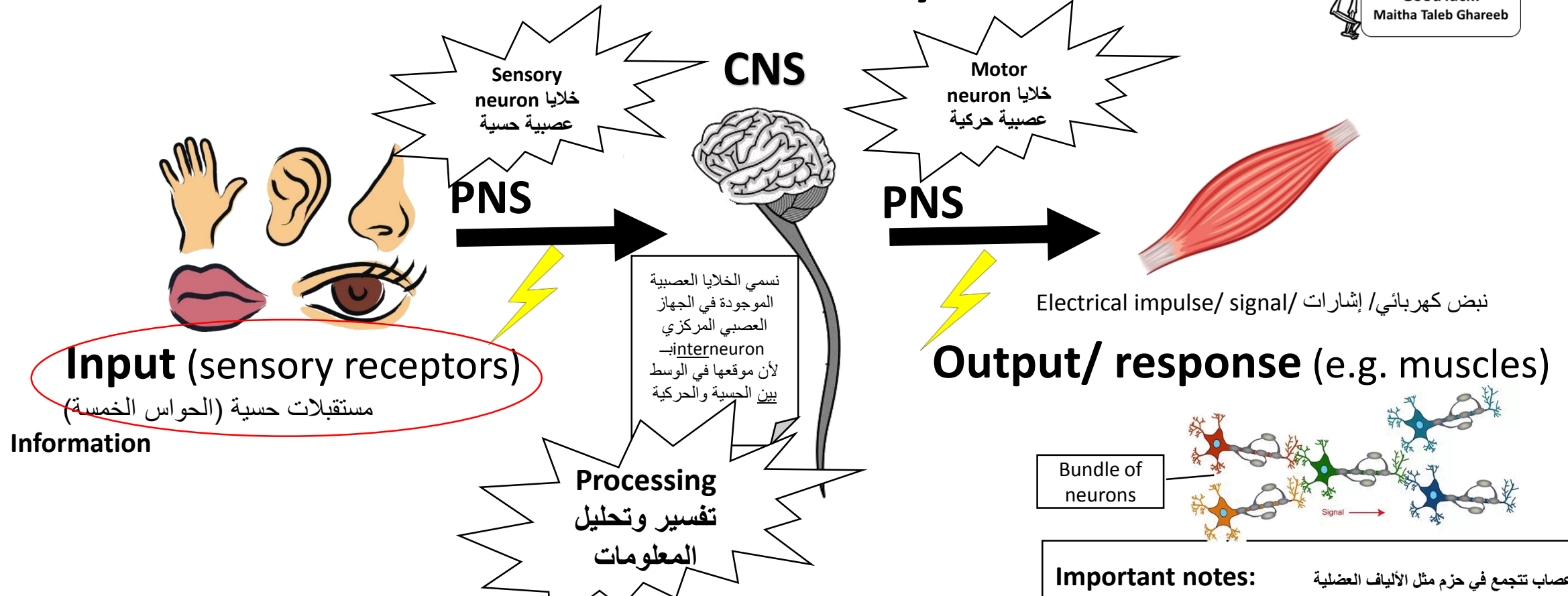
Good luck!
Maitha Taleb Ghareeb

NF2s

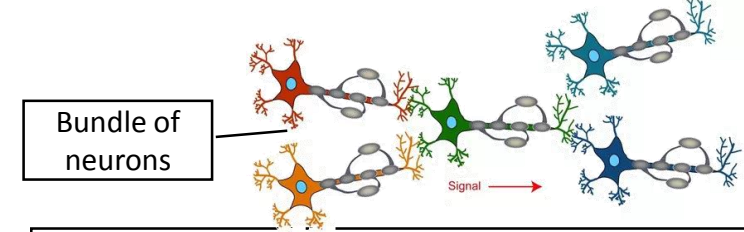
How does the nervous system work?



Good luck!
Maitha Taleb Ghareeb



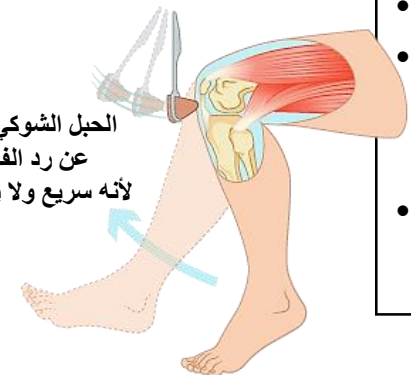
نسمي الخلايا العصبية الموجودة في الجهاز العصبي المركزي -interneuron لأن موقعها في الوسط بين الحسية والحركية



- Important notes:** الأعصاب تتجمع في حزم مثل الألياف العضلية
- Nerves are made up of bundles of neurons.
 - If the movement is automatic and does not require thinking we will call it "reflex" رد فعل منعكس
 - Reflexes are very fast they **do not** travel to brain instead the spinal cord manage them.

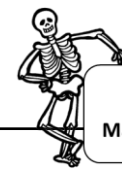
Sensory neuron	VS	Motor neuron
Take information about what you hear, see, touch, taste & smell (your senses) to the brain or spinal cord.		Send signals from the brain to the muscle and glands غدد so they can react.

الحبل الشوكي هو المسؤول عن رد الفعل المنعكس لأنه سريع ولا يحتاج إلى تفكير

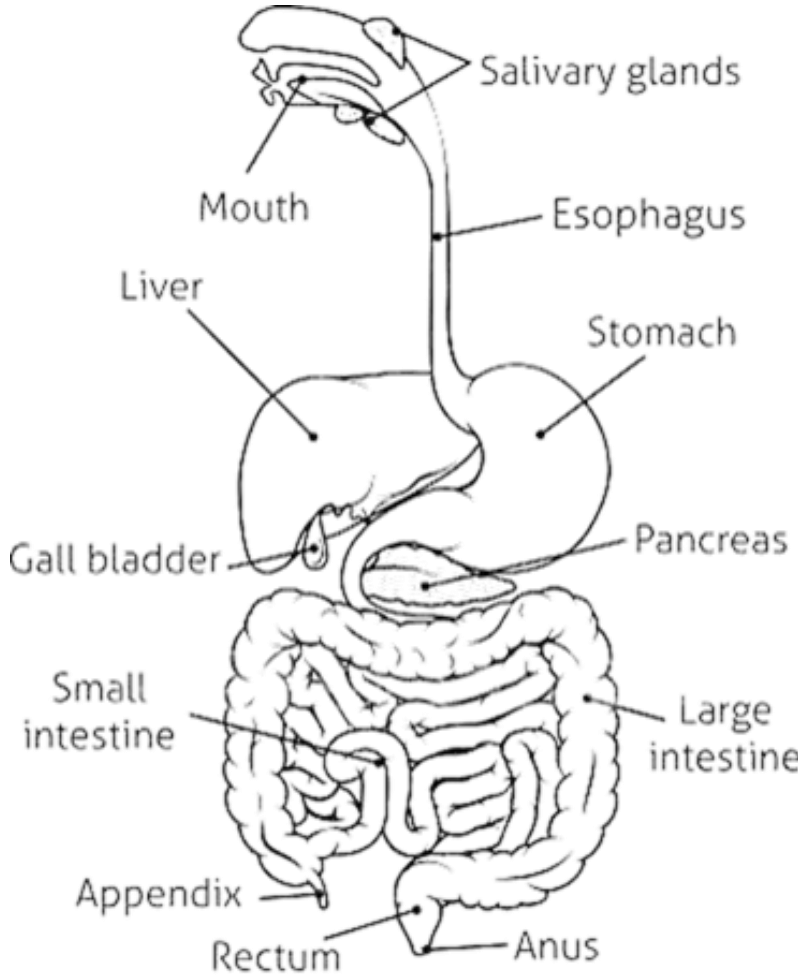


Unit3: Anatomy and physiology

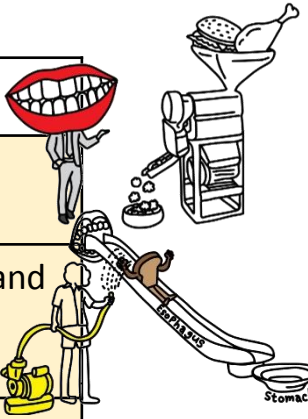
Lesson7: The digestive system



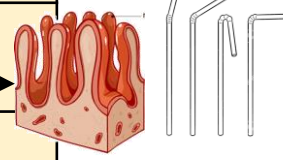
Good luck!
Maitha Taleb Ghareeb



Digestive system	organ	Function
Gastrointestinal (GI) tract ممر القناة الهضمية	Mouth الفم	Food is chewed here into small pieces and mixed with saliva لعاب
	Esophagus المريء	A long narrow muscular tube that relaxes and contracts (peristalsis الحركة الدودية) moving swallowed food into the stomach
	Stomach المعدة	A muscular organ that secretes gastric juices العصارة الهضمية and mixes food around
	Small intestine الأمعاء الدقيقة	Digested food is absorbed into bloodstream through villi الخملات
	Large intestine/ colon الأمعاء الغليظة/ القولون	Receive undigested food/ waste
	Rectum المستقيم	The last section of the large intestine
Accessory organs of digestion ملحقات الجهاز الهضمي	Liver الكبد	Produces bile أملاح الصفراء & remove toxin from blood
	Gallbladder المرارة	Stores bile
	Pancreas البنكرياس	Produces enzymes for digestion

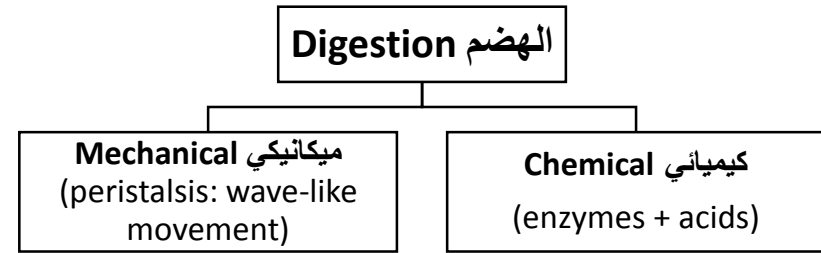


Absorb امتصاص



تتكون غازات gases في المعدة نتيجة الهضم.

Gastro = Stomach = معدة

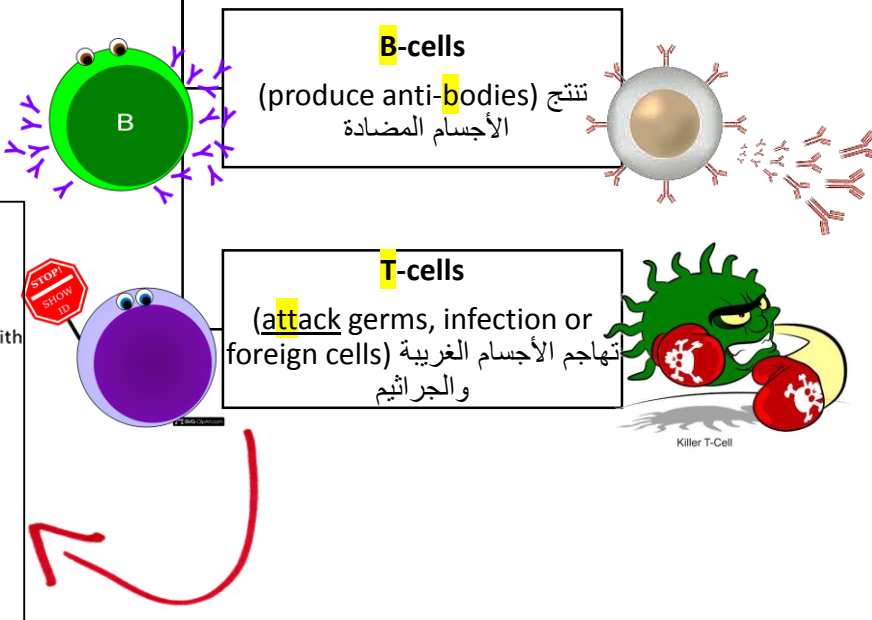
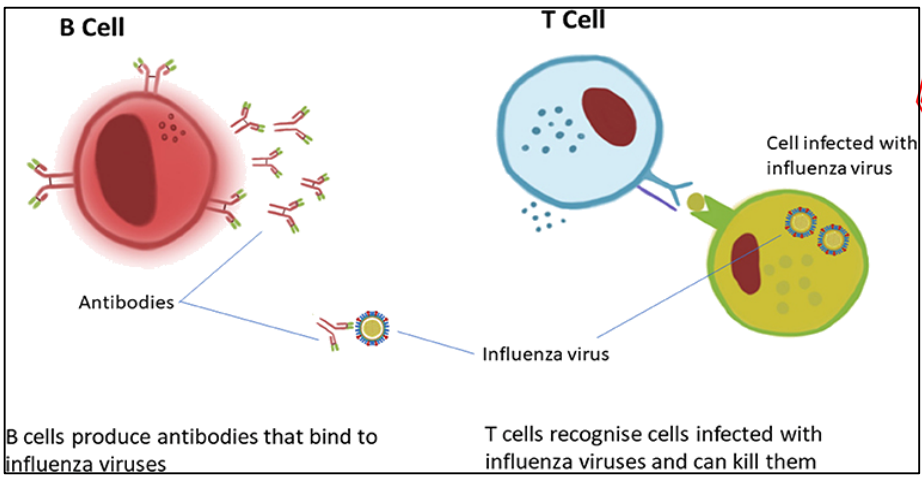
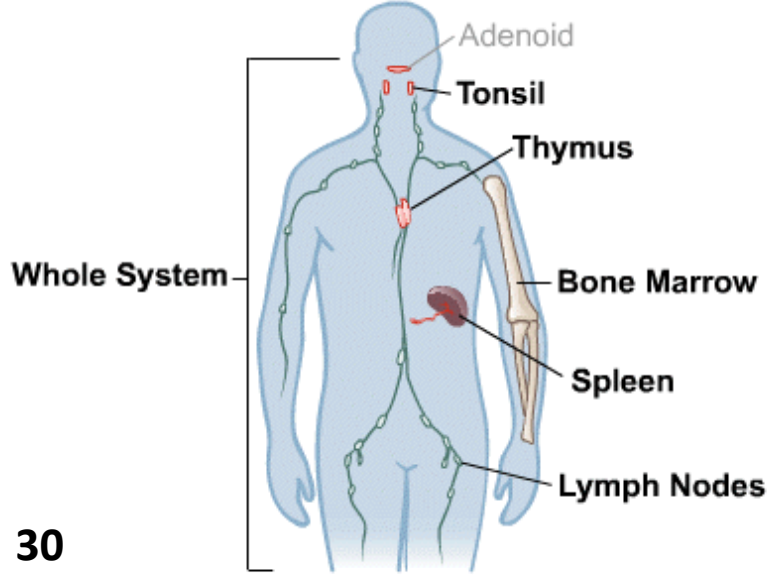
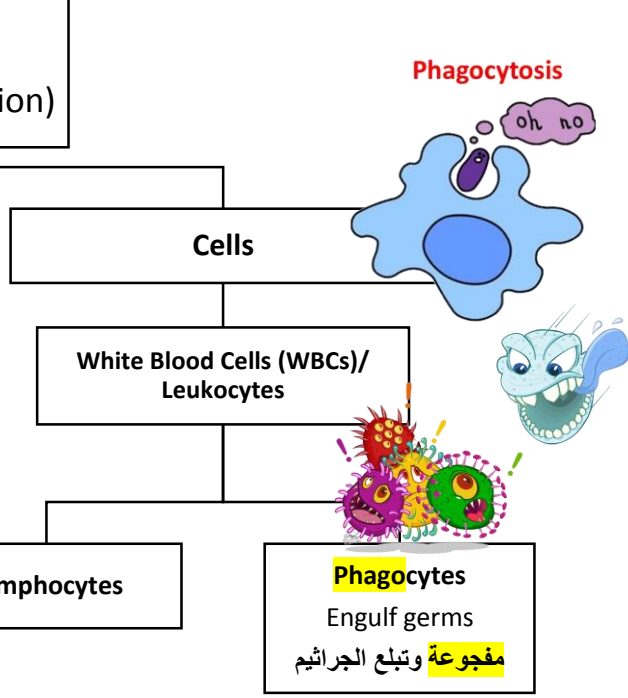
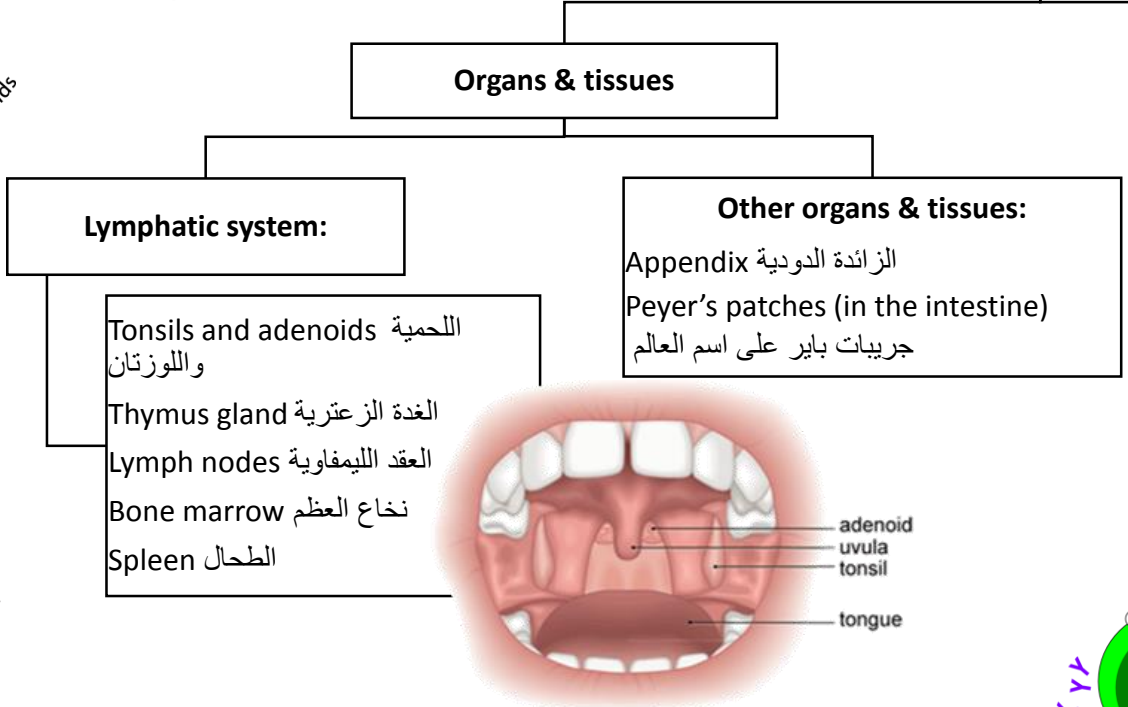
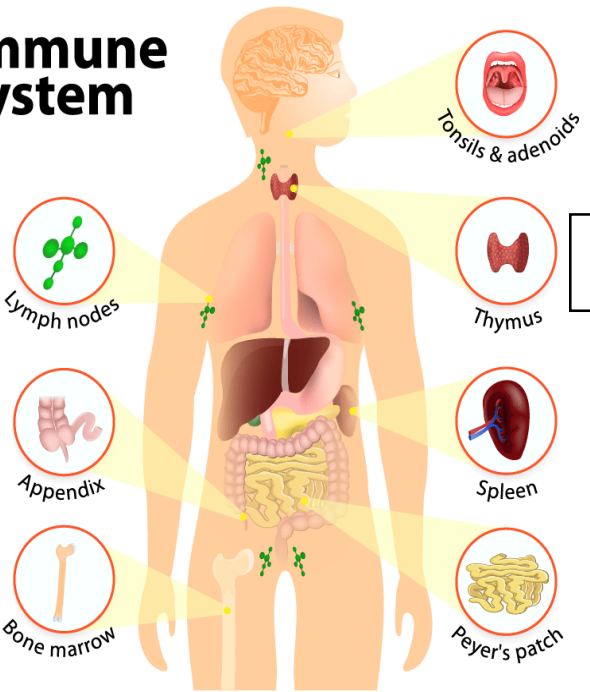


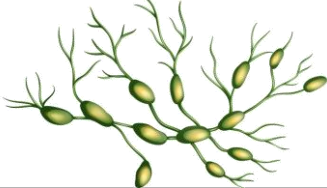
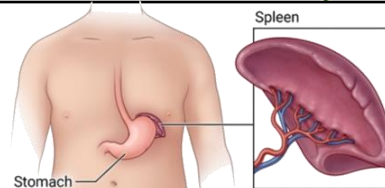
Unit3: Anatomy and physiology
Lesson8: The immune system

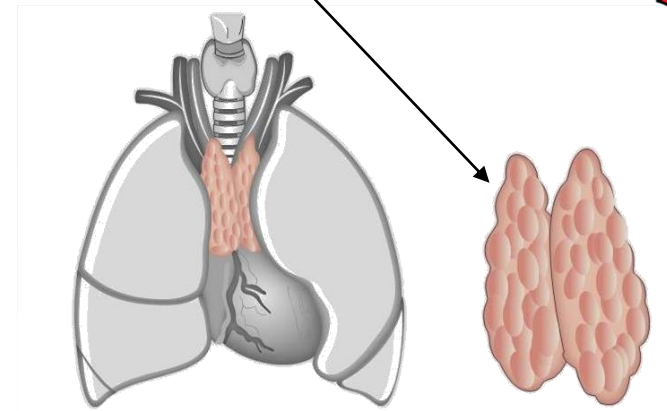
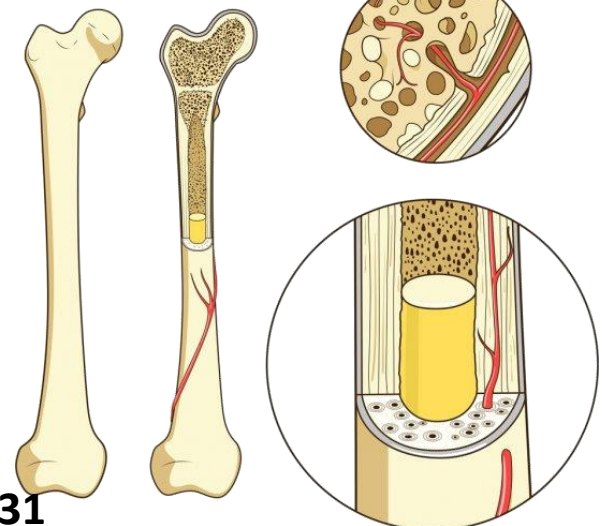
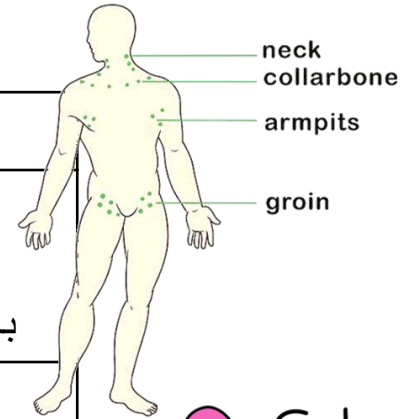


Immune system الجهاز المناعي
(fights off diseases & provide protection)

Immune system



Lymphatic system:	Discription & function:
Lymph nodes العقد الليمفاوية 	Small bean-shaped glands. Produce & store cells that fight diseases. Found in: the neck + armpits + groin باطن الفخذ
Spleen الطحال 	Contains WBCs that fight diseases. Controls the amount of blood cells. Destroys old or damaged blood cells. مقبرة الخلايا.
Bone marrow نخاع العظم (ينتج خلايا الدم بأنواعها)	Soft tissue in the center of a bone. Produces blood cells (red & white).
Thymus gland الغدة الزعترية	The place where T-cells develop.



Good luck!
Maitha Taleb Ghareeb

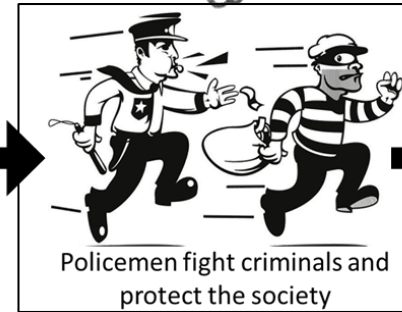
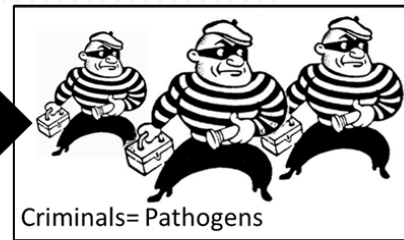
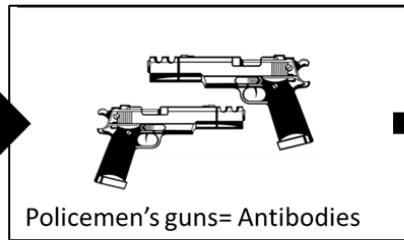
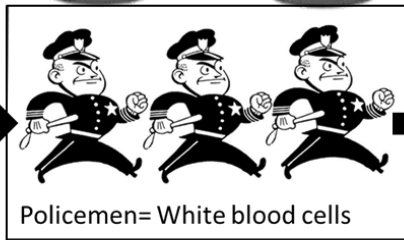
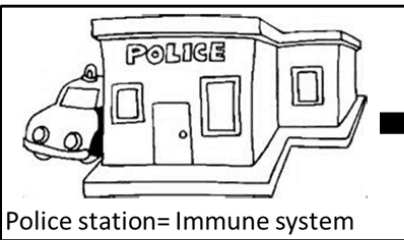
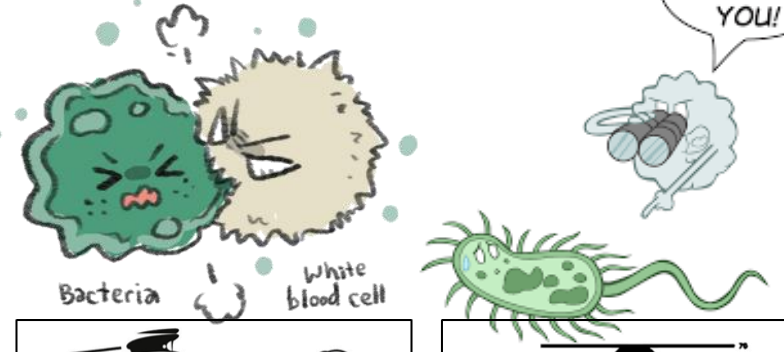
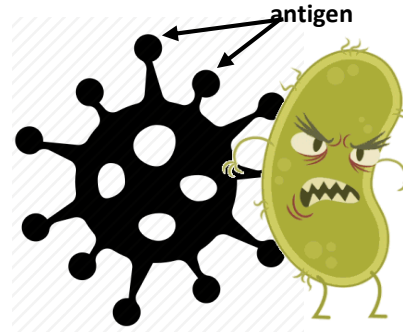
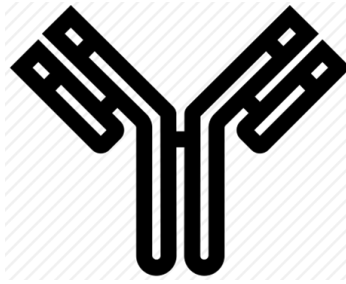
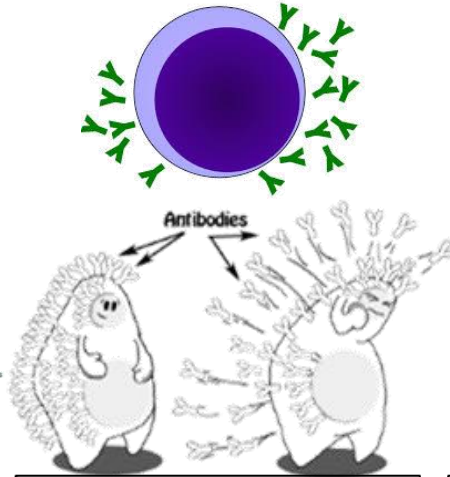
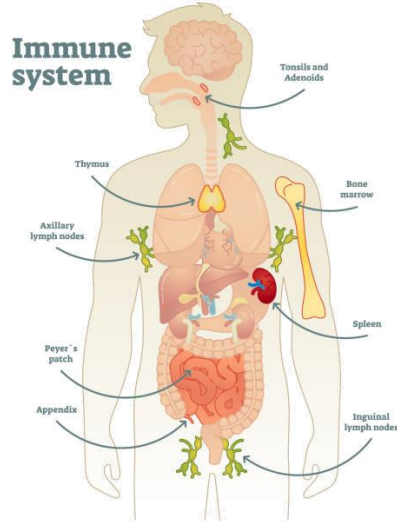
Unit3: Anatomy and physiology

Lesson8: The immune system

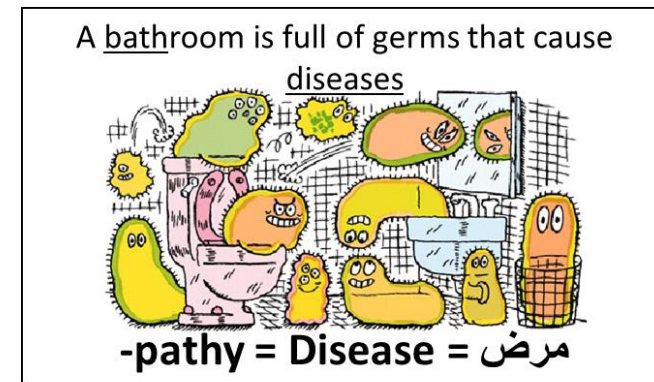


How the immune system works?

Immune system



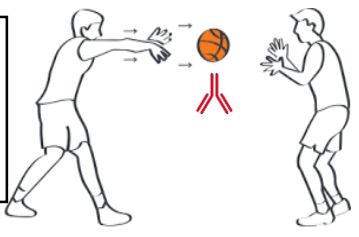
Term	Definition
Immune system جهاز المناعة	Fights off disease
White blood cell/ leukocyte خلايا دم بيضاء	Search for pathogens and fight them using antibody
Antibody أجسام مضادة	Protein produced by WBC to bind with antigen to destroy them
Pathogen مسبب مرضي	Germs or microbes/ foreign organisms (virus/ bacteria/ fungi/ parasite)
Antigen مولد ضد	Things that triggers the production of antibody "immune response"



مولد الضد: أي شيء يحفز إنتاج الأجسام المضادة، مثل الجراثيم والأجسام الغريبة والخلايا السرطانية على سبيل المثال

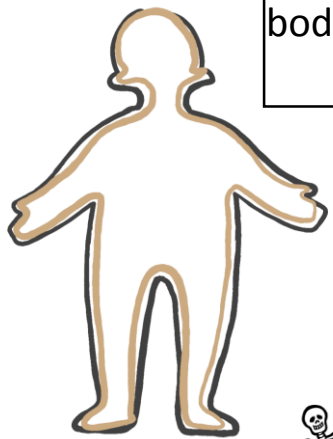
Immunity المناعة

"pass the ball" لتسهيل الحفظ تذكرني لعبة اللي يتم فيها تمرير الكرة وبنفس الطريقة في هالنوع من المناعة يتم تمرير أجسام مضادة جاهزة ويكون تأثيرها مؤقت.



Innate فطرية

Natural immunity you are born with.
Example: the skin is as a barrier to block germs from entering the body.



Passive السلبية/ الالافاعلة

'Borrowed' from another source and it lasts for a short time.
Example: antibodies in a mother's breastmilk give a baby temporary immunity.



نقل أجسام مضادة

Adaptive مكتسبة/ تكيفية

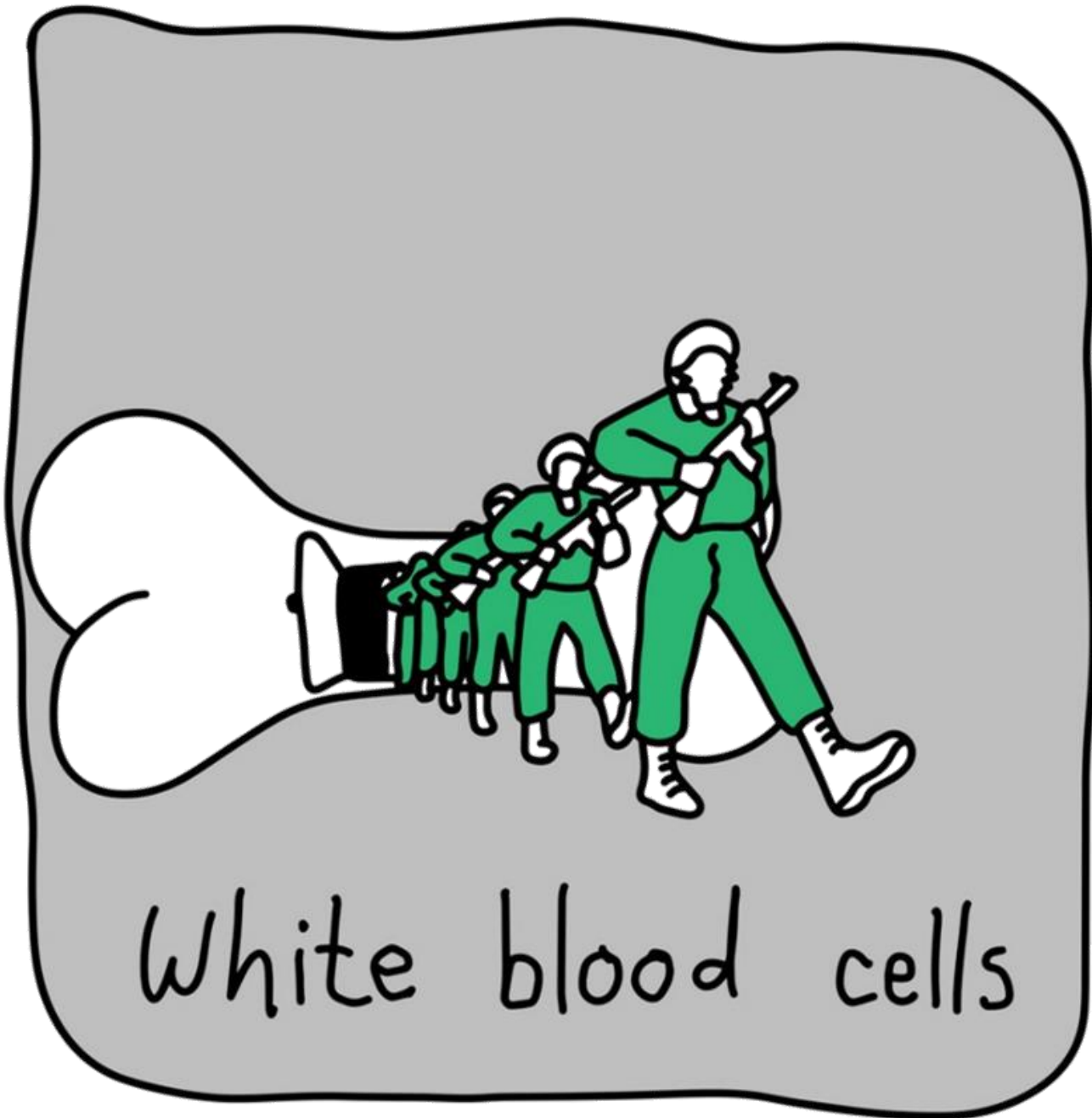
Active immunity develops throughout the lifetime.
Example: people develop adaptive immunity when they are exposed to diseases e.g. Chicken pox



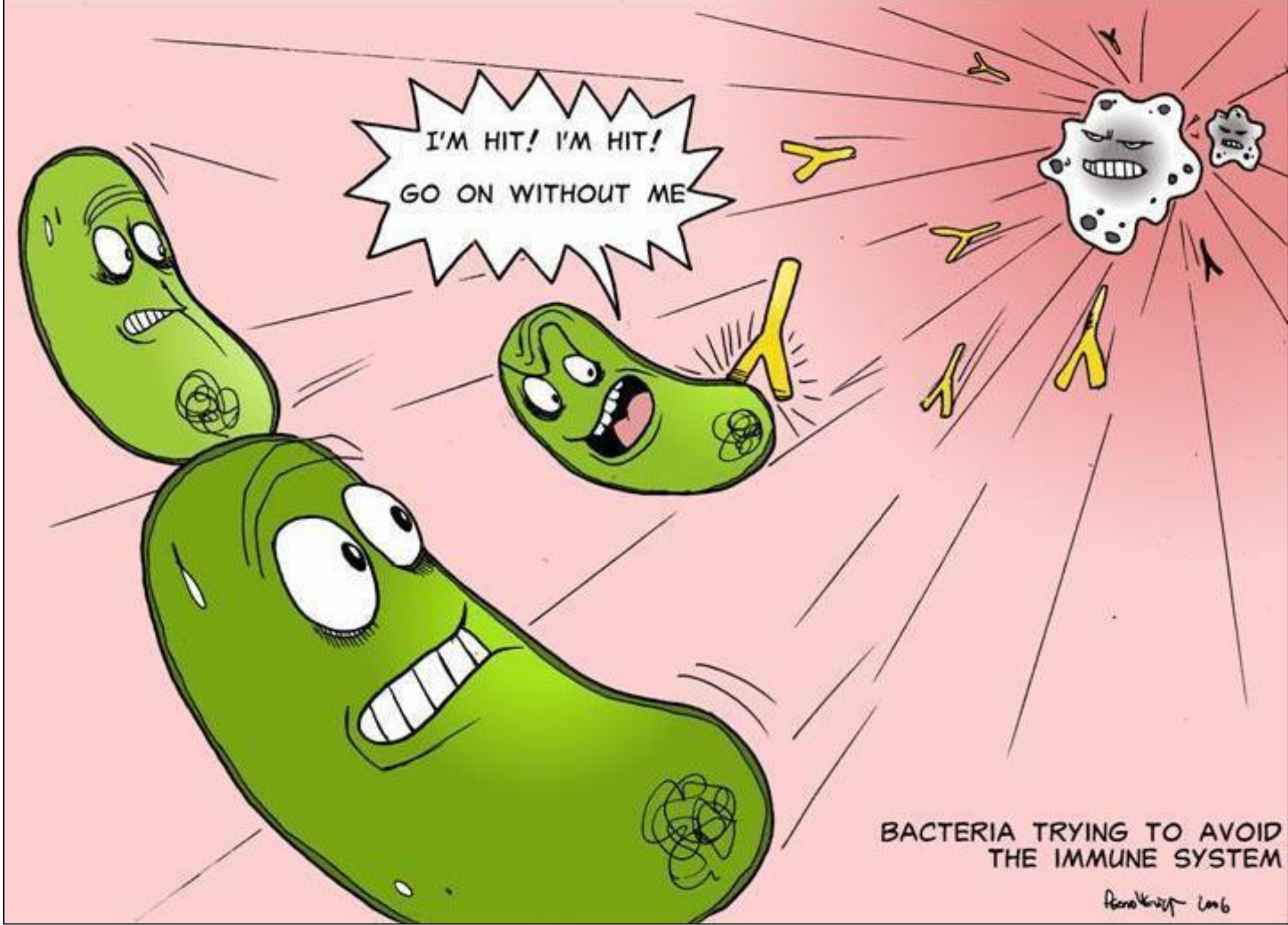
Good luck!
Maitha Taleb Ghareeb



White blood cells



White blood cells

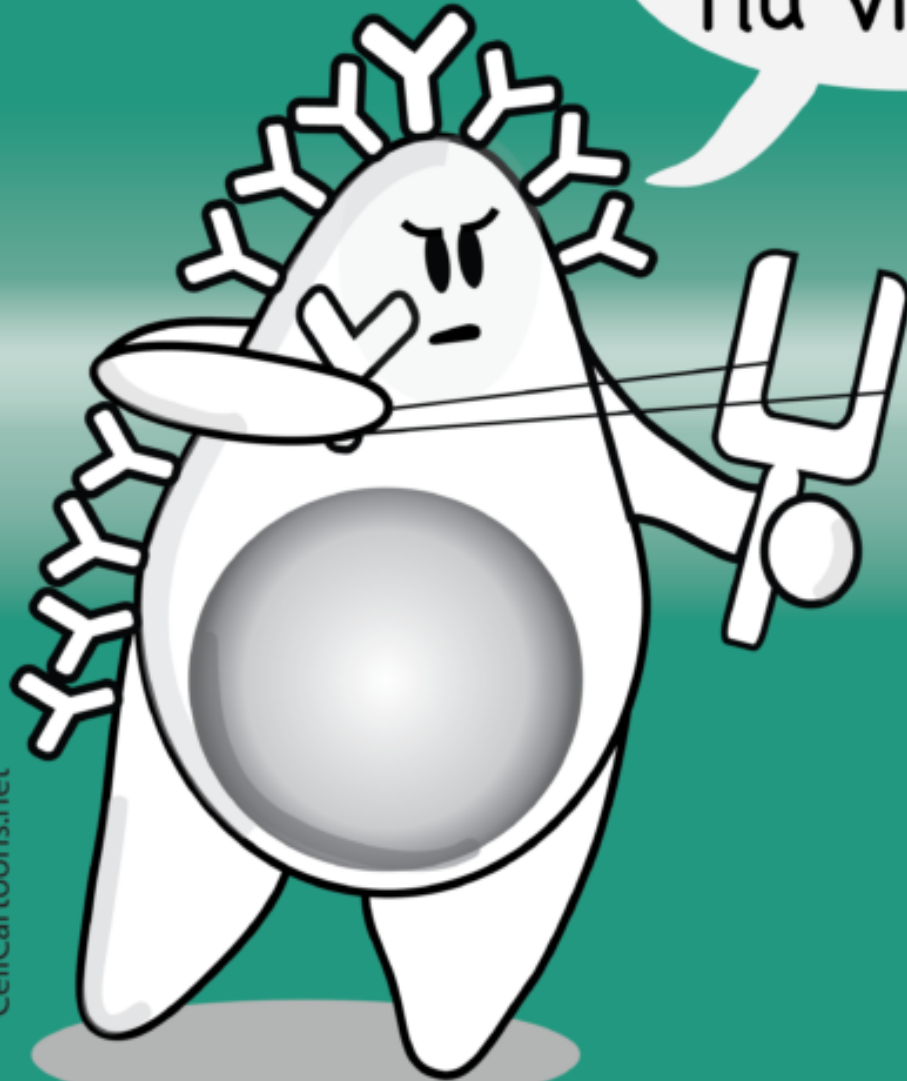


I'M HIT! I'M HIT!
GO ON WITHOUT ME

BACTERIA TRYING TO AVOID
THE IMMUNE SYSTEM

Ronald Knopf 2006

Take that
flu virus!!!



B-lymphocyte/ B-cell
Plasma Cell
Shooting Antibodies

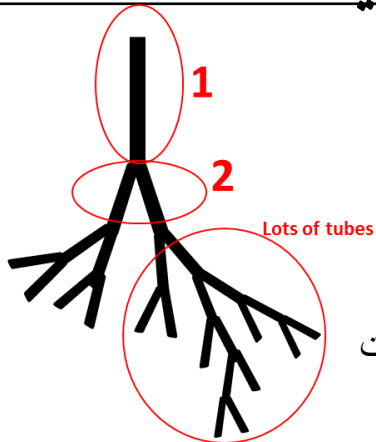
قاموسي

الرئة مثل البالونة، اسم الرئة العلمي يبدأ بالباء مثل كلمة بالون.

Pulmonary = lung = رئة



Lung Balloon



نجمع الكلمات اللي فيها «ch»

Trachea

Bronchus

Bronchioles

نوزعهم على حسب عدد تفرعات الأنابيب الهوائية أطول كلمة مع أكبر عدد للتفرعات والعكس صحيح

أثناء ممارسة تمارين الكارديو تزيد نبضات القلب.

Cardio = Heart = قلب



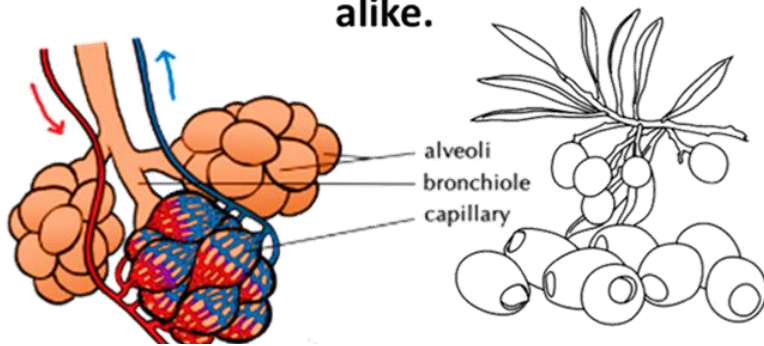
الانترنت شبكة تربط ما بين الناس.

Inter = Between = بين

خلية عصبية بينية inter-neuron كلمة



Alveoli sounds like olives they even look alike.



Larynx الحنجرة

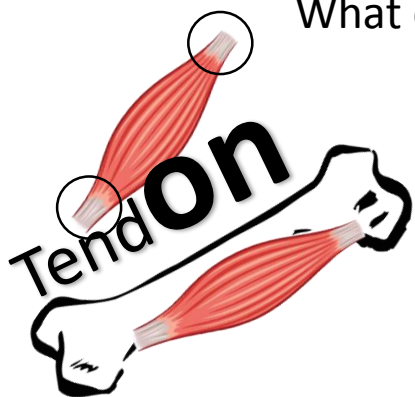
هي اللي تخليك تغني وتقول: «أيل يا عين»



What connects muscles

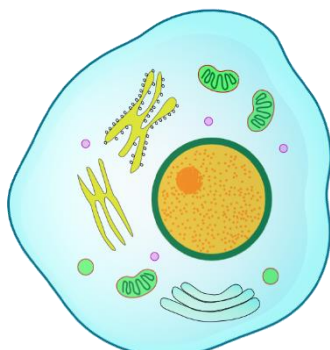
on bones?

Tendons أوتار



Cyte = Cell = خلية

كلمة phago-cyte خلية بلعمية



Phagia sounds like

الشخص المفجوع بيلع الأخضر واليابس

Phagia = بلع



Good luck!
Maitha Taleb Ghareeb