The Islamic University
College of Medical Technologies
Department of Radiology Technologies
First Stage
Lecture one: Introduction to Human Anatomy
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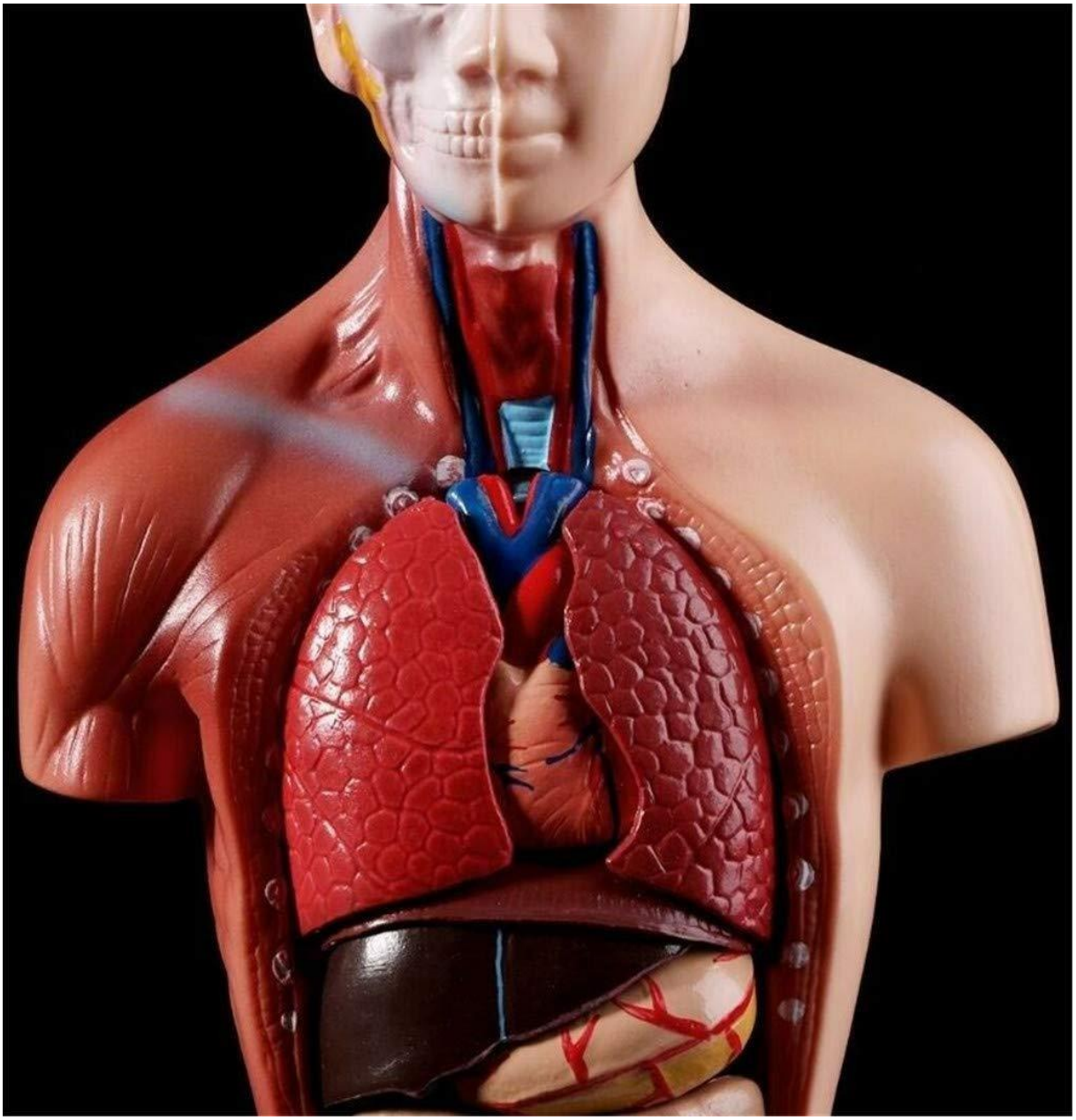
Introduction to Human Anatomy



Themes of the lecture-:

1- Introduction to human anatomy.
2- The Language of Anatomy.
3- Body Cavities.
4- Details of the anatomical parts.

The purpose of the lecture:-

(Introducing the student to the concept of Introduction to human anatomy)

Behavior Objectives:-

1- To know the definition of the anatomy and its branches.
2- In order for the student to learn the language of anatomy and divide it.
3- The student should be able to know the body cavities.
4- The student be able to differentiate between anatomical parts and cavities.
5- The student enumerates the anatomical taxonomy points.

References of the lecture:-

https://books.google.iq/books?id=aK52DwAAQBAJ&printsec=frontcover&dq=general+anatomy+book+pdf&hl=ar&sa=X&redir_esc=y#v=onepage&q&f=false

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Anatomy - the study of the structure of body parts and their relationships to one another.

Physiology: the study of the function of the body's structural machinery.

Clinical anatomy: It's the study of the macroscopic structure and function of the body and its related to practice of the medicine and other healthy science.

Branches of Anatomy:

1- GROSS ANATOMY: refers to macroscopic study of the whole body…things that can be seen with the naked eye. Within Gross anatomy are:

A-REGIONAL ANATOMY: which studies the anatomy of body parts (the head, the leg, etc).

B-SYSTEMIC ANATOMY: which studies body systems.

C-SURFACE ANATOMY: which studies what is underneath the surface.

2- MICROSCOPIC ANATOMY: refers to the study of anatomy using a microscope, and include:

A-CYTOLOGY: is the study of cells

B-HISTOLOGY: is the study of tissues (tissues are groups of cells).

3- DEVELOPMENTAL ANATOMY studies where things come from, how they develop. This area includes EMBRYOLOGY (the study of embryonic development)

Specialized Branches of Anatomy

Pathological Anatomy : Study of structural changes caused by disease.

Radiographic anatomy : study of internal structures visualized by X - ray.

Molecular biology : study of anatomical structures at a sub-cellular level.

The Language of Anatomy

Anatomical position:

Refers to standard body position…face forward, feet forward, Arms at sides with palms turned forward.

Directional anatomical terms:

Describe the relationships of anatomical structures.

1-Superior / Inferior = Above / Below

Ex: The head is superior to the chest

The umbilical region is inferior to the neck

2-Anterior / Posterior = Front / Back (also Ventral / Dorsal)

Ex: The heart is anterior to the spine

The heart is posterior to the breast bone

3-Medial / Lateral = Toward midline / Toward side

Ex: The heart is medial to the arm

The arms are lateral to the heart

4-Superficial / Deep = Toward surface / Away from surface

(inward)

Ex: The epidermis is superficial to the skeleton

The lungs are deep to the skin

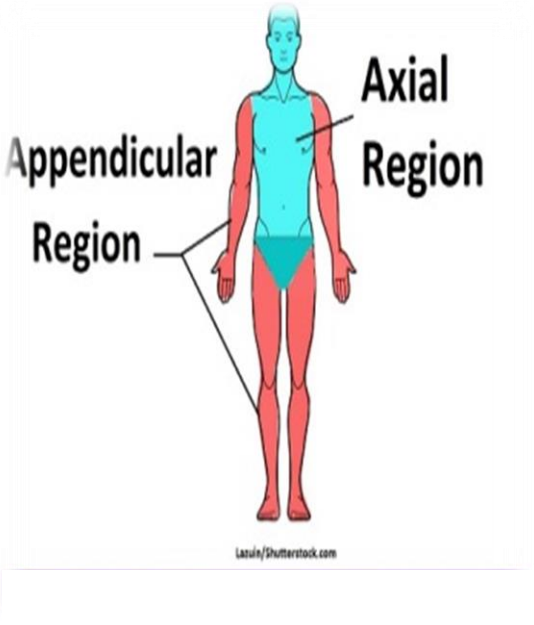
5-Proximal / Distal = Closer to midline or point of region / Farther away

Ex: The elbow is proximal to the wrist

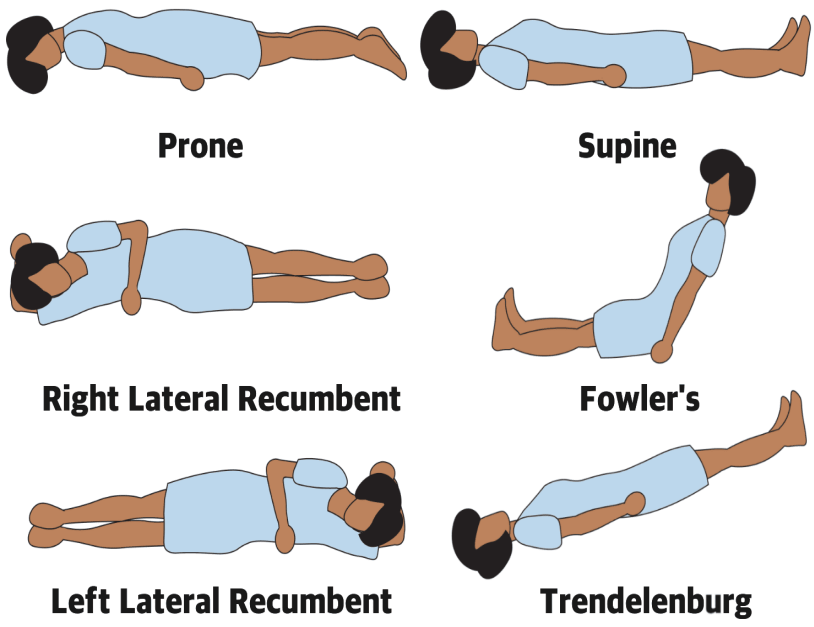
The wrist is distal to the shoulder

Regional Terms

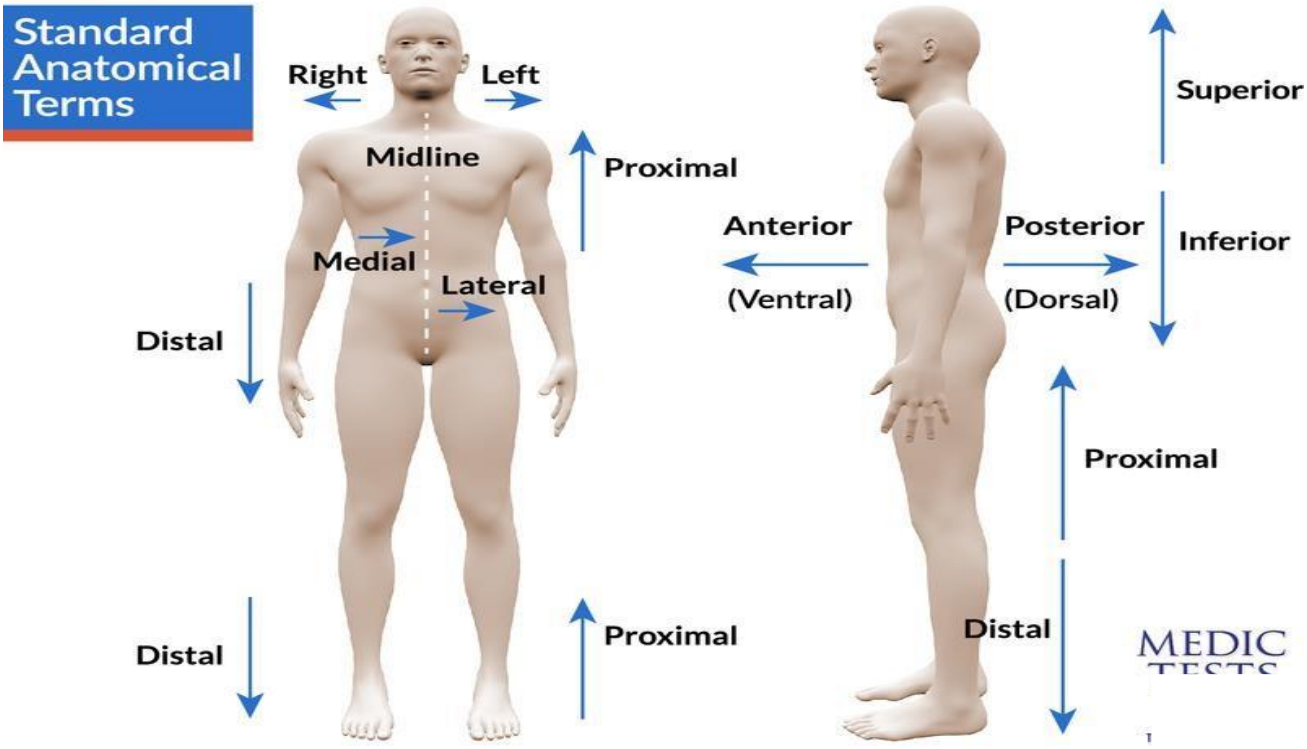
Regional terms designate specific areas of the body. There two types of region. The axial region and appendicular, such as the nasal region, and occipital region.



Region Terms



Anatomical position



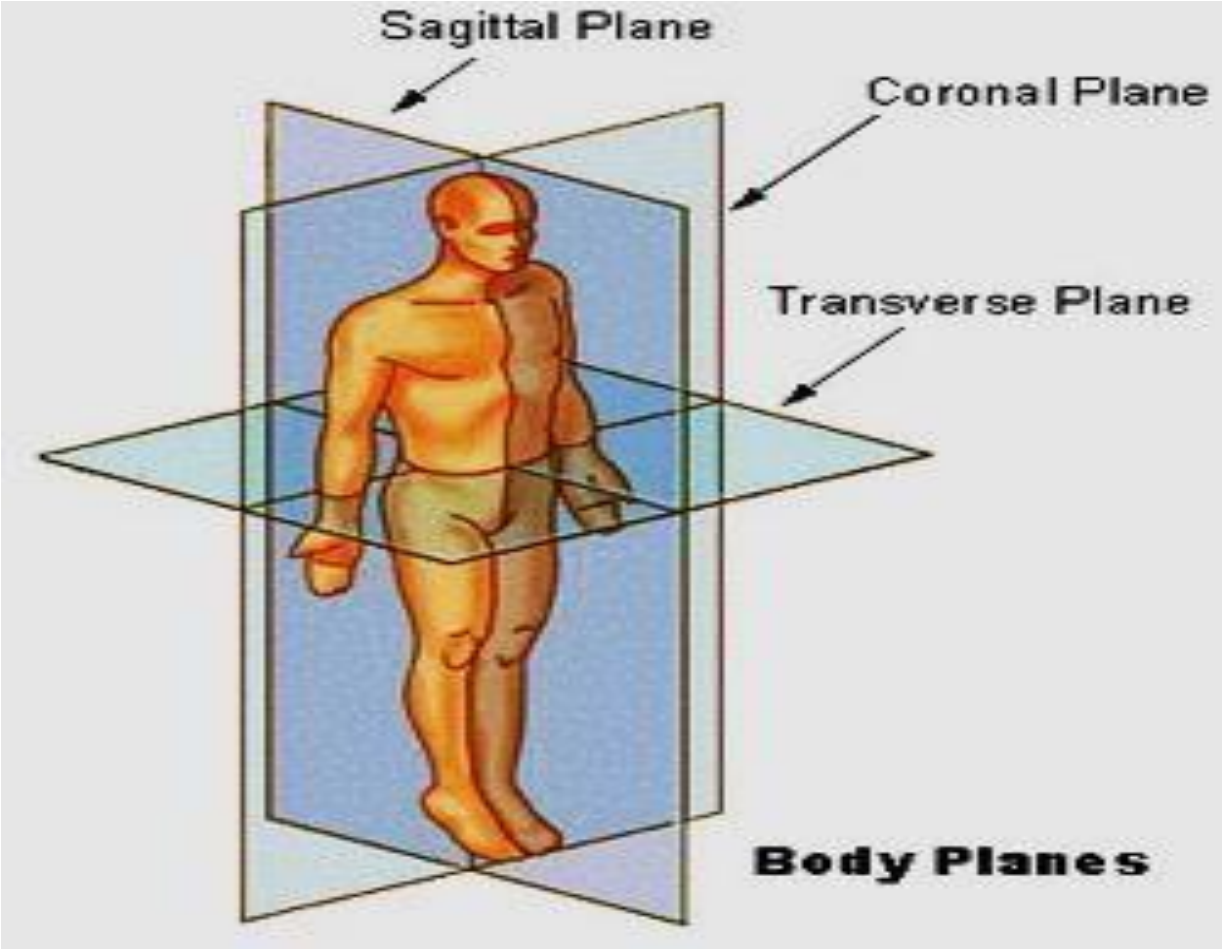
Body Planes

1-Sagittal : divides the body into right and left parts.

Midsagittal or medial : sagittal plane that lies on the midline.

2-Frontal or coronal : divides the body into anterior and posterior parts.

3-Transverse or horizontal :(cross section) - divides the body into superior and inferior parts.



Body Cavities:

Dorsal cavity : protects the nervous system , and is divided into two subdivisions

1-Cranial cavity : is within the skull and encases the brain.

2-Vertebral cavity : runs within the vertebral column and encases the spinal cord.

Ventral cavity : houses the internal organs(viscera) , and is divided into two subdivisions:

1-Thoracic cavity .

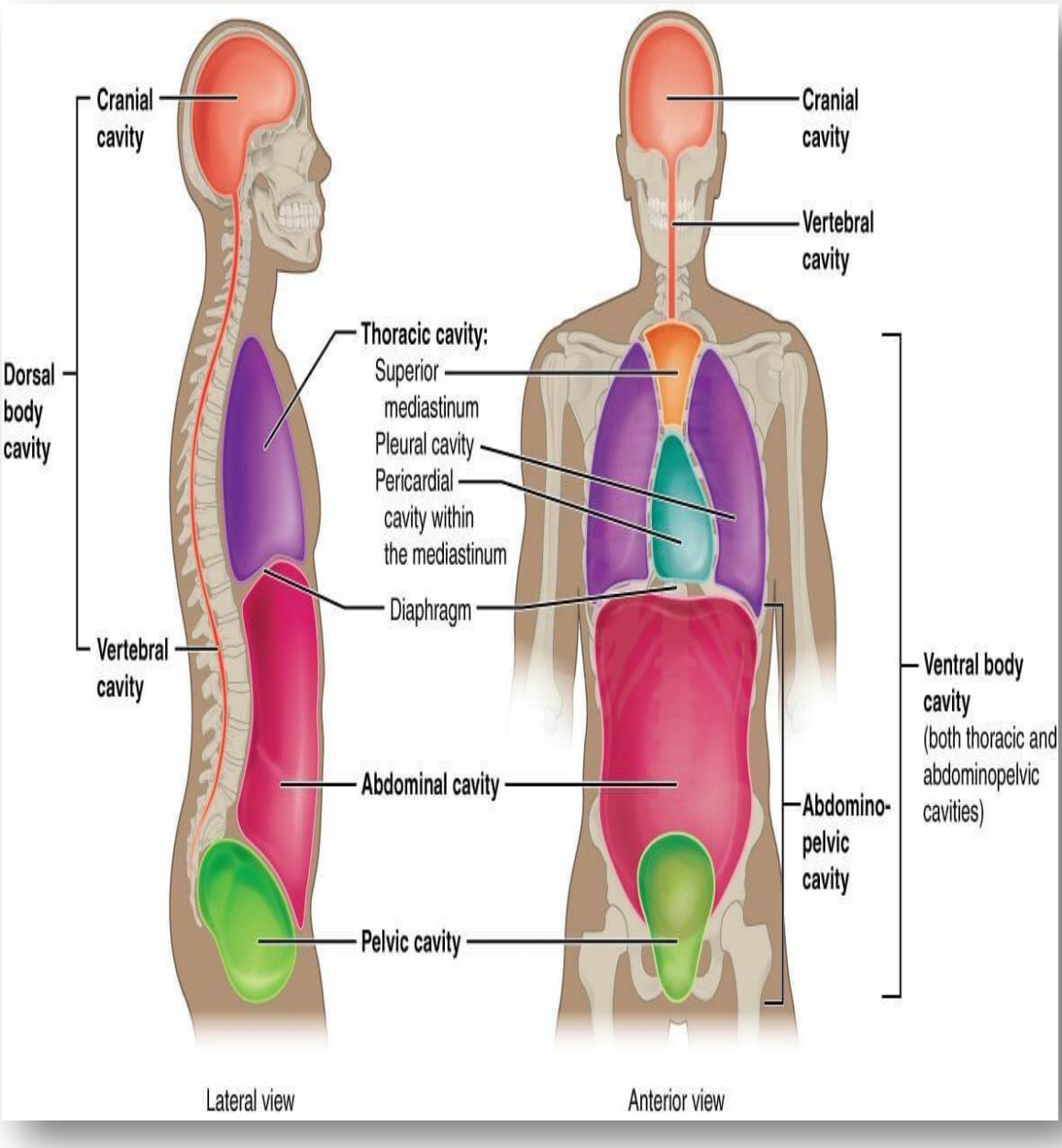
2-Abdominopelvic cavity .

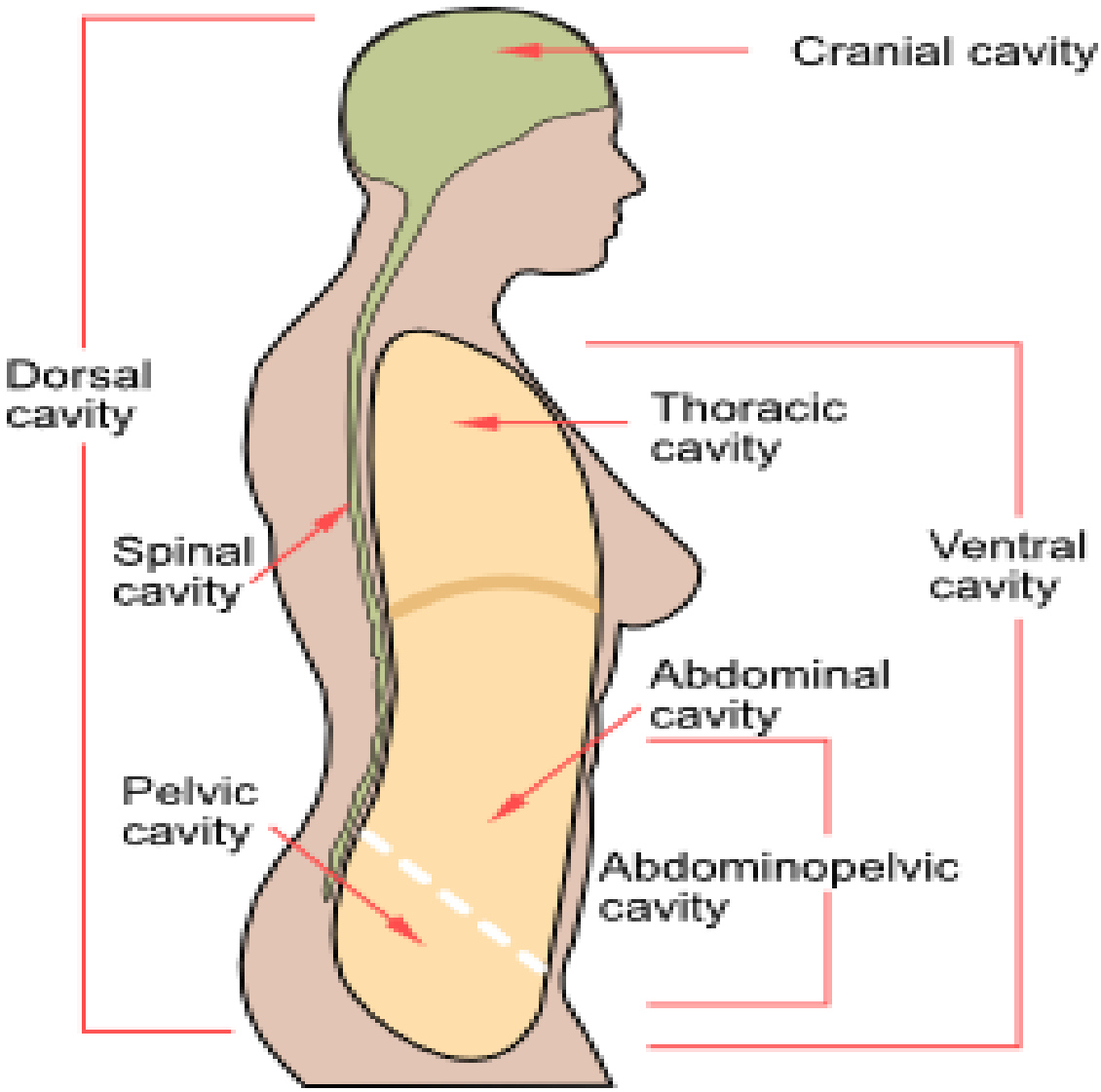
Thoracic cavity : is subdivided into

1-Pleural cavities - each houses a lung

2-Mediastinum : contains the pericardial cavity , and surrounds the remaining thoracic organs

3-Pericardial cavity **:** encloses the heart.





The abdominopelvic cavity: is separated from the superior thoracic cavity by The dome - shaped called diaphragm .

It is composed of two subdivisions :

Abdominal cavity

contains the..

1- stomach

2- intestines

3-spleen

4-liver

5- other organs .

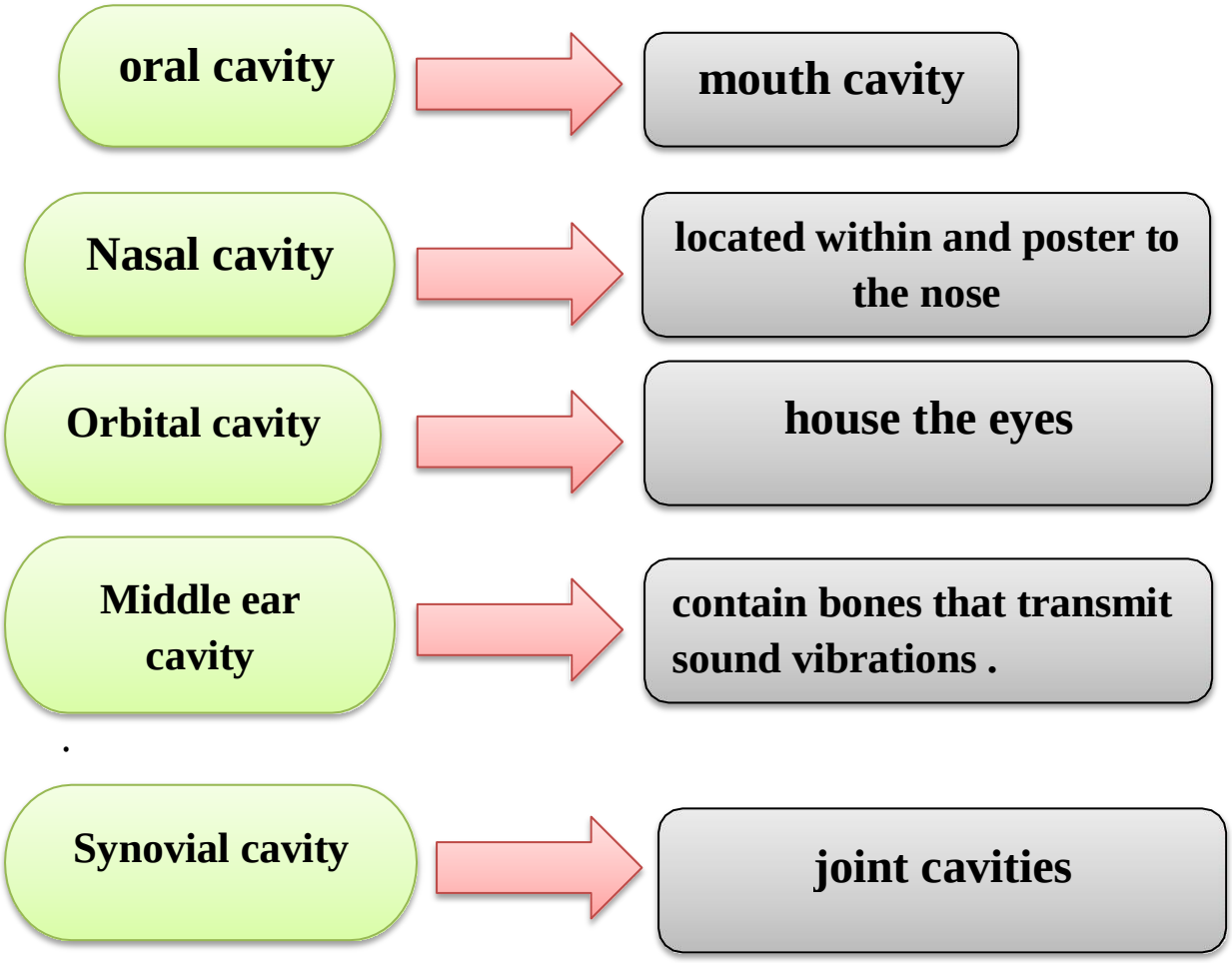
Pelvic cavity

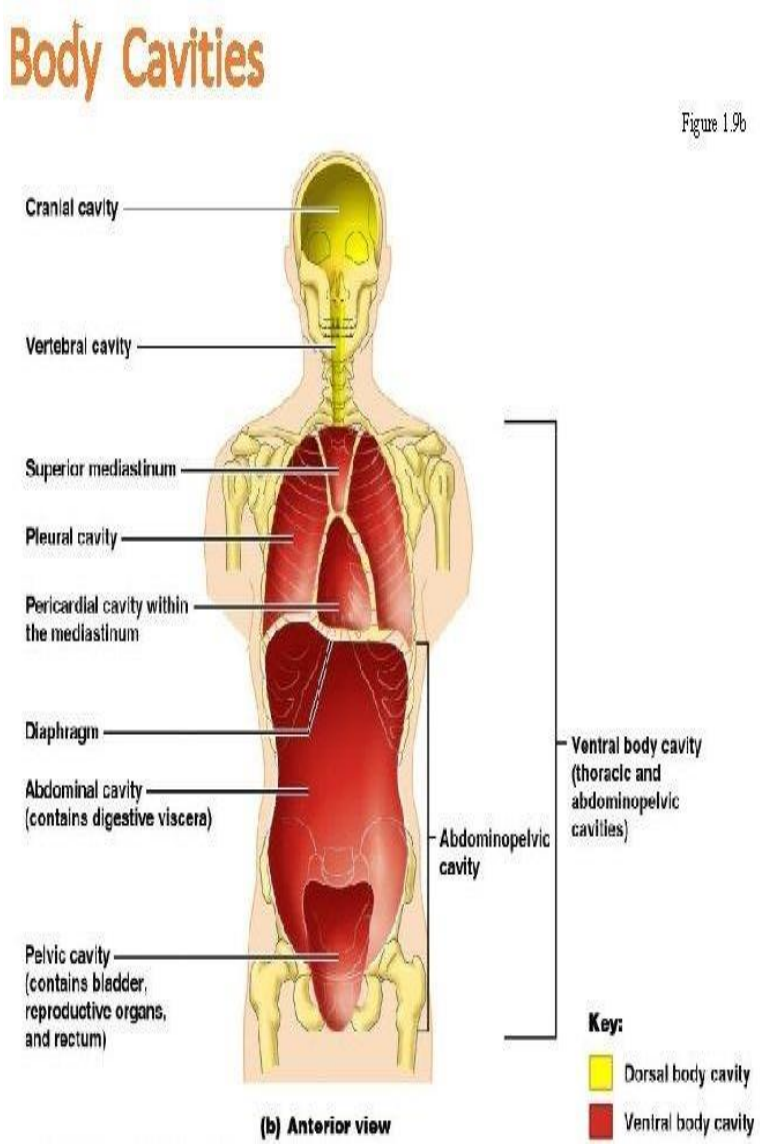
lies within the pelvis and contains the…

1-bladder

2- reproductive organs

3- rectum


oral cavity
mouth cavity
Nasal cavity
located within and poster to the nose
Orbital cavity
house the eyes
Middle ear cavity
contain bones that transmit sound vibrations .
Synovial cavity
joint cavities



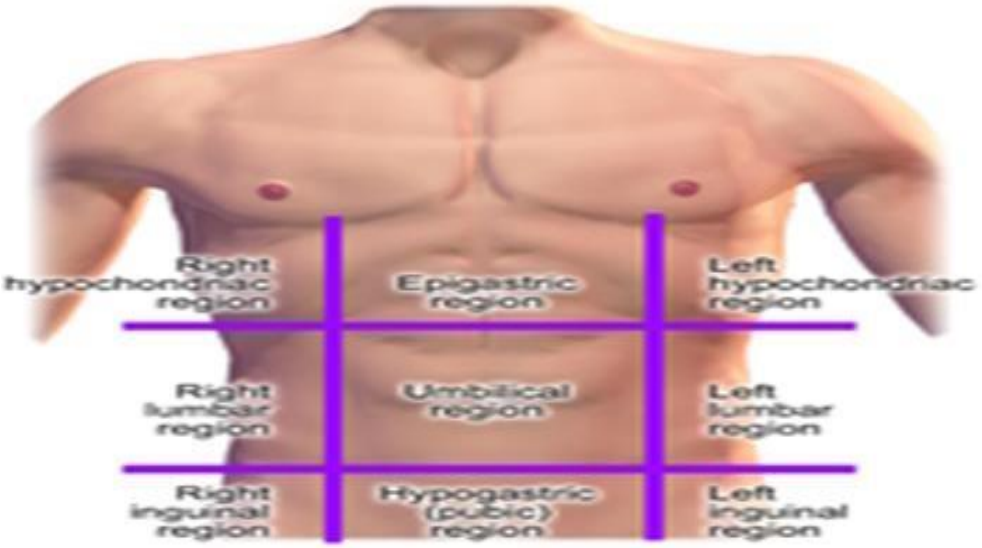
Abdominopelvic Regions

1.Umblical

2.Epigastric

3. Hypogastric

4.Right and left iliac or inguinal



Abdominopelvic Regions

Organs of the abdominoplvic regions