

بنام مهربان ترین

گروه علوم تشریحی
دانشکده پزشکی شیراز
سعید کربلایی دوست



Introduction to anatomy



اهداف یادگیری

در انتهای این مبحث از یادگیرنده انتظار می رود:

- وضعیت تشریحی را تعریف کند و سطوح فرضی بدن را توضیح دهد.
- واژه های مربوط به سطوح بدن را بیان کند

Anatomy

The study of the structure of the human body

The term anatomy comes from the Greek words meaning to cut (tomy) apart (ana) .

Anatomy

1-Microscopic Anatomy

- Structures that cannot be seen with the eye
- Need to use a microscope
- Histology = study of tissues

Anatomy

3-Gross anatomy, or macroscopic anatomy

- Structures that can be seen with the eye
- Muscles, bones, various organs

Anatomy

2-Developmental anatomy

- From conception to birth
- **Embryology** – study of developmental changes of the body before birth

Why do you need to study anatomy?

- A doctor should be able to localize symptoms and signs
 - Pains
 - Withdrawing of blood & giving injections

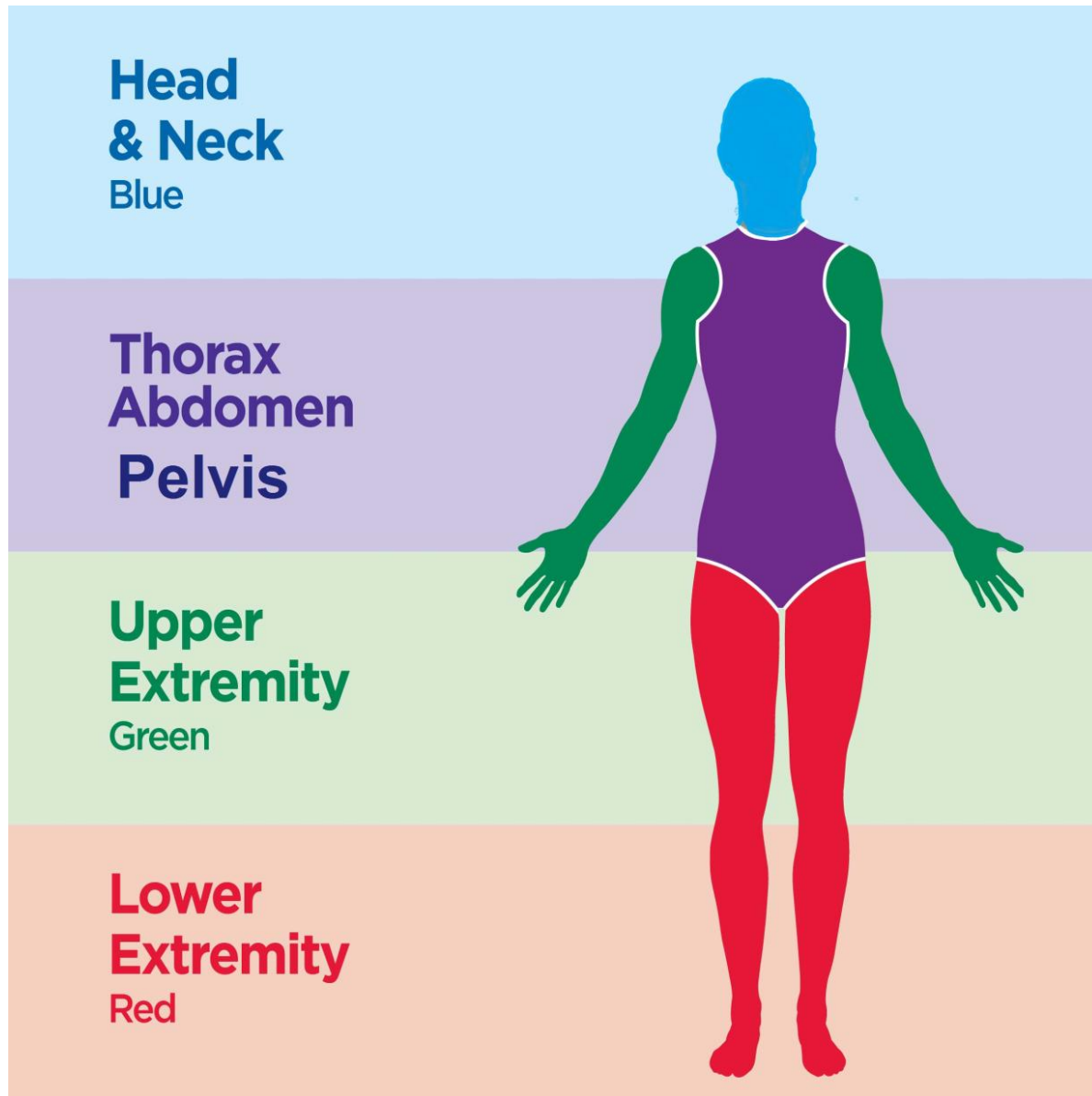
Why do you need to study anatomy?

- Surgeons need to know what they cut
 - Where to cut
 - How to find the structures/organs
 - Relationship of structures/organs
 - Normal variations

Ways to study macroscopic anatomy

- **Regional anatomy:** The study of areas of the body (Limb. Head and Neck, Trunk)
- **Systematic anatomy:** groups of organs working together

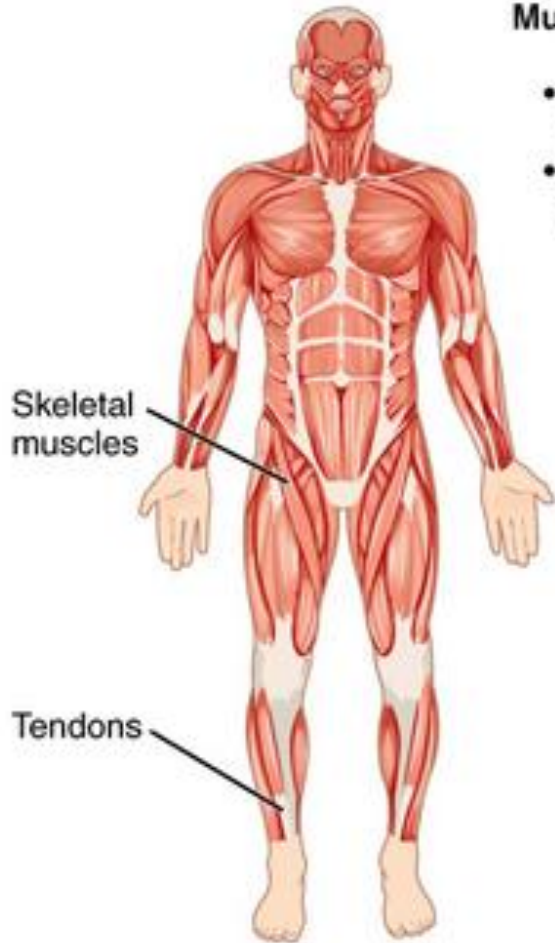
Regional anatomy



Systematic anatomy

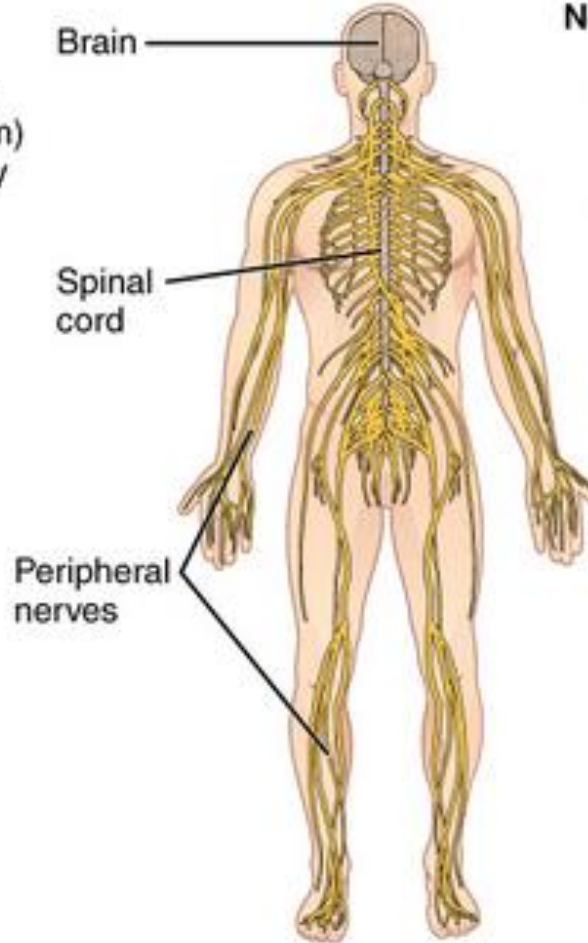
Muscular System

- Enables movement (with skeletal system)
- Helps maintain body temperature

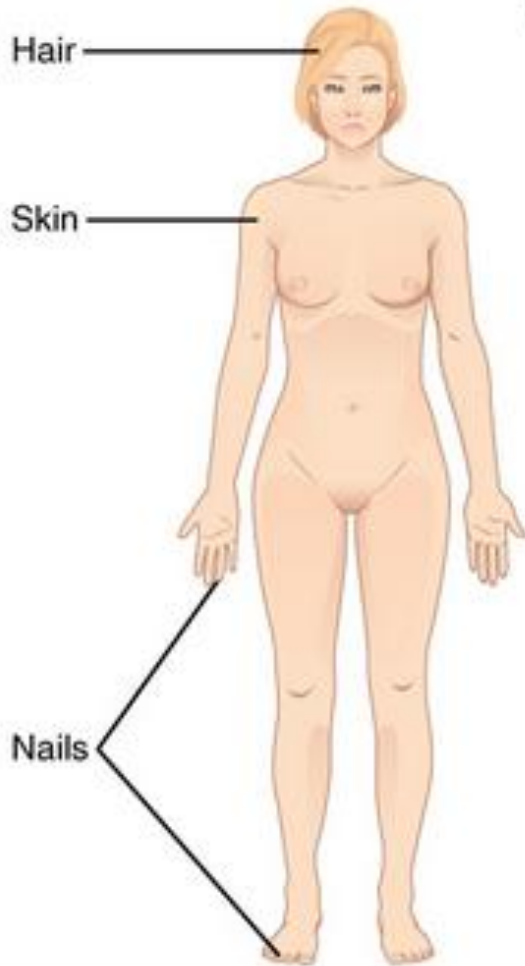


Nervous System

- Detects and processes sensory information
- Activates bodily responses

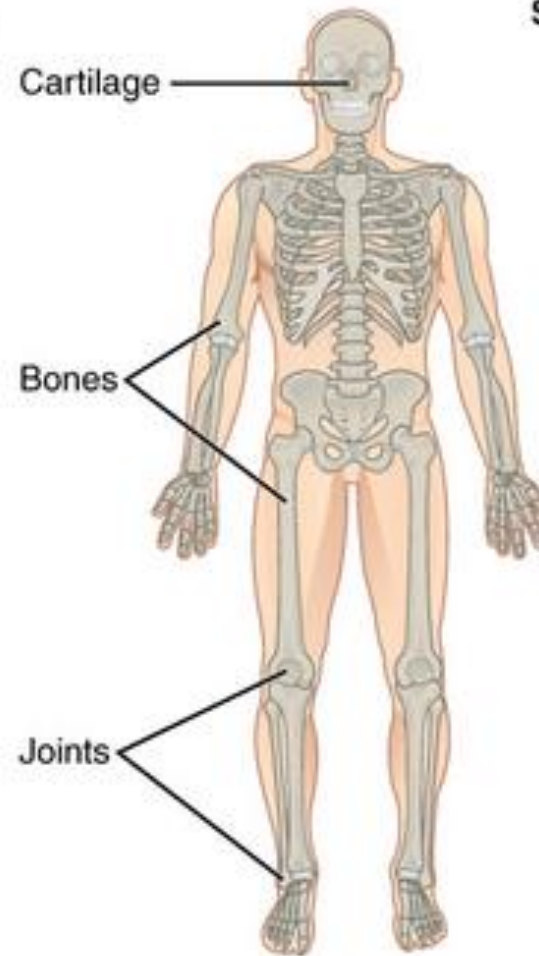


Systematic anatomy



Integumentary System

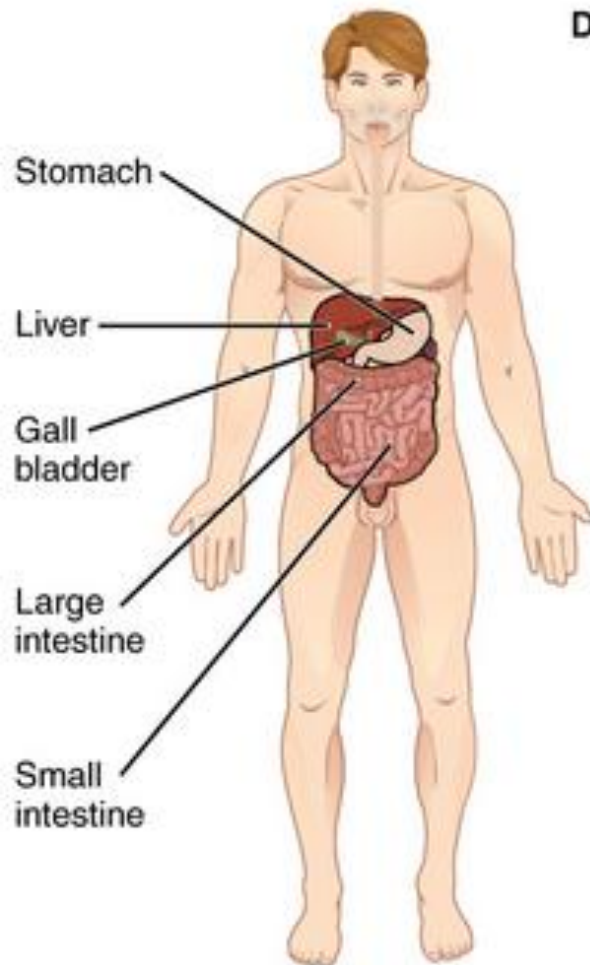
- Encloses internal body structures
- Site of many sensory receptors



Skeletal System

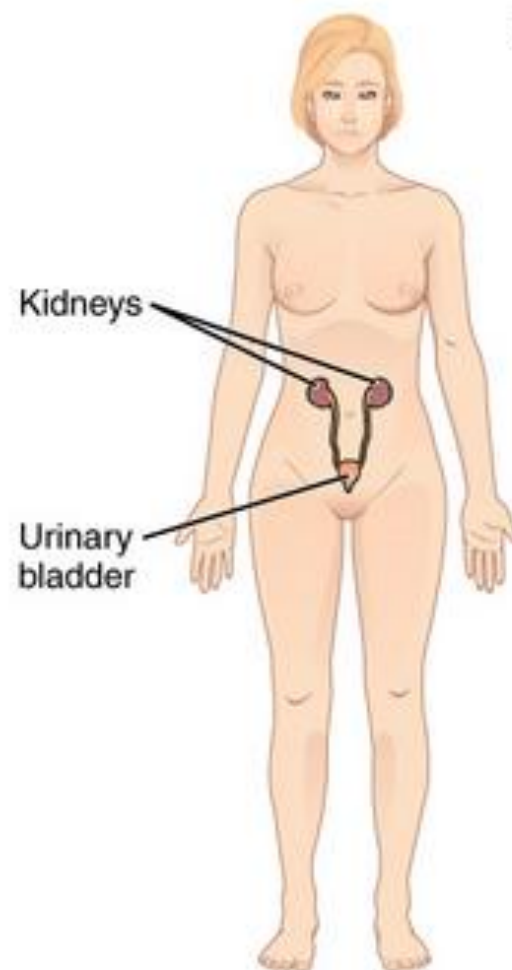
- Supports the body
- Enables movement (with muscular system)

Systematic anatomy



Digestive System

- Processes food for use by the body
- Removes wastes from undigested food



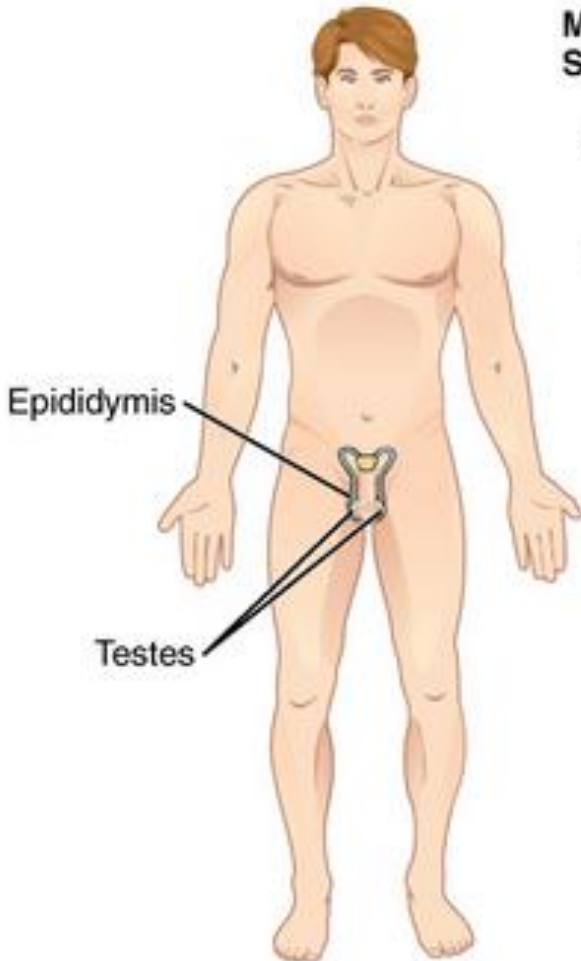
Urinary System

- Controls water balance in the body
- Removes wastes from blood and excretes them

Systematic anatomy

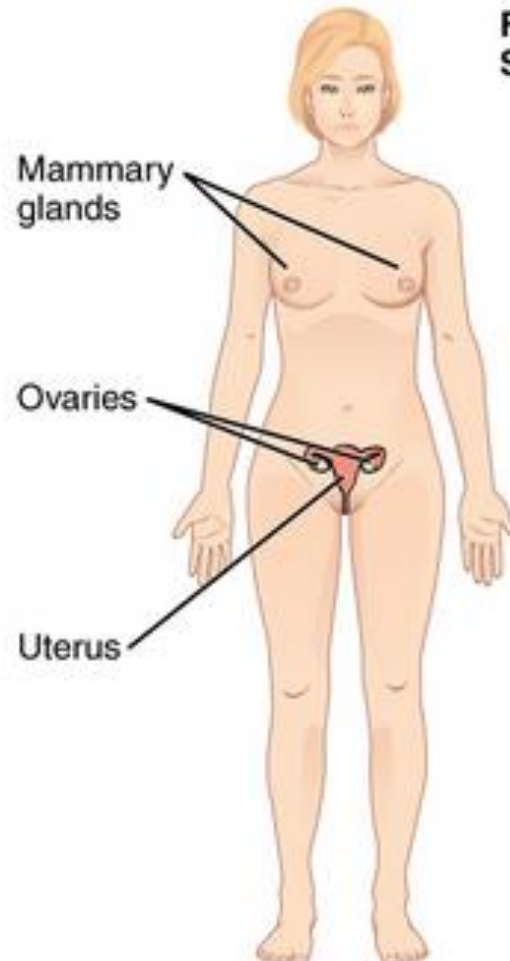
Male Reproductive System

- Produces sex hormones and gametes
- Delivers gametes to female

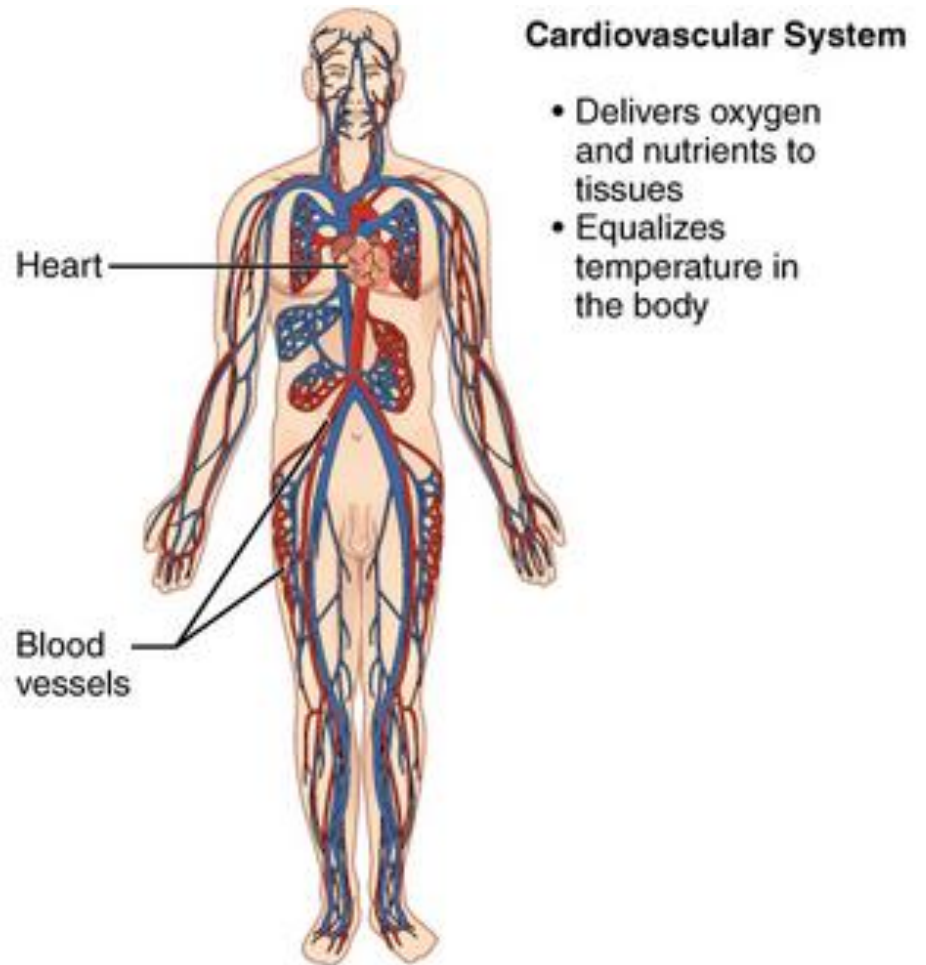
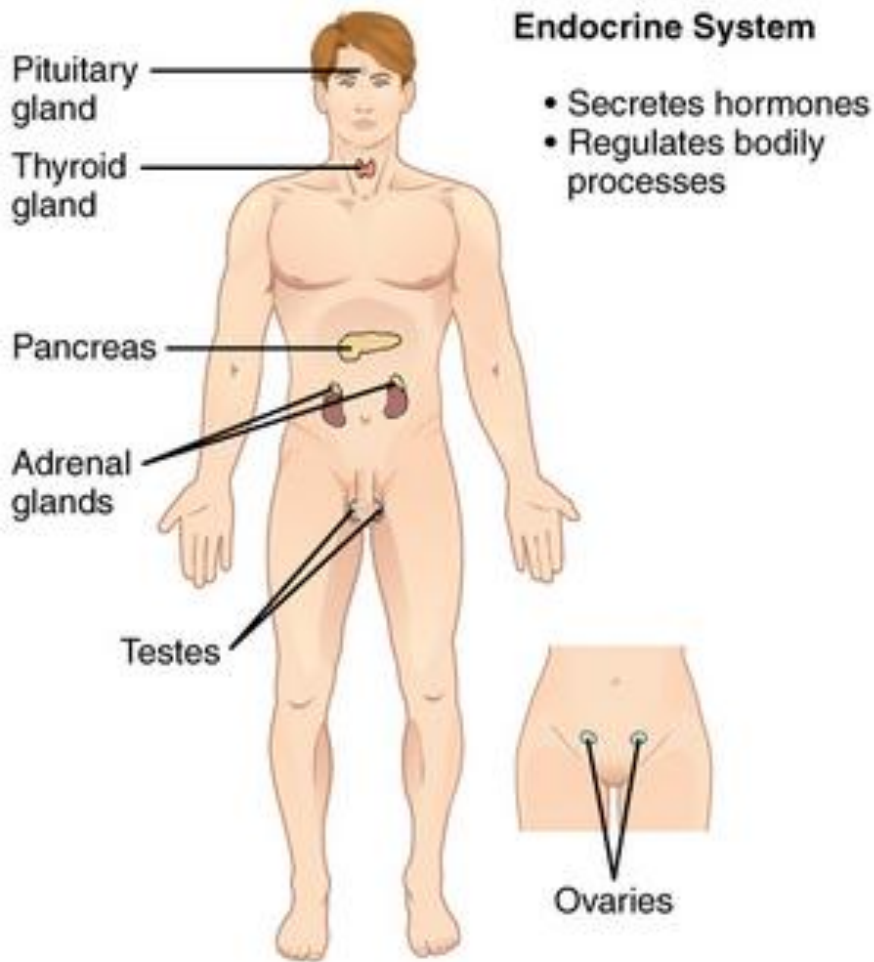


Female Reproductive System

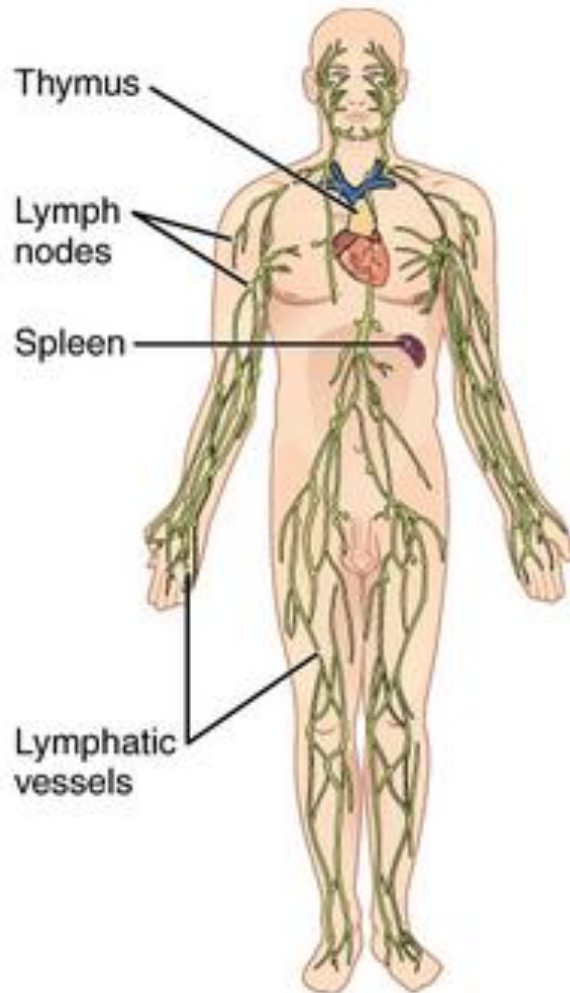
- Produces sex hormones and gametes
- Supports embryo/fetus until birth
- Produces milk for infant



Systematic anatomy

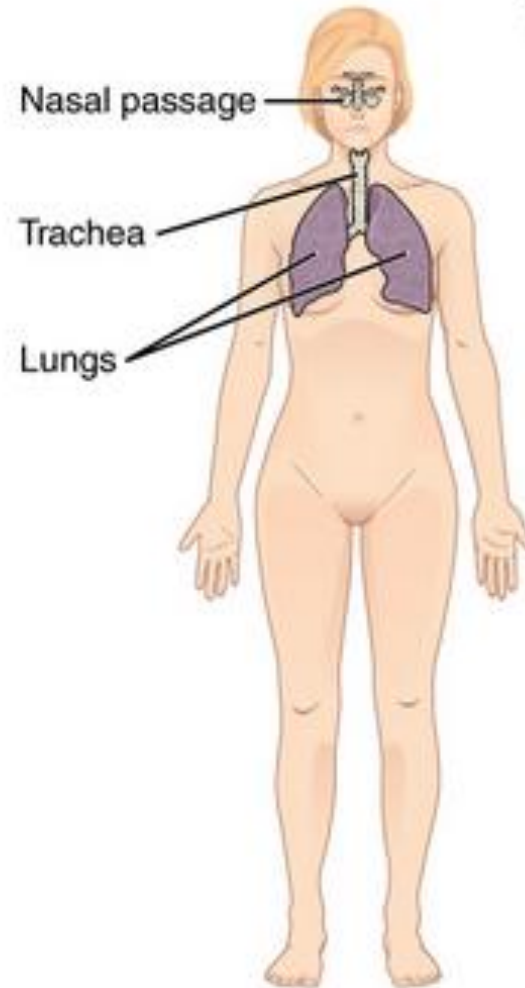


Systematic anatomy



Lymphatic System

- Returns fluid to blood
- Defends against pathogens

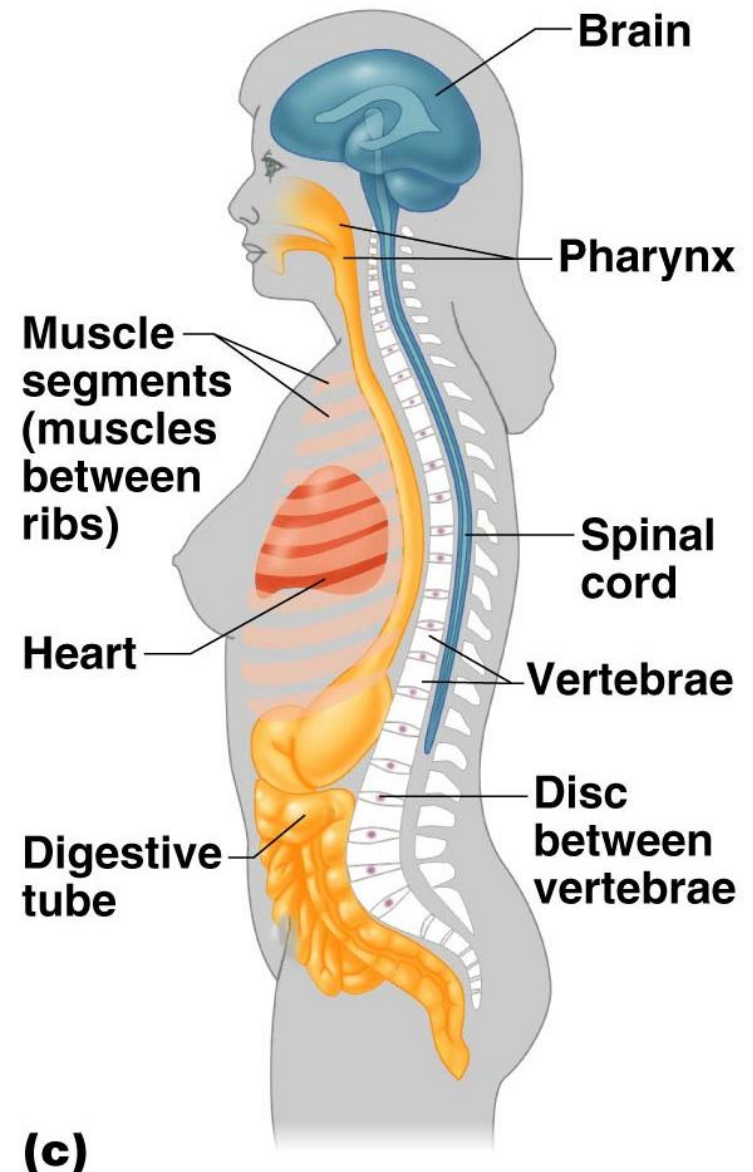


Respiratory System

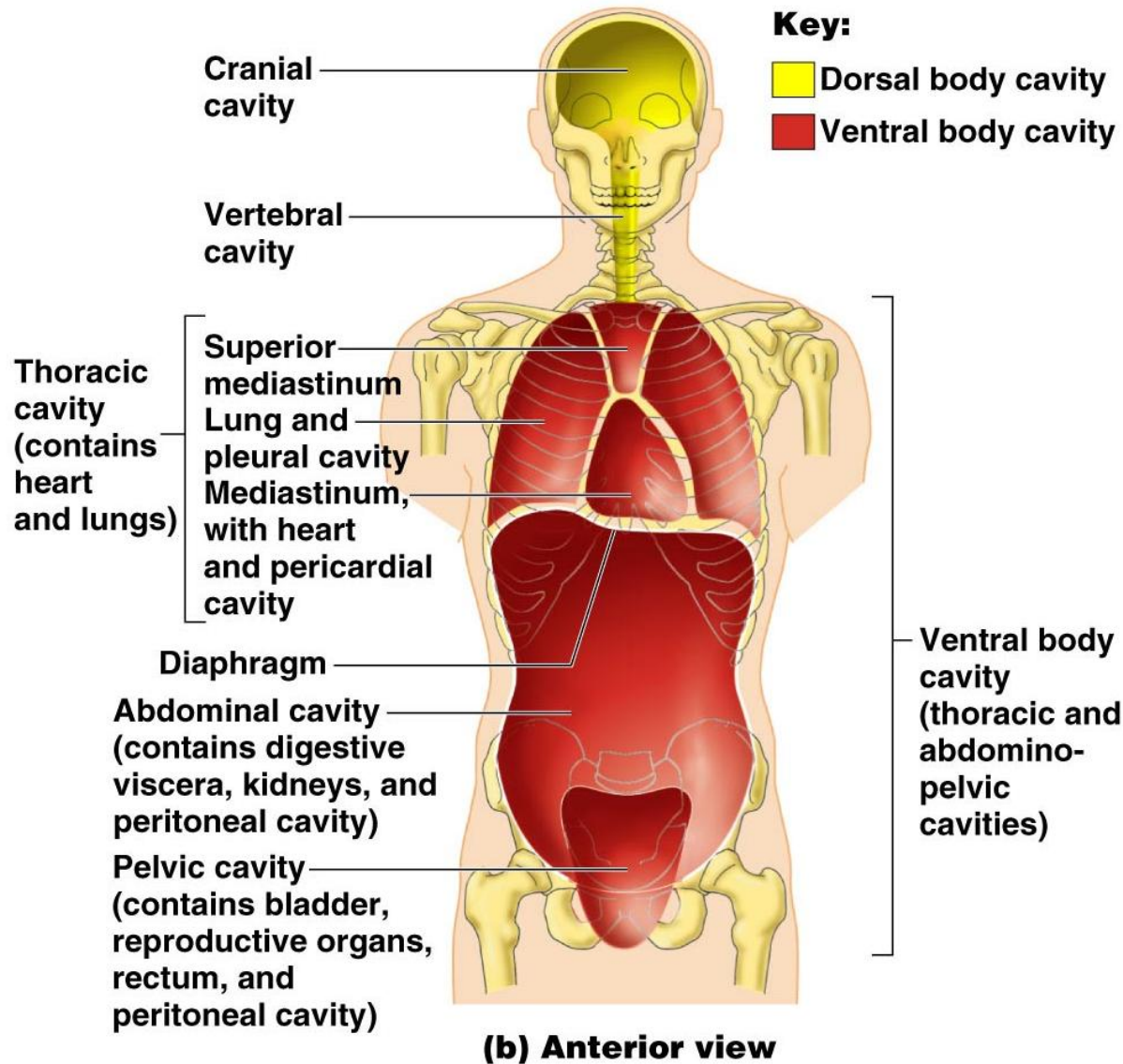
- Removes carbon dioxide from the body
- Delivers oxygen to blood

Body cavities

- Ventral body cavity
- Dorsal body cavity



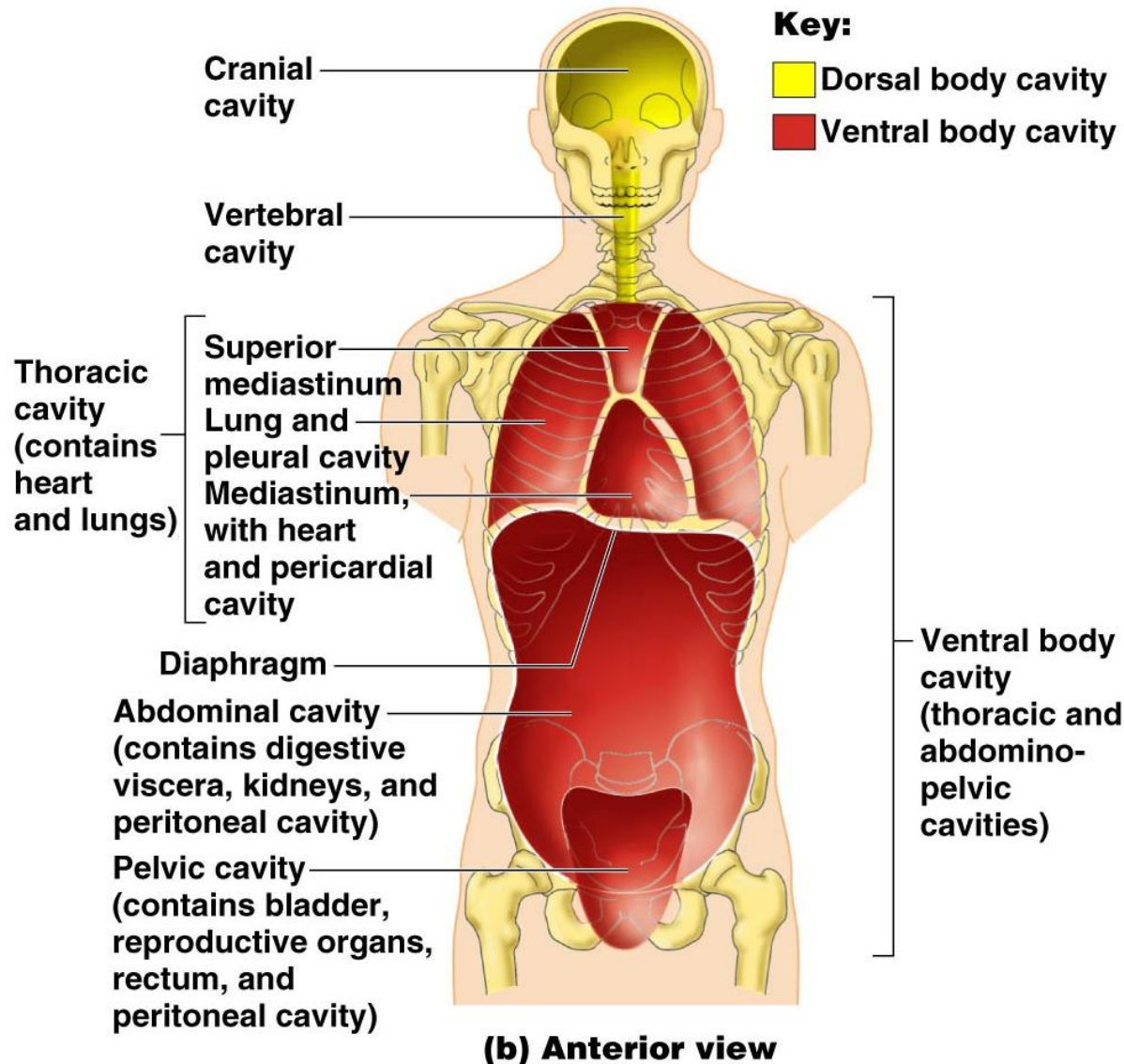
Ventral body cavities(Thoracic cavity)



Two pleural cavity :Lung

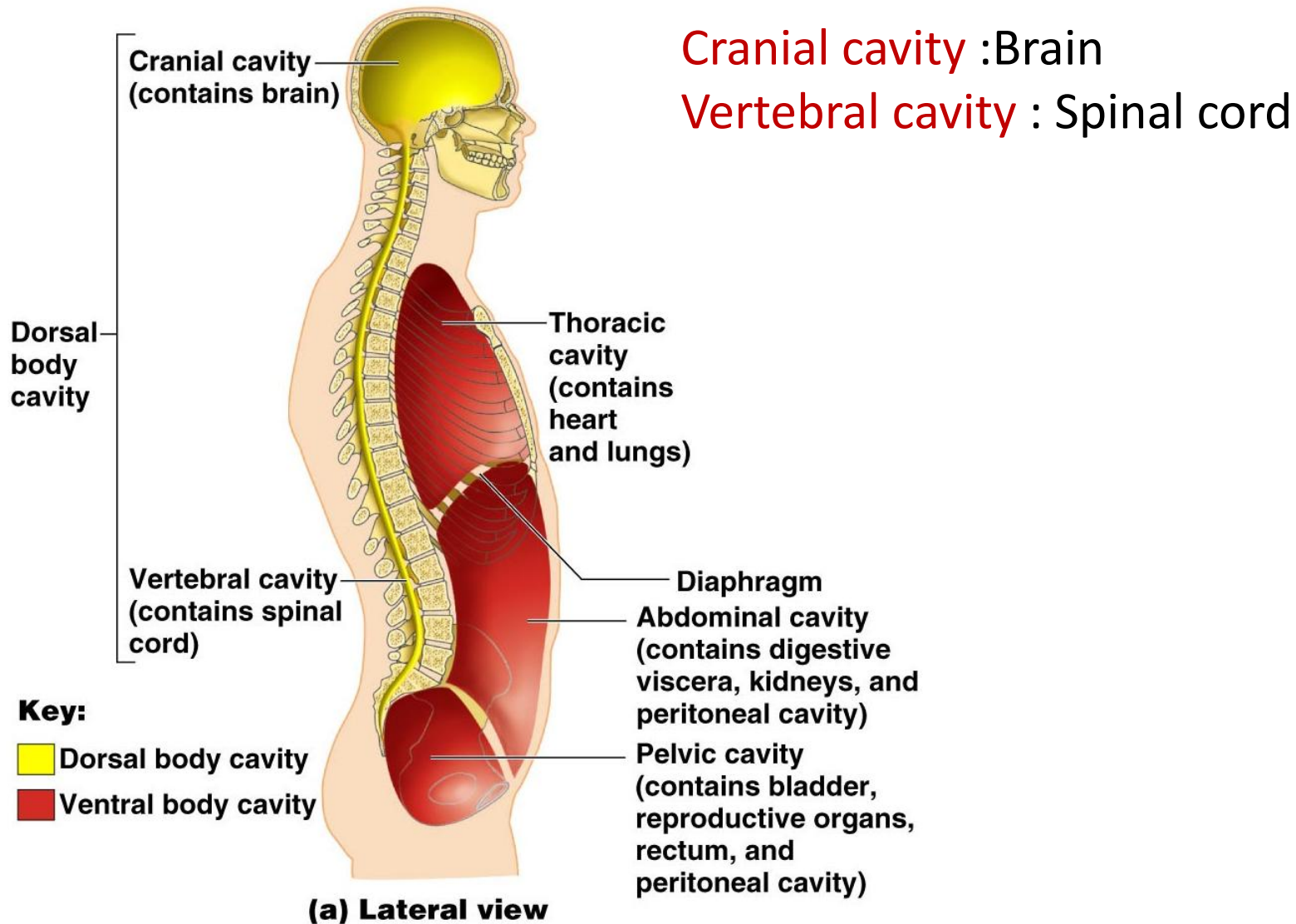
- Mediastinum :Heart

Ventral body cavities(Abdominopelvic cavity)



- **Abdominal cavity** – contains the liver, stomach, kidneys, and other organs
- **Pelvic cavity** – contains the bladder, some reproductive organs, and rectum

Dorsal body cavities

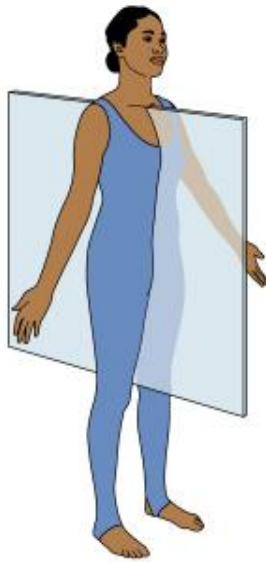


Anatomical position

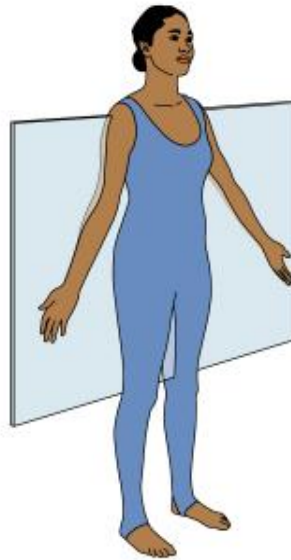


- Person stands erect with feet together and eyes forward
- Palms face anteriorly with the thumbs pointed away from the body
- Standing erect
- Feet parallel
- Arms hanging at the sides
- Palms facing forward

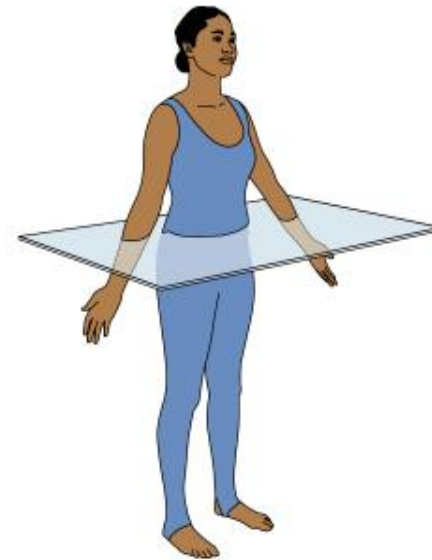
Planes of the body



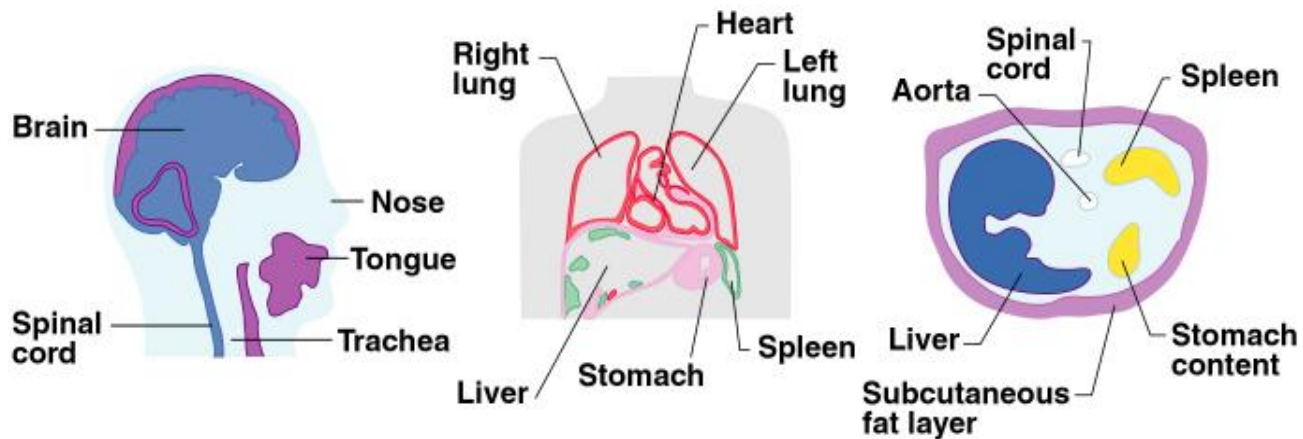
(a) Median (midsagittal)



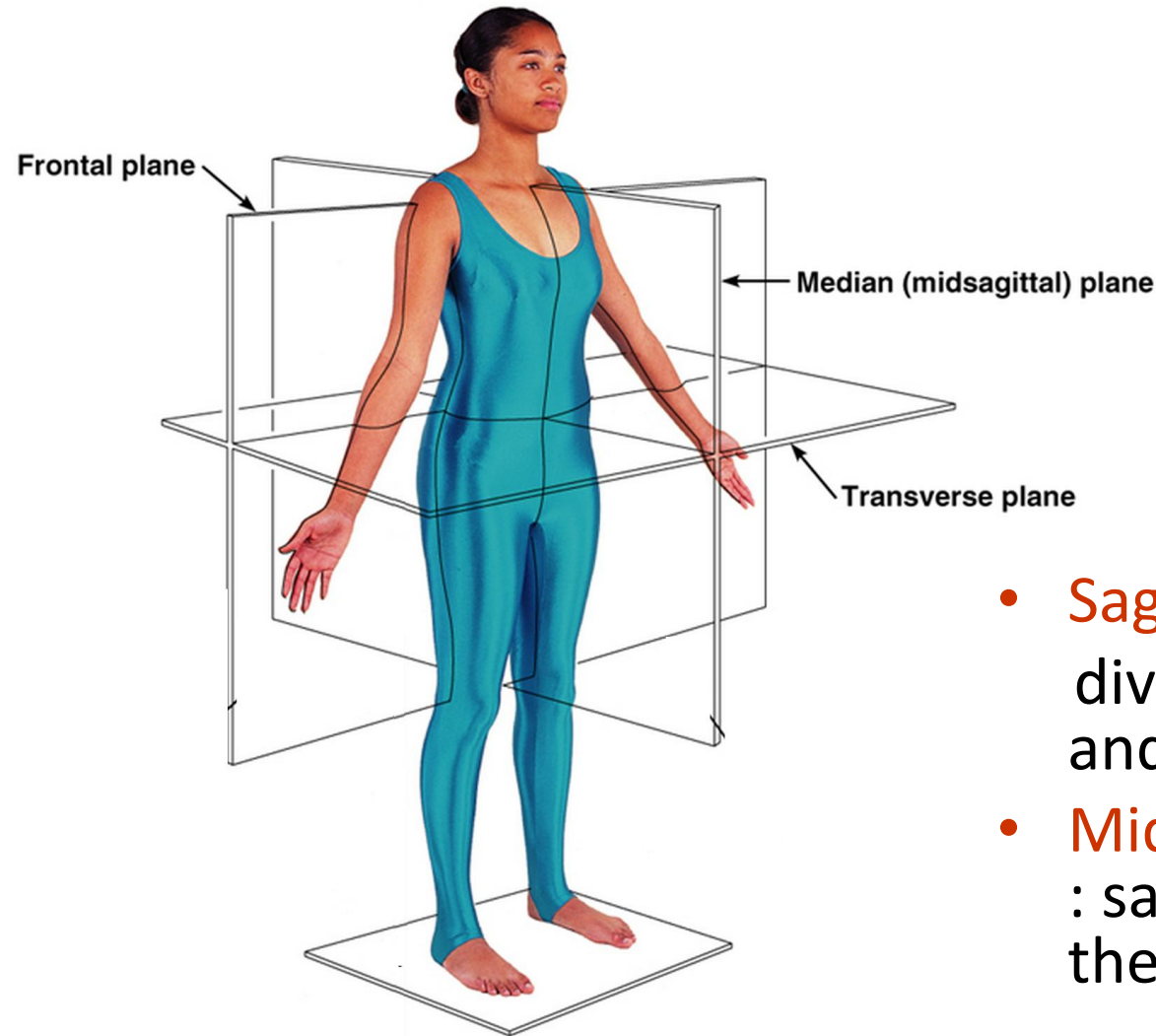
(b) Frontal (coronal) plane



(c) Transverse plane

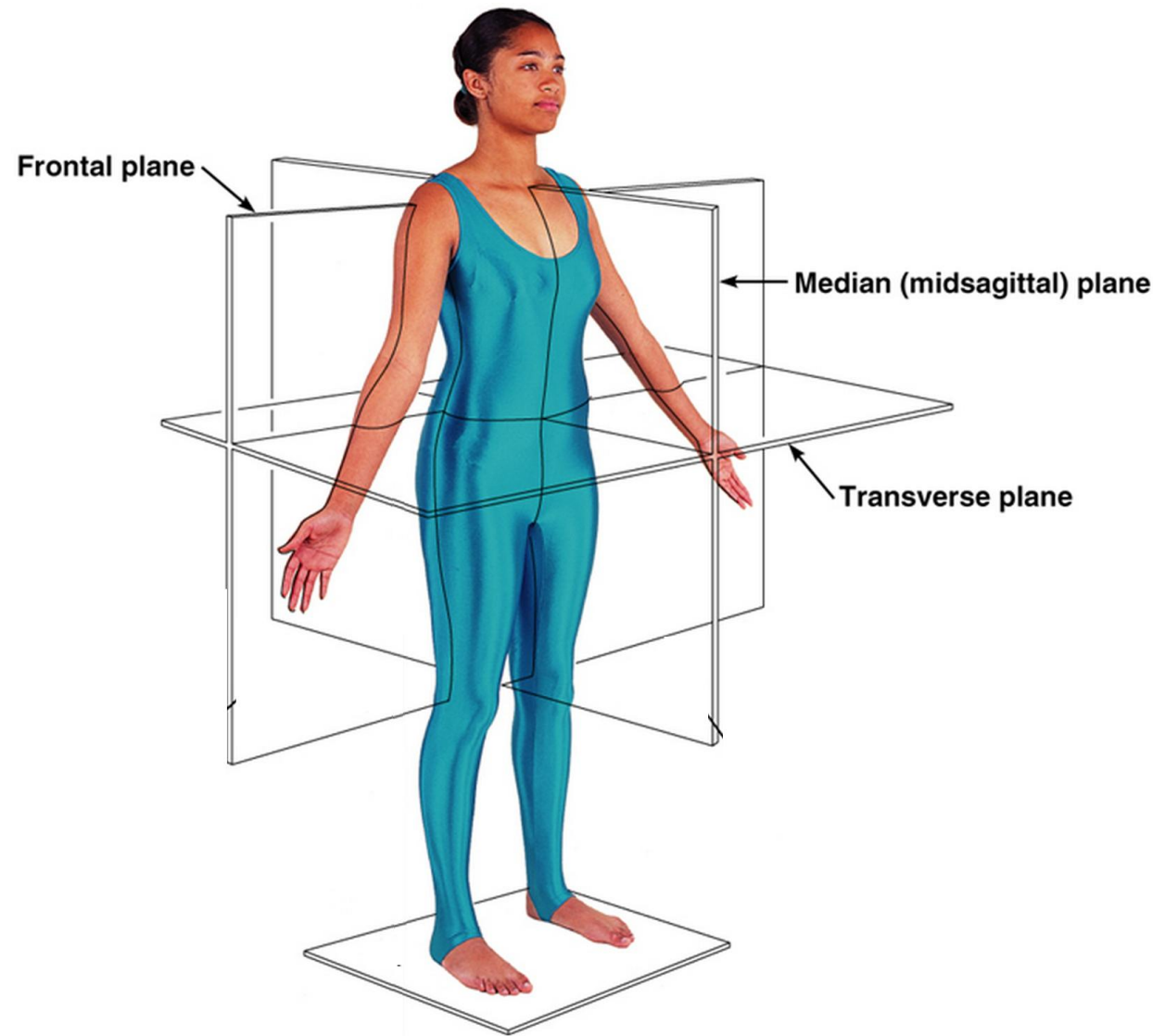


Planes of the body



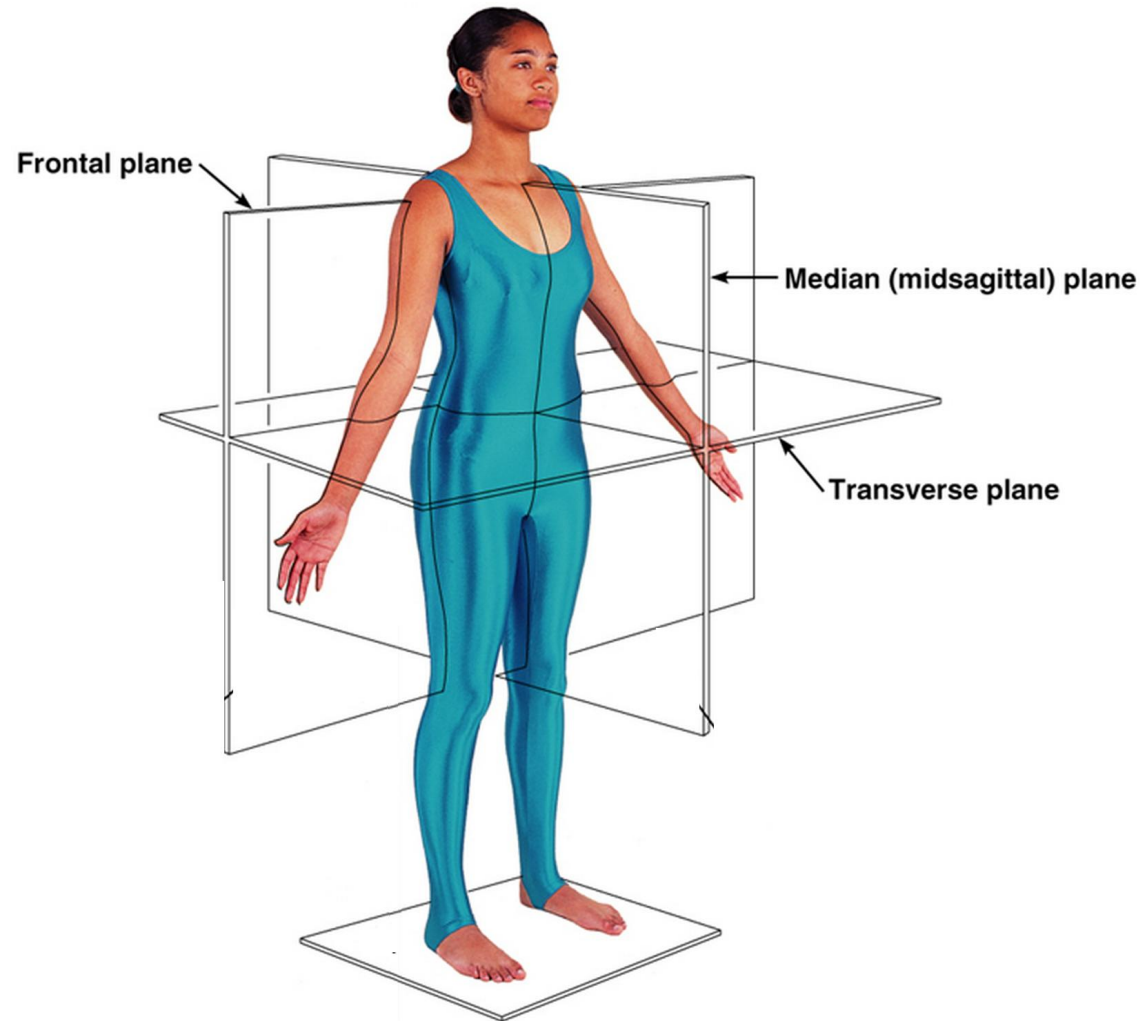
- **Sagittal plane** :
divides the body into right
and left parts
- **Midsagittal plane or midline**
: sagittal plane that lies on
the midline

Planes of the body



Coronal or frontal –
divides the body into
anterior and
posterior parts

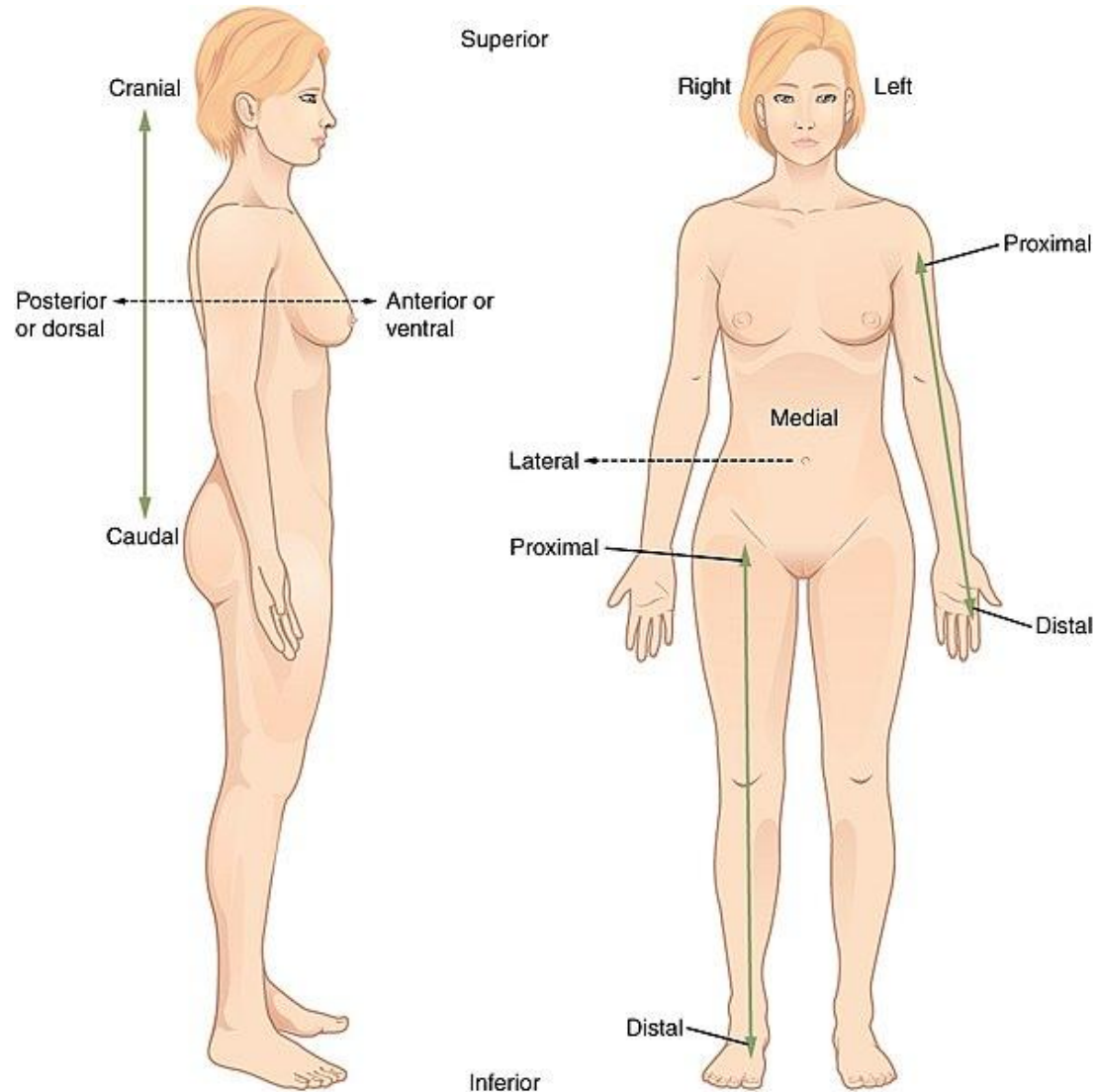
Planes of the body



- Transverse or horizontal plane (cross section) – divides the body into superior and inferior parts

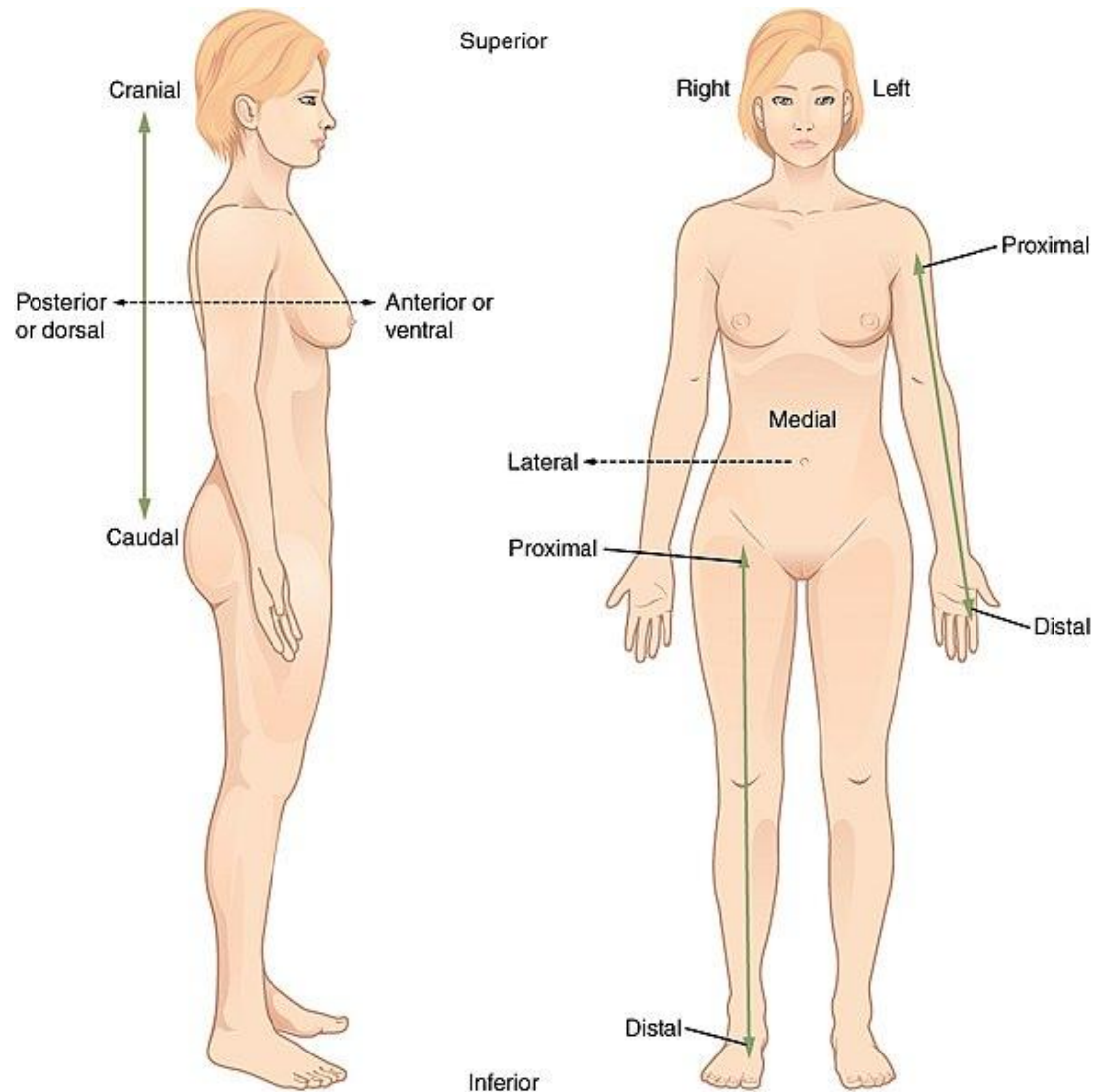
Directional terms

- Superior, cephalic, cranial or upper
 - Inferior, caudal or lower
- : toward and away from the head, respectively



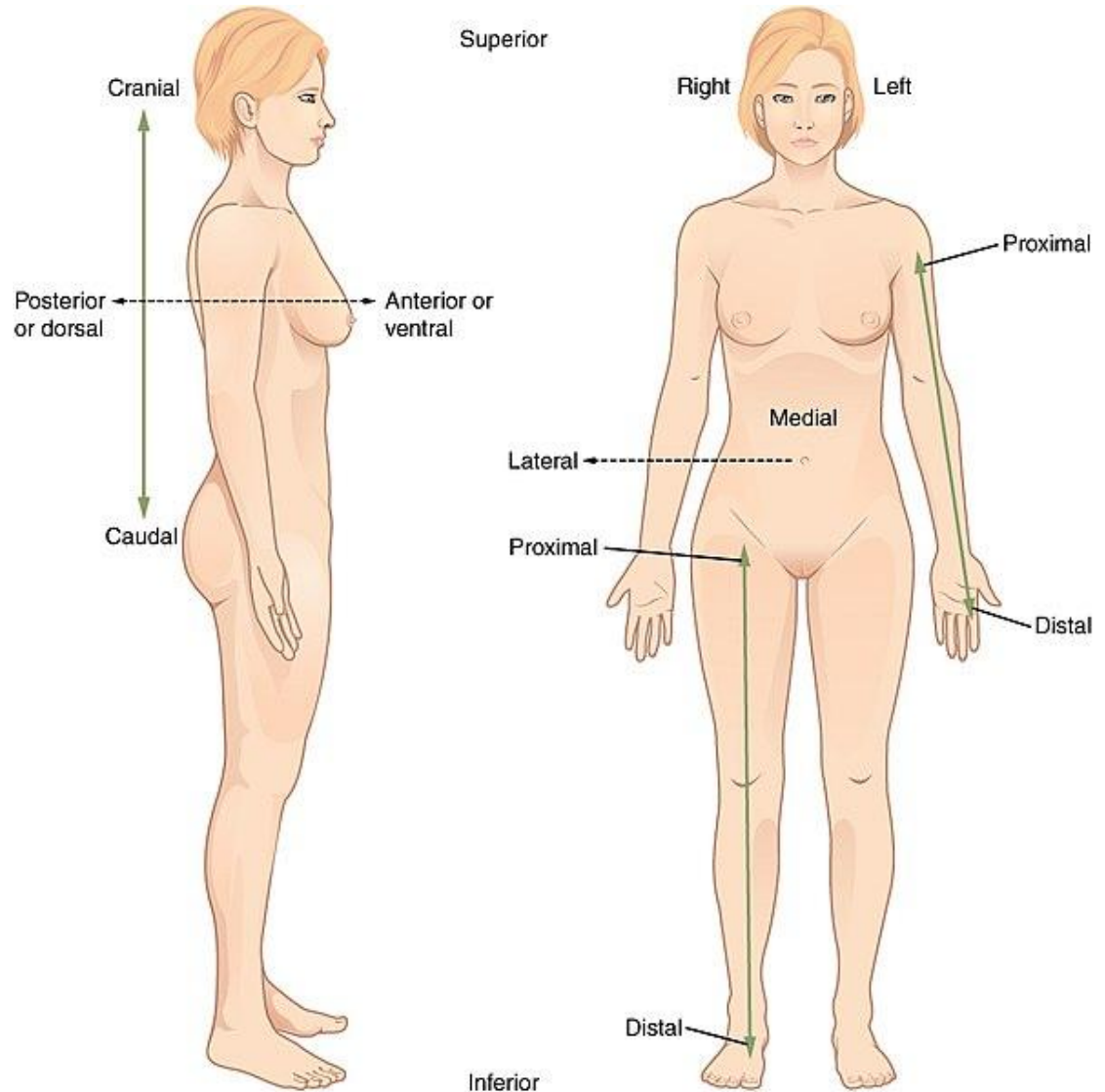
Directional terms

- Anterior or ventral
- Posterior or dorsal :
toward the front and
back of the body



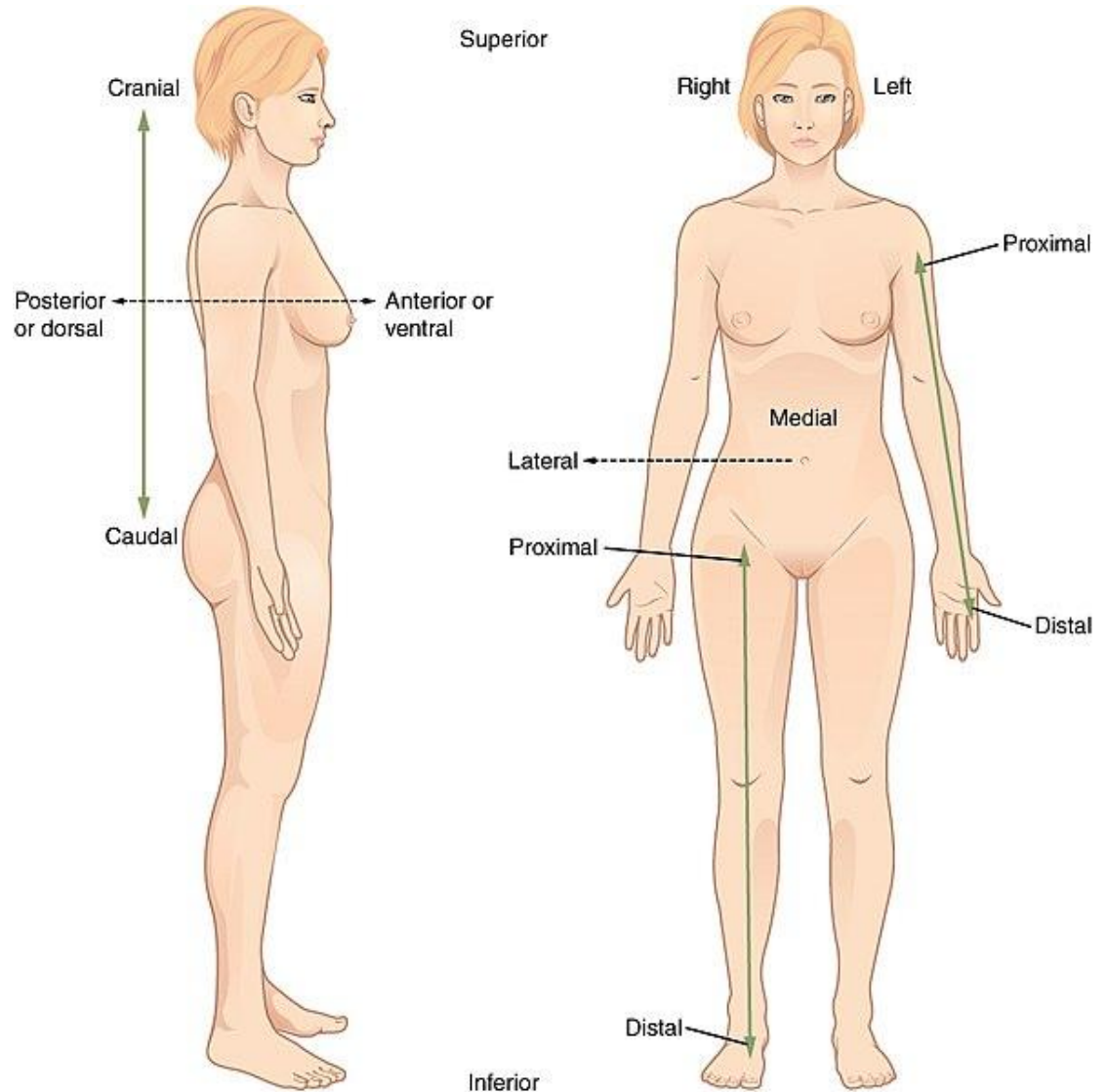
Directional terms

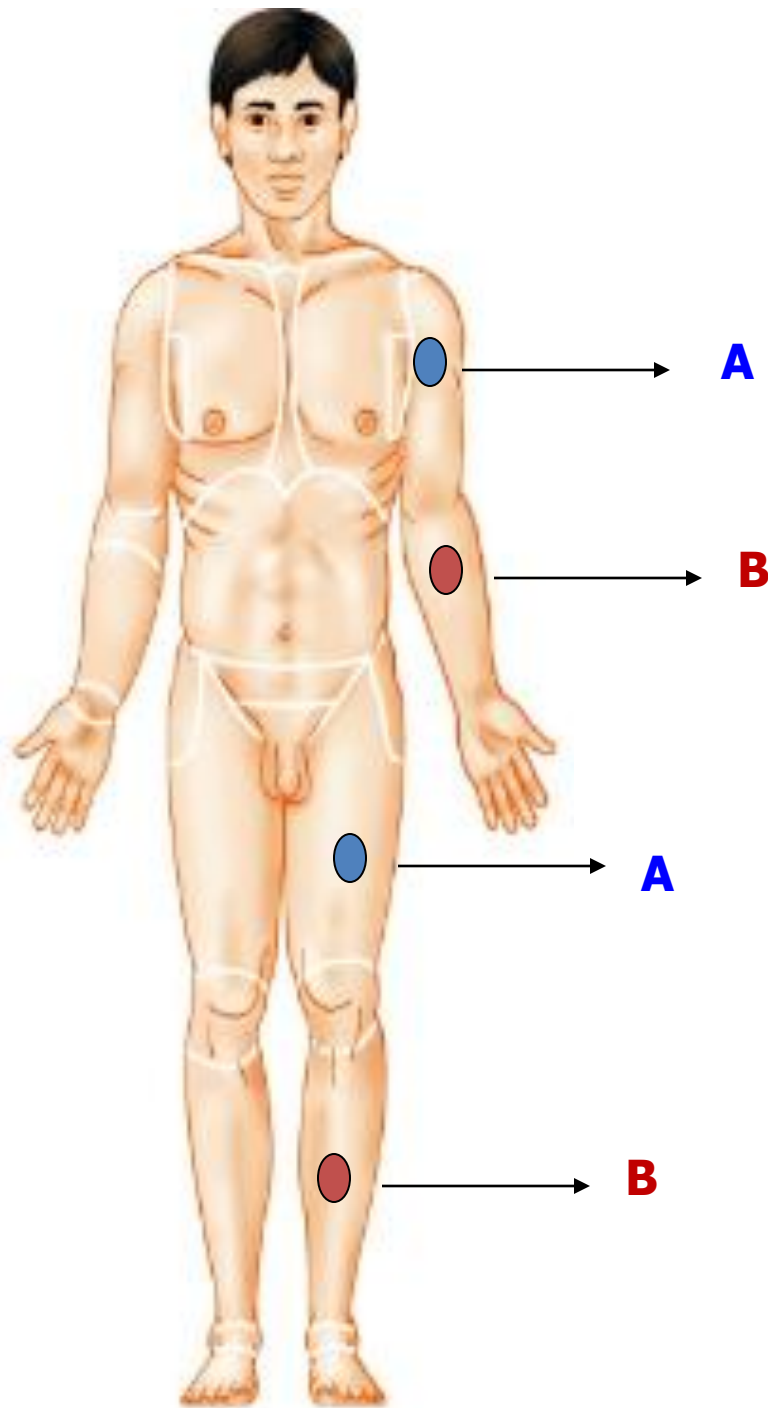
- **Medial, lateral, and**
– toward the
midline, away from
the midline



Directional terms

- **Proximal and distal**
 - closer to and farther from the origin of the body part



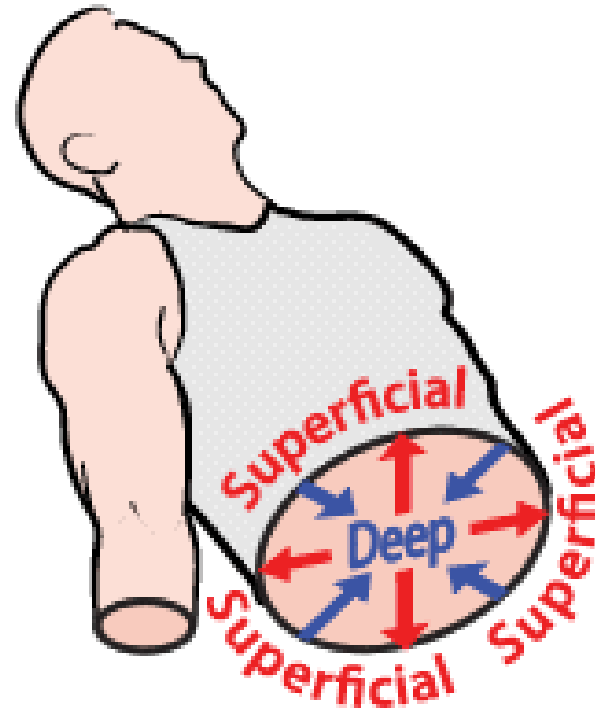


'A' is proximal to 'B'

'B' is distal to 'A'

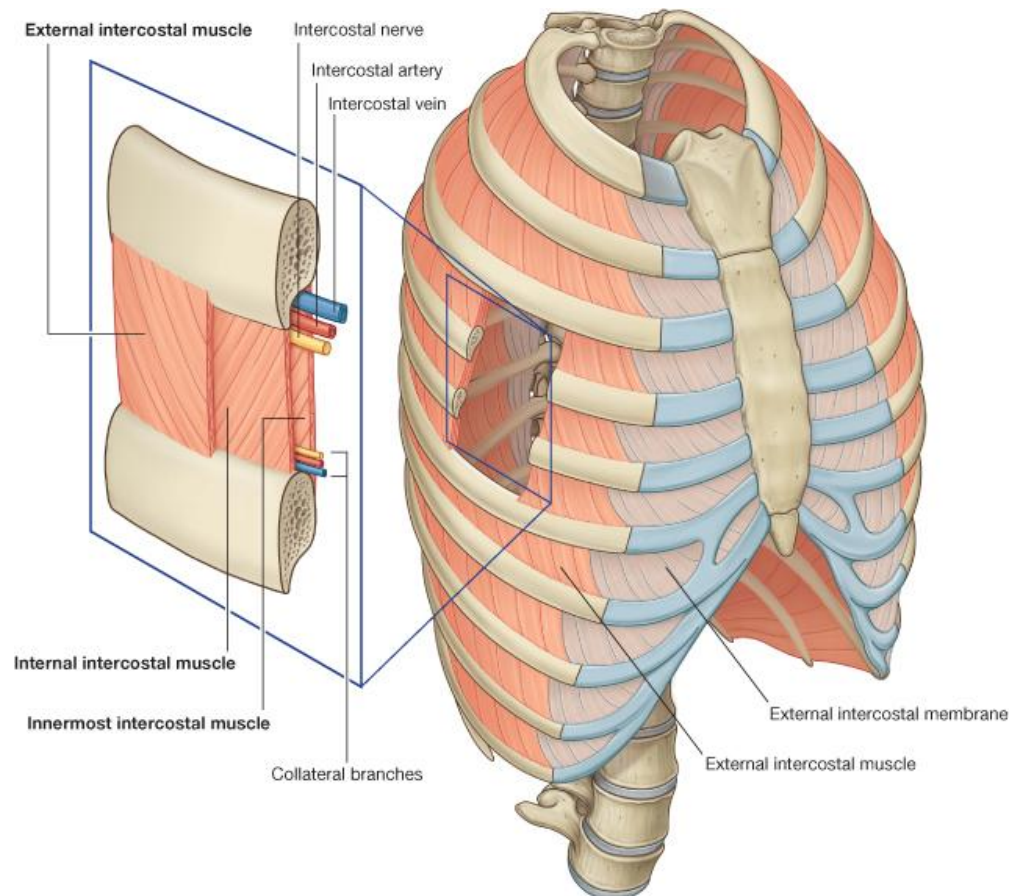
Directional terms

- **Superficial**— Closer to the skin/out side
- **Deep**— Away from the skin/out side



Directional terms

- External ,Internal
- Refers to a hollow structures(external being outside and internal being inside)



Directional terms

Hand



Palmar
surface

Dorsal
surface

Foot

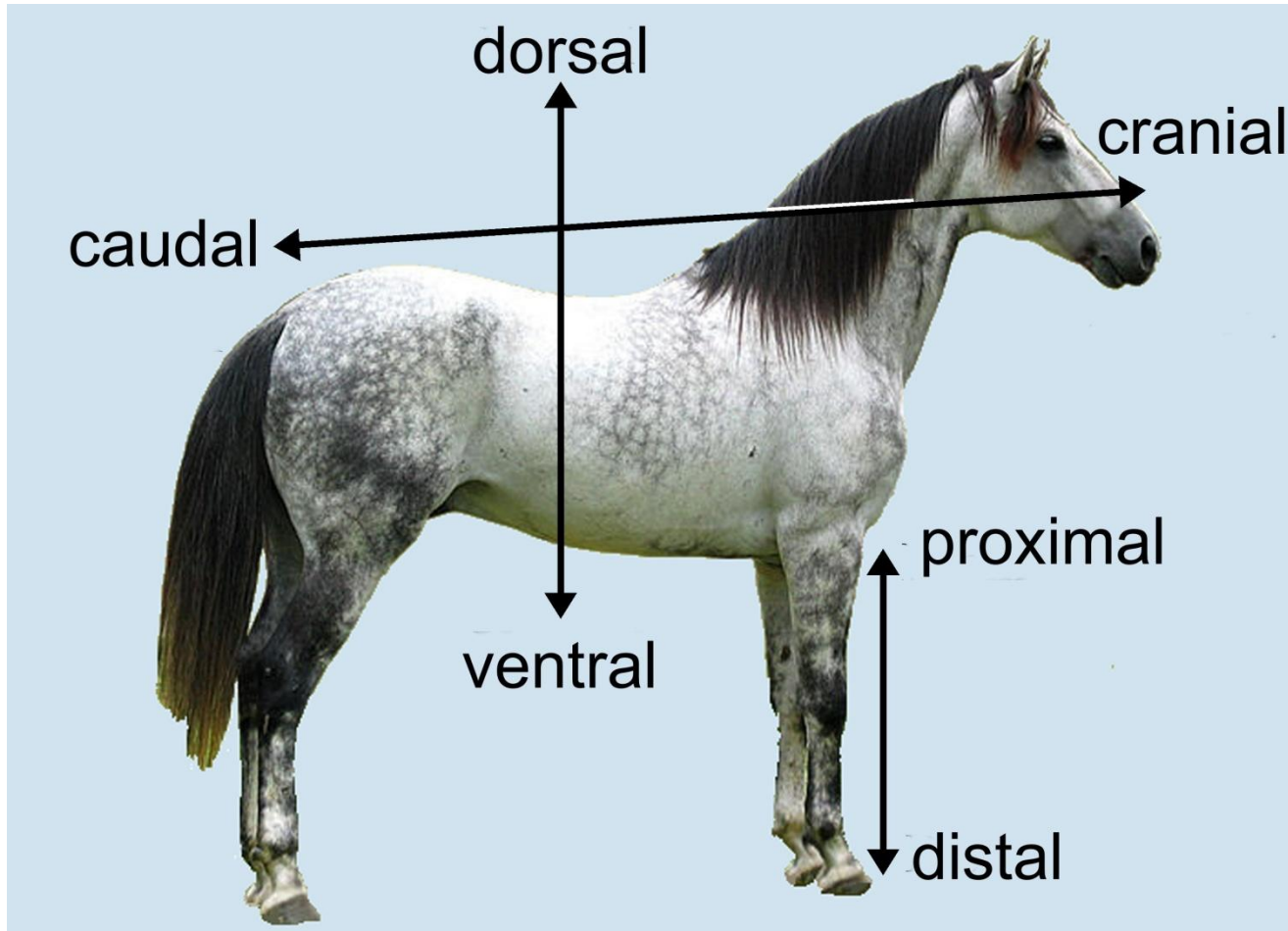


Dorsal
surface

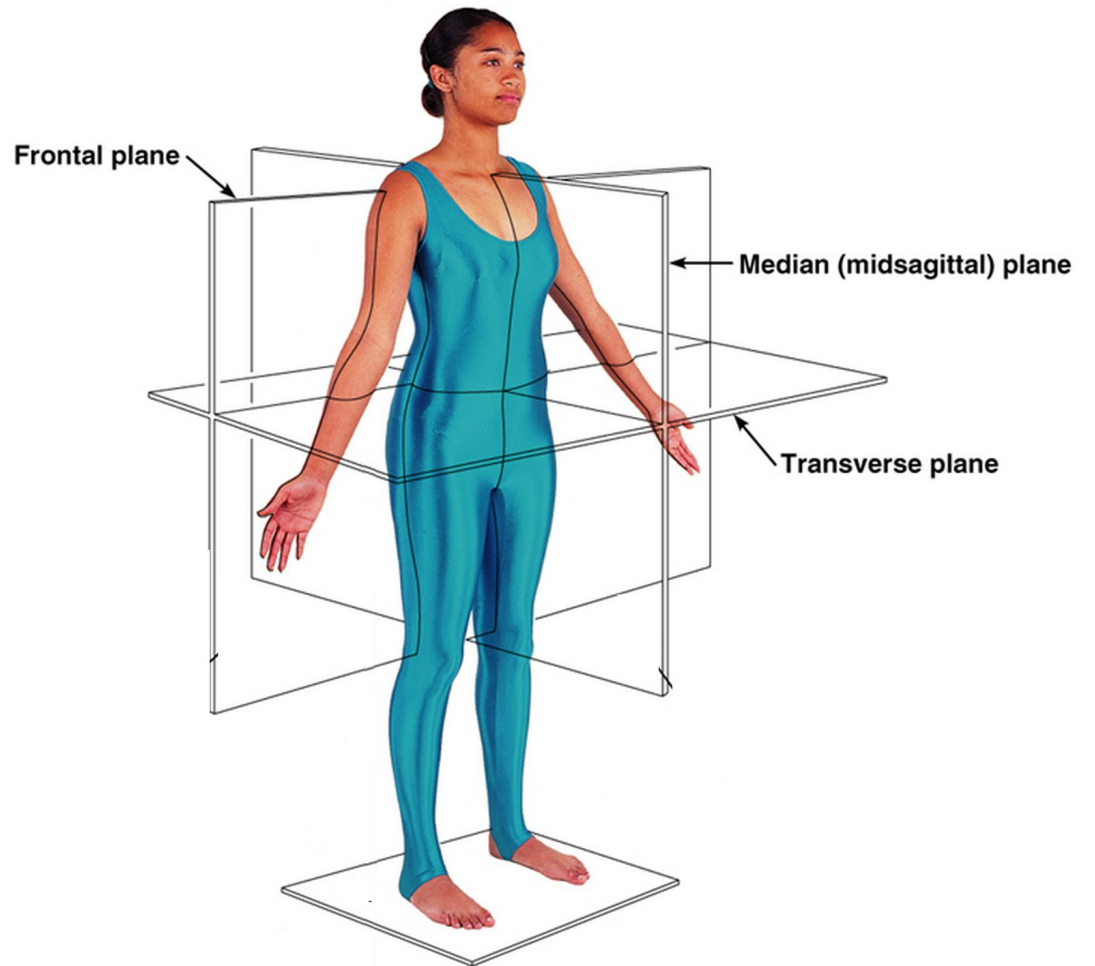
Plantar
surface

Four-footed body directions

- Ventral (= Anterior) Dorsal (= Posterior)
- Cranial – head Caudal – tail



خلاصه



- 1-Clinical Anatomy by Regions by Richard S. Snell , 2017
- 2-Gray's Anatomy for Students, 3rd Edition, 2017
- 3-Clinical Oriented Anatomy, KL Moore, 2017
- 4-Human Anatomy,S.Fakhroodin mesbah A, sixth Edition,2017

آزمون

1- اصطلاح Anterior and Posterior را نسبت به کدام صفحه می‌سنجند؟

A-Transverse

B-Sagittal

C-Coronal

D-Horizontal

2- اصطلاح Distal را تعریف کنید؟

شاد و سلامت باشید

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