

Intro to Anatomy & Physiology Notes

A Anatomy and physiology

- 1) anatomy: study of structure
- 2) physiology: study of function

B Characteristics of life

- 1) movement
- 2) responsiveness
- 3) growth
- 4) reproduction
- 5) respiration
- 6) digestion
- 7) absorption
- 8) circulation
- 9) excretion
- 10) homeostasis

C Homeostasis:

maintaining a stable internal environment (ex. shivering)

D Levels of Organization: atoms → molecules →
macromolecules → organelles → cells → tissues →
organs → organ systems → organism

A Body Organization

1) body regions

- i) axial portion : head, neck, and trunk
- ii) appendages : arms and legs

2) body cavities (spaces in the body)

- i) dorsal cavity is made up of the cranial cavity and the spinal cavity.
- ii) ventral cavity is made up the thoracic cavity and the abdominal cavity

3) membranes

- i) usually there are two layers: parietal (outer)
visceral (inner)
- ii) two layers have fluid between them for lubrication
- iii) pleura : membranes of the thoracic cavity
- iv) peritoneum : membranes of the abdominal cavity

4) organ systems

- i) integumentary (skin, etc.)
- ii) skeletal (bones, ligaments, etc.)
- iii) muscular (muscles, tendons, etc.)
- iv) nervous (brain, spinal cord, nerves, etc.)
- v) endocrine (glands that secrete hormones)
- vi) digestive (stomach, intestines, etc.)
- vii) circulatory (heart, blood vessels, etc.)
- viii) respiratory (lungs, etc.)
- ix) immune (fights disease)
- x) urinary (removes wastes)
- xi) reproductive (male and female)

F Anatomical terminology

1) relative position

- i) superior vs. inferior
- ii) ventral vs. dorsal
- iii) anterior vs. posterior
- iv) medial vs. lateral
- v) proximal vs. distal
- vi) superficial vs. deep

2) planes of dissection:

- i) Midsagittal : cut into left and right parts
- ii) Transverse : cut into superior and inferior parts
- iii) Frontal : cut into ventral and dorsal parts
- iv) also: cross-section, oblique section, and longitudinal section