

F. Organ Systems



1. Integumentary system

Organs: skin, hair, nails & various glands

Functions: protects against environmental hazards; senses changes outside the body; helps regulate body temperature.

2. Skeletal system

Organs: bones, cartilages, ligaments.

Functions: supports, protects & provides frameworks; stores calcium & other minerals; forms blood cells.

3. Muscular system

Organs: muscles & tendons

Functions: provides movement, posture, protection & support; generates heat.

4. Nervous system

Organs: brain, spinal cord, nerves, & sense organs

Functions: directs immediate responses to stimuli; coordinates activities of other organ systems; interprets sensory information

5. Endocrine system

Organs: pituitary gland, thyroid gland, pancreas, adrenal glands, gonads

Functions: adjusts metabolic activity & energy use by the body; controls many structural & functional changes during development.

6. Cardiovascular system

Organs: heart, blood vessels & blood

Functions: distributes blood cells, water, oxygen & nutrients throughout the body while removing wastes from the cells.

7. Lymphatic system

Organs: lymphatic vessels, lymph nodes, thymus, spleen & tonsils

Functions: defends against infection & disease; returns tissue fluids to the bloodstream.

8. Digestive system

Organs: mouth, esophagus, stomach, intestines, liver, gallbladder, pancreas

Functions: receives & processes food; absorbs nutrients & water.

9. Respiratory system

Organs: nasal cavities, larynx, trachea, bronchi, lungs, alveoli

Functions: delivers air to alveoli; exchanges gases between the blood and air

10. Urinary system

Organs: kidneys, ureters, bladder & urethra

Functions: removes wastes from the blood; helps to maintain water and electrolyte balance; regulates blood ion concentration and pH; stores urine prior to elimination

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11. **Reproductive system**

Organs:
in males = testes, epididymis, ductus deferens, prostate gland, scrotum & penis;
in females = ovaries, uterine tubes, uterus, vagina & mammary glands.


Functions: produces sex cells & hormones; produces new organism; in female, also houses developing fetus

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G. Anatomical Terminology

1. **Anatomical position:**
 body is standing erect, face forward, with the upper limbs at the sides and the palms forward.



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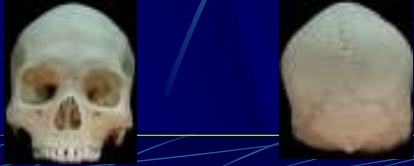
2. **Directional terms** describe the location of one body part with respect to another.

superior	inferior
anterior	posterior
medial	lateral
proximal	distal
superficial	deep
ventral	dorsal


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Anterior
 A body part is toward the front.
 The breastbone is anterior to the lungs.


Posterior
 A body part is toward the back.
 The lungs are posterior to the breastbone.



Superior
 A body part is above another body part.
 Head is superior to shoulders...




Inferior
 A body part is below another body part.
 Shoulders are inferior to the head...




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Medial
 A body part is toward the midline.
 The nose is medial to the eyes.



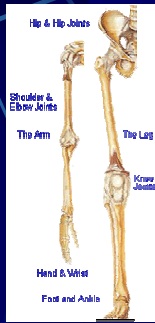
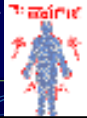
Lateral
 A body part is toward the side from the midline.
 The eyes are lateral to the nose.



● **Proximal**

A body part is closer to a point of limb's attachment to the trunk.

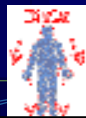
The elbow is proximal to the wrist.



● **Distal**

A body part is farther away from a point of limb's attachment to the trunk.

The wrist is distal to the elbow.

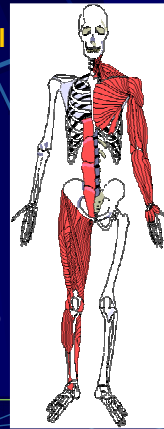


● **Superficial**

The body part is situated near the surface.

The skin is superficial to the muscles.

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● **Deep**

The body part is more internal than another body part.

The muscles are deep to the skin.

● **Ventral**

A body part is toward the belly surface of the body.

Stomach is ventral to the spine.



● **Dorsal**

A body part is toward the vertebral surface of the body.

Spine is dorsal to the stomach.

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