Chapter 6
The Human Body

The Planes of the Body

- **Anterior**: Front side (Ventral)
- **Posterior**: __________________________ side (Dorsal)
- **Midline**: Imaginary line that divides body
- **Midclavicular line**: Imaginary line at center of __________________________ (collar bone)
- **Midaxillary line**: Imaginary line at armpits

The Planes of the Body

Directional Terms (1 of 3)

- **Right**: The patient’s right
- **Left**: The patient’s left
- **Lateral**: Away from the __________________________
- **Medial**: Toward the midline

Directional Terms (2 of 3)

- **Superior**: Nearer or toward the __________________________
- **Inferior**: Nearer or toward the feet
- **Distal**: Toward the free end
- **Proximal**: Toward the __________________________
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Directional Terms (3 of 3)

- **Superficial**: close to or on the __________________________
- **Deep**: further inside the body
- **Palmar**: palm/front of hand
- **Plantar**: bottom of foot
- **Apices**: tip or topmost portion of a structure
- **Bilateral**: body part that appears on both sides of __________________________
- **Unilateral**: only one side of the body

Directional Terms

Movement Terms
Movement Terms

- Flexion: Extremity (knee or elbow) in flexed position
- Extension: Extremity in ________________ position
- Adduction: Extremity ________________ to body
- Abduction: Extremity away from body

Anatomic Positions

- Prone: Face ________________
- Supine: Face ________________
- Fowler’s position: body sitting up, knees bent
- Lateral recumbent: on side
- Trendelenburg’s Position: body supine with head ________________ than feet
- Shock Position: Trendelenburg with legs elevated and the head and torso supine

The Skeletal System

- Gives form to the body
- Protects vital organs
- Consists of ________________ bones
- Acts as a framework for attachment of muscles
- Designed to permit ________________ of the body

The Skull

The Neck

Spinal Column

- Protects spinal cord
- Consists of ________________ vertebrae
- 7 Cervical
- 12 ________________
- 5 Lumbar
- 5 Sacrum
- 4 ________________

The Thorax

The Abdomen (1 of 2)
The abdomen is the _________________ major body cavity.
It contains the major organs of digestion and excretion.

17 □ The Abdomen (2 of 2)

18 □ The Pelvis

19 □ The Lower Extremity
- Femur: thighbone
  - _________________ and strongest bone of body
- Patella: kneecap
- Knee Joint
- Tibia: shin bone (lower leg)
- Fibula: smaller bone of lower leg

20 □ The Lower Extremity
- Talus: _________________ bone
- Calcaneus: heel bone
- Foot
  – tarsal bones
  – metatarsal bones
  – phalanges--toes

21 □ The Lower Extremity
- Hip
- Thigh
- Knee
- Leg
- Ankle
- Foot

22 □ The Upper Extremity
- Humerus: _________________ arm bone
- Elbow
- Radius: thumb side
- Ulna: pinkie side
- Hand
  – carpal bones
  – metacarpal bones
The Upper Extremity

- Shoulder girdle
- Arm
- Elbow
- Forearm
- Wrist
- Hand

Joints

1. Ball and Socket:
   - Allows ______________________ and rotation
2. Hinge:
   - Allows for only hinging

Functions of the Musculoskeletal System

- Gives the body ______________________
- Protects internal organs
- Provides for movement
- Consists of more than ______________________ muscles

Types of Muscle (1 of 2)

- Skeletal (voluntary) muscle
  - Attached to the bones of the body
- Smooth (involuntary) muscle
  - Carry out the ______________________ muscular functions of the body

Types of Muscle (2 of 2)

Cardiac muscle
- Involuntary muscle
- Has own blood supply and ______________________ system
- Can tolerate interruptions of blood supply for only very short periods

The Respiratory System

Diaphragm
- Has characteristics of both ______________________ and ______________________ muscles
• Dome-shaped muscle
• Divides thorax from abdomen
• __________________________ during inhalation
• __________________________ during exhalation

30 Infant and Child Anatomy
• Structures less rigid
• Airway smaller
• Tongue proportionally __________________________
• Dependent on diaphragm for breathing

31 The Circulatory System
• Consists of:
  – Heart
  – Blood
  – Blood Vessels

32 The Circulatory System: Anatomy

33 The Nervous System
• The nervous system controls the body’s voluntary and involuntary actions.
  • Somatic nervous system
    • Regulates __________________________ actions
  • Autonomic nervous system
    • Controls __________________________ body functions

34 Central Nervous System (1 of 2)
  (Brain and Spinal Cord)

35 Central Nervous System (2 of 2)

36 Peripheral Nervous System
• Links the organs of the body to the __________________________ nervous system.
• Sensory nerves carry information from the body to the central nervous system.
• Motor nerves carry information from the central nervous system to the muscles of the body.

37 The Skin (1 of 2)
The Skin (1 of 2)
- Protects the body from the ____________________
- Regulates body ____________________
- Transmits information from environment to the brain

The Skin (2 of 2)

Endocrine System
- Complex message and control system
- Made up of ____________________ glands
- Glands produce and release ____________________

The Endocrine System: Anatomy and Physiology

Endocrine Glands (1 of 2)
- Adrenal: regulates salt, sugar, and sexual function
- Ovary: regulates sexual function, characteristics, and reproduction in ____________________
- Pancreas: regulates ____________________ metabolism
- Parathyroid: regulates serum calcium

Endocrine Glands (2 of 2)
- Pituitary: regulates all other endocrine glands
- Testes: regulates sexual function, characteristics, and reproduction in men
- Thyroid: regulates ____________________

Digestive System (1 of 7)
Mouth
Salivary Glands:
- Located under the tongue
- Produces saliva (98% water)
Oral pharynx: oral and ____________________ structures
Esophagus:
- Collapsible tube about 10” long
- Connects mouth to ____________________
- Muscle contractions propel food

Digestive System (2 of 7)
Stomach:
- Located in left upper quadrant (LUQ)
- Stores food in large quantities and transfers to small intestines in regular portions

Pancreas:
- Aids in digestion of fat, starch, and proteins
- Produces about 2 liters of pancreatic juices per day
- Produces ______________________

Liver:
- Largest ______________________ organ of the body
- Poisonous substances produced by digestion are rendered harmless
- Storage of sugar and starch
- Produces factors necessary for blood clotting and for producing ______________________
- Solid organ very rich in blood
- Fragile and easily injured

Bile Ducts:
- Connects the liver to the intestine
- The ______________________ is an outpouching of the bile ducts and stores bile
- Major function of bile is the digestion of fat

Small Intestine:
- The major ______________________ organ of the abdomen
- Composed of the duodenum, jejunum, and ileum
- Produces enzymes and mucus to aid in digestion

Large Intestines:
- Consists of the cecum, colon, and rectum
- The major function of the colon is to absorb the final 5-10% of digested food and water from the intestine to produce solid waste
Appendix:
- 3 to 4” long that opens into the cecum in the lower quadrant (RLQ) of the abdomen
- Easily obstructed, inflamed and infected
- Major cause of abdominal distress
- No known function

49  Digestive System  (7 of 7)
Rectum:
- Lowermost end of the colon
- Stores feces until it is expelled
- Contains sphincters to control the escape of waste products

50  Urinary System