

Quineigamond Community College

First Responder – On Line

Linda J. Gosselin M.S., REMT IC, Ed.

Chapter 4

The Human Body: Anatomy and Function of Body Systems

Topographic Anatomy 1 of 2

- **Anterior:** Front.
- **Posterior:** Back.
- **Midline:** Vertical line separating body into right and left halves.
- **Medial:** Closer to midline.
- **Lateral:** Away from midline.

Topographic Anatomy 2 of 2

- **Proximal:** Close to trunk.
- **Distal:** Away from trunk.
- **Superior:** Closer to head.
- **Inferior:** Closer to feet.

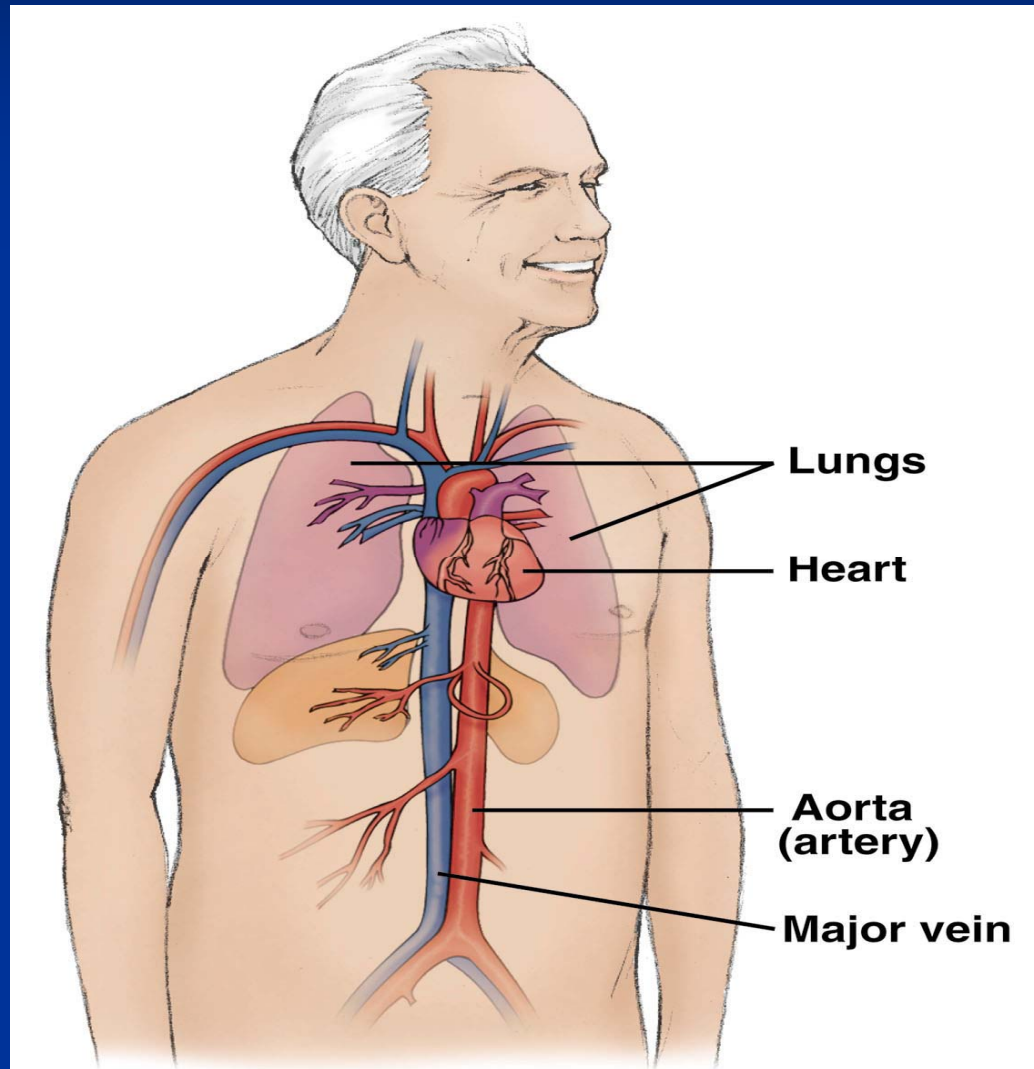
The Respiratory System

- Consists of the structures within body contributing to normal breathing.
- Brings oxygen into body and removes carbon dioxide.
- Breathing is controlled by the diaphragm, a muscle at the bottom of the chest cavity.

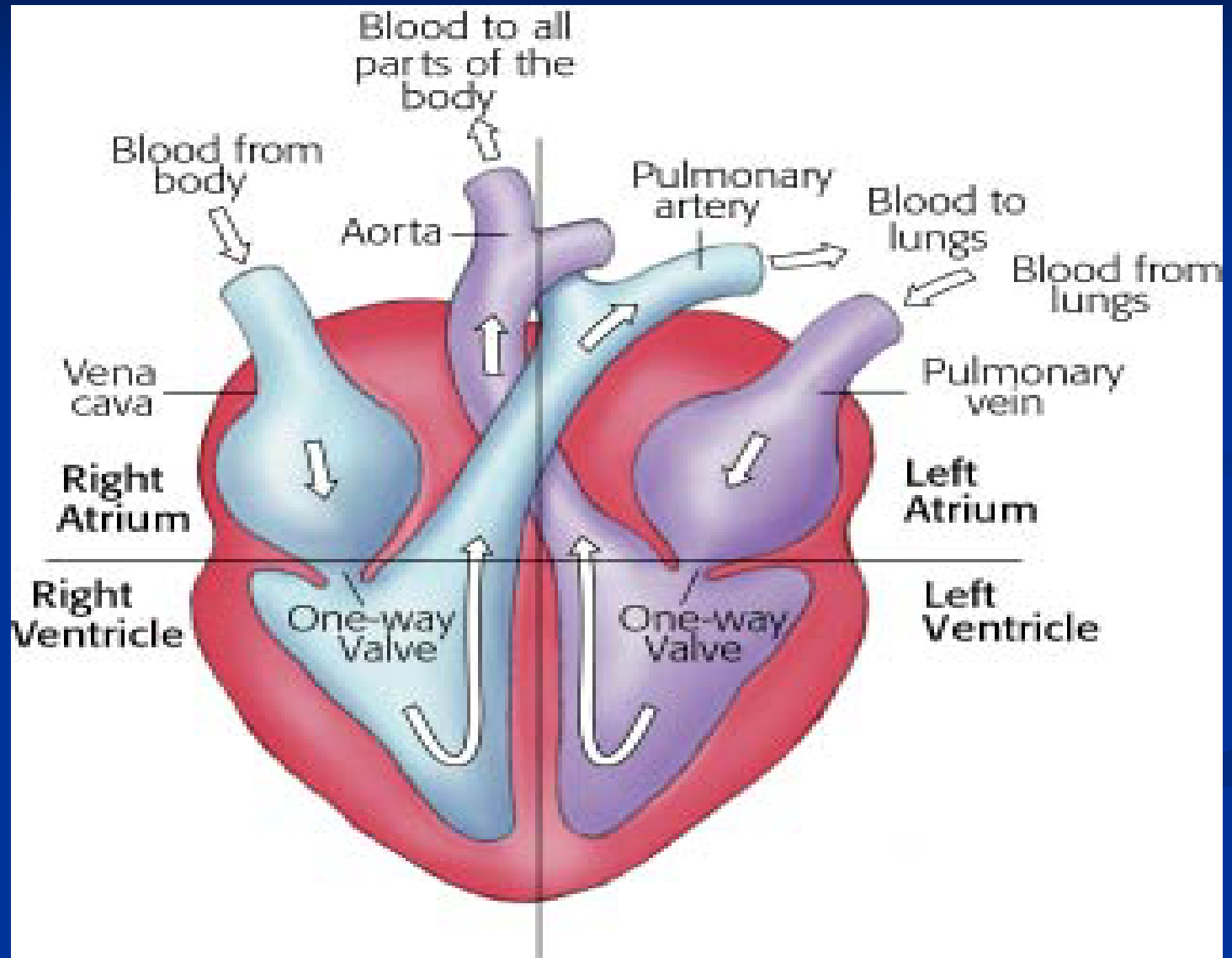
The Circulatory System (1 of 2)

- Consists of a pump, network of pipes, and fluid (heart, vessels, and blood).
- Blood picks up oxygen in lungs and then is pumped to the body by the heart.
- Waste products from cells are carried back to lungs.
- In lungs, waste products are removed and more oxygen is picked up.

The Circulatory System (2 of 2)



The Heart



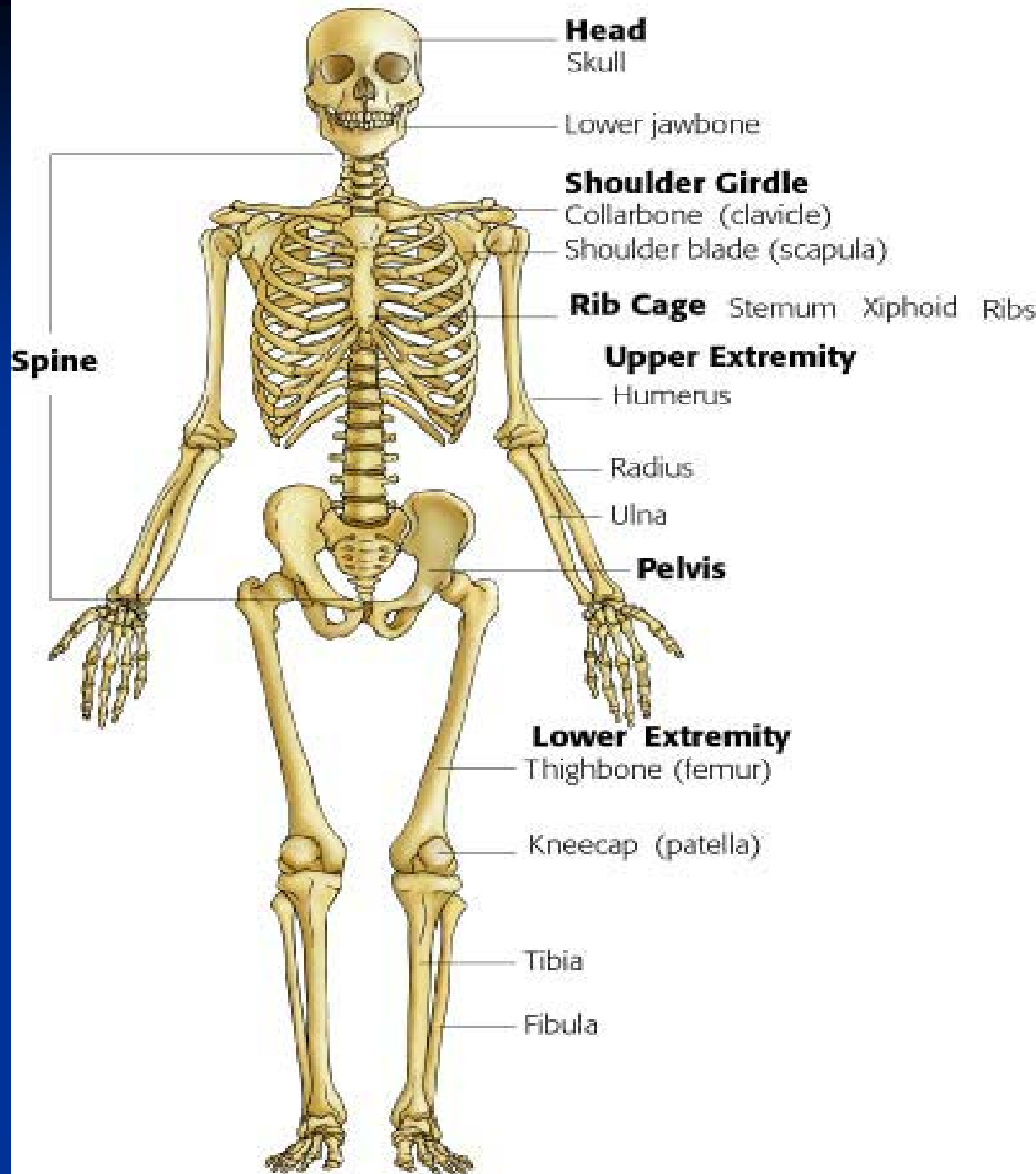
Blood

- Blood has several components:
 - Red blood cells carry oxygen.
 - White blood cells are “infection fighters.”
 - Platelets start blood clotting process.

The Skeletal System (1 of 2)

- Three functions of skeletal system:
 - Support body.
 - Protect vital structures.
 - Manufacture red blood cells.

The Skeletal System (2 of 2)



The Five Sections of the Spine

- **Cervical:** Neck
- **Thoracic:** Upper back
- **Lumbar:** Lower back
- **Sacrum:** Base of spine
- **Coccyx:** Tailbone

The Muscular System

- **Skeletal muscles:** provide movement, support
- **Smooth muscles:** carry out automatic functions
- **Cardiac muscle:** found only in the heart

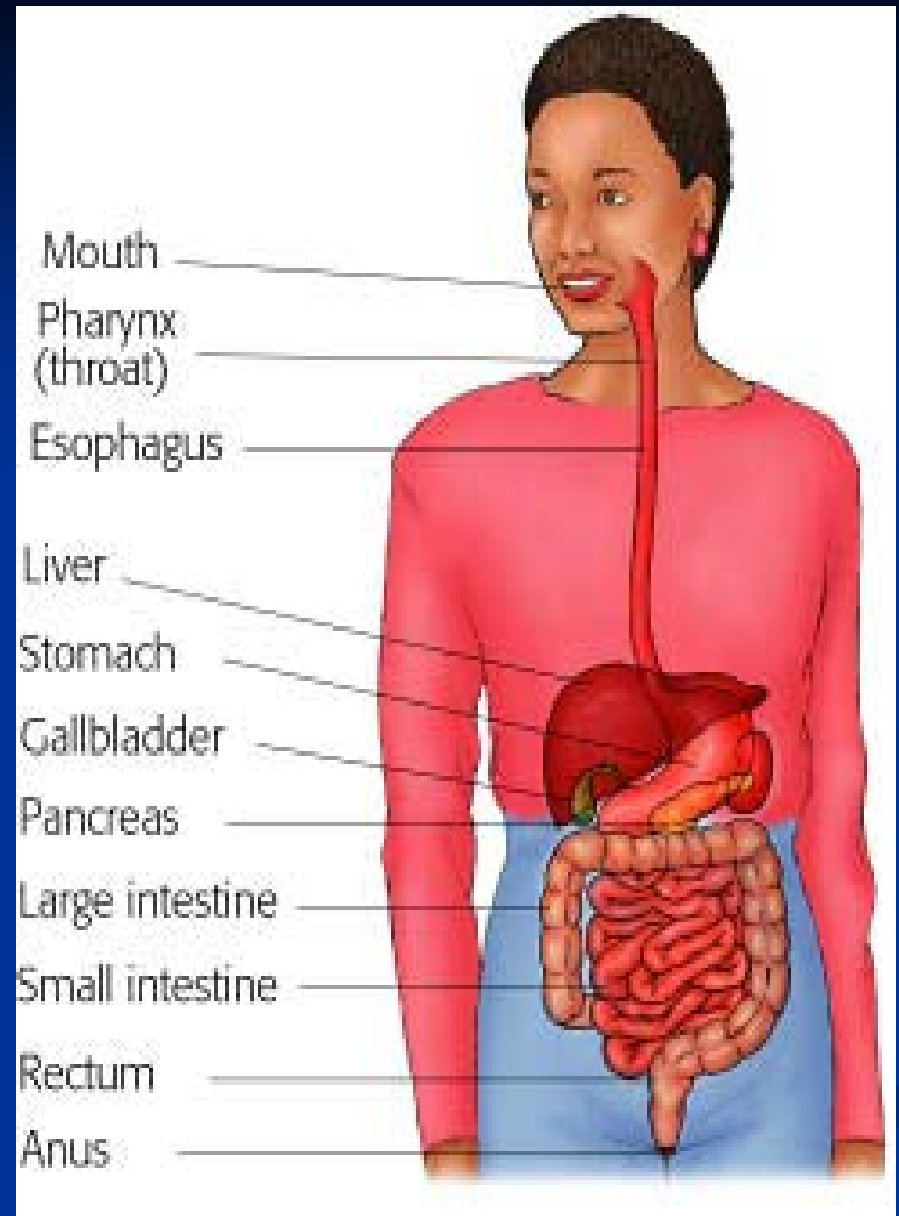
The Nervous System

- Consists of brain, spinal cord, and individual nerves.
- The brain controls all bodily functions.
- Spinal cord is communication system between brain and body.
- Nerves branch out from spinal cord to every part of the body.

The Digestive System (1 of 2)

- Digestive tract is about 35 feet long from mouth to anus.
- Digestive tract breaks down food, then carries it to cells of the body.
- Bile and insulin are very important in digestion of fats and sugars.

The Digestive System (2 of 2)



The Genitourinary System

- Responsible for body's reproductive functions and removal of waste products from bloodstream.

The Skin

- Skin covers entire body and has three functions:
 - Protection
 - Temperature regulation
 - Receiving information from outside

The Skin

