

# Introduction to Human Anatomy



**Dr. G. MATHAN, Ph.D.,**  
**ASSIATANT PROFESSOR**  
**DEPARTMENT OF BIO MEDICAL SCIENCE**  
**BHARATHIDASAN UNIVERSITY**  
**INDIA**

# CLASSIFICATION OF HUMANS

## Classification Scheme

- ☐ Kingdom: **Animalia**
- ☐ Phylum: **Chordata**
- ☐ Subphylum: **Vertebrata**
- ☐ Class: **Mammalia**
- ☐ Order: **Primate**
- ☐ Family: **Hominidae**
- ☐ Genus: **Homo**
- ☐ Species: **Sapiens**

- Anatomical terminology from ancient Greek and Latin.

## Branches of anatomy:

Gross anatomy (or) Morphological  
Microscopic anatomy  
Developmental anatomy  
    Embryology- Development of  
    organ & tissue before birth  
Applied Anatomy  
Comparative Anatomy

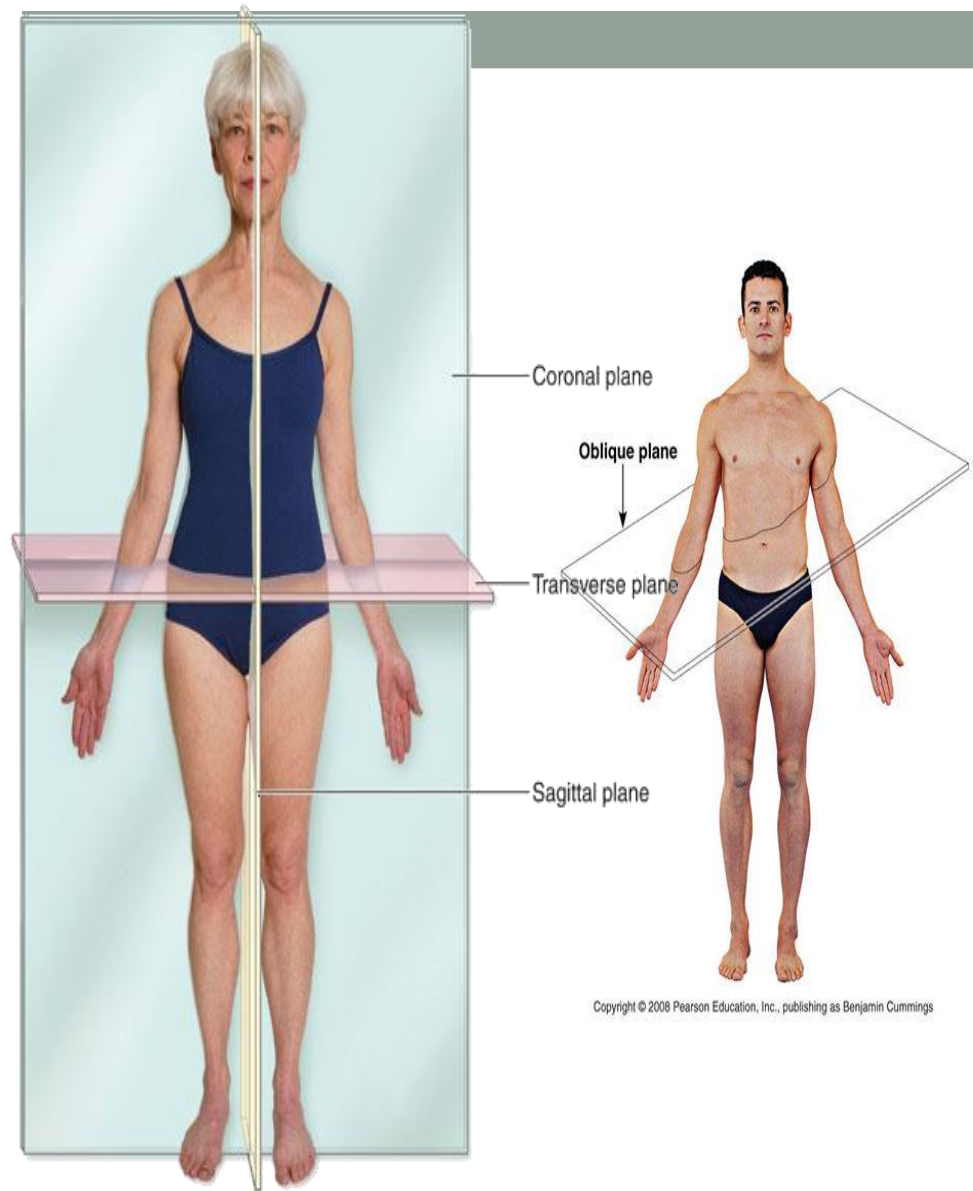
## Simplest to most complex

- **Chemical-Cellular-Tissue – Organ – Organ system – Organism**

# Anatomical Terminology & Body Plans

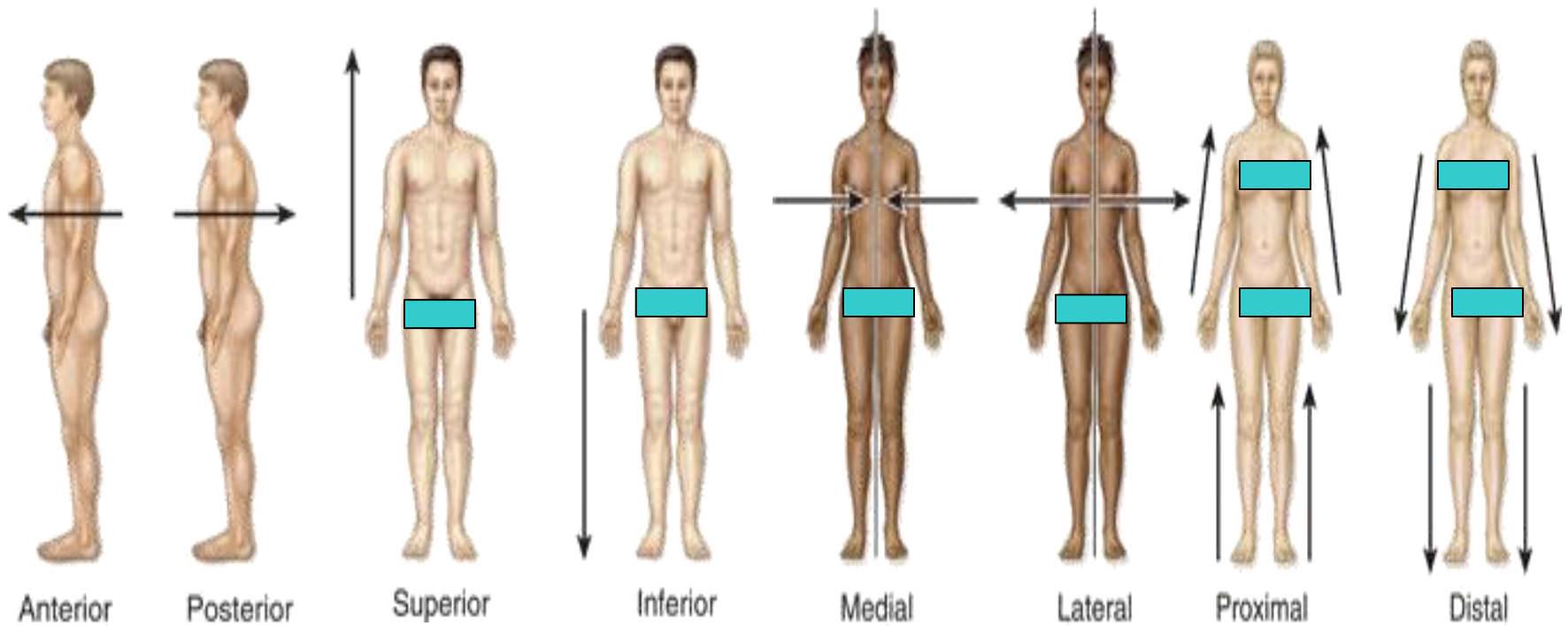
- ❖ **Anatomic position** is a specific body position in which an individual stands **upright** with the **feet parallel** and **flat** on the floor.
- ❖ The head is **level**, and the **eyes look forward** toward the observer.
- ❖ The **arms are at either side** of the body with the **palms facing forward** and the **thumbs pointing away** from the body.

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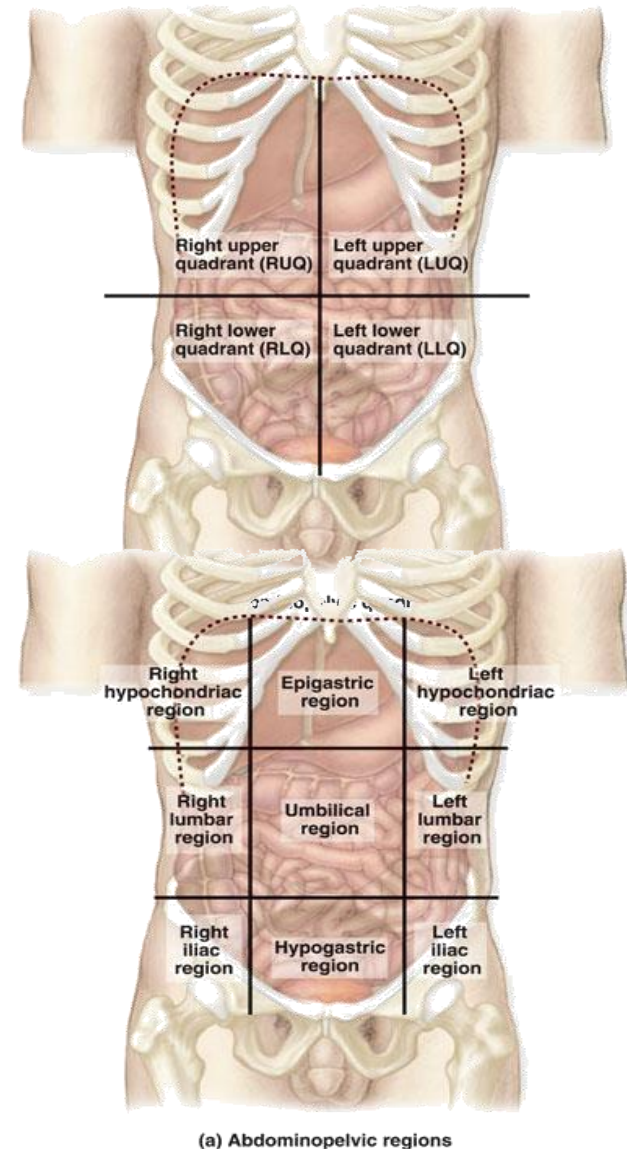
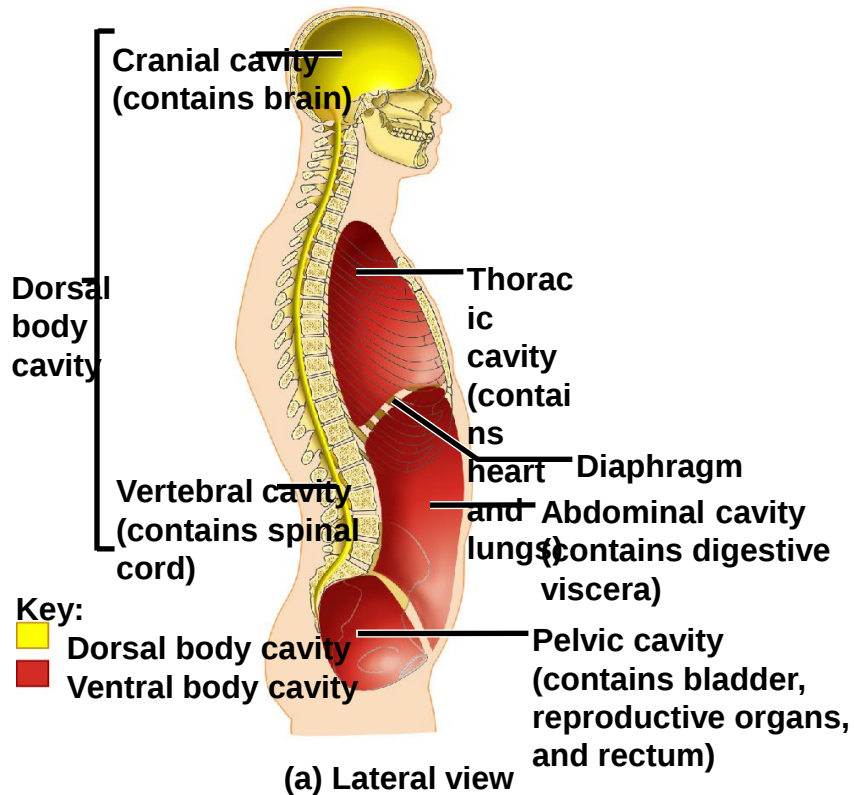


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## Directional Terms of the Body



# Body Cavities & Abdominal Division

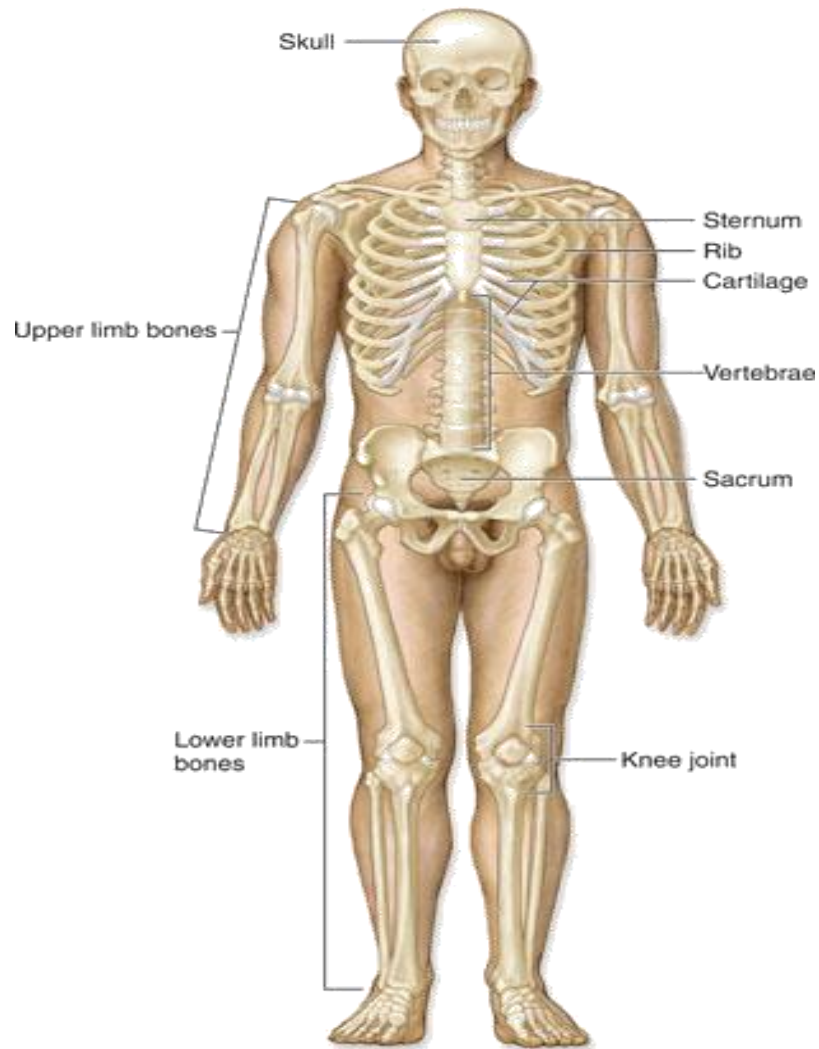




## Human Organ systems

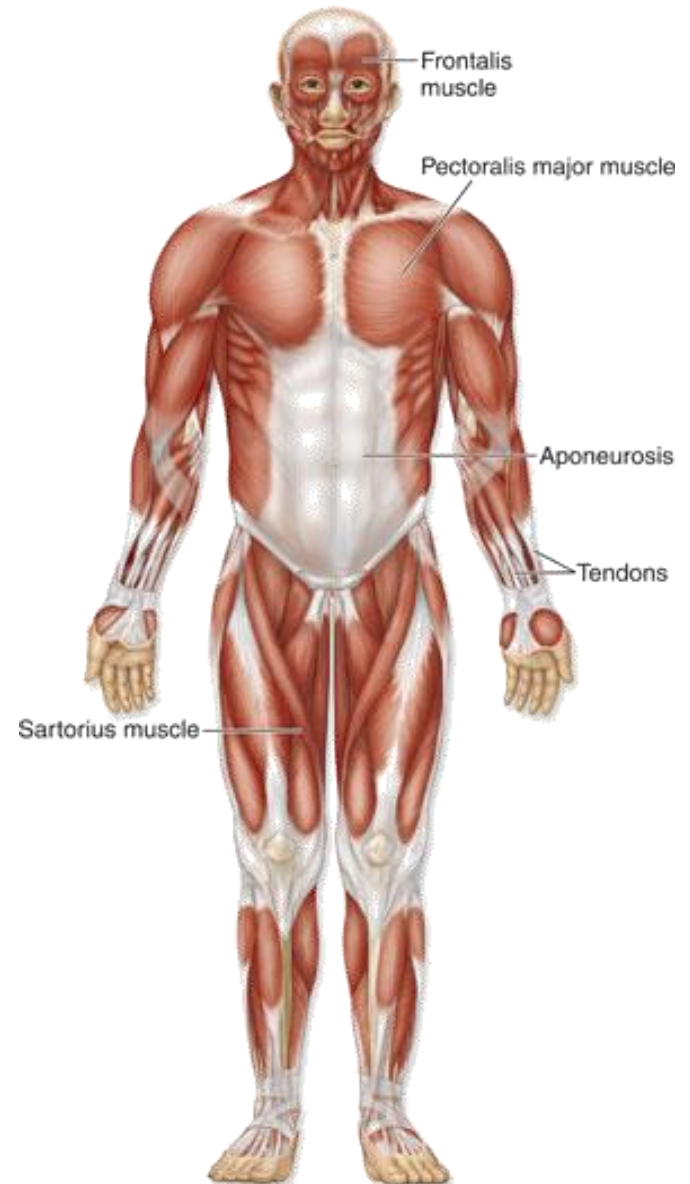
- Skeletal
- Muscular
- Nervous
- Endocrine
- Cardiovascular
- Lymphatic/immune
- Respiratory
- Digestive
- Urinary
- Reproductive

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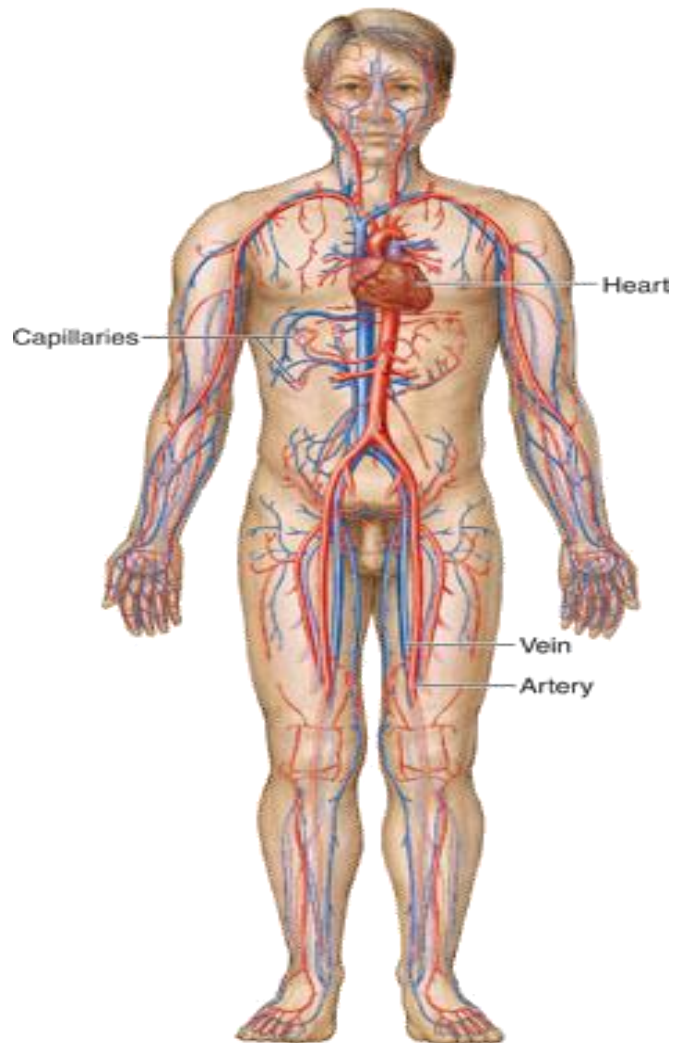
**Skeletal System** (Chapters 6–9)

Provides support and protection, site of hemopoiesis (blood cell production), stores calcium and phosphorus, allows for body movement.



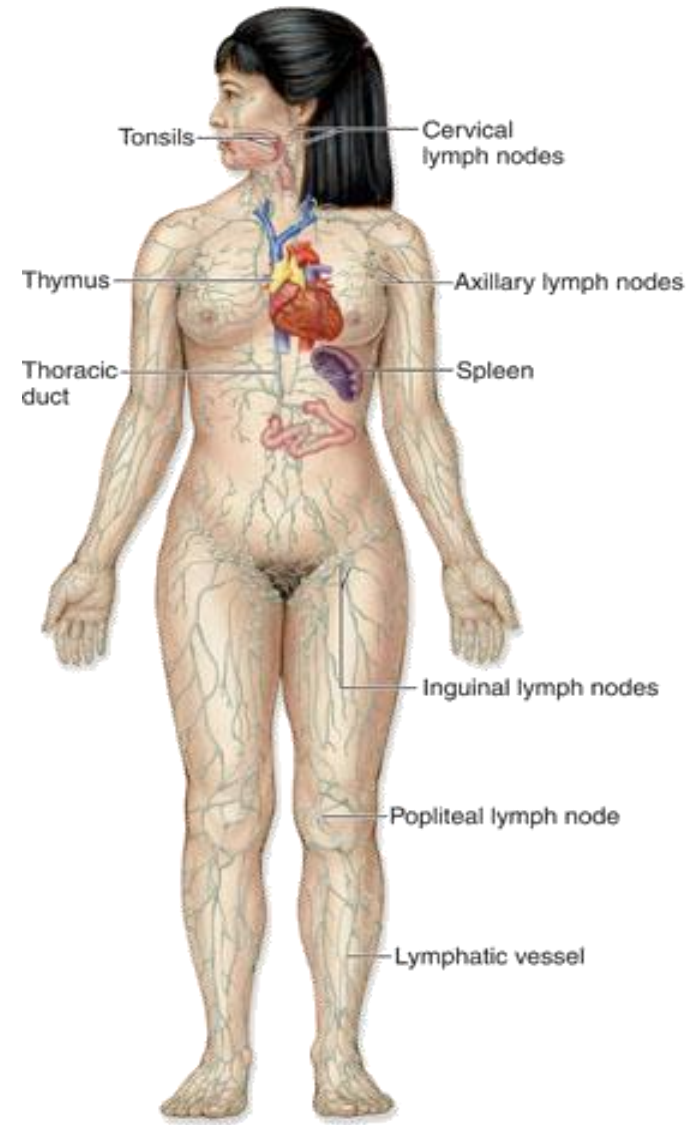
**Muscular System** (Chapters 10–12)

Produces body movement, generates heat when muscles contract.



### Cardiovascular System (Chapters 21–23)

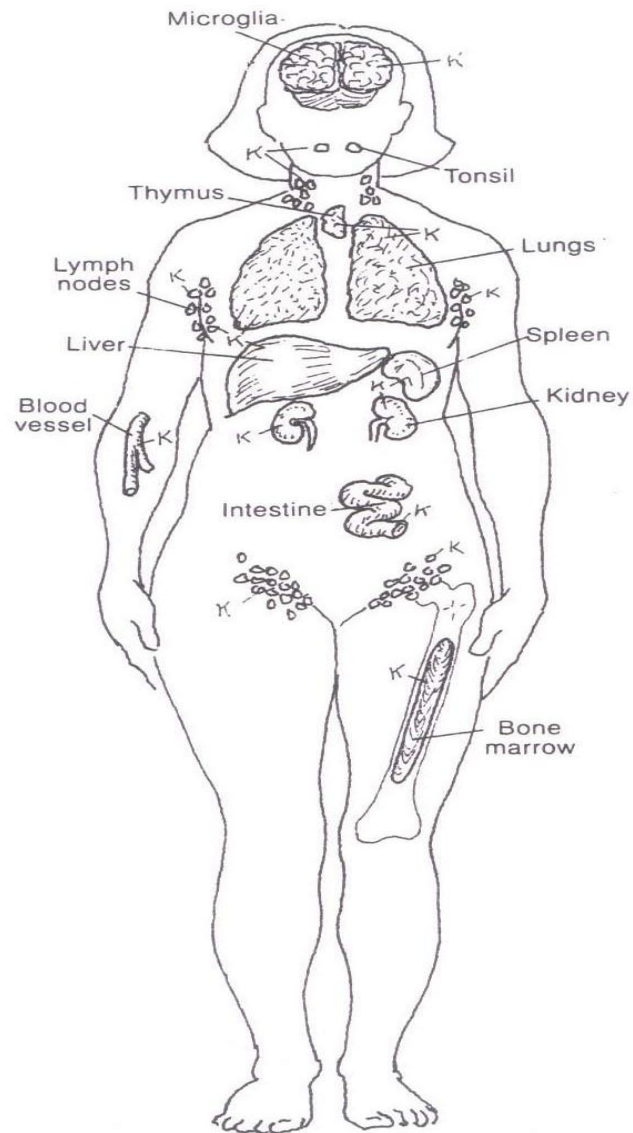
Consists of a pump (the heart) that moves blood through blood vessels in order to distribute hormones, nutrients, and gases, and pick up waste products.



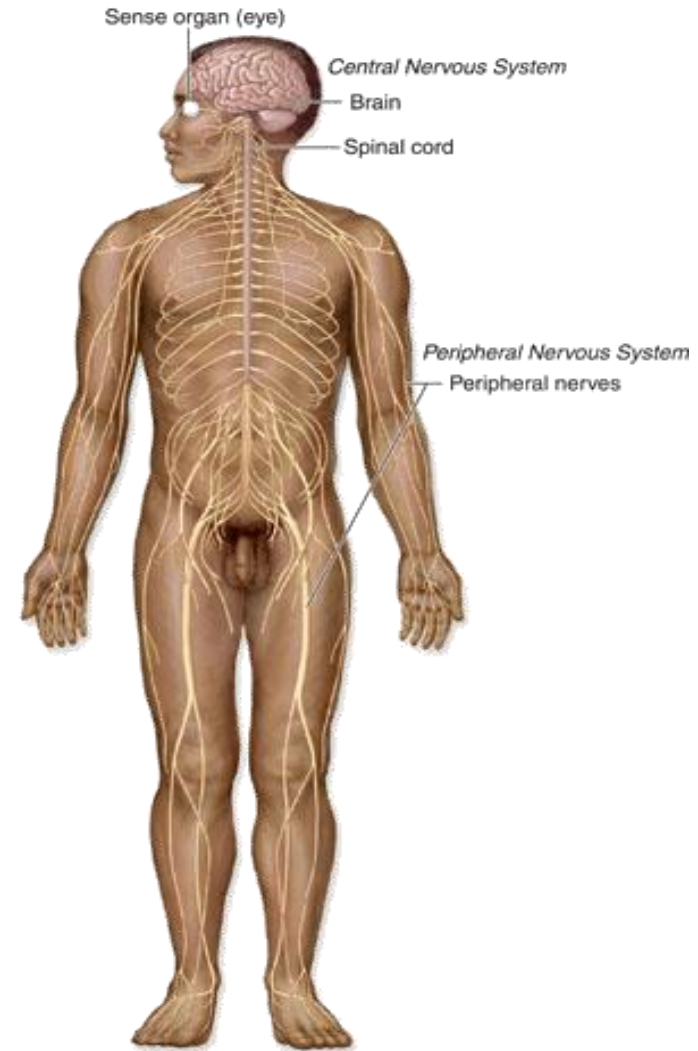
### Lymphatic System (Chapter 24)

Transports and filters lymph (interstitial fluid) and initiates an immune response when necessary.

# Immune System

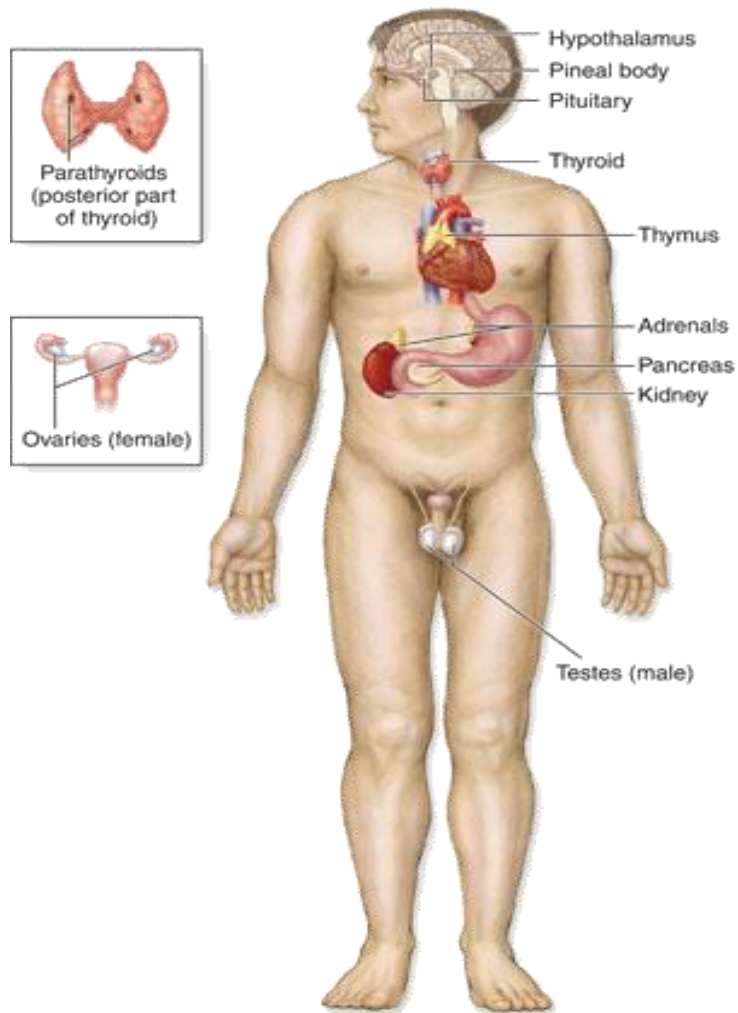


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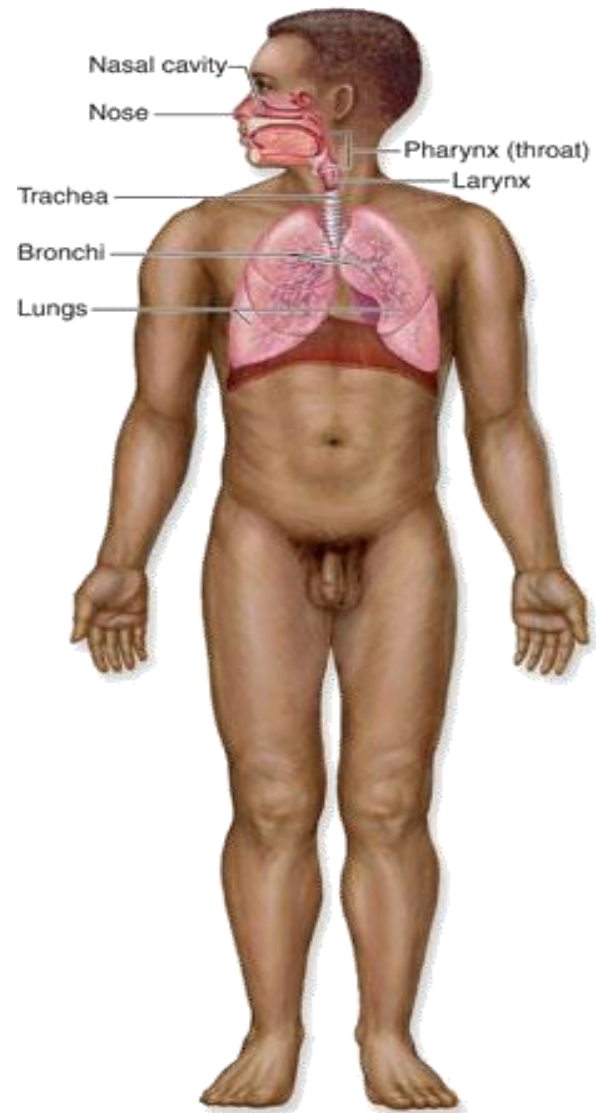
## **Nervous System** (Chapters 14–19)

A regulatory system that controls body movement, responds to sensory stimuli, and helps control all other systems of the body. Also responsible for consciousness, intelligence, memory.



#### **Endocrine System (Chapter 20)**

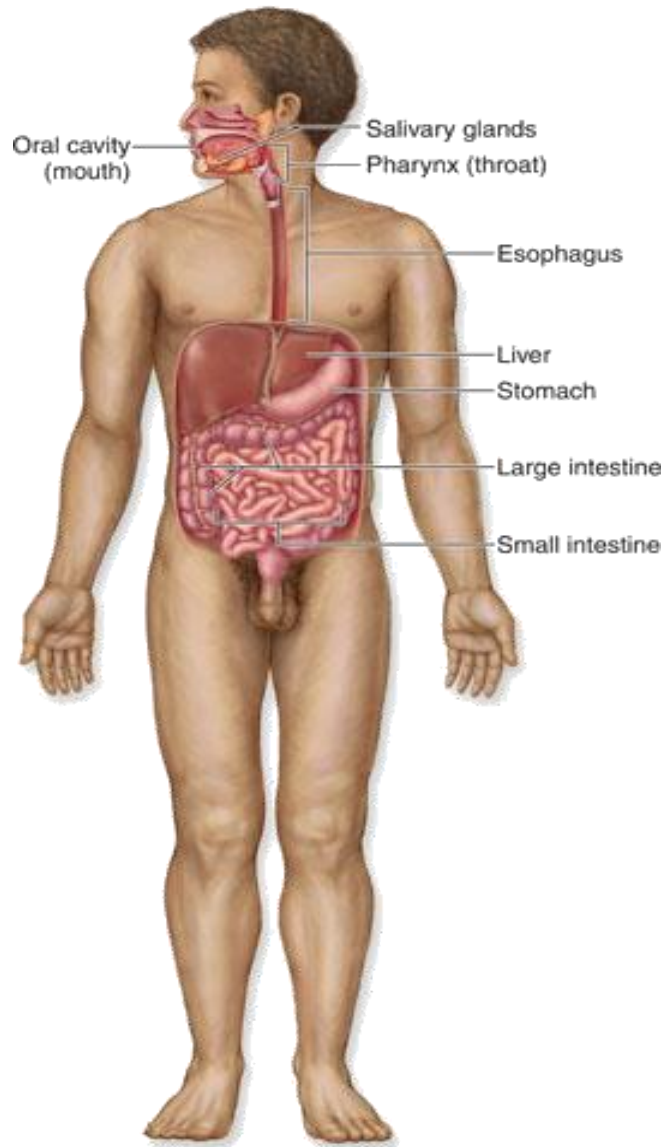
Consists of glands and cell clusters that secrete hormones, some of which regulate body and cellular growth, chemical levels in the body, and reproductive functions.



#### **Respiratory System (Chapter 25)**

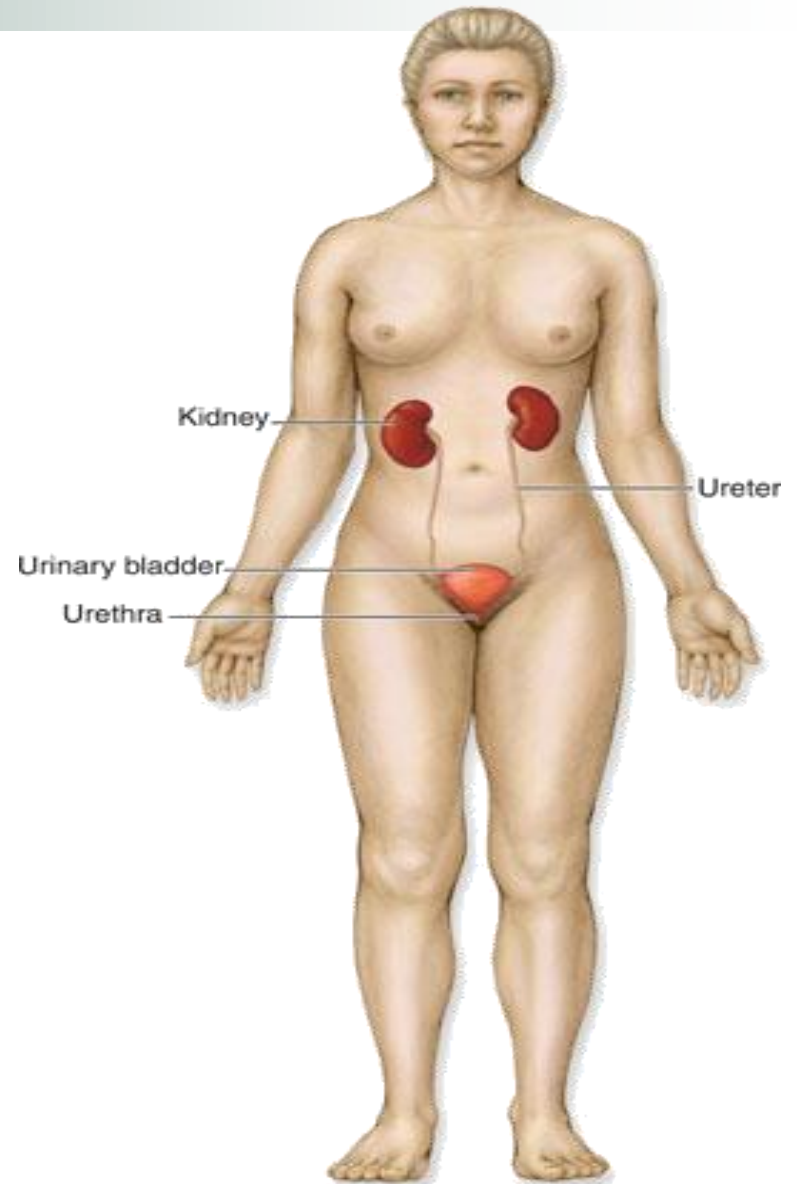
Responsible for exchange of gases (oxygen and carbon dioxide) between blood and the air in the lungs.

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#### **Digestive System** (Chapter 26)

Mechanically and chemically digests food materials, absorbs nutrients, and expels waste products.

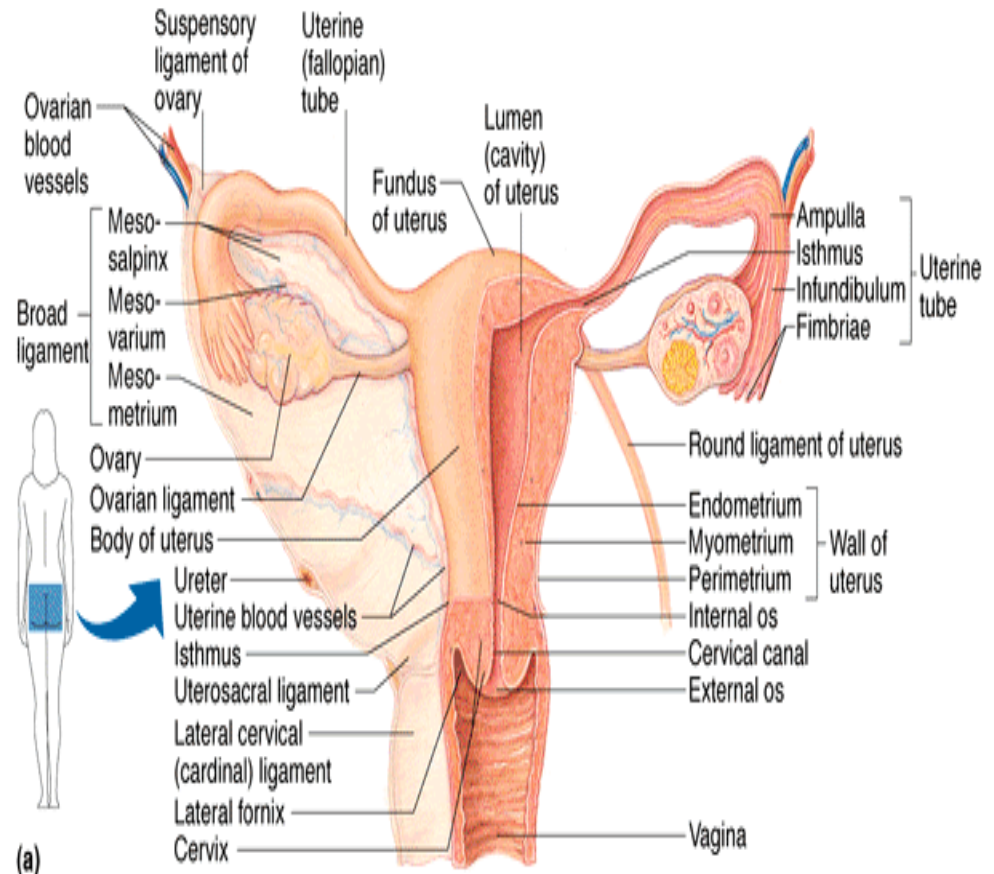
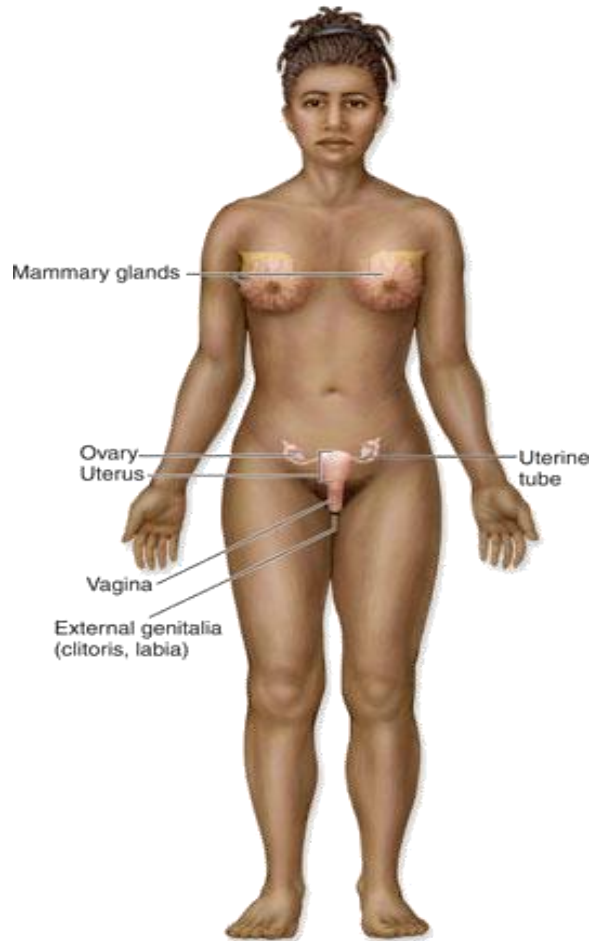


#### **Urinary System** (Chapter 27)

Filters the blood and removes waste products from the blood, concentrates waste products in the form of urine, and expels urine from the body.

# Reproductive System

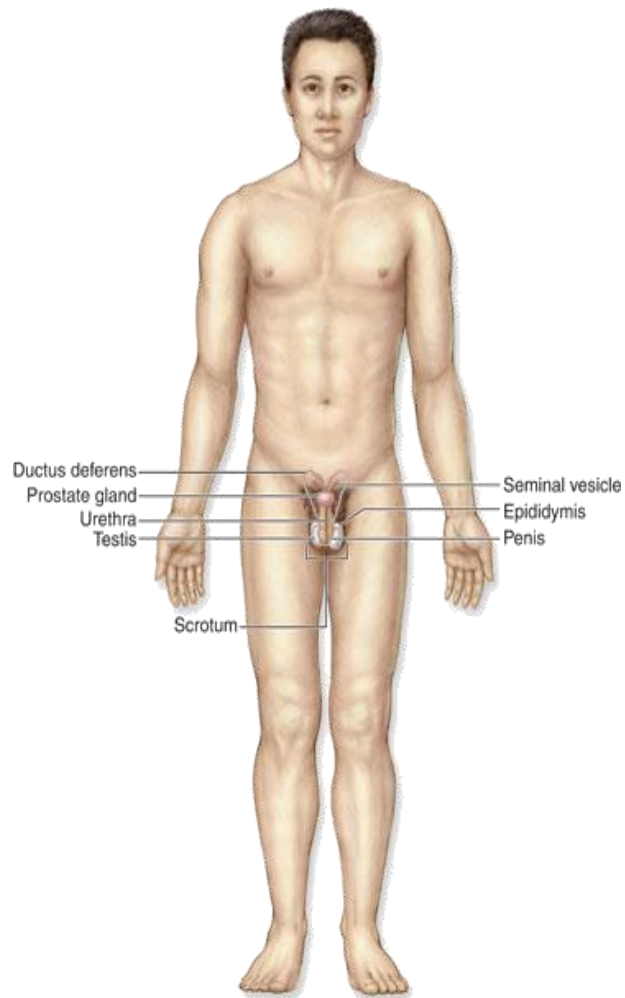
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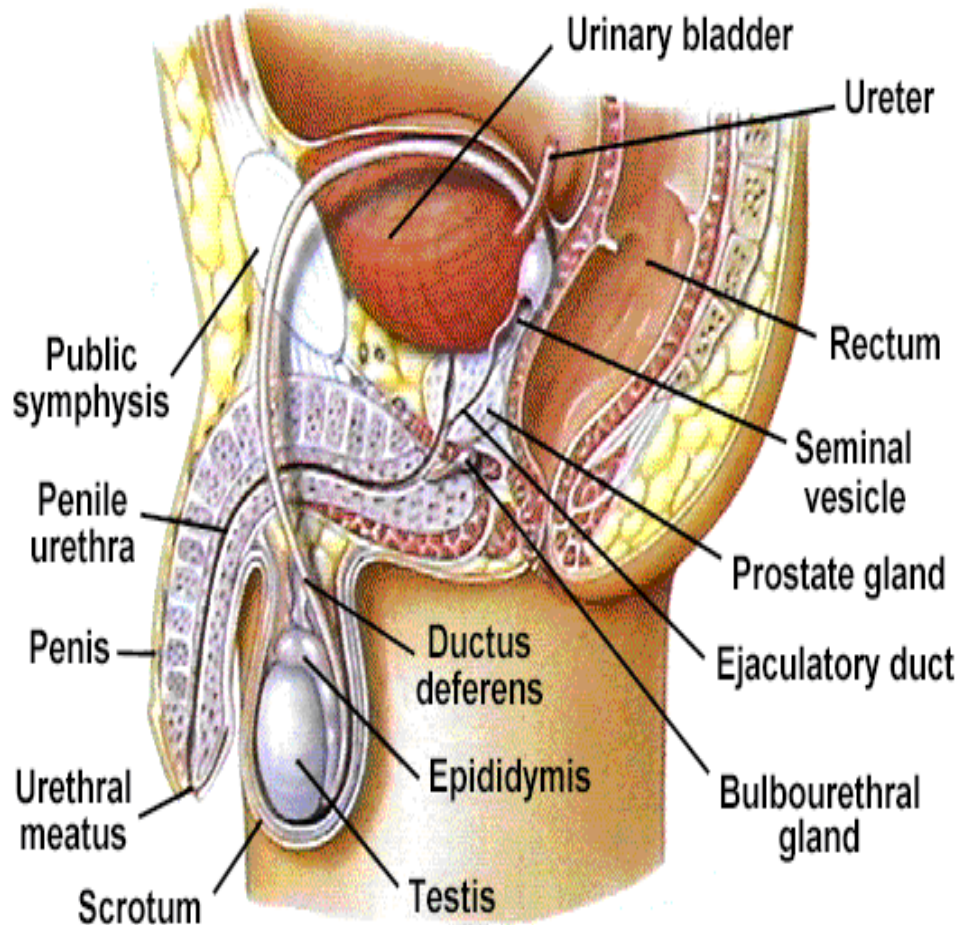
## Female Reproductive System (Chapter 28)

Produces female sex cells (oocytes) and female hormones (e.g., estrogen and progesterone), receives sperm from male, site of fertilization of oocyte, site of growth and development of embryo and fetus.



**Male Reproductive System** (Chapter 28)

Produces male sex cells (sperm) and male hormones (e.g., testosterone), transfers sperm to the female.





# Reference

- Text Book of Anatomy- Inderbir Singh,

Jaypee Brothers Medicinal Publishers (P) Ltd, Delhi.110 002

- Anatomy and Physiology for Nurses

Jaypee Brothers Medicinal Publishers (P) Ltd, Delhi.110 002



## **Acknowledgement**

- ❖ The Presentation is being used for educational and non commercial purpose
- ❖ Thanks are due to all those original contributors and entities whose pictures used for making this presentation.