

# Al-Mustaqbal University

- College of Sciences Intelligent Medical Systems Department
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  - قسم علوم الأنظمة الطبية الذكية
  - LECTURE: (2)
  - Subject: Anatomical terminology
    - Level: first
- Lecturer: MSc. Amna shaker shahad

A circular wreath of various botanical illustrations surrounds a central white circle. The illustrations include green fern fronds, a red maple leaf, a green heart-shaped leaf, a branch with small pink flowers, a large green leaf, a red leaf, and purple flowers.

# Anatomical terminology used in the lab.

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Second lecture



# Topics

Introduction

Types of Anatomy

Anatomical Terminology

Systems of the body



# Introduction

**Anatomy:** is the study of the structure of the body. Often, you may be more interested in functions of the body. Functions include digestion, respiration, circulation, and reproduction.

**Physiology:** is the study of the functions of the body.





# TYPES OF ANATOMY

**Human anatomy** is primarily the scientific study of the morphology of the adult human body.

It is subdivided into

1- Gross anatomy

2- Microscopic anatomy.





# TYPES OF ANATOMY

**Gross anatomy :** is the study of anatomical structures that can be seen by unaided vision.

**Microscopic anatomy :** is the study of minute anatomical structures assisted with microscopes, which includes histology, and cytology (the study of cells).





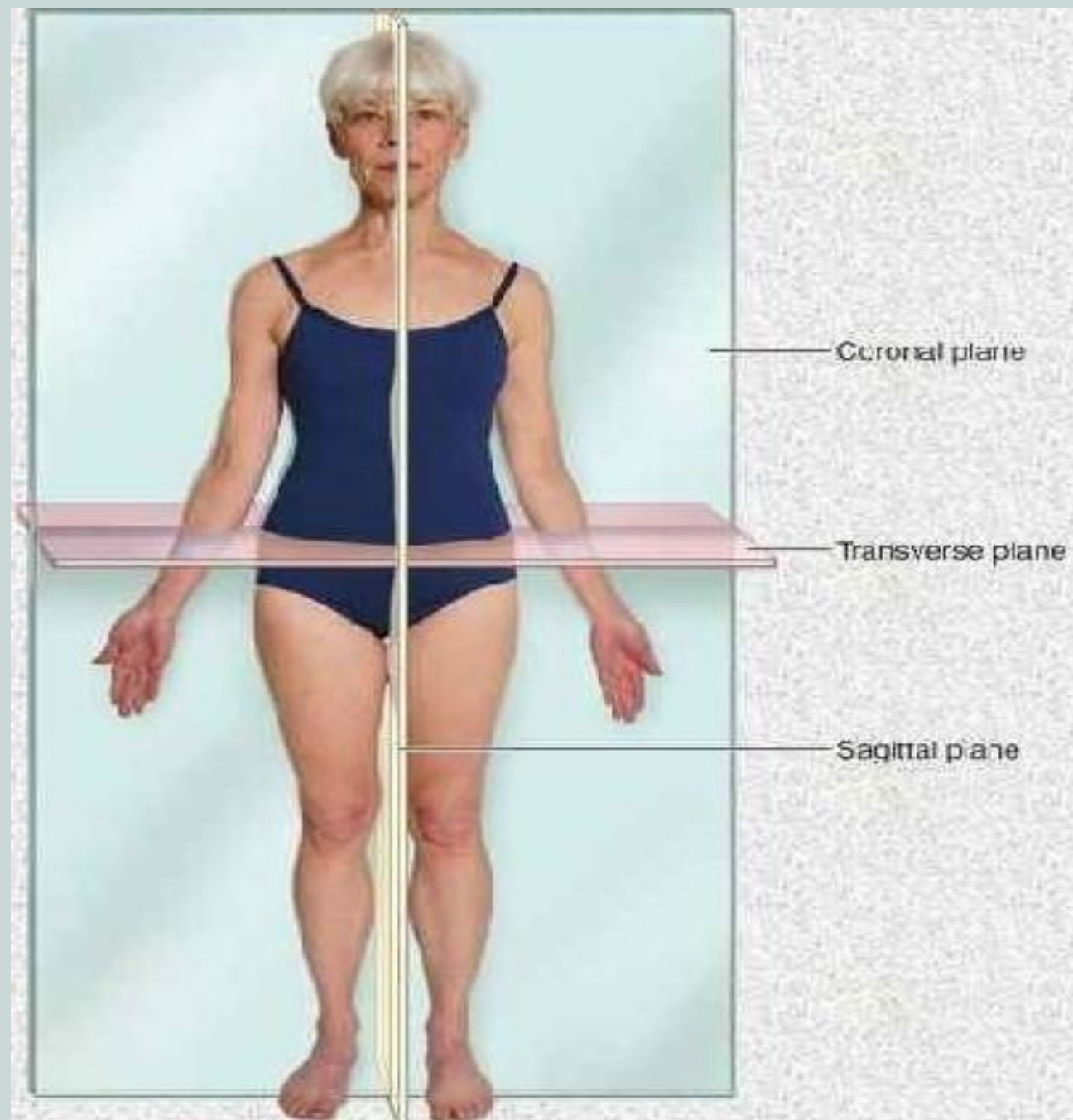
# Anatomical Terminology

**Anatomic position** :is a specific body position in which an individual stands upright with the feet parallel and flat on the floor.

**A plane** : is an imaginary surface that slices the body into specific sections. **The three major anatomic planes of reference are the coronal, transverse, and sagittal planes.**











# Relative and Directional Terms of the Body

Relative to front (belly side) or back (back side) of the body :

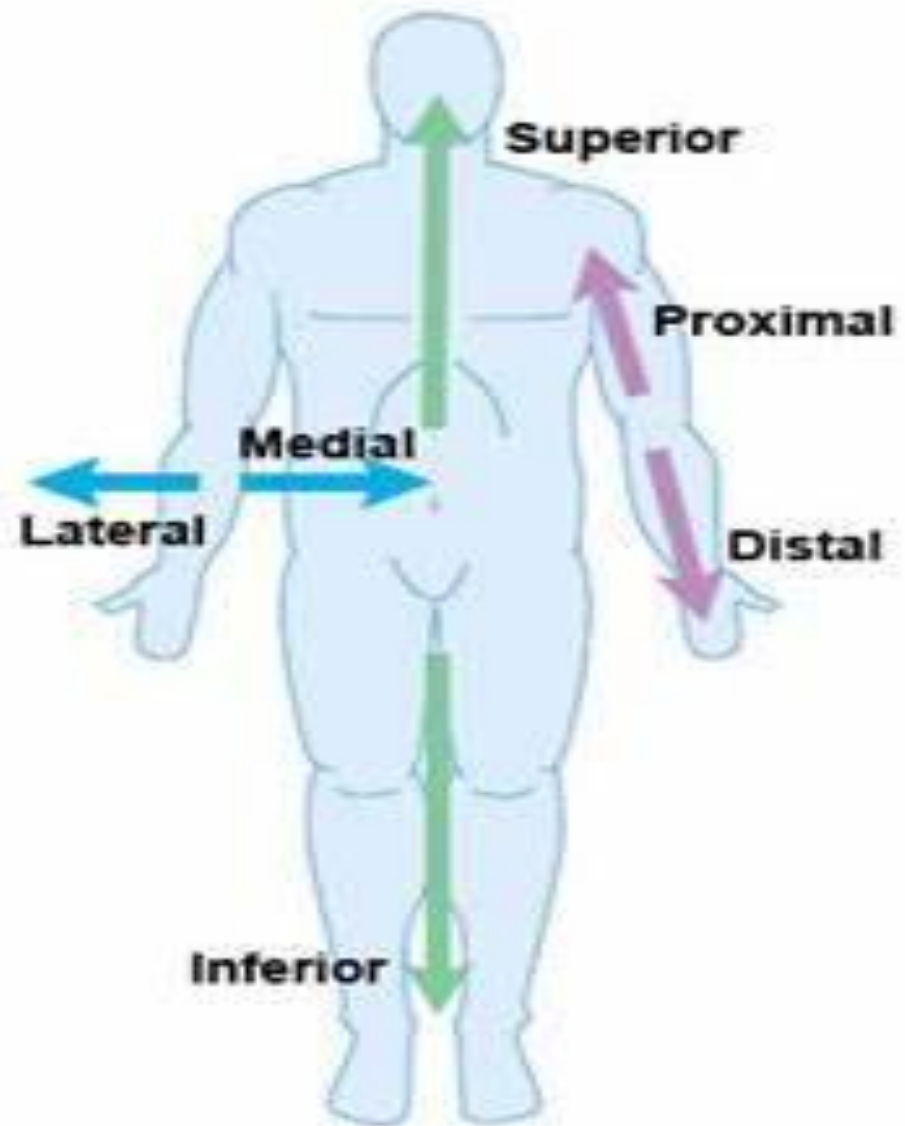
Anterior = In front of toward the front surface

Posterior = In back of; toward the back surface

Dorsal = At the back side of the human body

Ventral = At the belly side of the human body







# Directional Terms of the Body Relative to the head

Superior = Toward the head or above

Inferior = Toward feet not head



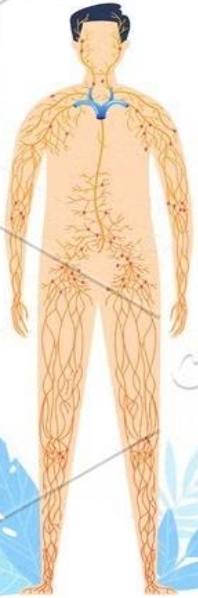


# Systems in The Body

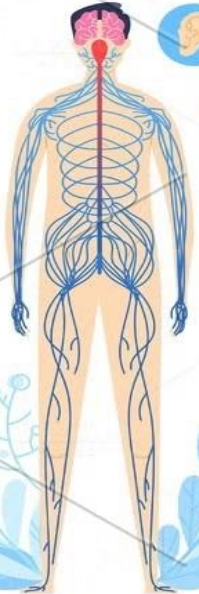
1 .Integumentary 2. Skeletal 3. Muscular 4.  
Nervous 5. Digestive 6. Respiratory 7.  
Cardiovascular 8. Endocrine 9. Lymphatic 10.  
Urinary 11. Reproduction



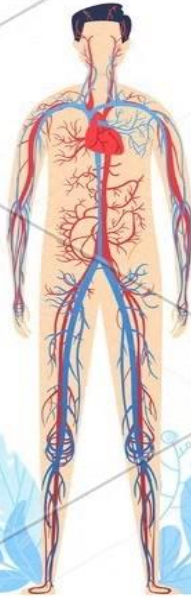




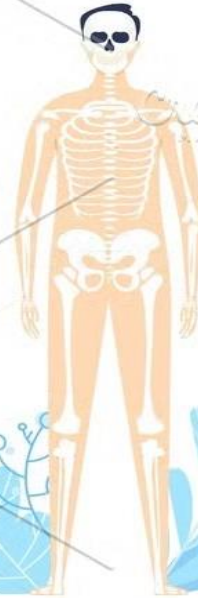
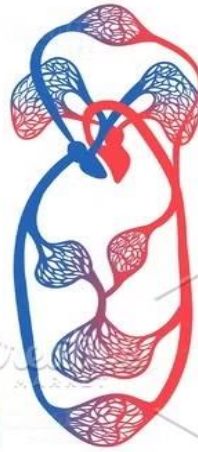
**LYMPHATIC SYSTEM**



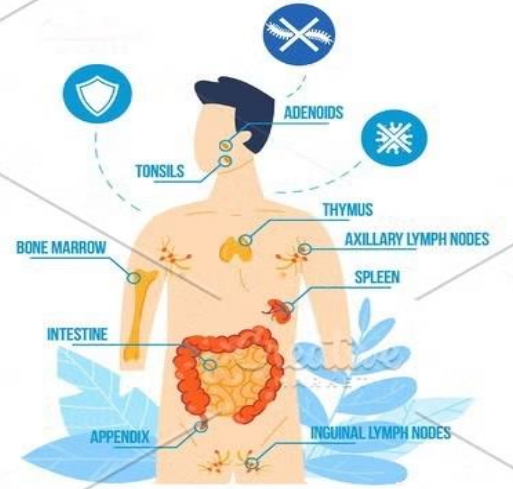
**NERVOUS SYSTEM**



**CIRCULATORY SYSTEM**



**SKELETAL SYSTEM**



**IMMUNE SYSTEM**



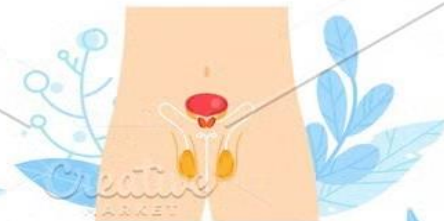
**URINARY SYSTEM**



**DIGESTIVE SYSTEM**

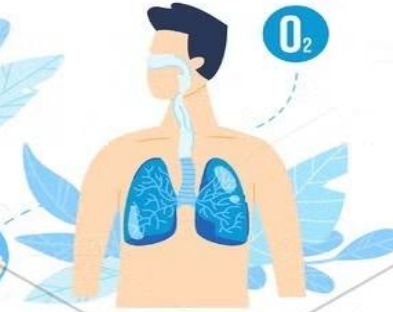


**FEMALE**

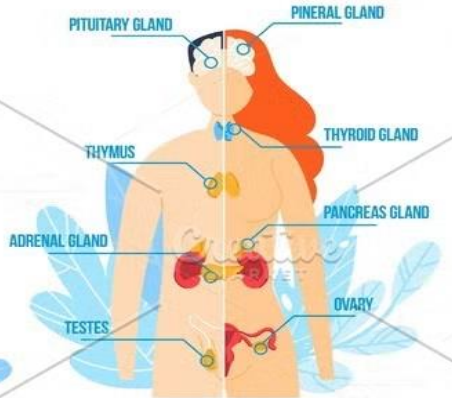


**MALE**

**REPRODUCTIVE SYSTEM**



**RESPIRATORY SYSTEM**



**ENDOCRINE SYSTEM**



**Integumentary System** :Components Skin ,Hair, nails.

Function External covering Protection Synthesis of Vitamin D  
Location of Sense receptors

**Skeletal System** : Components Bones , Joints and adjacent cartilages .

Function :Support Protection Movement ,Blood cell production (red bone marrow), Mineral storage (calcium and phosphorus)







## Muscular System

Components : Skeletal Muscles , tendons

Function : Locomotion , Manipulation of the environment  
, Facial expression (communication)

## Circulatory System

Components : Cardiovascular System ,Lymphatic System

Function : Transportation of materials , Within the body  
To and from internal and external environments





## Cardiovascular System

Components : Heart ,Vessels

Function : Transportation of blood ,Blood contains  $O_2$  and  $CO_2$ , nutrients, wastes,

## Lymphatic System

Components , Lymphatic Organs (spleen, lymph nodes, thymus, etc. ) , Lymphatic Vessels .

Function : Transportation of lymph , Lymph is derived from tissue fluid “ Houses white blood cells’





## Immune System

Components : White blood cells (lymphocytes, macrophages, etc. )

Function : Defense (Immune response)

## Nervous System

Components: Brain, Spinal cord , Nerves ,sense receptors Nervous System

Function : Control system ,Response to external and internal environment





## Endocrine System

Components : Glands that secrete hormones E. g. : pancreas, thyroid

Function: Regulates processes such as growth, reproduction

## Respiratory System

Components :Lungs , Tubing ( trachea, bronchus, etc. ) , Larynx

Function Exchange of respiratory gases ( $O_2$  and  $CO_2$ ) Between blood and atmosphere , Voice production





## Digestive System

Components (mouth, pharynx, esophagus, stomach, small intestine, large intestine) , Accessory structures (liver, salivary glands)

Function: Break down food into small and absorbed, Eliminate waste

## Urinary System

Components :Kidneys, Ureters, Urinary bladder, Urethra

Function: Eliminate waste (nitrogen) from blood , Regulates water,





## Reproductive System

Components :Male Reproductive System , Female  
Reproductive System

Function :reproduction







Thank you

