



المرحلة الثانية 2023-2024

Medical Terminology



Lecture : 6th Medical terminology terms concerning the body as a whole

- **Dr. Ali Hussein Al-Nasrawi**
- **Otorhinolaryngologist specialist**

Introduction

- The body as a whole is a complex system made up of many different parts and organs.
- Medical terminology terms concerning the body as a whole are used to describe the structure and

function of the body as a whole,

as well as the interactions between the different parts and organs of the body.

Examples of medical terminology terms concerning the body as a whole

- Anatomy: the study of the **structure** of the body
- Physiology: the study of the **function** of the body
- Pathology: the study of **disease** and injury
- Homeostasis: the **maintenance** of a stable internal environment within the body
- Metabolism: the **chemical processes** that occur within the body to produce energy and build and repair tissues

Anatomy of the body as a whole

- The body is divided into two main parts: the head and neck and the trunk.
- The **head and neck contain** :
the brain, spinal cord, and most of the sensory organs.
- **The trunk contains the thoracic cavity, which contains**
the heart and lungs,
- the **abdominal cavity**, which contains
the digestive organs,
- and **the pelvic cavity**, which contains the
reproductive organs and urinary bladder.

Important and recurrent medical terms in anatomy

- **Anterior:** Front of the body
- **Posterior:** Back of the body
- **Superior:** Above
- **Inferior:** Below
- **Medial:** Towards the midline of the body
- **Lateral:** Away from the midline of the body
- **Proximal:** Closer to the center of the body
- **Distal:** Further from the center of the body
- **Superficial:** Towards the surface of the body
- **Deep:** Away from the surface of the body
- **Visceral:** Relating to the internal organs of the body
- **Parietal:** Relating to the walls of the body cavities

Physiology of the body as a whole

- The body's many different parts and organs work together to maintain
- homeostasis, the maintenance of a stable internal environment.
- For example, the heart works to **circulate** blood throughout the body,
- the lungs work to **exchange oxygen** and **carbon dioxide**,
- and the kidneys work to **filter waste products** from the blood.

Major organ systems and their components

Cardiovascular system

- Heart
- Blood vessels
- Blood

Respiratory system

- Lungs
- Airways
- Diaphragm

Digestive system

- Mouth
- Teeth
- Esophagus
- Stomach
- Small intestine
- Large intestine
- Liver
- Gallbladder
- Pancreas

Urinary system

- Kidneys
- Ureters
- Bladder
- Urethra

Nervous system

- Brain
- Spinal cord
- Nerves

Reproductive system

- Male:** Testes, scrotum, penis, prostate gland
- Female:** Ovaries, fallopian tubes, uterus, vagina, vulva

Musculoskeletal system

- Muscles
- Bones
- Joints

The most important physiological terms in physiology are:

- **Homeostasis:** The maintenance of a stable internal environment within an organism.
- **Metabolism:** The sum of all the chemical processes that occur in an organism.
- **Osmosis:** The movement of water across a semipermeable membrane, driven by a difference in water concentration.
- **Diffusion:** The movement of molecules from an area of high concentration to an area of low concentration.
- **Active transport:** The movement of molecules across a cell membrane against their concentration gradient, using energy.
- **Respiration:** The process by which cells break down glucose to produce energy.
- **Circulation:** The movement of blood through the body, driven by the heart.
- **Excretion:** The removal of waste products from the body.
- **Nervous system:** The system of cells and tissues that controls and coordinates body functions.
- **Hormonal system:** The system of glands that produce and secrete hormones, which regulate various body functions.
- **Reproduction:** The process by which organisms produce offspring.

Homeostasis of the body as a whole

A metabolism: is important because it releases the energy required for a body to function.

Homeostasis: allows the body to maintain a stable internal environment despite changes in external conditions.

- **Homeostasis** is the maintenance of a stable internal environment within the body.

The body has many different feedback mechanisms that help to maintain homeostasis.

- For example, the body has a feedback mechanism that helps to regulate body temperature. If the body
- temperature gets too high, the body will sweat to cool down.

If the body temperature gets too low, the body will shiver to generate heat.

Pathology of the body as a whole

- **Pathology** is the study of disease and injury.
- Many different diseases and injuries can affect the body as a whole.
- Some examples include
 - cancer,
 - heart disease,
 - stroke,
 - and diabetes.

Metabolism of the body as a whole

- **Metabolism** is the chemical processes that occur within the body to produce energy and build and repair tissues.
- The body's metabolism is regulated by hormones.
- **Hormones** are chemical messengers that are produced by glands and travel through the bloodstream to other parts of the body.

Other medical terminology terms concerning the body as a whole

- **System:** a group of organs that work together to perform a specific function
- **Apparatus:** a group of organs and tissues that work together to perform a specific function
- **Organ:** a group of tissues that work together to perform a specific function
- **Tissue:** a group of cells that work together to perform a specific function
- **Cell:** the basic unit of structure and function in all living things

Examples of systems and apparatuses of the body as a whole

• **Systems:**

- Cardiovascular system
- Digestive system
- Endocrine system
- Immune system
- Muscular system
- Nervous system
- Respiratory system
- Reproductive system
- Urinary system

Examples of organs and tissues of the body as a whole

. **Organs:**

- Brain
- Heart
- Lungs
- Liver
- Stomach
- Kidneys
- Pancreas
- Skin

. **Tissues:**

- Epithelial tissue
- Connective tissue
- Muscle tissue
- Nervous tissue

thank
you