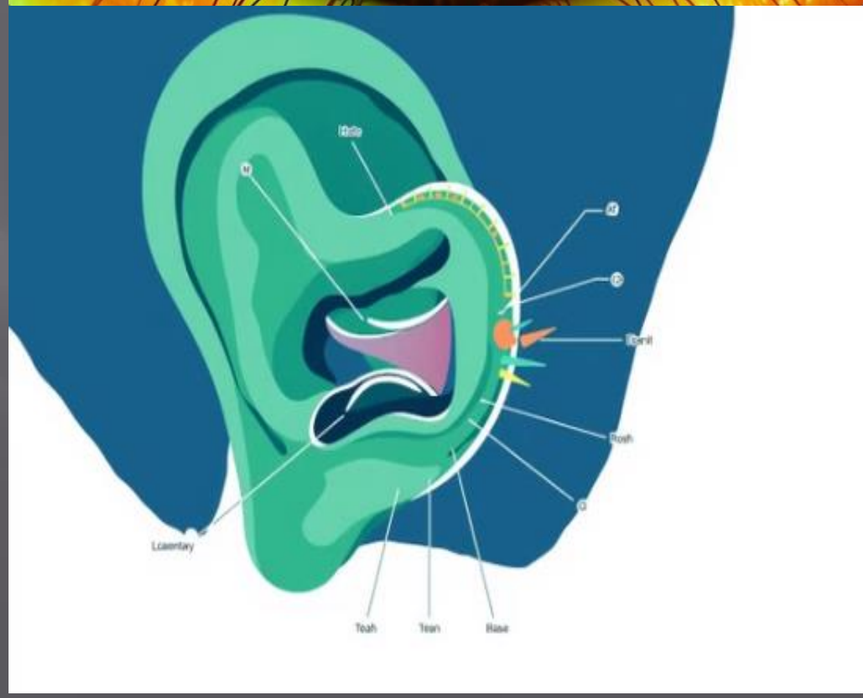
Five Senses

إِنَّ السَّمْعَ وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَئِكَ كَانَ عَنْهُ مَسْؤُولاً {الاسراء: 36}



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Presentation Contents

- Sense of sight
- Sense of hearing
- Sense of touch
- Sense of taste
- Sense of smell

"Humans have five main senses, which represent five tools that help them explore the surrounding world. These senses include: the sense of touch, the sense of taste, the sense of hearing, the sense of smell, and the sense of sight."

"Humans have other senses beyond the commonly known ones, including the following: balance, deep sense, thermal perception, time perception, and pain sensation."

What does the word sense mean?

The word "sense" means any of the stimulating qualities, internal or external, that the body translates into sensations that can be perceived by consciousness.

SIGHT SENSE OR VISION "

The sense of sight is one of the five senses. It is the brain's ability, through the eye, to detect electromagnetic light waves in order to interpret the perceived image. It is also the sense that helps with vision.

NOTE As we know, any sense is completed through a specific organ. Thus, the sense of sight is completed through the eyes.

How does the vision mechanism work?

The eye processes light and transmits it to the brain, which interprets it. When light rays fall on the eye. they cause the image to be reflected, and then the retina transmits the image to the brain, which is able to perceive it. This process occurs very quickly, in fractions of a second...

What is the benefit of sight?.

The eye sees objects, distinguishes colors and shapes, and detects light from darkness.

The structure of the eye:

The eye consists of several main parts, each of which plays an important role in the process of vision:

1. Cornea
2. Iris
3. Pupil
4. Lens
5. Retina
6. Optic nerve

What are the diseases that affect the sense of sight?

- Blindness
- Eye diseases
- Eye allergies
- Pink eye (Conjunctivitis)
- Glaucoma
- Cataracts

How to maintain your sense of sight?

Tips for keeping your eyes healthy:

- Make sure to wear sunglasses
- Wear safety glasses
- Eat foods that are good for your eyes
- Don't neglect your eyes.
- Take care of your contact lenses
- Avoid eye makeup
- Regularly visit an eye doctor
- Stay away from smoking

Hearing Sense

One of the most important senses that helps humans communicate and understand their surroundings.

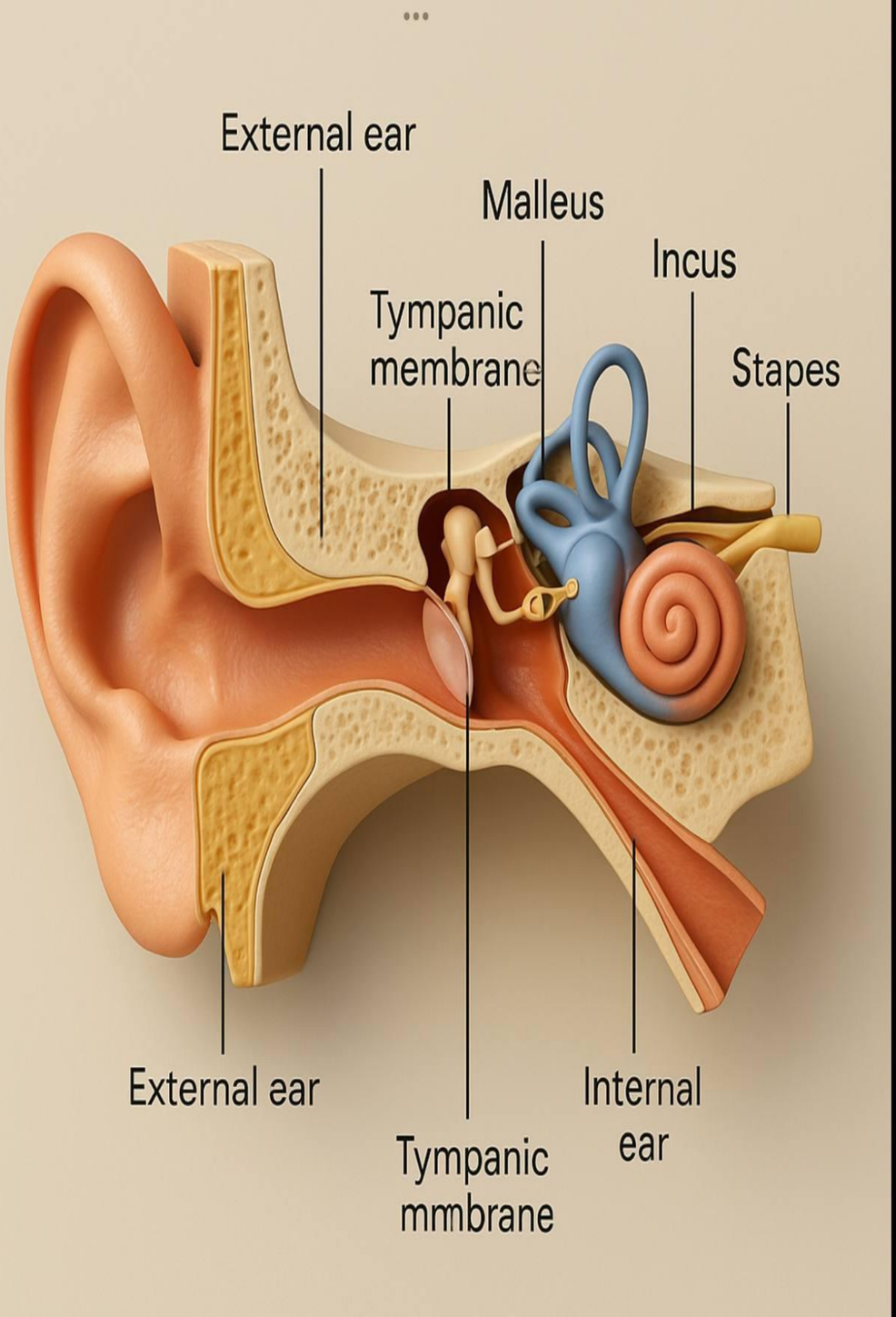
The ear begins to develop in the fifth month of pregnancy, making hearing the first functioning sense in the human body.

Parts of the Ear

1. Outer Ear: Includes the auricle (pinna) and the ear canal.

2. Middle Ear: Contains the eardrum and the auditory ossicles (malleus, incus, stapes).

3. Inner Ear: Includes the cochlea.



Hearing Disorders

1. Temporary hearing loss
2. Permanent hearing loss
3. Tinnitus
4. Total deafness

Importance of Hearing

- Essential for speech learning and communication.
- Connected to brain functions, making it one of the most developed senses.

Sound vibrations affect the entire body since the inner ear is linked to all organs.

- Helps maintain balance.

Protecting Hearing

- Avoid loud noises and wear ear protection.
- Clean the ears safely and monitor any hearing changes.
- Eat foods rich in vitamins C, E, B12, and folate to reduce the risk of hearing loss.

Touch

is the process by which specialized neurons sense tactile information from the skin and other organs and convey this information to the brain, where it is perceived as sensations such as pressure, temperature, vibration, and pain.

The touch sense organ skin

The skin is the largest organ in the human body and houses receptors that sense touch

Our touch sense helps us to

Know where something has touched us or which part of our body is painful

Feel the size, shape and texture of objects and people

Be precise with our motor skills, especially using our fingers and talking

Move our body away if something we touch is dangerous (e.g. stepping on a thorn or touching a hot plate)

Know if it's hot or cold

Vitamin B12 Deficiency: Can lead to nerve damage and gradual loss of sensation.
Spinal Cord Injuries: May cause loss of sensation in specific areas depending on the location of the injury.
Chronic Stress and Anxiety: In some cases, prolonged nerve strain can cause temporary numbness or sensory disturbances.

SKIN DISEASES:

Leprosy: Damages peripheral nerves, leading to loss of sensation in affected skin areas.
Severe Burns: Can destroy nerve endings, resulting in loss of touch sensation.
Neurodermatitis: A chronic skin condition that may cause loss of sensation or persistent itching.

How touch works

Touch receptors in the skin are nerve cells that inform the brain about tactile or touch sensations. There are two main types:

Thermoreceptors
These tell you about temperature.

Mechanoreceptors
These tell your body about pushing/pulling forces and body movement and are responsible for translating these physical forces into nerve impulses.

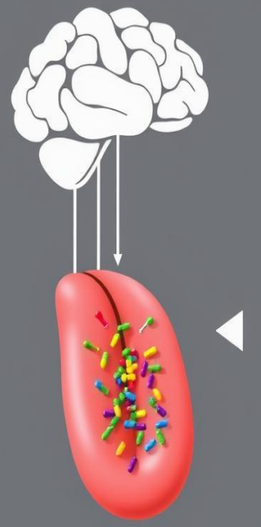
The receptors change chemical, thermal or mechanical responses into electrical signals. The signals travel along axons (the extensions of nerve cells or neurons), which form pathways along which messages travel to areas of the brain that receive and interpret them. In the brain, we interpret sensations using our previous experiences and the properties of the receptors.

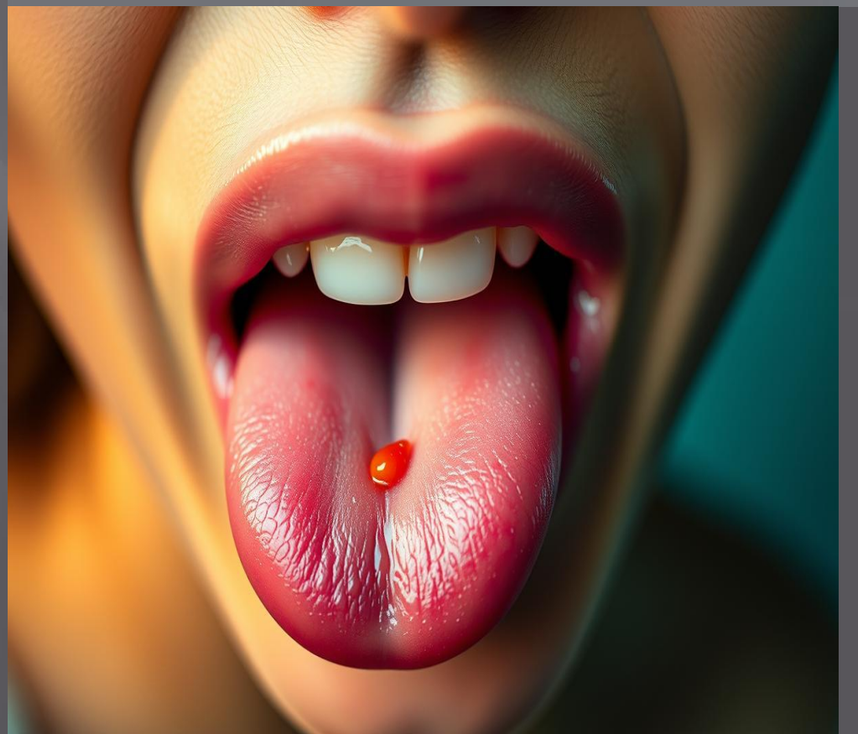
The Amazing Sense of Taste

The sense of taste allows us to enjoy and identify diverse flavors in food. Taste buds on our tongue detect five main tastes: sweet, sour, salty, bitter, and umami. Each taste provides important clues about what we eat. Sweetness indicates energy-rich food, while bitterness can signal toxins.

How Does Taste Work?

Taste begins when food dissolves in saliva. The taste buds send signals to the brain, telling us what we're tasting. Smell also plays a big role in taste. Humans have around 10,000 taste buds!





Respiration

is a vital biological process in which living organisms exchange gases with their environment. During respiration, the body takes in oxygen to produce energy and expels carbon dioxide as a waste product.

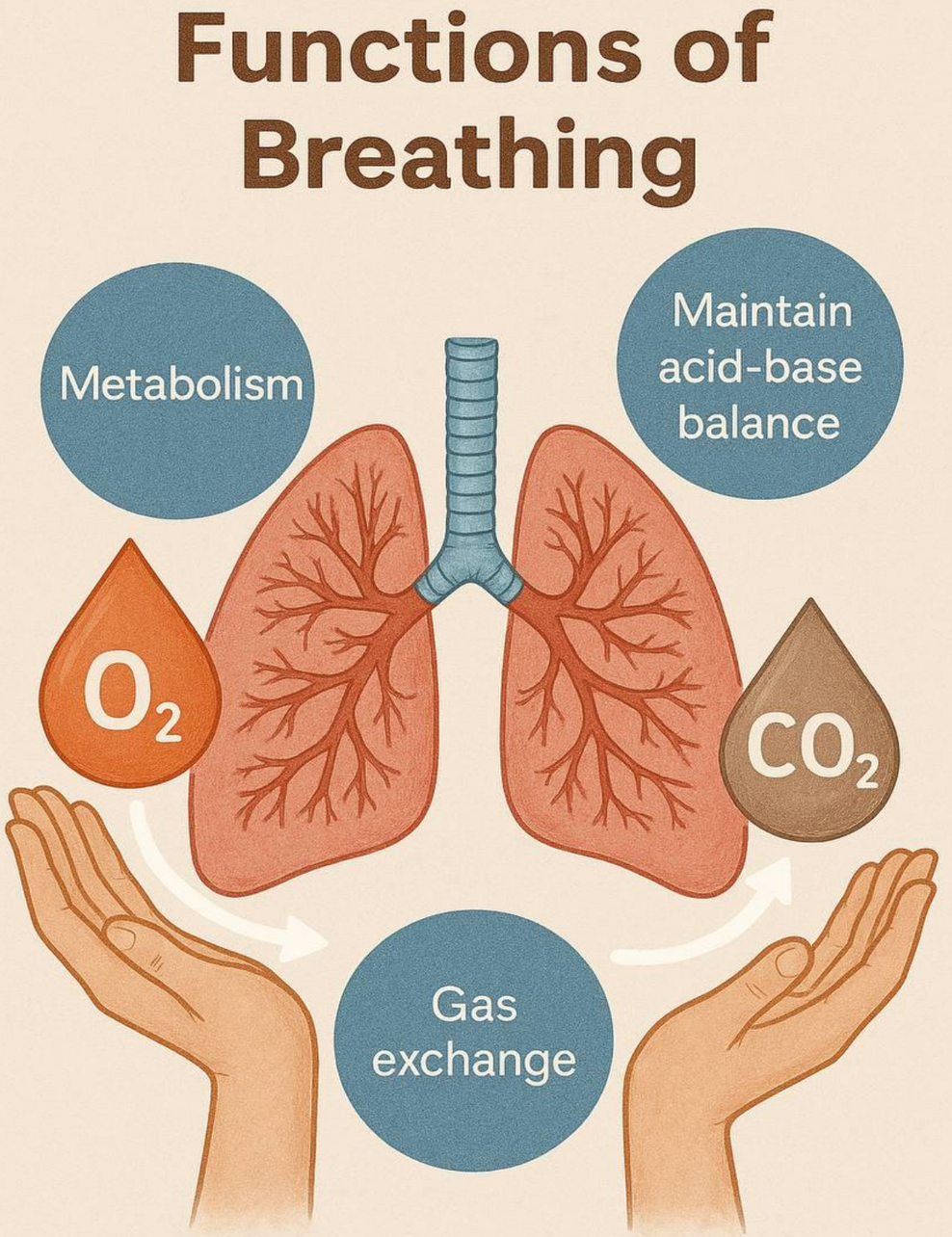
Importance of Respiration:

1. Energy Production

2. Waste Removal

3. Organ Function

Support



Types of Respiration:

1. External Respiration:

The exchange of gases in the lungs, where oxygen enters the bloodstream and carbon dioxide is expelled.

2. Internal Respiration:

Occurs within cells, where oxygen is used to produce energy from food.

Thank You!

We hope you enjoyed learning about the five senses! Understanding and protecting our senses helps us appreciate the world.