

Chapter 10 The Senses

10.2 Receptors, Sensations, and Perception

- The olfactory receptors are examples of chemoreceptors.
- Receptors stimulated by changes in temperature are called thermoreceptors.
- The process by which the brain causes a sensation to seem to come from the stimulated receptors is called projection.

10.3 General Senses

- Pain sensations arising from visceral organs may be caused by the stretching of tissues.
- Pain that feels like it is coming from a part other than the part being stimulated is called referred pain.

10.5 Sense of Smell

- Anosmia is a condition in which there is a loss of smell.

10.6 Sense of Taste

- Taste receptors are modified epithelial cells
- The five primary taste sensations are sweet, sour, salty, bitter, and umami.

10.7 Sense of Hearing

- The range of human hearing is about 20 – 20,000 vibrations per second.
- The auditory nerve pathways carry impulses to the auditory cortices in the temporal lobes.
- The auditory ossicles are located within the middle ear.
- Blowing the nose improperly may cause an infection within the auditory tube to spread into the middle ear.
- A torn tympanic membrane can cause a form of conductive deafness.
- The stapes transmits vibrations to the inner ear through the oval window.
- The auditory tube connects the middle ear with the throat.

10.9 Sense of Sight

- The parts through which light passes as it enters the eye are cornea, aqueous humor, lens, and vitreous humor.
- The retina is part of the inner tunic of the eye.
- The lens of the eye thickens when the ciliary muscles contract.
- Pain receptors are generally stimulated by factors that can cause tissue damage.
- Rod cells contain the pigment rhodopsin.
- Treatment for cataract usually involves removal of the lens.
- Tears contain an enzyme that functions to reduce the chances of developing an eye infection.
- When the radial muscles of the iris contract, the diameter of the pupil increases.
- Rods are more sensitive to light than cones, but cones are important for color vision.
- The conjunctiva lines the inner surface of the eyelid and covers the anterior surface of the eye.