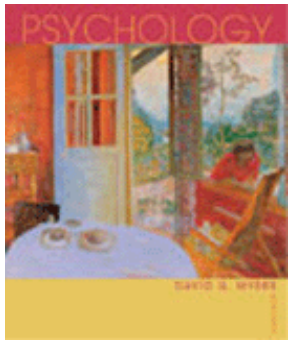
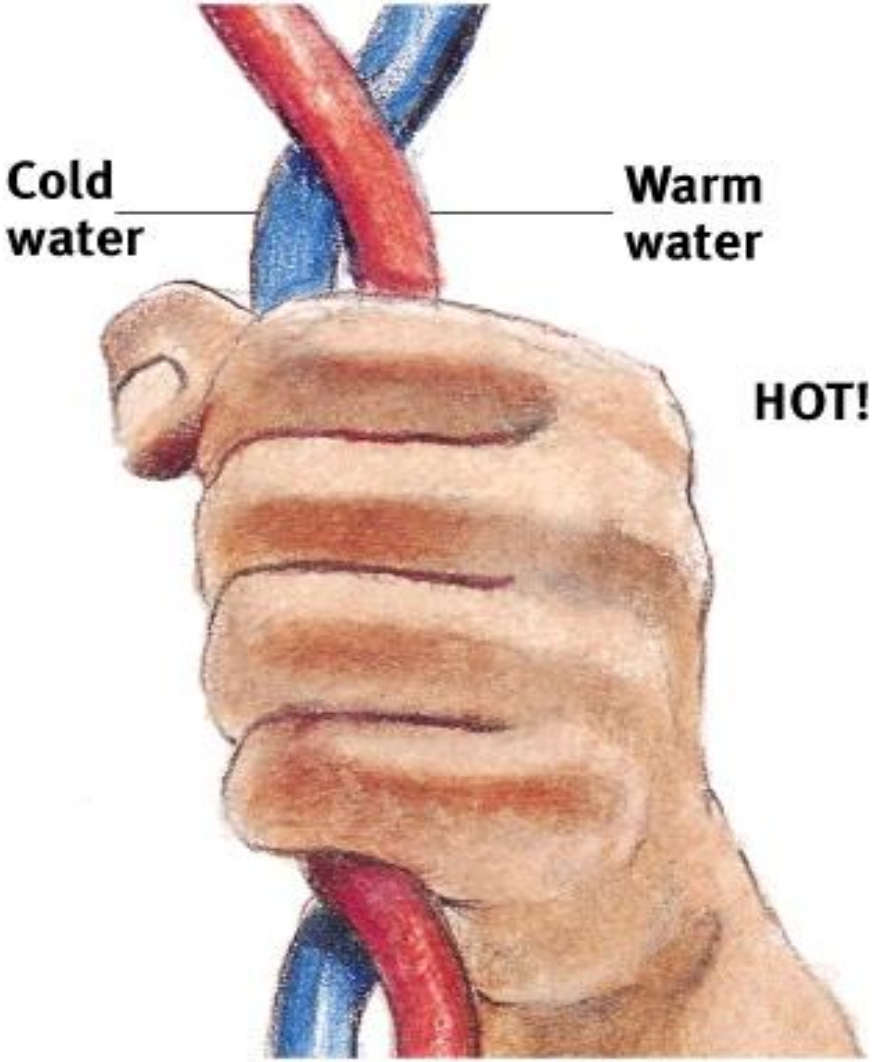
Touch

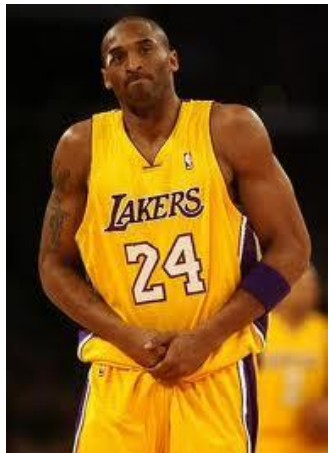




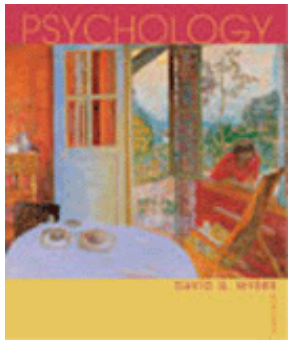
- Skin Sensations
  - pressure
    - only skin sensation with identifiable receptors
  - warmth
  - cold
  - pain

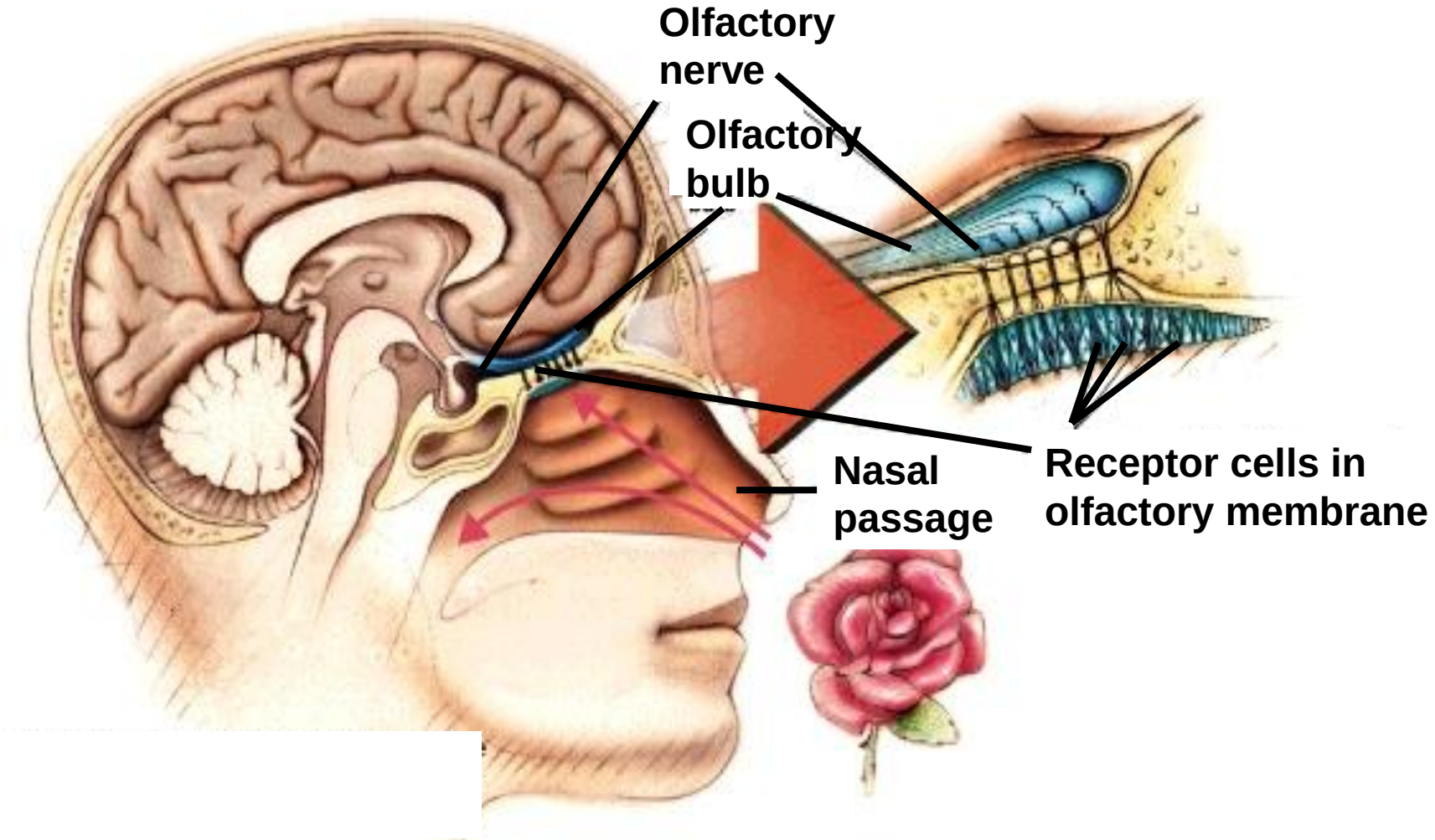
Pain

- Gate-Control Theory
  - theory that the spinal cord contains a neurological "gate" that blocks pain signals or allows them to pass on to the brain
  - "gate" opened by the activity of pain signals traveling up small nerve fibers
  - "gate" closed by activity in larger fibers or by information coming from the brain



Smell

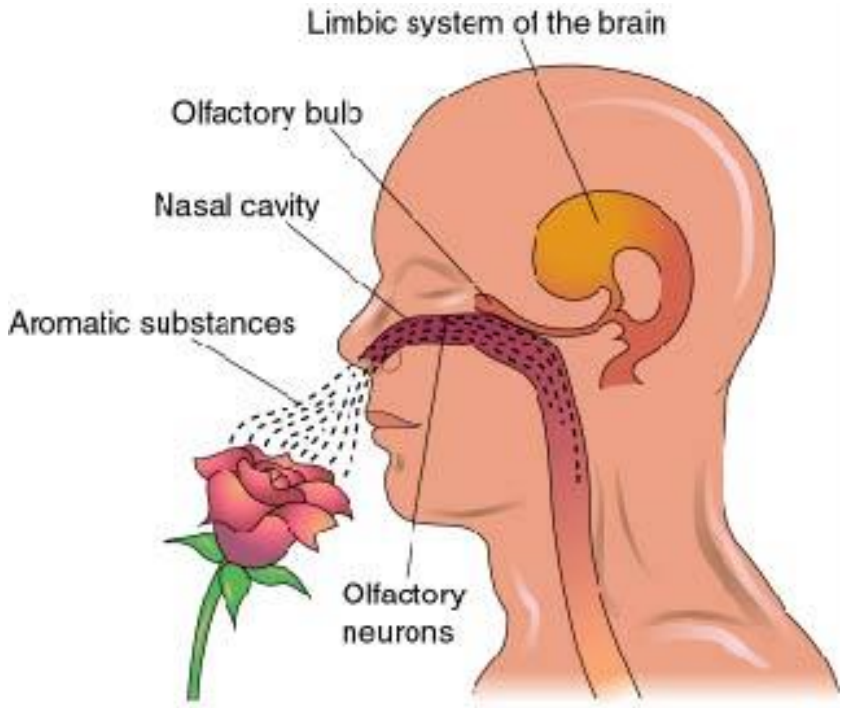

PSYCHOLOGY


Olfactory nerve
Olfactory bulb
Nasal passage
Receptor cells in olfactory membrane

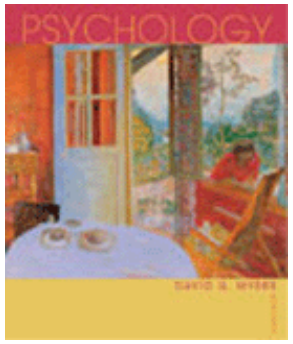
Smell

Smell (also known as OLFACTION)

- When we smell something, it is because MOLECULES in the air have entered our nasal passages and bind to SENSORY RECEPTORS.
- These cells send ACTION POTENTIALS to the brain via olfactory nerves.
- Different odors bind to different OLFACTORY RECEPTORS which is how the brain can distinguish the different smells.
- Unlike other senses, messages from the olfactory nerves go directly to the LIMBIC SYSTEM (without entering the THALAMUS first).



Taste



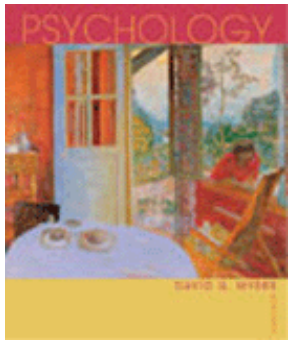
- Taste occurs when molecules are DISSOLVED in saliva and drip down to the GROOVES between the little bumps on your tongue where the taste buds are located. When molecules bind to the receptors, ACTION POTENTIALS are sent to the THALAMUS and then passed on regions of your cortex.
- Taste Sensations
  - sweet
  - sour
  - salty
  - bitter

VESTIBULAR sense

– the sense of balance and equilibrium; controlled by the SEMI-CIRCULAR CANALS in the inner ear.

- Movement of fluid along hair cells located in the SEMI-CIRCULAR CANALS lets us know which way our head is tilted and whether or not we are moving. The spinning sensation you have immediately after spinning is caused by the fact that the fluid in the semicircular canals has not stops moving yet.

Body Position and Movement



- Kinesthesis
  - the system for sensing the position and movement of individual body parts.
  - The kinesthetic sense involves special sensory neurons, called PROPRIOCEPTORS which are located in muscles, joints, and the inner ear.