Parts of the Neuron

Myelin Sheath
- white, fatty substance covering the axon.
- makes neural impulses travel more rapidly.
Neurotransmitters

• **Acetylcholine**
  – stimulates firing of neurons;
  – involved in the action of muscles, learning and memory;
  – found throughout CNS & PNS.

• **Norepinephrine**
  – inhibits the firing of neurons in the CNS
  – excites the heart muscle, intestines & urogenital tract;
  – helps control alertness
  – associated with depression
Neurotransmitters

• Endorphin
  – Natural opiates that mainly stimulate the firing of neurons;
  – shields the body from pain;
  – elevate feelings of pleasure;

Morphine

- an important narcotic of opium which mimics the action of endorphins by stimulating receptors in the brain involved with pleasure & pain.
Lobes

Frontal lobe
- located at the front and top of the cortex;
- the region in the cortex where much conscious thinking occurs;
Lobes

Parietal lobe
- located in the upper back portion of the cortex;
- receives and interprets somatosensory information;
Two Important Regions of the Cerebral Cortex

- Somatosensory Cortex
- Motor Cortex
Endocrine System

- A set of glands that regulate activities of certain organs by releasing their chemical products (hormones) into the bloodstream;
- Connected with the nervous system.
Epinephrine

• Helps a person get ready for emergency by acting on smooth muscles, the heart, stomach, intestines and sweat glands;

• Stimulates the Reticular Activating System which in turn arouses the sympathetic nervous system.
Norepinephrine

• Also alerts the individual to emergency situations by interacting with the pituitary gland and the liver;