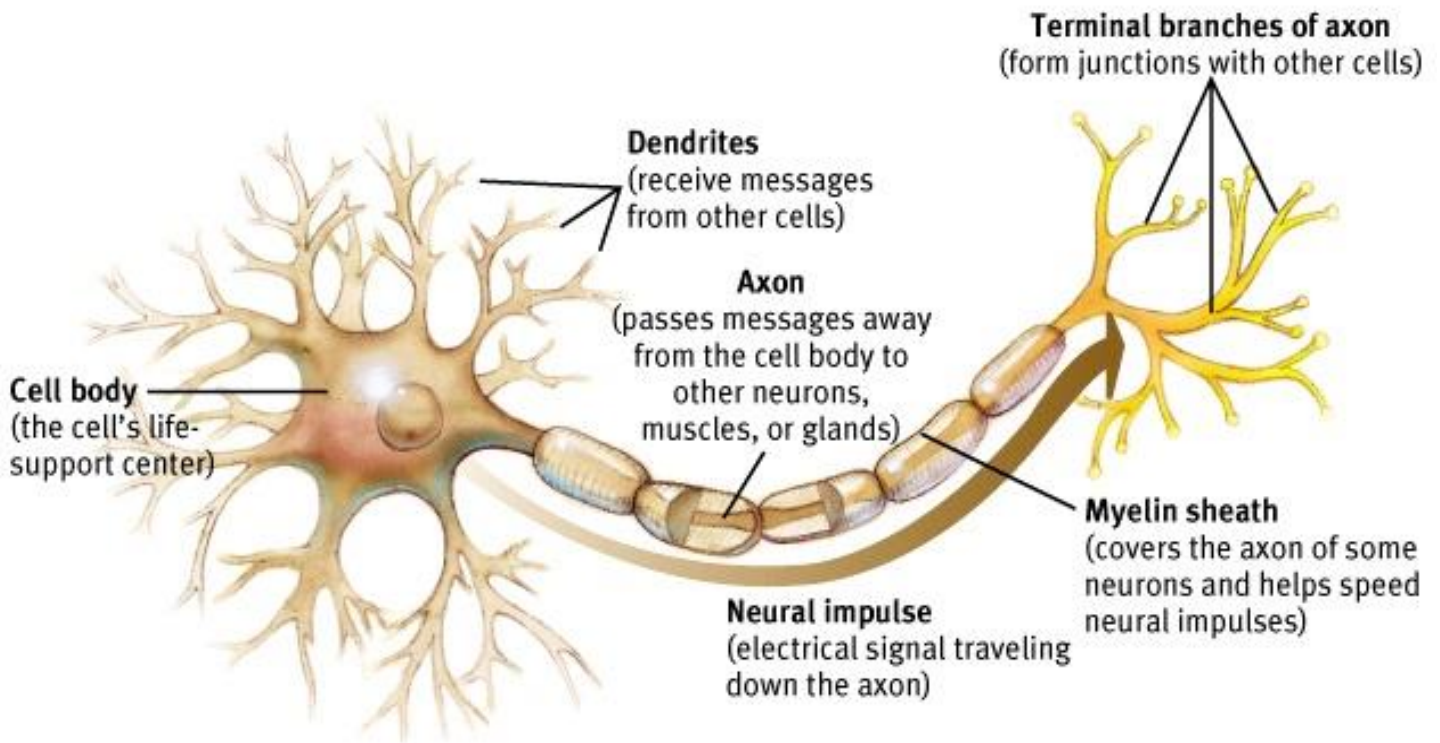


Unit 2 Handout

The Neuron



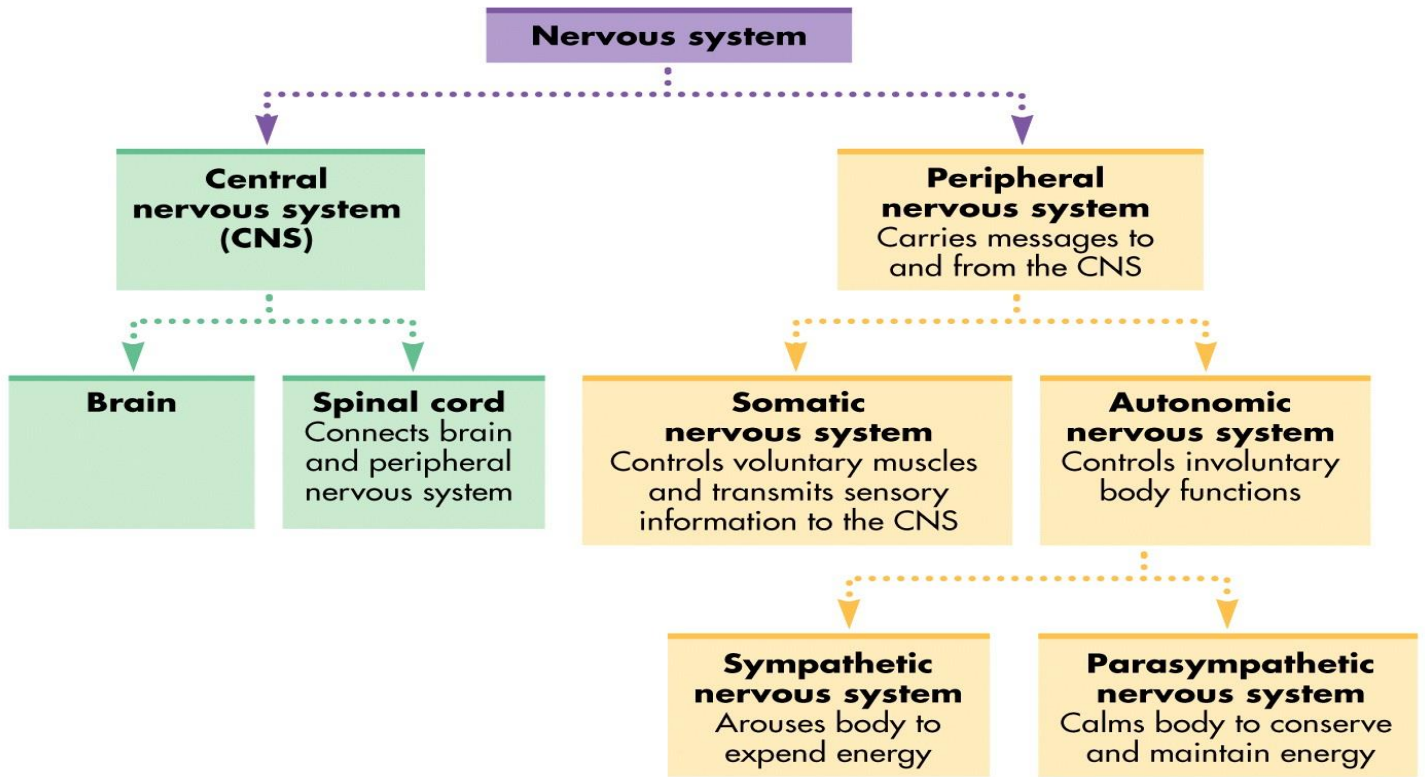
Neurotransmitters Chart

TABLE 2.1

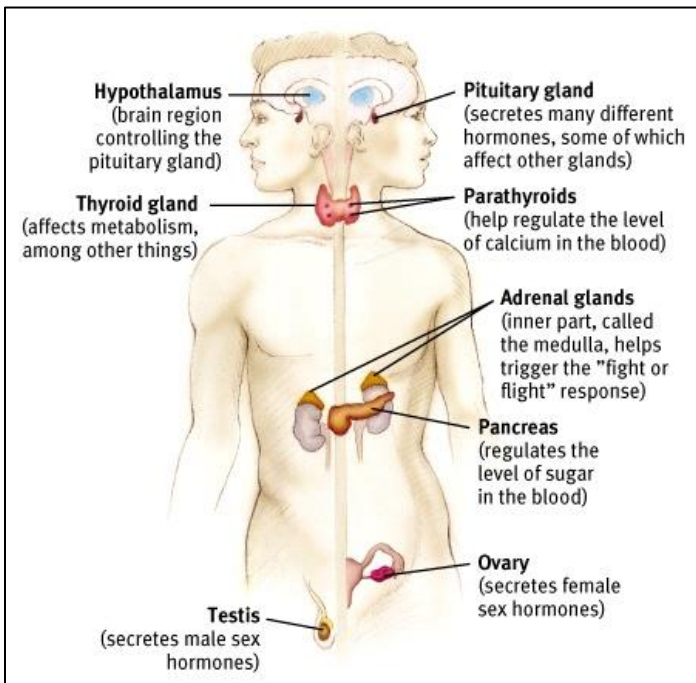
SOME NEUROTRANSMITTERS AND THEIR FUNCTIONS

Neurotransmitter	Function	Examples of Malfunctions
Acetylcholine (ACh)	Enables muscle action, learning, and memory	Undersupply, as ACh-producing neurons deteriorate, marks Alzheimer's disease
Dopamine	Influences movement, learning, attention, and emotion	Excess dopamine receptor activity linked to schizophrenia; starved of dopamine, the brain produces the tremors and decreased mobility of Parkinson's disease
Serotonin	Affects mood, hunger, sleep, and arousal	Undersupply linked to depression; Prozac and some other antidepressant drugs raise serotonin levels
Norepinephrine	Helps control alertness and arousal	Undersupply can depress mood
GABA (gamma-aminobutyric acid)	A major inhibitory neurotransmitter	Undersupply linked to seizures, tremors, and insomnia
Glutamate	A major excitatory neurotransmitter; involved in memory	Oversupply can overstimulate brain, producing migraines or seizures (which is why some people avoid MSG, monosodium glutamate, in food)

The Nervous System Diagram



The Endocrine System & Hormones



• Hormones

- Melatonin
 - Sleep/wake cycle
- Human Growth Hormone (HGH)
 - Produced by Pituitary Gland
 - Stimulates growth and cell reproduction
- Adrenaline
 - Speeds up body ("Fight or Flight")
- Estrogen
 - Produced by ovaries
 - Aids in female sexual development and functioning
- Testosterone
 - Produced by testes
 - Aids in male sexual development and functioning

The Brain Lobes & Brain Structures

