

Name: _____

Date: _____

Period: _____

The Nervous System

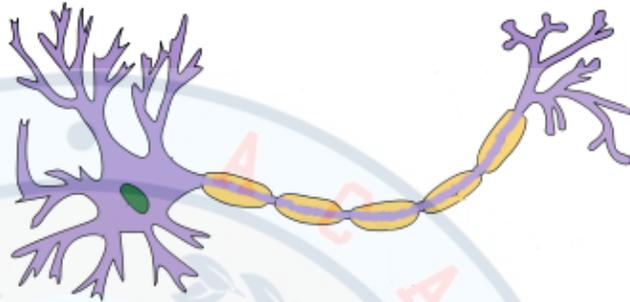
Week # _____

Question

Description

What is the function of a neuron? (p. 897)

Label the parts of the neuron. (p. 897)



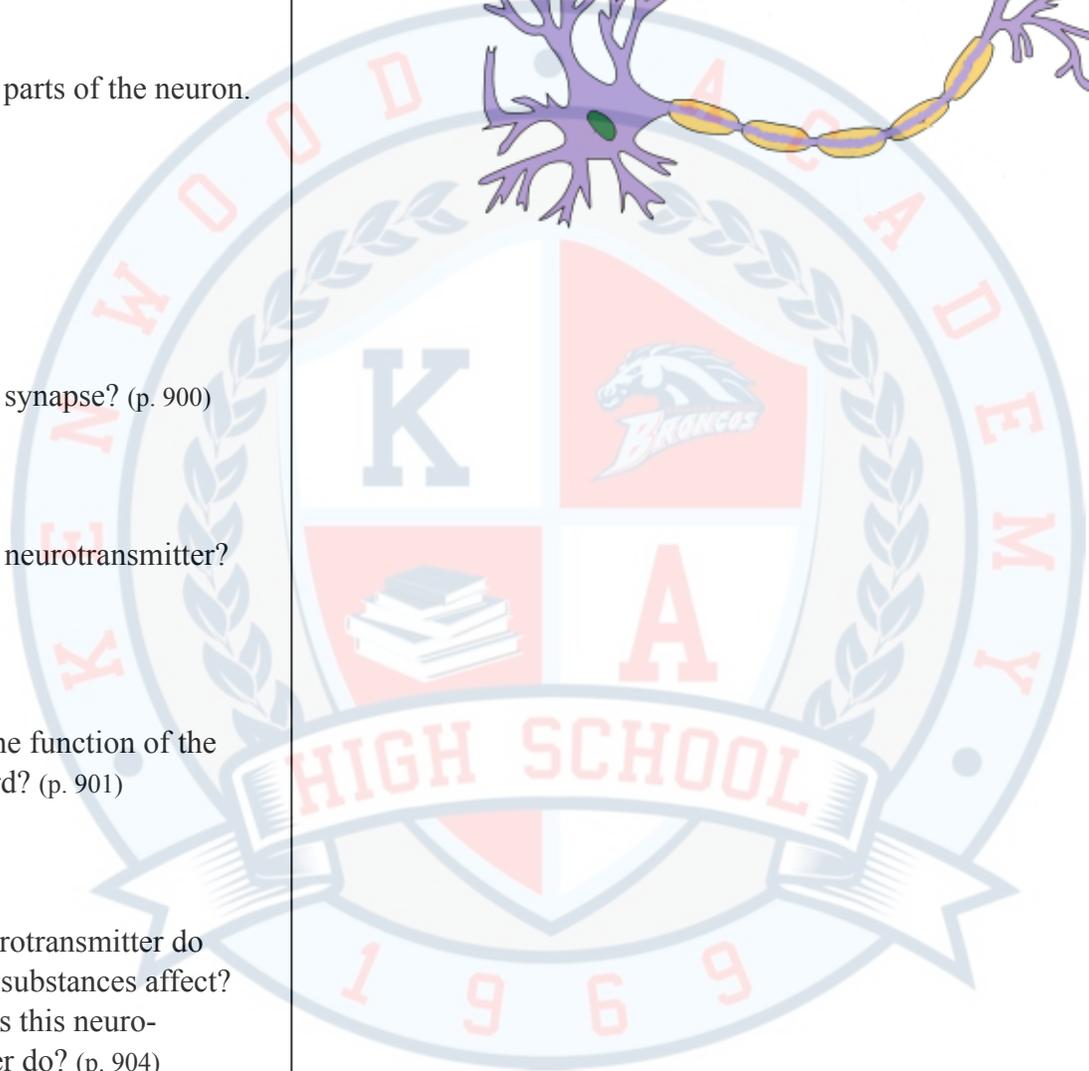
What is a synapse? (p. 900)

What is a neurotransmitter? (p. 900)

What is the function of the spinal cord? (p. 901)

What neurotransmitter do addictive substances affect? What does this neurotransmitter do? (p. 904)

What happens in the brain that causes drugs to be addictive? (p. 904)



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Directions: Use the passage, Table 1, and Table 2 to answer the questions below.

A study was conducted to analyze concussions in a select group of NCAA football players. A *concussion* is defined as an injury resulting from a blow to the head that causes an alteration of mental status and 1 or more of the following symptoms: headache, nausea, vomiting, dizziness, fatigue, difficulty sleeping, drowsiness, sensitivity to light or noise, blurred vision, memory difficulty, and difficulty concentrating.

1. (IOD 401) According to Table 1, the study indicates that a player in which of the following positions has the least risk of concussion?

- a. Special teams
- b. Receiver
- c. Quarterback
- d. Tight end

2. (EMI 401) According to Table 1, the concussion rate suggests that:

- a. Some positions have no risk of concussion.
- b. There is a strong association between position played and the likelihood of concussion.
- c. Some positions have twice the concussion risk of others.
- d. There is a weak association between position played and likelihood of concussion.

3. (EMI 401) According to Table 2, one would predict that most athletes sustaining their fourth concussion:

- a. do not recover
- b. experience a prolonged recovery
- c. experience a rapid recovery
- d. experience a gradual recovery

Position	No. of Concussions	Estimated No. of Athlete Exposures	Concussion Rate per 1,000 Athlete Exposures
Quarterback	11	13,320	0.83
Running back	18	25,336	0.71
Receiver	15	27,944	0.54
Tight end	10	12,867	0.78
Offensive lineman	41	43,078	0.95
Defensive lineman	28	36,673	0.76
Linebacker	32	32,308	0.99
Defensive back	32	36,446	0.88
Special teams	9	11,620	0.77
Total	196	239,592	0.78

Table 1. Rate of Concussion by Player Position

Length of Symptom Recovery (in days)	No. of Previous Concussions			
	0	1	2	3+
Rapid (<1)	37	19	5	0
Gradual (1-7)	76	16	7	3
Prolonged (>7)	9	6	3	7

Table 2. Length of Recovery by History of Concussion

An athlete in the study was given a preseason baseline test using a Graded Symptom Checklist. Figure 3 illustrates this baseline and the subsequent scores after suffering a concussion.

4. (IOD 601) According to Table 2, the concussion graphed in Figure 3 indicates that the athlete likely sustained their:

- a. second concussion with a rapid recovery
- b. second concussion with a prolonged recovery
- c. first concussion with a gradual recovery
- d. first concussion with a prolonged recovery

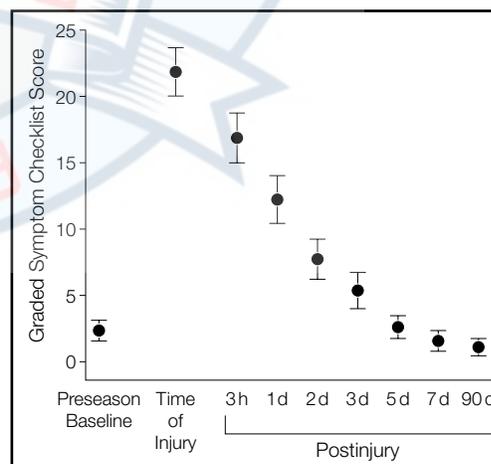


Figure 3

Adapted from:

Guskiewicz, K. M., McCrea, M., Marshall, S. W., Cantu, R. C., Randolph, C., Barr, W., & ... Kelly, J. P. (2003). Cumulative Effects Associated With Recurrent Concussion in Collegiate Football Players: The NCAA Concussion Study. *JAMA: Journal Of The American Medical Association*, 290(19), 2549-2555.