

Name: Date:

How do drugs affect the brain?

Viewing Questions:

1. Which of the following is the quickest way for a drug to reach the bloodstream?

 (A) oral administration

 (B) intravenous injection

 (C) inhalation

2. Which of the following is the slowest way for a drug to reach the bloodstream?

 (A) oral administration

 (B) intravenous injection

 (C) inhalation

3. What is the function of the blood-brain barrier?

(A) To keep all external substances out of the brain

(B) To let substances inside the brain by favoring blood circulation in the nervous system

(C) To separate the blood from the nervous system, thus keeping potentially dangerous substances out

4. Complete the sentence: “Synapses are structures \_\_\_\_\_\_\_\_, and allow the exchange of electrochemical signals between neurons.

(A) Placed on the sending neuron

(B) Placed on the receiving neuron

(C) Of interconnection between sending and receiving neuron

5. How can a neurotransmitter modulate synaptic transmission?

(A) By increasing the activity of the receiving neuron

(B) By inhibiting the activity of the receiving neuron

(C) Both a and b

6. In synaptic transmission, several neurotransmitters are released from the sending neuron and some of these are captured by the receiving neuron. Any neurotransmitter that remains is then degraded or reabsorbed into the transmitting neuron. Can you imagine the consequences of an abnormal degradation or reabsorption of neurotransmitters? What happens if neurotransmitters are persistently available in the synaptic space?

7. Is it good or bad for our health to use substances which bypass a natural defense mechanism, such as the blood-brain barrier?

8. Given the complex effect that a single drug can have on different neurotransmitters, try to imagine the consequences resulting from the interaction of multiple drugs. Describe these consquences.

After viewing…

Read your group’s assigned article found on Mrs. Herman’s website. Answer the following questions & be prepared to share with the class next week.

1. What is the “heroin and prescription opioid epidemic,” and just how bad is it? Explain the magnitude of the crisis and the damage caused by it *in your own words.*Provide at least one example from your article.

2. What does the article state about the causes of this epidemic?

3. What does the article state about possible solutions to the epidemic?

4. What is your personal reaction to this article and to the opioid epidemic in general?