

The Muscular System: Neuromuscular Junction

1. What insulates each muscle cell? _____
2. Synaptic vesicles in the axon terminal of a motor neuron contain what neurotransmitter? _____
3. An action potential in the axon terminal of a motor neuron opens what type of ion channels? _____
4. By what means of membrane transport does the neurotransmitter leave the axon terminal? _____
5. Binding of neurotransmitter to the receptors on the motor endplate open what type of ion channels? _____
6. Opening of these channels leads to _____ of the motor endplate.
7. How is the neurotransmitter removed from the synaptic cleft?
8. As a result of question 6, an action potential is propagated along the _____ of the muscle cell and down the _____ into the cell.
9. The result of this action potential releases what ion from the terminal cisternae? _____
10. a. What effect did molecule "X" in the quiz have on the muscle contraction?

b. Explain its mechanism of action.

c. What drug did molecule "X" act like? _____
11. a. What effect did molecule "Y" have on the muscle contraction?

b. Explain its mechanism of action.

c. What drug did molecule "Y" act like? _____

12. a. What effect did molecule "Z" have on the muscle contraction?

b. Explain its mechanism of action.

c. What drug did molecule "Z" act like? _____