

More muscle contraction / relaxation question

Be very specific when answering the following questions!!!!!!

- 1) From 'memory' draw the graph showing local depolarization, depolarization, repolarization... etc. and all of its components
- 2) What gates open during local depolarization?
- 3) What gates open during depolarization?
- 4) What gates open at +30mV?
- 5) What gates close @ +30mV?
- 6) Specifically explain / write steps leading to Na⁺ initially leaking into the post-synaptic membrane.
- 7) Specifically explain / write steps leading to Na⁺ rapidly flooding into the post-synaptic membrane.
- 8) Myosin heads are attached to actin during relaxation... TRUE or FALSE.
- 9) Myosin heads are attached to actin during contraction... TRUE or FALSE.
- 10) What does the Na⁺ / K⁺ pump do in the membrane of the sarcolemma?
- 11) Why 'must' the Na⁺ / K⁺ pump kick in during the Refractory period?
- 12) What happens to the Na⁺ inside the cell when the Na⁺ / K⁺ pump kicks in?
- 13) What happens to the K⁺ inside the cell when the Na⁺ / K⁺ pump kicks in?
- 14) What 'specifically' causes the voltage to change from +30mV to -70mV and to move into the Refractory period?
- 15) What would happen if the Acetylcholine receptors were blocked in the post-synaptic membrane?
- 16) Explain what happens to an individual who had their Acetylcholinesterase blocked.
- 17) What do you think would happen to someone exposed to nerve gas and did not have their atropine sulfate with them?
- 18) Explain in detail what would happen if the Na⁺ / K⁺ pump did not have any ATP available?
- 19) Explain what would 'immediately' happen if the Ca²⁺ VG channels did not open in the pre-synaptic terminal of a neuron.
- 20) Explain what would 'immediately' happen if the Ca²⁺ VG channels did not open in the sarcoplasmic reticulum.