


These Slides Accompany the YouTube Video Tutorial:
https://www.youtube.com/watch?v=Y7FLw5_fkuQ

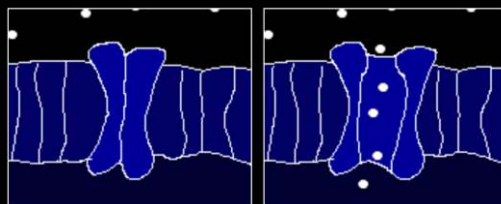
Membrane Potential

Neurons – Electrical Charge called membrane potential

Na-K Pump

- Specialized transport protein in cell membranes
- Ions: Charged Particles Na^+ has missing electron
- Ion+Protein \rightarrow Changes shape of protein

 Fat Layer (Prevent Things from entering or leaving) on Cell – Protein Stick to It – Ion Channels



closed.....open

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Membrane Potential

- Resting Potential
- Post-Synaptic Potential
- Action Potential

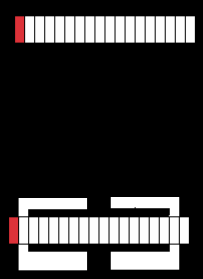
Resting Phase (-70 mV)

- Stable negative charge of inactive neuron

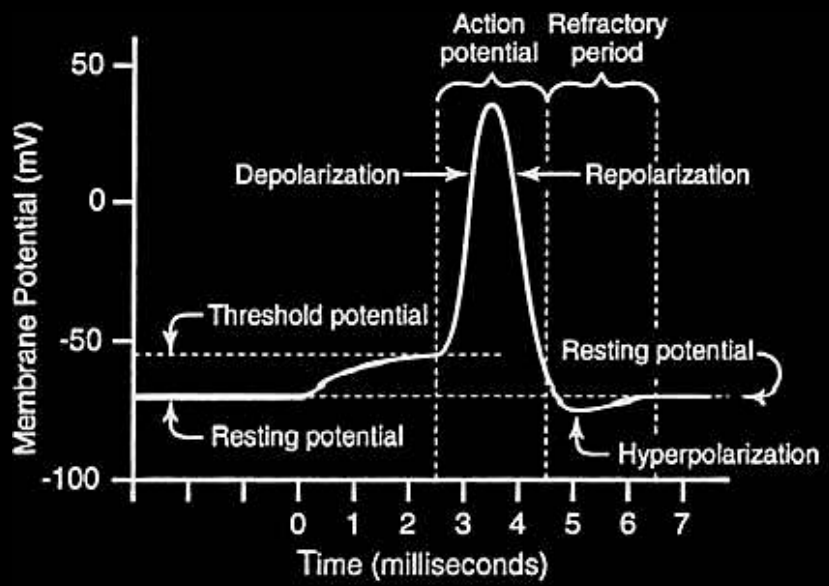


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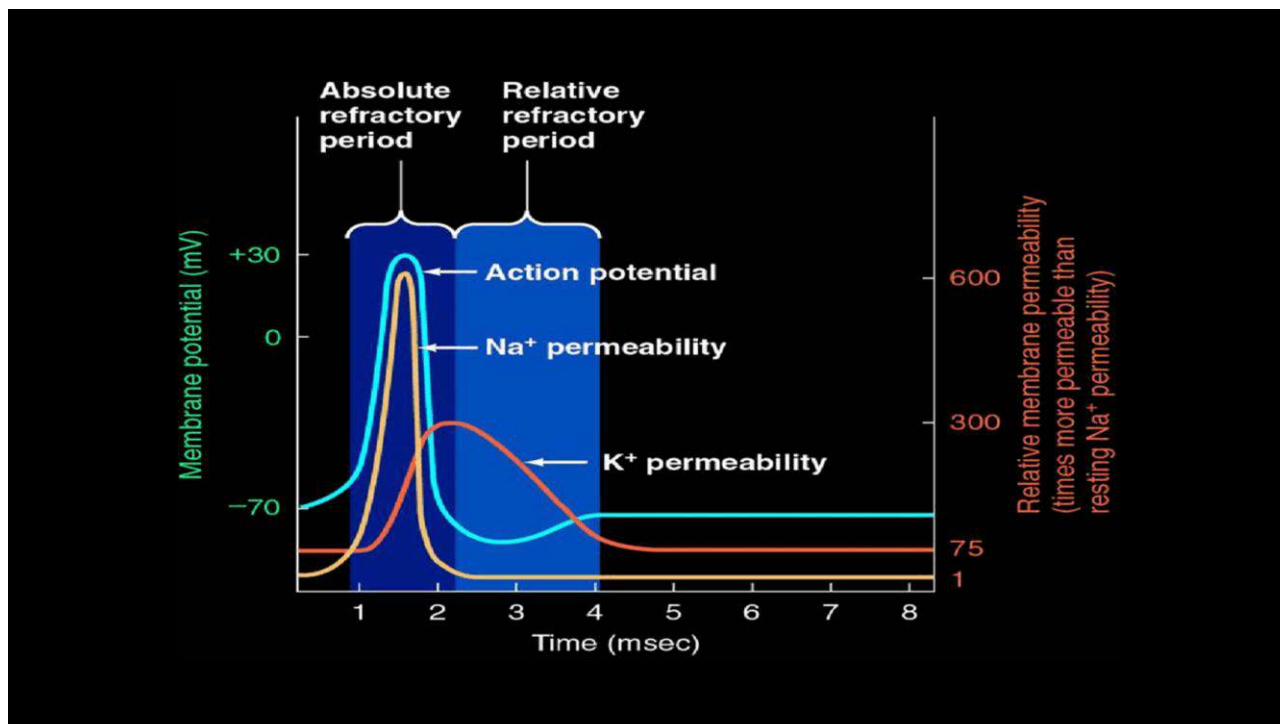
Red (Na^+ in) & Orange (K^+ out)



Myelin Sheath (Saltatory Conduction –
Somersault - Jump)



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All or Nothing Law

- Axon either produces action potential or it does not
- For action potential – Threshold must be reached
- If not, neuron will not fire
- Similar to firing of GUN
- After firing, cannot fire or 1 to 2 millisecond – Absolute Refractory Period
- Then Relative Refractory Period - Neuron will fire only if stimulus is too strong

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