

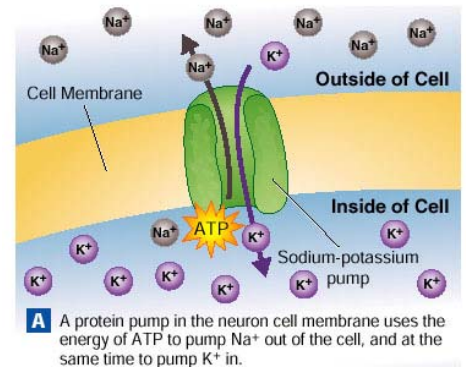
Electrochemical Impulse

Resting Membrane Potential:

- Inside of neuron is more _____ relative to outside
 (_____ electrical potential across nerve cell membrane)

- Achieved by:

Sodium-potassium pump - _____
 ___ Na^+ pumped _____ for ___ K^+ pumped _____
 Cell membrane is _____



Phases of an Action Potential

Depolarization –

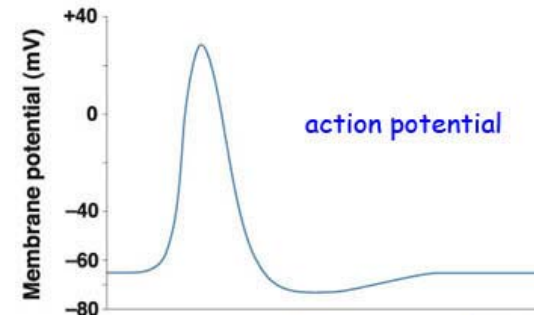
How?

Repolarization –

How?

Hyperpolarization –

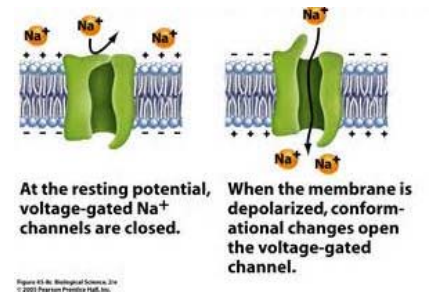
How?



Gated Ion Channels:

Ligand-gated ion channels –

Voltage-gated ion channels -



Action Potential (AP) - _____

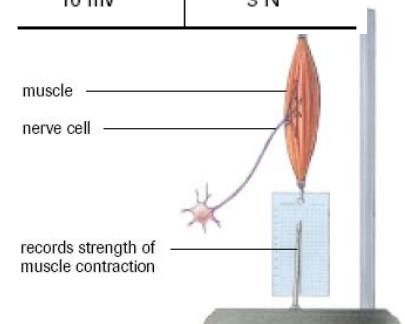
Triggered by a stimulus strong enough to produce a _____ to _____

Work on an **all-or-none** phenomenon:

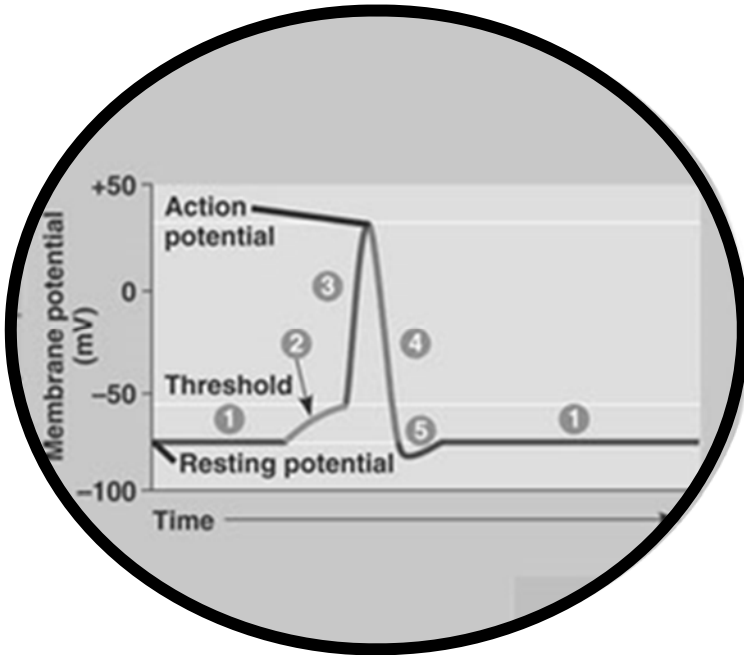
Data

Strength of stimuli	Force of contraction
1 mV	–
2 mV	3 N
3 mV	3 N
10 mV	3 N

Saltatory conduction:



Action Potential Generation



- 1.
- 2.
- 3.
- 4.
- 5.

Stage	Membrane potential	Pump / Channel Activity	Ion Movement	Ability to Send AP
1				
2				
3				
4				
5				