

# Electrochemical Impulse

## Resting Membrane Potential:

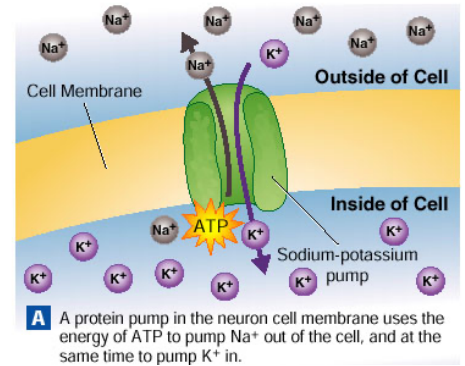
- Inside of neuron is more \_\_\_\_\_ relative to outside  
 (\_\_\_\_\_ electrical potential across nerve cell membrane)

- Achieved by:

Sodium-potassium pump - \_\_\_\_\_

\_\_\_ Na<sup>+</sup> pumped \_\_\_\_\_ for \_\_\_ K<sup>+</sup> pumped \_\_\_\_\_

Cell membrane is \_\_\_\_\_



## Phases of an Action Potential

**Depolarization –**

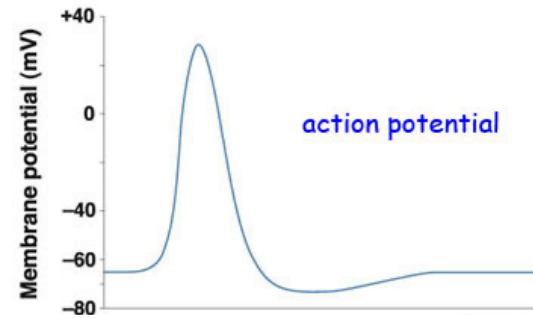
How?

**Repolarization –**

How?

**Hyperpolarization –**

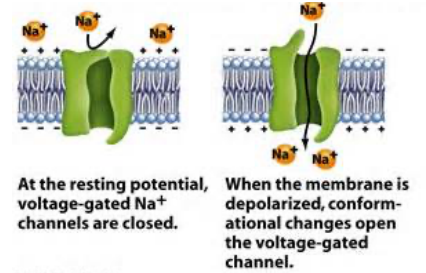
How?



## Gated Ion Channels:

Ligand-gated ion channels –

Voltage-gated ion channels -



## Action Potential (AP) - \_\_\_\_\_

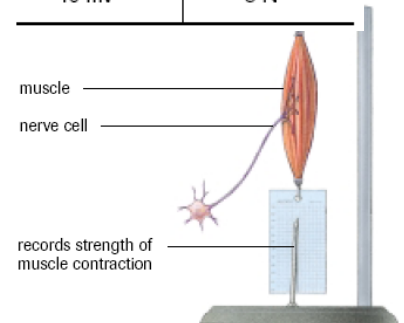
Triggered by a stimulus strong enough to produce a \_\_\_\_\_ to \_\_\_\_\_

**All-or-none** phenomenon:

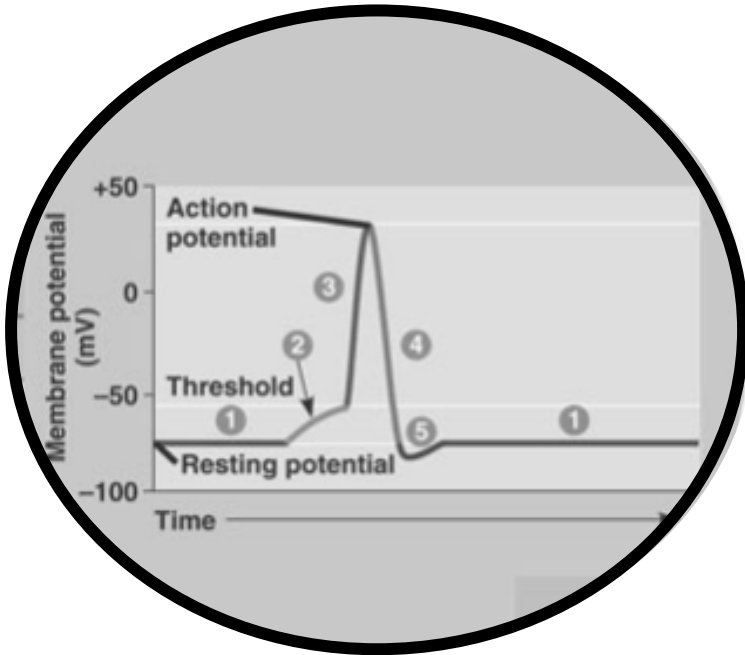
**Saltatory conduction:**

**Data**

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



# Action Potential Generation



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

Stage	Membrane potential	Pump / Channel Activity	Ion Movement
1			
2			
3			
4			
5			