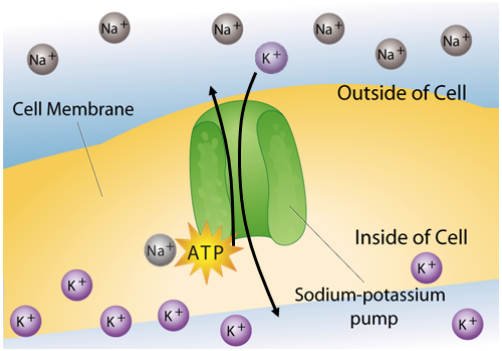
The Nerve Impulse - pg 898

- The sodium-potassium pump in the nerve cell membrane pumps sodium (Na^+) ions out of the cell and potassium (K^+) ions into the cell by means of active transport.

- As a result, the inside of the cell contains more K^+ ions and fewer Na^+ ions than the outside. This ongoing process maintains resting potential.

p 898

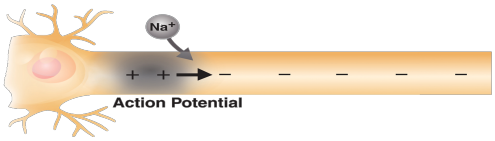
Sodium-Potassium Pump



The Moving Impulse - pg 899

An impulse starts when Na^+ can move into an axon.

- At the leading edge of the impulse, gates in the Na channels open, allowing positively charged Na^+ ions to flow inside the cell membrane.



The inside of the membrane temporarily becomes more positive than the outside, reversing the resting potential.
This reversal of charges, from negative to positive, is called a nerve impulse, or an action potential.

- The impulse continues to move along the axon. Gates within the K channels open, allowing K^+ ions to flow out. This restores the resting potential so that the neuron is once again negatively charged on the inside of the cell membrane and positively charged on the outside.
- An impulse at any point of the membrane causes an impulse at the next point along the membrane (like dominoes).