

activation of a motor nerve is based on the voltage differences inside & outside the cell membrane

ions attract water (hydrophilic)

cells can swell if they get too water logged

too much swelling \rightarrow cell death

ions move via concentration gradients

moving against concentration gradients is active transport, which takes energy

action potential

saltatory conduction

myelin - spiral wrappings of tightly packed membranes

nodes of ranvier - action potential generation, high concentration of Na^+ & K^+ channels

force of conduction - determined by # of recruited neurons & rate coding

rate coding - frequency of achieving an action potential

neuromuscular junction

acetylcholine (neurotransmitter) - stored in vesicles

- binds to postsynaptic cells (receptors)

- must be broken down by enzyme: acetylcholinesterase

- if unable to be broken down, synaptic transmission can't be terminated

excitation - contraction coupling.