

The base unit of the nervous system is the _____, which can send messages, called _____.

The resting membrane potential of a neuron is _____, which is established by the _____, which pumps _____ out of the cell and _____ into the cell. When a neuron encounters a stimulus, _____ channels open, causing the ion to diffuse down its concentration gradient, _____ the voltage of the cell. If the membrane potential rises above the _____ potential of _____, additional _____ channels will open in response to the change in potential, and the membrane potential will continue to rise. Once the membrane potential is positive, the _____ channels will close, halting diffusion of the ion. After this, _____ channels, sensitive to membrane potential, open to allow diffusion of the ion down its concentration gradient. This brings more _____ the cell, _____ the membrane potential. The _____ is responsible for reestablishing resting membrane potential. In order to propagate an action potential to a downstream neuron, _____ are released by the _____ neuron and diffuse across the _____ to bind to ion channels on the _____ neuron. _____ neurotransmitters increase the potential of the postsynaptic neuron and _____ neurotransmitters _____ the potential of the postsynaptic neuron. Whether or not the postsynaptic neuron reaches the _____ potential determines whether or not the message from the presynaptic neuron is propagated.

potassium channel			sodium	falling
		potassium		threshold
sodium channels		sodium	dendrite	
decreasing	axon			40mV
		calcium ions	postsynaptic	
excitatory	sodium ions			potassium channels
threshold		inhibitory	inhibitory	
	threshold potentials	increasing		increasing
		potassium	calcium	
sodium	sodium			decrease
	neuron	potassium	sodium	
	negative			maintaining
		maintaining	axon	
dendrite		potassium		
	presynaptic		concentration gradients	neurotransmitters
positive	resting	-70mV		
		Na ⁺ /K ⁺ pump	falling	potassium
action potentials	increase synapse	potassium		
calcium		-70mV		presynaptic
	calcium	decreasing	40mV	
-55mV				sodium channel
sodium	postsynaptic		resting	
Na ⁺ /K ⁺ pump		-55mV		Excitatory