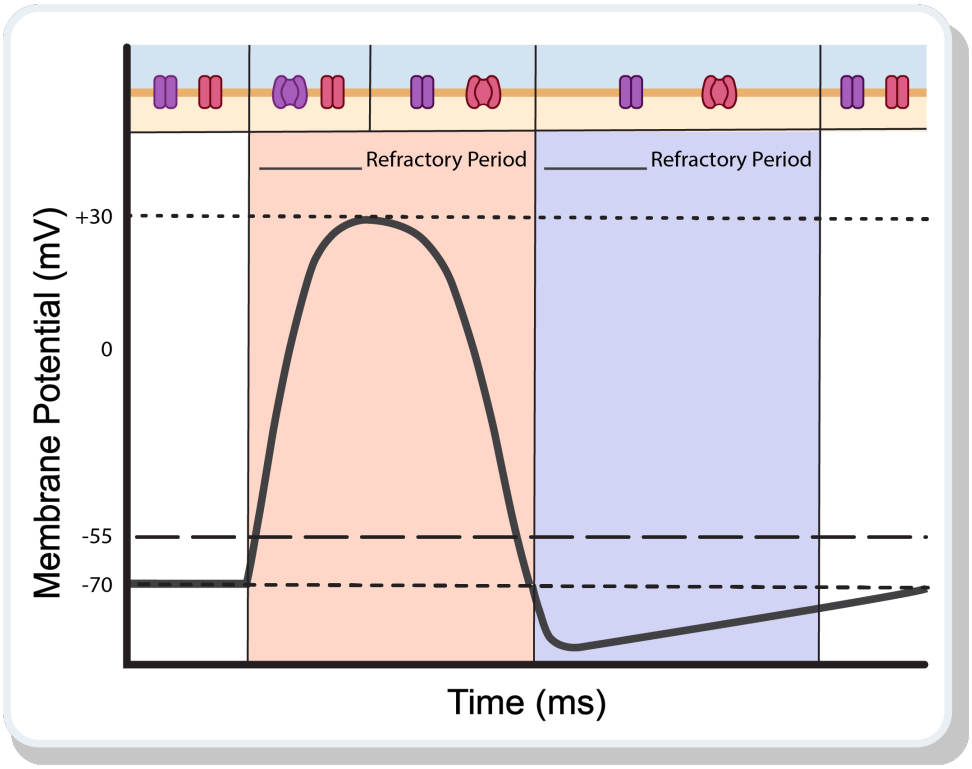
TOPIC: THE REFRACTORY PERIOD

- **Refractory Period**: Period when cell either _____ respond to stimulus or requires _____ stimulus.
- Two parts:

	Absolute Refractory Period	Relative Refractory Period
Definition	_____ additional action potentials can be evoked.	Only a _____-than-normal stimulus can evoke action potential.
Ion Channels	• **Begins:** Na+ channels open. • **Ends:** Na+ channels return to resting state.	• **Begins:** Na+ channels in resting state, • some K+ channels open. • **Ends:** Resting potential reestablished.
Time	_____ msec.	_____ msec.
Function	• Each action potential is distinct event. • Ensures unidirectional propagation. • Establishes maximum rate of neuronal firing.	• Prevent overexcitation. • Ensures unidirectional propagation.



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EXAMPLE: What factor determines the maximum frequency of action potentials that could be propagated by an axon? Explain why.

PRACTICE: During the relative refractory period, a larger-than-normal depolarizing stimulus can _____.

a) cause a membrane to reject a response to further stimulation.

b) cause the membrane to hyperpolarize.

c) bring the membrane to threshold and initiate a second action potential.

d) inhibit the production of an action potential.