

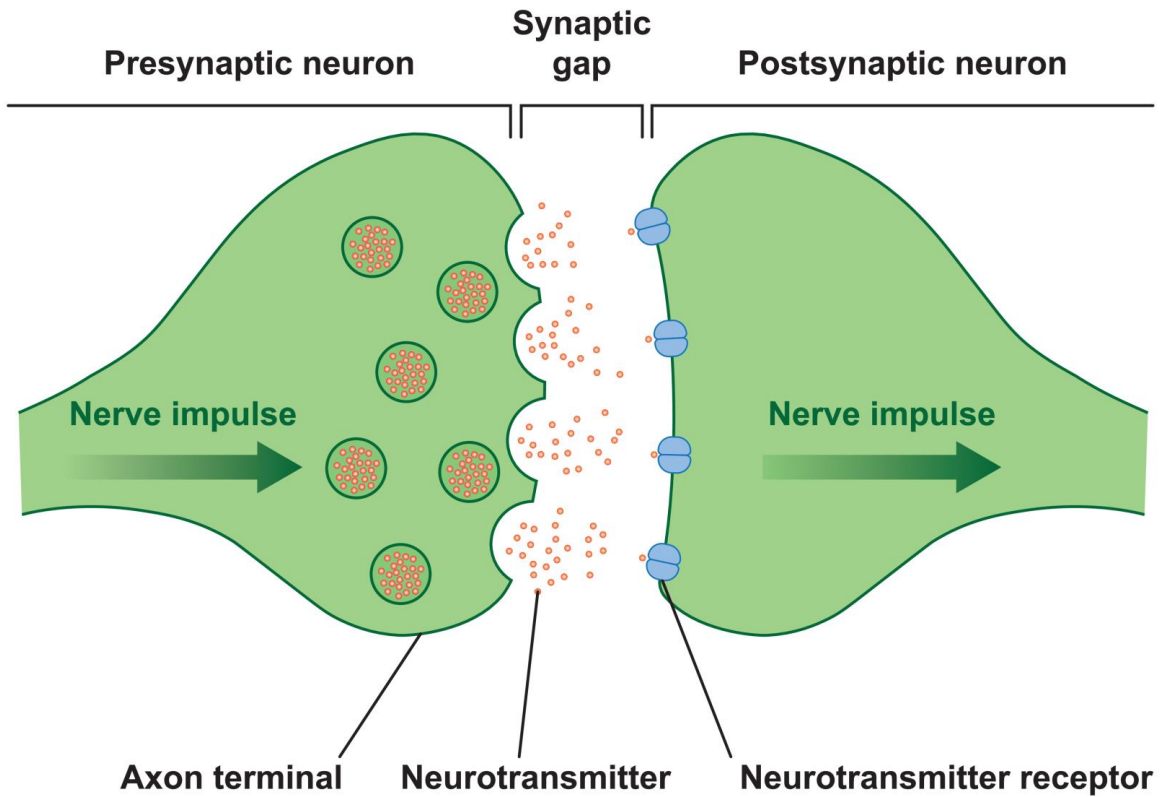


Background Information:

The *maintenance of a stable, internal environment* would not be possible without a control center or **nervous system**. The nervous system is composed of **nerve cells** or **neurons** that communicate with one another by special proteins called **neurotransmitters**. Many things can upset the functioning of our nervous system especially illegal drugs and alcohol. The simplified mechanisms of drug action presented in this activity are just a small part of the story. When drugs enter the body, they are carried by the bloodstream to the brain where they elicit very complex effects in many different regions of the brain. Often they cause the release of special proteins found in the brain called **neurotransmitters** or may bind with a variety of shape specific **receptors** located on the nerve cell membrane to which a neurotransmitter can bind. For example, THC in marijuana can bind with cannabinoid receptors located on these membranes.

This simulation primarily depicts how drugs interact with the neurotransmitter dopamine and its **receptors** because this activity focuses on the brain's reward pathway. Mouse Party is designed to provide a small glimpse into the chemical interactions that take place in the tiny gap between neurons called the **synapse** that cause the drug user to feel 'high'.

Close Up Diagram of a Synapse:



Label the diagram of the synapse below:

C. _____

D. _____

B. _____

A. _____

