**Worksheet: Neurons, Neurotransmitters, and Drugs**

**Learning Objectives:** By the end of this section, you will be able to:

* Identify the basic parts of a neuron.
* Describe how neurons communicate with each other.
* Explain how drugs act as agonists or antagonists for a given neurotransmitter system.

**Part 1: Neuron Structure**

* Describe the outer surface of a neuron's membrane and its permeability.
* What is the function of the soma, or cell body, of a neuron?
* Explain the role of dendrites in neuronal communication.
* What is the purpose of the myelin sheath, and how does it affect neuronal function?

**Part 2: Neuronal Communication**

* Define the resting potential of a neuron and explain its significance.
* Describe the process of depolarization and repolarization during an action potential.
* What is the all-or-none principle regarding the action potential?
* Explain the process of neurotransmitter release and reuptake in neuronal communication.

**Part 3: Neurotransmitters and Drugs**

* Define agonists and antagonists in the context of neurotransmitter systems.
* Provide an example of how an agonist and antagonist drug might affect dopamine neurotransmission.
* What is the function of reuptake inhibitors, and how do they affect neurotransmitter levels?
* Briefly explain why psychoactive drugs are not instant solutions for psychological disorders.

**Conclusion:** 13. Summarize the importance of understanding neuron structure, neurotransmitter function, and drug interactions in the study of psychology and neuroscience.