

Neurotransmission Steps

There are six basic steps, with many substeps:

1. Resting Potential Establishment
 - a. Ion Concentrations
 - b. Membrane Polarization
 - c. Membrane Mechanisms
 - i. Passive
 - ii. Active
2. Action Potential Generation (Nerve Impulses)
 - a. Membrane Depolarization
 - b. Threshold Potential
 - c. Ion Gates and Currents
 - d. All-or-None Law
 - e. Refractory Periods (absolute & relative)
3. Propagation of Action Potentials
 - a. Myelination

4. Synaptic Transmission of Presynaptic Activity

a. Electrical Synapses

b. Chemical Synapses and Neurotransmitters

i. Synthesis

ii. Transportation

iii. Synaptic Vesicles

iv. Release and Diffusion

5. Postsynaptic Potential Generation

a. Receptors

i. Ionotropic

ii. Metabotropic

b. EPSPs and IPSPs

c. Temporal and Spatial Summation

6. Inactivation and Reuptake

a. Presynaptic- and Auto-Receptors