

The Nervous System II: Synaptic Transmission

1. What channels in the presynaptic neuron open up in response to an action potential? _____
2. The presence of what ion inside the cell causes the synaptic vesicles to fuse with the membrane? _____
3.
 - a. What is the name for the chemicals stored in the synaptic vesicles?

 - b. What do these chemicals diffuse across? _____
 - c. Where do these chemicals bind to receptors? _____
4. What type of gated channels do these chemicals open? _____
5. Name two ways these chemicals can be removed from the synaptic cleft.
 - a.
 - b.
6. The response on the postsynaptic cell depends on two factors:
 - a.
 - b.
7. Name the two types of cholinergic receptors and indicate where these are found.

Type	Found
	excitatory: inhibitory:

8. Indicate where the following three adrenergic receptors are found:

$\alpha 1$	
$\beta 1$	
$\beta 2$	

9. Autonomic nerves innervate what three things?

10. The most common excitatory neurotransmitter in the CNS is

_____.

11. Two major inhibitory neurotransmitters in the CNS are:

a.

b.

12. Name a drug that alters synaptic transmission in the following ways:

a. blocks the action of the neurotransmitter at the postsynaptic membrane

_____.

b. blocks the reuptake of the neurotransmitter at the presynaptic membrane

_____.

c. blocks the release of the neurotransmitter _____ and

_____.