

Neurotransmitter Chart

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Neurotransmitter	Function	Effect of Deficit	Effect of Surplus	Additional Notes
Acetocholine (Ach)	<p style="text-align: center;">Excitatory: Released by motor neurons. Stimulates muscle contraction; involved in attention, memory, learning and general intellectual functioning</p>	Alzheimer's Disease	Severe Muscle Spasms	
Dopamine (DA)	<p style="text-align: center;">Inhibitory: pleasurable sensations involved in voluntary movement, attention, and learning</p>	Parkinson's Disease	Schizophrenia Drug Addiction	
Serotonin	<p style="text-align: center;">Inhibitory: moods and emotional states, hunger regulation of sleep and wakefulness (arousal)</p>	Depression, mood disorders	Autism	
Norepinephrine (NE)	<p style="text-align: center;">Excitatory: Used for arousal in the flight/fight response, modulation of mood, plays a role in learning and memory retrieval</p>	Mental disorders, especially depression	Anxiety	
GABA (gamma-aminobutyric acid)	<p style="text-align: center;">Inhibitory: helps to offset excitatory messages and regulate daily sleep-wake cycles</p>	Anxiety, seizures, tremors, and insomnia	Sleep and eating disorders	
Endorphins	<p style="text-align: center;">Inhibitory: involved in pain perception and positive emotions. Similar to opiate family of drugs.</p>	Body experiences pain	Body may not give adequate warning about pain. Artificial highs	
Glutamate	<p style="text-align: center;">Excitatory: Used in memory, learning, movement. Helps messages cross the synapse more efficiently</p>		Too much glutamate (and too little GABA) associated with epileptic seizures	