

# Brooke Randolph



Neurotransmitter	Levels	Coorelated Effects
<b>Serotonin</b> Excitatory & Inhibitoary	at optimal levels	sense of contentment, wellbeing, satiation (feeling full after eating), positive affect, lower pain levels, capacity for sleep, resting
	above optimal	use of anti-depressants
	Optimal range: 175-225	below optimal
<b>Dopamine</b> Excitatory Catecholamine	at optimal levels	fluid body movement, clear thinking, joy, happiness, enjoyment of life, pleasure, memory, cognition, learning, reduces hunger, focus, attention, motivation
	above optimal	ADHD, euphoria, mania, aggression, autism spectrum, shizophrenia, poor intestinal function
	Optimal range: 125-175	below optimal
<b>Norepinepherine</b> Excitatory Catecholamine	at optimal levels	attention, appropriate response to stressful sutations, optimal energy, thinking, drive
	above optimal	ADHD, anxiety, stress, "Type A personality", aggression, high blood pressure, insulin resistance, stress, obesity, over stimulation,
	Optimal range: 30-55	below optimal
<b>Epinepherine</b> Excitatory Catecholamine	at optimal levels	optimal levels of energy, attention, focus, learning, appropriate response to challenges
	above optimal	anxiety, hyperactivity, stress, ADHD, sleep difficulties
	Optimal range: 8-12	below optimal

Licensed Mental Health Counselor

<b>GABA</b> Inhibitory	at optimal levels	calm, sleepiness, consolidation of memory, reduction of anxiety, reduces excess stimulation
	above optimal	anxiety, insomnia, compulsive eating, headaches
Optimal range: 550-750	below optimal	anxiety, memory problems, increased muscle tension, seizure, epilepsy, schizophrenia
		Substances used to compensate: valium, alcohol, marijuana, tobacco, sugar
<b>Histamine</b> Excitatory	at optimal levels	optimal attention, memory, learning, arousal, enhances cognition & sensory processing, aids in control of appetite, reduces hunger
	above optimal	allergy, inflammation, UTIs, restlessness, inability to relax, ADHD, irritability, asthma, sleep difficulties
Optimal range: 20-45	below optimal	poor focus, poor attention, learning difficulties, fatigue, sleep difficulties, lethargy
<b>Glutamate</b> Excitatory	at optimal levels	touches 70% of CNS, neurogenesis, most common excitatory NT, necessary for learning and memory
	above optimal	behavioral problems, aggression, violence, Alzheimer's Disease, immune upregulation
Optimal range: 5-15	below optimal	fatigue, learning difficulties, depression, insomnia
<b>Taurine</b> Inhibitory	at optimal levels	protects cells from elevated glutamate, prevents seizures, strengthen skeletal system, stabilizes brain membranes, increases muscle mass, reduces blood pressure, enhances attention and cognition
	above optimal	anxiousness, sleep difficulties
	below optimal	seizures, sleeplessness, anxiety, poor digestion
Optimal range: 156-535		Substances used to compensate: benzodiazepines, alcohol
<b>Glycine</b> Inhibitory	at optimal levels	essential for healthy CNS and digestion, helps regulate blood sugar, inhibits bipolar disorder and ADHD symptoms, improves memory retrieval
	above optimal	anxiety, low mood, stress-related symptoms, high immune activity
Optimal range: 156-535	below optimal	anxiety, mood issues
<b>PEA</b> Excitatory	at optimal levels	creative thinking, clear thinking, learning, memory, decision-making, concentration
	above optimal	mood disorders, ADHD, autism spectrum, problems with memory, potential cue to FAE/FAS, psychosis, racing thoughts, anxiety, sleep difficulties
Optimal range: 29-83	below optimal	depression, fatigue, problems with memory/thinking/learning/inattention