

## NEUROTRANSMITTER CHART

Neurotransmitter	Signs of Low Levels	Therapeutic Strategies	Signs of Too Much	Therapeutic Strategies
Dopamine	Depression, ADHD, inability to handle stress, fatigue, mood swings, anxiety	Goal-setting and achievement, meditation/mindfulness, regular exercise, sunlight, deep touch pressure, proprioceptive strategies, heavy work activities, aromas- lemon/pepper/rosemary, preferred music, preferred activities, rewards, alerting vestibular activities, outdoor activities	(Less common) Agitation, high energy (manic phase of bipolar), high libido, hyperactivity, insomnia	Strategies to increase inhibitory neurotransmitters
Norepinephrine	Depression, poor memory, lack of energy, poor concentration, low motivation	Light/tickly touch, alerting vestibular activities, cold shower	Increased blood pressure and heart rate, hyperactivity, anxiety, stress, irritability, insomnia	Deep touch pressure, aromas – lemon/orange/ lavender, proprioceptive input, calming or most preferred music, calming vestibular activities, long duration/low intensity forms of exercise
Glutamate	Fatigue, learning issues	Alerting vestibular activities	Depression	Calming vestibular activities
Acetylcholine	Learning disorders, poor memory, ADD, decreased creativity, mood swings, aggression	Intense interval training, heavy work activities combined with cardio activities, vestibular input activities	Depression	Aerobic exercise, weight lifting, deep touch pressure, heavy work activities
Serotonin	Sadness, apathy, lethargy, impaired memory and attention, daytime sleepiness, aggression	Sunlight, mood change (gratitude lists, etc.), aerobic exercise, deep touch pressure, proprioceptive strategies, heavy work activities, vestibular activities, outdoor/nature activities, calming visual input, belly breathing, classical music	(Very rare) Hallucinations, euphoria, fever, seizures	Immediate medical intervention
GABA	Insomnia, depression, anxiety, sensitivity to sensory input, frustration, feeling overwhelmed	Vigorous exercise at 80 – 85% maximum heart rate, aroma – lemon/citrus/lavender, rhythmic vestibular activities, outdoor/nature activities, belly breathing, calming visual input	Impaired short-term memory, disinhibition, impaired coordination	Sustained aerobic exercise, obstacle courses, or circuits with cardio-vascular component
Endorphins	Low pain threshold, high stress level, anxiety, poor sleep quality	Low intensity, long duration forms of exercise, massage, meditation and mindfulness	Euphoria, lack of appropriate response to pain	Decrease stress level, decrease intense sensory input (self-injury)