

#### WHAT IS A NEUROTRANSMITTER?

A chemical messenger that **carries**, **boosts**, **and balances signals** between nerve cells and targets cells throughout the body.



## **DOPAMINE**

A neurotransmitter that elicits feelings of euphoria, motivation, and concentration. Childhood trauma causes the receptors to not fully develop, changing the way one experiences pleasure and happiness. Low levels of dopamine can lead to difficulty with concentration, attention, arousal, energy, and motivation. Low levels may also be present in those with ADHD.



### **SEROTONIN**

A neurotransmitter that affects mood and emotion, social behavior, appetite, digestion, and inhibits norepinephrine. Serotonin also helps produce healthy sleep patterns. Low levels can result in anxiety, irritability, depression, sleep disturbances, and obsessive compulsive disorder.



#### **NEROPINEPHRINE**

Norepinephrine acts as both a stress hormone AND a neurotransmitter. Norepinephrine is released when the body experiences a stressful event and is involved in the fight-flight-freeze response. Increased levels can cause anxiety, hyperactivity, stress, and irritability.

Low levels can lead to depression, poor memory, as well as a lack of concentration, energy, and motivation.



# **EPINEPHRINE**

A neurotransmitter and hormone, also known as adrenaline, that is released during stress. It creates extra energy in the body for fight-flight-freeze response. Excess levels can cause heightened emotions, hypervigilance, damage to memory, and inability for rational thought.



# **CORTISOL**

**NOT** a neurotransmitter, but a stress hormone that interacts with the neurotransmitters in the body. Stress leads to excess levels and can cause difficulty with concentration & memory, as well as suppress serotonin.