Important Neurotransmitters to Know

Neurotransmitter	Function	Problems with Excess, Deficit
Acetylcholine (ACh)	• critical to motor movement (deliver messages from neurons to muscles) • learning • memory	• **DEFICIT** in ACh production occurs in Alzheimer's disease
Dopamine	• motor movement • alertness, attention	• **DEFICIT**: Parkinson's disease • **EXCESS**: schizophrenia o schizophrenia often treated with *antipsychotic drugs*: block dopamine receptors, limiting the amount of dopamine being transmitted across synapse
Endorphins	• pain control, stress reduction • feelings of pleasure • "natural opiates"	• **DEFICIT** potentially involved in addiction?
GABA (gamma-amino-butyric acid)	• brain's major inhibitory neurotransmitter	• **DEFICIT**: seizures, insomnia
Glutamate	• brain's major excitatory neurotransmitter • creates links between neurons that form basis of learning, long-term memory	• **EXCESS**: overstimulation of brain (seizures?) (This is why people avoid food with MSG. MSG = monosodium **glutamate**)
Norepinephrine (AKA noradrenaline)	• "fight or flight" • controls alertness, arousal • elevates heart rate, circulation, respiration, etc. • mood elevation	• **DEFICIT**: depressed mood
Serotonin	• mood regulation • hunger, sleep	• **DEFICIT**: depressed mood o depression often treated with *selective serotonin reuptake inhibitors (SSRIs)*: prevent serotonin from being reabsorbed in uptake, thus leaving more serotonin in synapses