NEUROTRANSMITTERS & MENTAL HEALTH

NEUROBIOLOGY IN MENTAL HEALTH:

Your brain uses chemical messengers called neurotransmitters to regulate your mood, thoughts, focus, and behavior.

Understanding how they work can help you make sense of your symptoms and the treatments your care team recommends.

Why Neurotransmitters Matter:

- Understand why certain symptoms — like low mood, poor focus, or anxiety — may be connected to how your brain's chemical messengers are working
- Make sense of why your doctor or psychiatrist recommends a specific medication and what it is trying to do
- Recognize that side effects from medications often relate to the same brain systems being discussed here
- Know what questions to ask your care team when starting, stopping, or adjusting a medication
- See how hormonal changes — such as during your menstrual cycle, postpartum period, or menopause — can affect your mood and energy through these same systems

Meet the "Big 6" Neurotransmitters:

- Dopamine
- Serotonin
- Norepinephrine
- GABA
- Glutamate
- Acetylcholine

NEUROTRANSMITTER FUNCTIONS & CLINICAL RELEVANCE

Neurotransmitter	Primary Functions	When levels are too high	When levels are too low
Dopamine	Pleasure, motivation, attention, movement	Psychosis, mania	Apathy, poor focus, parkinsonism
Serotonin	Mood, sleep, appetite, pain regulation	Serotonin syndrome, agitation	Depression, anxiety, insomnia, cravings
Norepinephrine	Fight-or-flight, attention, arousal	Hypertension, panic, anxiety	Fatigue, apathy, poor focus
GABA	Inhibition, calming, anticonvulsant	Sedation, respiratory depression	Anxiety, seizures, insomnia
Glutamate	Excitation, learning, memory	Overactivation of brain cells, mania, seizures	Cognitive dulling, low energy
Acetylcholine	Cognition, memory, muscle activation	Muscle cramps, tremor, GI upset	Memory loss, confusion