

MIND & MOOD NEUROTRANSMITTER TEST

Discover How to Improve Your Mood, Focus & Energy

Patient:
DOB:
Height:
Weight:

Practitioner:
Lab #:
Collection Date: 01-14-2025
Received: 01-16-2025

Inhibitory Neurotransmitters



Tryptophan is an essential amino acid obtained from the diet that plays a role as a precursor to creating the neurotransmitter serotonin and the hormone, melatonin. While the gastrointestinal tract absorbs a portion of tryptophan, the majority enters circulation and is metabolized by the liver. The leftover tryptophan, along with its breakdown products from liver metabolism, is then transported to the peripheral circulation, reaching various tissues such as the brain, heart, and skeletal muscle.

The tryptophan level is above optimal and may indicate an excess of this amino acid in the body from dietary intake, metabolic imbalances, or medication. It is possible that elevated tryptophan over periods of time can coincide with irritability, headaches, GI-based symptoms or sleep disturbances.



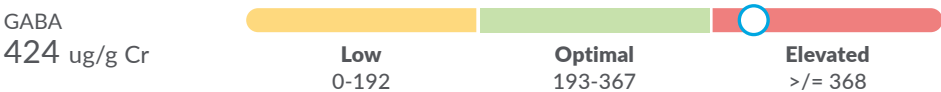
Serotonin is a neurotransmitter known for its calming effects and its role in promoting a sense of well-being and elevating mood, reducing anxiety, regulating appetite and libido, enhancing sleep quality, and improving memory. Additionally, serotonin assists in regulating body temperature. The majority of serotonin in the human body is produced in the gastrointestinal tract, where it plays a role in gut motility, digestion and overall gut health.

The level of serotonin is elevated and may indicate an overproduction or excessive breakdown of serotonin in the body. This can be due to chronic stress, inflammation, or a high intake of serotonin-precursor foods like bananas and nuts or certain medications that increase levels.



5-HIAA (5-Hydroxyindoleacetic acid) is a primary metabolite of serotonin, providing insight into serotonin turnover and breakdown in the body through the enzymatic action of monoamine oxidase and aldehyde dehydrogenase enzymes.

The level of 5-HIAA is elevated and may indicate increased serotonin production or breakdown, often associated with the use of certain medications and supplements that enhance serotonin activity. Symptoms may include flushing, elevated heart rate, skin changes, diarrhea or headaches.



GABA (Gamma-Aminobutyric Acid) is a key inhibitory neurotransmitter in the brain that plays a crucial role in reducing neuronal excitability and promoting relaxation and calmness. GABA is implicated in mood, sleep and blood glucose levels.

The level of GABA is elevated and may indicate a response to chronic stress, overwhelm or an imbalance in excitatory neurotransmitters like glutamate. It can also result from the use of medications or supplements that enhance GABA activity.

Patient:

Collection Date: 01-14-2025

Inhibitory Neurotransmitters (cont')



This inhibitory neurotransmitter plays a role in the production of DNA, phospholipids, collagen, creatine, heme, and glutathione. As a neurotransmitter, glycine helps regulate excitatory signals in the brain. Additionally, it acts as an anti-inflammatory agent, helping to reduce irritability, improve sleep quality, stabilize blood sugar levels, and enhance metabolic function.

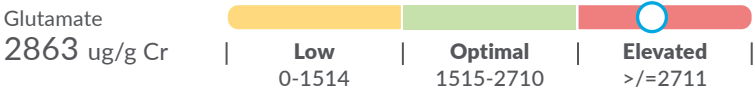
The level of glycine is elevated and may result from increased dietary intake of glycine-rich foods or supplements, as well as increased protein catabolism. Elevated levels can also indicate an adaptive response to heightened excitatory activity, where the body increases glycine production to maintain balance.



Taurine is an amino acid and neurotransmitter that plays a key role in regulating nervous system function, particularly by stabilizing cell membranes and modulating the activity of neurotransmitters like GABA and glutamate. Taurine enhances sleep quality, balances overwhelm, helps with fatigue, supports metabolism and digestion, and helps regulate glucose levels and electrolyte balance.

The level of taurine is elevated and may be a result of increased taurine excretion due to stress, high protein intake, or supplementation. It can also indicate excessive breakdown of taurine during periods of oxidative stress or metabolic imbalance.

Excitatory Neurotransmitters



Summary

Glutamate is the primary excitatory neurotransmitter in the brain, essential for cognitive functions like learning and memory. It also plays a crucial role in brain development and plays a key role in regulating appetite, enhancing cognition, increasing gut motility, optimizing learning, and modulating memory, mood, and pain perception. Additionally, glutamate boosts libido and can impact sleep. The brain is the body's main source of glutamate production.

The level of glutamate is elevated and may indicate heightened excitatory activity, often linked to chronic stress, anxiety, or neuroinflammation. Excess glutamate can overstimulate neurons, potentially leading to issues such as pain or overwhelm.

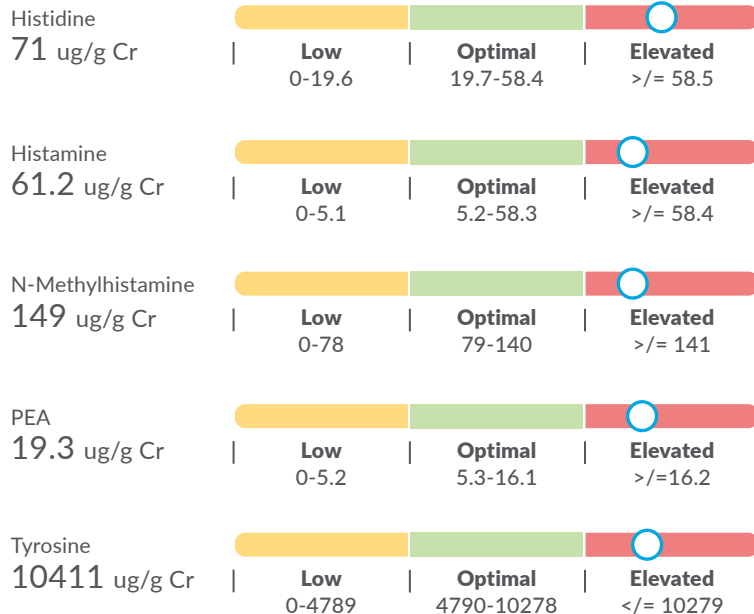
Glutamine is a precursor to both excitatory (glutamate) and inhibitory (GABA) neurotransmitters, playing a vital role in maintaining neurotransmitter balance in the brain. It supports brain function, immune response, and gut health.

The level of glutamine is elevated and may indicate increased demand for glutamine due to stress, trauma, or chronic illness. It can also reflect an overactive glutamate-to-glutamine conversion process, often linked to inflammation or stress.

Patient:

Collection Date: 01-14-2025

Excitatory Neurotransmitters (cont')



Summary

Histidine is an essential amino acid that serves as a precursor to histamine, a neurotransmitter involved in regulating immune responses, sleep-wake cycles, and digestion. As a neurotransmitter, histamine plays a key role in arousal, cognitive function, and the body's inflammatory response.

The level of histidine is elevated and may indicate increased histamine activity due to allergies, inflammation, or heightened immune response. It can also be a sign of excessive histidine intake from a high histidine diet or certain supplements.

Histamine is a neurotransmitter that plays a crucial role in the body's immune response, digestion, and regulation of the sleep-wake cycle. In the brain, histamine promotes alertness and cognitive function, while it also triggers inflammatory responses and gastric acid production in the body. Histamine is a vasodilator and an inflammatory agent in the body.

The level of histamine is elevated and may result from heightened immune activity due to allergies, infections, or chronic inflammation. Excess histamine may also stem from histamine intolerance or high intake of histamine-rich foods.

N-methylhistamine is a metabolite of histamine and can indicate the histamine activity in the body. As a byproduct of histamine breakdown, it reflects the level of histamine-driven processes, including immune response, gastric acid secretion, and neurotransmission related to wakefulness and cognition.

The level of N-methylhistamine is elevated and may indicate increased histamine release due to allergic reactions, chronic inflammation, or conditions such as histamine intolerance. It can also correlate excessive histamine activity from consuming histamine-rich foods or medications that trigger histamine release.

Phenylethylamine (PEA) is a neurotransmitter that plays a key role in mood regulation, cognitive function, attention, and energy.

The level of PEA is elevated and may indicate increased sympathetic nervous system activity, often linked to heightened stress, anxiety, or stimulant use.

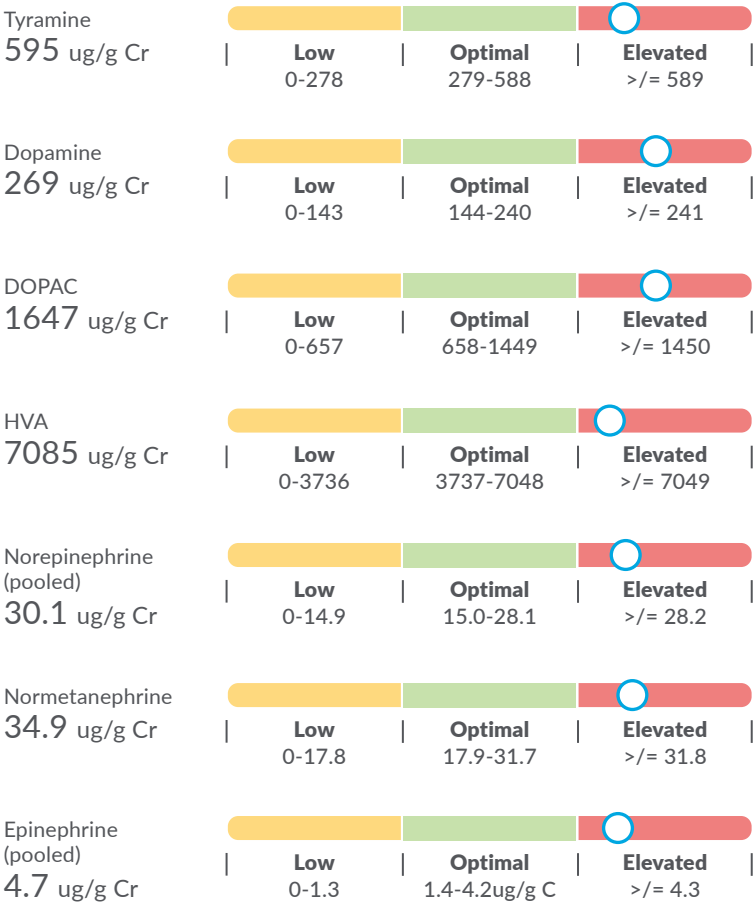
Tyrosine is an amino acid that serves as a precursor to important neurotransmitters like dopamine, norepinephrine, and epinephrine, as well as thyroid hormone. Tyrosine comes from foods like sesame seeds, cheese, soy, meat, nuts, and fish, or is made in the body from the amino acid phenylalanine.

The level of tyrosine is elevated and may indicate increased production often due to stress, thyroid imbalances, or supplementation.

Patient:

Collection Date: 01-14-2025

Excitatory Neurotransmitters (cont')



Summary

Tyramine is a naturally occurring compound derived from the amino acid tyrosine and acts as a trace amine neurotransmitter, influencing blood pressure and brain function. In the body, enzymes convert tyrosine to tyramine.

The level of tyramine is elevated and may result from a diet high in tyramine-rich foods (such as aged cheeses and fermented products), or it may indicate impaired monoamine oxidase (MAO) activity, which normally breaks down tyramine.

Dopamine is a key neurotransmitter involved in regulating mood, motivation, ambition, reward seeking, pleasure, and motor control.

The level of dopamine is elevated and may indicate stress, excessive stimulant use, or the use of certain medications.

DOPAC (3,4-Dihydroxyphenylacetic acid) is a major metabolite of dopamine, providing insight into dopamine turnover and metabolism.

The level of DOPAC is elevated and may indicate increased dopamine breakdown, often associated with heightened stress, stimulant use, or certain neurological conditions. It may also be elevated in individuals with gut imbalances such as bacterial overgrowth in the intestines.

HVA (Homovanillic Acid) is a primary metabolite of dopamine, used to assess dopamine metabolism and overall activity in the brain.

The level of HVA is elevated and may indicate increased dopamine turnover, often linked to stress or stimulant use. It may also be elevated in individuals with gut imbalances such as bacterial overgrowth in the intestines.

Norepinephrine is a critical neurotransmitter and hormone that plays a key role in the body's "fight or flight" response, influencing heart rate, blood pressure, and alertness. It reduces digestive activity, pain, and sleep, prevents bladder emptying, and regulates body temperature. The adrenal gland produces about 20% of norepinephrine, while the remaining 80% is produced by the sympathetic nerve fibers.

Norepinephrine is elevated and may indicate chronic stress, anxiety, adrenal imbalances, or the use of certain medications or stimulants.

Normetanephrine is a metabolite of norepinephrine, a key neurotransmitter involved in the body's stress response.

The level of normetanephrine is elevated and may indicate increased norepinephrine activity, often associated with chronic stress, adrenal imbalances, or stimulant use.

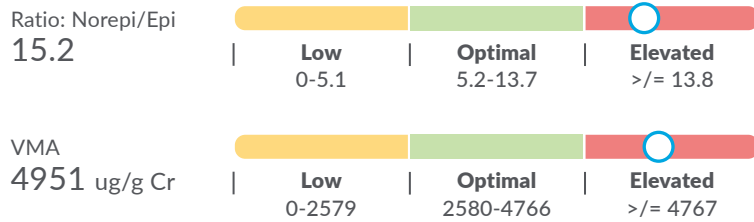
Epinephrine, also known as adrenaline, is a crucial neurotransmitter and hormone that plays a key role in the body's "fight or flight" response, affecting heart rate, blood pressure, and energy levels.

The level of epinephrine is elevated and may indicate heightened stress, adrenal imbalances, anxiety, or the use of certain medications or stimulants.

Patient:

Collection Date: 01-14-2025

Excitatory Neurotransmitters (cont')



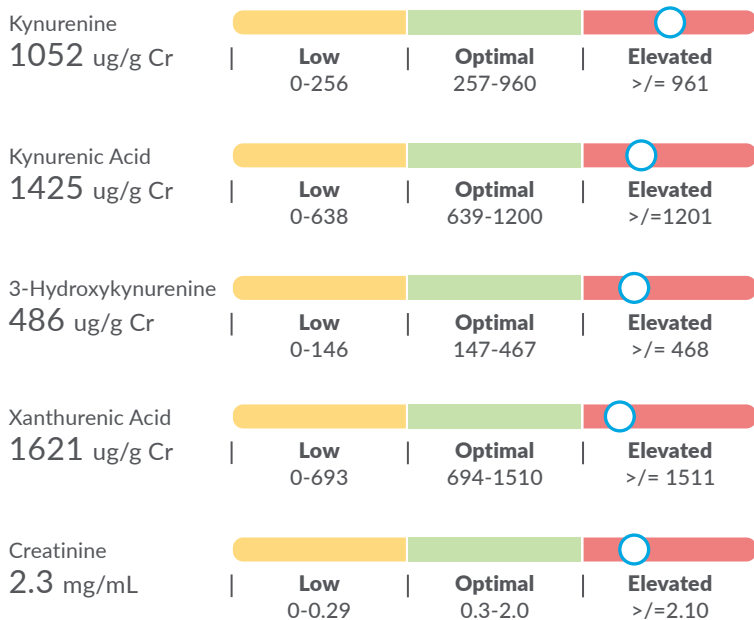
Summary

The ratio of Norepinephrine to epinephrine is elevated and may indicate heightened sympathetic nervous system activity, where norepinephrine is more dominantly produced than epinephrine. This can occur with chronic stress, anxiety, or imbalanced adrenal function, where the body is under prolonged stress and the adrenal medulla shifts production towards norepinephrine.

Vanillylmandelic Acid (VMA) is a key urinary metabolite that serves as an indicator of catecholamine (dopamine, norepinephrine, and epinephrine) metabolism in the body.

The level of VMA is elevated and may suggest increased stress or heightened sympathetic nervous system activity.

Inflammatory Markers



Summary

Kynurenine is a metabolite in the tryptophan degradation pathway and plays a role in the regulation of immune response and neuroinflammation. It is used to produce niacin (vitamin B3) leading to the formation of NAD⁺ which is essential for energy metabolism, cell survival, and the regulation of calcium levels.

The level of Kynurenine is optimal.

Kynurenic acid is a metabolite produced from kynurenine, primarily involved in regulating glutamate activity in the brain. It is generally considered neuroprotective because it inhibits the N-methyl-D-aspartate (NMDA) glutamate receptor, reduces glutamate release, and helps prevent excitotoxicity, as long as it is not present in excessive amounts.

The level of kynurenic acid is optimal.

3-Hydroxykynurenine (3-HK) is an intermediate metabolite in the kynurenine pathway, which is the primary route for the degradation of the amino acid tryptophan. As a metabolite, 3-HK plays a role in the synthesis of niacin (vitamin B3) and the regulation of immune responses.

The level of 3-Hydroxykynurenine is optimal.

Xanthurenic Acid is a metabolite in the kynurenine pathway, which is involved in the breakdown of the amino acid tryptophan. It has been implicated in supporting insulin levels and neurotransmitter activity.

The level of xanthurenic acid is optimal.

Creatinine levels indicate how concentrated your urine is. Low creatinine suggests the urine is too diluted, while high creatinine indicates it is overly concentrated. Different values result from hydration issues—high creatinine from not drinking enough water, and low creatinine from drinking too much water before the test. Creatinine is used to adjust lab results for accuracy and quality.

Patient:

Collection Date: 01-14-2025

Next Steps & Recommendations Summary

Since one or more markers were out of range, it is important to support the foundational production of neurotransmitters and their optimal balance by adding the Daily Foundational Protocol Level 2. Within this protocol you may choose the Daily Nutritional Support powder or Daily Multi-Vitamin capsules.

It is also suggested to add Full Spectrum Magnesium 1 capsule with lunch and 2 capsules with dinner for 90 days or longer to support neurotransmitter production.

Adding Vitamin D3 or checking Vitamin D3 levels will be important as it enhances neurotransmitter synthesis and immune modulation.

ADULTS ONLY - Consider a 7, 14, 21 day detox to support elimination of toxins that may be contributing to inflammation as well as symptoms.

Should you be experiencing any GI-related symptoms such as gas, bloating or indigestion, it is important to investigate the root cause

of those symptoms as gut imbalances can impact neurotransmitter production. Consider the Candida, Metabolic & Vitamins test as your next recommended test.

If sleep is a concern, consider adding the Sleep Help Protocol to ensure adequate sleep as a foundation for healthy neurotransmitter production.

It is important to adopt a whole food, low inflammatory diet. Ideally consuming fruits and vegetables daily with adequate protein and fiber. Ensure that you are hydrating with half of your body weight in ounces of water daily.

If taking any medications for mood please consult with your provider prior to implementing any new supplementation protocols.

When possible, exercise daily, get morning sunlight if possible and aim for or work up to 10,000 steps per day or similar exercise.

Product Recommendations

Daily Foundational Protocol Level 2

- The Daily Foundational Protocol (Powder) — Level 2 is a quick and easy morning routine to nourish the body and mind. The Level 2 protocol contains everything included in Level 1 and adds Omega-3 Support capsules that provide essential fatty acids for brain, heart health and more. [View Product](#)

Daily Nutritional Support

- Daily Nutritional Support is a vegan, hypoallergenic protein powder, fortified with a wide range of activated vitamins, minerals, antioxidants, detox co-factors, and electrolytes, making it a one-stop-shop to fill the nutritional gaps in your diet. This product is included in the Daily Foundational Protocol above, but if not using that Protocol we recommend opting for the Daily Nutritional Support. [View Product](#)

Daily Activated Multi-Vitamin

- EquiLife's Daily Activated Multi-Vitamin is a high quality source of key methylated vitamins and minerals for superior absorption to restore common deficiencies. It includes a key blend of antioxidants that protect from free radicals as well as providing essential nutrients that are necessary for supporting immune health and detoxification. The Daily Activated Multi-Vitamin is not needed for those using the Daily Nutritional Support. [View Product](#)

Full Spectrum Magnesium

- Full Spectrum Magnesium utilizes three unique delivery formats ensuring maximum absorption and effectiveness in the body. It is a superior source of magnesium for better bioavailability, helps the body to relax and achieve restful sleep, promotes improved mental clarity, and aids in muscle relaxation. [View Product](#)

Vitamin D3: High-Potency Liquid

- Vitamin D3: High-Potency Liquid is a convenient, high-potency liquid formula to quickly and easily add the benefits of Vitamin D3 to your day. This easy to digest, fat-soluble formulation tastes good and has been proven to enhance absorption and utilization in the body. [View Product](#)

Dr. Cabral Detox

- The Dr. Cabral Detox is a comprehensive, full body Functional Medicine detoxification system that gently eliminates harmful toxins while rebalancing the body at an underlying root cause level. [View Product](#)

Candida Metabolic and Vitamins Test

- The simple at-home Complete Candida, Metabolic & Vitamins Test will assess how well your digestive system is functioning, along with your energy and mood metabolites using a urine sample. Plus, you'll get a clear picture of your digestive and metabolic health and how to support any imbalances to feel your best again. [View Product](#)

Sleep Help Protocol

- The Sleep Help Protocol relaxes muscles and induces calm in the mind. It is designed to bring the synergistic benefits of our top-selling sleep support products that work together to help you get the rest you deserve. [View Product](#)