

Prepared for: Sample Report NF2
 Date of Birth: 1/1/1950

Reported On: 4/10/2026

Neuro Focus 2

Parameters	Your Results (4/10/2026)	Reference Range	Plays a Role In
Serotonin IV	14.3	63.7-105.1	Sleep cycle, depression, anxiety, carbohydrate cravings, PMS
Dopamine IV	115.3	137.0-306.3	Focus, attention, memory, motivation/drive, mood, addictive disorders
Norepinephrine IV	13.8	17.8-41.0	Energy, drive, stimulation, "fight or flight" response, sleep cycle disturbances anxiety
Epinephrine IV	0.2	1.5-4.2	"Fight or flight" response, metabolism, energy, depression, cognitive function.
Norepi/Epi Ratio	69	3.0-6.0	Ratios < 3 = restlessness, over-training Ratio > 6 = stress, tiredness, lack of focus, energy & motivation, "burn out"
GABA IV	2.4	4.4-9.8	Reduces excess stimulation. Anxiety, nervousness, restlessness, and sleep cycle
Glutamate IV	14.2	16.7-34.4	Agitation, impulsivity, anxiety, focus issues, sleep cycle disturbances, tics, migraines, headaches when elevated. Depression when low.
Histamine II	14.5	14.0-44.0	Responds to allergy and inflammation, low levels cause lethargy. High levels can contribute to poor concentration, focus, or memory, attention issues.
5HTP IV	11.8	30.4-63.9	The amino acid precursor in the synthesis of serotonin
Creatinine I	185	60.0-284.0	Determines whether sample is viable for testing (hydration/dehydration)

The information provided in this report is intended for informational purposes only. The information is not intended to replace a relationship with your physician or other healthcare professional. You should not rely on this information as professional medical advice. Always seek the advice of your physician or other qualified healthcare provider before starting, stopping or modifying any dietary supplement or before modifying or stopping any physician-prescribed treatment. In the case of a health emergency, seek immediate assistance from emergency personnel. Never delay obtaining medical advice or disregard medical advice because of something you have or have not read on this site.



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Suggested Protocol

Supplement	Morning Dosage	Lunchtime Dosage	Afternoon Dosage	Dinner Dosage	Before Bed Dosage
*M² 5-HTP 100mg					
Daily for Week 1	1 capsule(s)				
Daily for Week 2	2 capsule(s)				
Daily for Week 3	2 capsule(s)				
Daily for Week 4 and After	2 capsule(s)				
*M² DLPA					
Daily for Week 1					
Daily for Week 2					
Daily for Week 3	1 capsule(s)				
Daily for Week 4 and After	1 capsule(s)				
*M² MagComplex					
Daily for Week 1					1 capsule(s)
Daily for Week 2					2 capsule(s)
Daily for Week 3					2 capsule(s)
Daily for Week 4 and After					2 capsule(s)



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*M² Neuro Nutrients 3					
Daily	1 capsule(s)			1 capsule(s)	

*M² Omega + 850 (120 ct)					
Daily	1 softgel(s)			1 softgel(s)	

Designs for Health Digestzymes					
Daily	1 capsule(s)	1 capsule(s)		1 capsule(s)	

PHP BH4 Assist (Mood Boost)					
Daily	1 capsule(s)				

Thorne PharmaGABA 250mg					
Daily	1 capsule(s)				1 capsule(s)

Clinical Notes








BH4 contains SAME which is a significant methyl donor to help convert norepinephrine to epinephrine as well as support other biological processes that need methyl donors. BH4 is typically included when the norepi to epi ratio exceeds 19.



Clinical Notes

- Causes for neurotransmitter imbalances include genetics, stress, anxiety, excessive worries, lack of physical exercise or movement, excess alcohol intake, lack of sleep, poor nutrition, excess caffeine intake, trauma, and a lack of balance/rest/restoration.
- A broad-spectrum digestive enzyme has been suggested to improve digestion, nutrient absorption, and overall gut health. The digestive enzyme dosages in your regimen should be taken with meals.
- An evening dose of GABA was included in this regimen to help with sleep cycle. If you have difficulty waking up during the night, an additional dose can be taken at that time.
- Gut Health: Scientists consider the gastrointestinal tract the second brain (enteric nervous system). This is because it contains a network of millions of nerve cells called neurons hidden in the walls of the digestive tract that control the functions of the gastrointestinal (GI) tract, but also communicates with the brain. Gut health plays a crucial role in our ability to properly absorb nutrients and can affect every other system in the body, including the nervous system. Poor gut health can adversely affect both the synthesis and utilization of neurotransmitters and can be a large factor with neurotransmitter imbalances.
- When 5-HTP is low there can be several scenarios at play. There can be a lack of methylation aiding tryptophan converting into 5-HTP or there is a low tryptophan containing diet.
- Low catecholamines (dopamine, norepinephrine and epinephrine) can be indicative of long term low serotonin and/or GABA levels or long term GI imbalance.
- Nitric Oxide: acts as a signaling molecule in the brain, influencing the release and activity of various neurotransmitters, including dopamine and serotonin. Low levels of nitric oxide can be age related, the result of a diet poor in plant foods, in particular leafy greens, but also indicative of gastrointestinal distress. By the age of 40, nitric oxide (N.O.) levels can decrease by as much as 50% and continue to decline with advancing age. This reduction leads to compromised blood flow, adversely affecting the delivery of oxygen and essential nutrients to cells. If histamine levels are high in your panel, the GI tract should be healed prior to taking nitric oxide support.
- Neurotransmitter Explanation II: Please note that all parameters are calculated around creatinine. Higher creatinine levels will result in lower values for neurotransmitters across the board. Lower creatinine will result in higher values across the board. It is important to note that it is the ratio between specific neurotransmitters and not the individual parameters that are being assessed.
- Norepinephrine is an excitatory neurotransmitter, excreted from the adrenal gland, which is responsible for stimulatory processes in the body and is associated with energy, drive and focus. The observed values for norepinephrine indicate that your adrenals are tired.







Clinical Notes

-  The Norepinephrine to epinephrine ratio is calculated to determine the amount of adrenal (our stress organ) fatigue or over-use that is present. Levels between 3-6 are found to be optimal. Levels less than 3 are indicative of stress whether it is emotional or physical. Ratios above 6 are indicative of fatigue. Often, this ratio will be high if the body needs more of the correct form of folic acid (methylation). The body also needs methyl folate, methyl B6 and methyl B5 to convert 5HTP to serotonin.
-  A retest is recommended every 3 months to gauge your progress.
-  Serotonin: Ideally there should be 50% as much serotonin as dopamine. When the ratio between serotonin and dopamine is out of balance it can contribute to issues with cravings, focus, anxiety and depression.
-  Serotonin: Low serotonin and frequent headaches correlate highly with gluten sensitivity. Gluten is a sticky protein that impairs absorption by adhering to the lining of the GI tract. If not already doing so, please consider removal of gluten from your diet.
-  Stress can generally be divided into several categories by intensity and duration. Acute stress, episodic acute stress, and chronic stress each have a different effect on the body and how it responds. Different types of stressors, from emotional situations to food sensitivities can negatively impact the brain, gut and hormones leaving you wondering what happened to your youth and zest for life.

Lifestyle Notes

-  Diet: Get 3-4 servings of protein each day from sources such as wild fish, grass-fed beef, bison, organic chicken, turkey, beans, legumes, quinoa, tempeh, nuts and seeds. Adequate protein is needed to make neurotransmitters, hormones, enzymes, as well as to build healthy bone, muscle, skin, and hair. Protein is also vital for proper growth and development.
-  Diet: Consuming a protein rich snack before bedtime may help improve sleep cycle disturbances. Consider eating a light snack before bed such as hummus with veggie sticks, a handful of nuts or seeds, quinoa with avocado, nut butter or bean dip with gluten-free crackers, or a turkey roll up.

Lifestyle Notes

-  Avoid foods and beverages that exacerbate anxiety. Caffeine containing beverages such as coffee, tea and soft drinks are stimulants that can exacerbate the physical symptoms of anxiety. Caffeine increases stress hormones such as adrenaline and cortisol contributing to feeling jittery, with an increase in heart rate, blood pressure, and blood sugar levels. Avoid sugar as much as possible. Sugary foods such as candy, cake, pastries, ice cream, sweet drinks, and refined carbohydrates such as white flour products can result in blood sugar imbalances which can often cause or aggravate anxiety.
-  Consume Nitrate-Rich Foods: Incorporate into the diet leafy greens such as arugula, spinach, kale, and cabbage, as well as beets, and citrus fruits, as they naturally enhance nitric oxide levels.
-  A reduction in gluten containing foods is encouraged when serotonin is low. Gluten adheres to the gut wall preventing some of the absorption of serotonin into the blood stream.
-  Sleep Cycle: Establish a regular sleep routine. Mindfulness meditation or yoga before bed can promote relaxation. Avoid eating large meals 2 hours before bedtime. Avoid drinking too many fluids close to bedtime as this can result in unnecessary trips to the bathroom; disrupting sleep cycle. Avoid stimulants such as caffeine and chocolate after 12 pm. Avoid electronics that emit blue-light at least 1 hour before bed (TV, cellphones, tablets, video games).
-  Sleep: Adults should aim to get 7-9 hours of uninterrupted sleep each night. Experts estimate that preschoolers (3 to 5 years-old) need 11-13 hours of sleep, while school-aged children up to age 12 need approximately 10-11 hours of sleep. Teens need at least 9 hours.
-  Sleep: The body is naturally inclined to rise with the sun and rest when it becomes dark. With the increase exposure to technology, having resources available 24 hours a day and excess stimulation (distractions, environments, diets, activities) it can be hard to fall asleep with ease. The human body produces melatonin (the sleep hormone) when there is an absence of light which is why we get tired. Too much light suppresses melatonin (even from electronic screens).



Lifestyle Notes



Symptoms: A daily bowel movement is important to ensure waste products are eliminated efficiently, but also promotes healthy cholesterol and blood sugar levels, and may reduce the risk of gastrointestinal (GI) issues such as diverticulosis. Constipation is most commonly related to dairy and gluten containing foods as well as low fiber and lack of water. To promote regularity, incorporate at least 30 minutes of daily exercise, adequate water intake, and dietary fiber. The recommendations for fiber are 30-38 grams of fiber per day for men and 25 grams per day for women. Good dietary sources of fiber are fruits, vegetables, whole grains, legumes, and nuts/seeds. As you increase fiber in your diet, also increase fluid, preferably water, as the soluble fiber will act like a sponge to absorb the water and add bulk to your stool for easier passage through the colon. If you continue to experience constipation (i.e. not having a bowel movement every 2-3 days), contact one of our clinicians for supplement recommendations to promote more regular bowel movements.



The human body is composed of two-thirds water. Water is required for every cell, organ and tissue to transport oxygen and nutrients around the body, and to regulate temperature. It is vital for joint lubrication, detoxification, energy production, and healthy hair, skin and nails. Aim to get half your body weight in ounces of water daily. Add lemon, cucumber, mint or berries for flavor. If you exercise or spend time outdoors in a hot climate, more water is needed.



Lab Descriptions



Serotonin IV

An inhibitory neurotransmitter, often referred to as the master neurotransmitter, that plays a role in sleep cycle, depression, anxiety, carbohydrate cravings, and PMS.



Dopamine IV

Dopamine is our focus or joy related neurotransmitter. When dopamine is either elevated (inefficient) or low, symptoms of poor focus or memory, attention issues or poor stress response can be noted.



Norepinephrine IV

An excitatory neurotransmitter that is responsible for stimulatory processes in the body. Norepinephrine also converts epinephrine. This neurotransmitter can cause anxiety at elevated excretion levels, as well as some "mood dampening" effects. Low levels of norepinephrine are associated with low energy and decreased focus ability. Elevated norepinephrine levels can also cause elevated blood pressure.



Epinephrine IV

An excitatory neurotransmitter involved in the body's "fight or flight" response and regulates brain functions such as metabolism, heart rate, and blood pressure. This neurotransmitter will often be elevated when hyperactivity or anxiety is present. Long-term over-stimulation can cause epinephrine levels to be depleted. Epinephrine also regulates heart rate and blood pressure.



Norepi/Epi Ratio

Provides insight into how well the body is coping with stress (adrenal glands). Ratios less than 3 can cause restlessness and/or be due to over-training. Ratios greater than 10 may indicate stress, tiredness, lack of focus, lack of energy & motivation, and burn out.



GABA IV

An inhibitory neurotransmitter that is often referred to as nature's valium-like substance. GABA reduces excess stimulation.



Lab Descriptions



Glutamate IV

Glutamate is an excitatory or stimulating neurotransmitter that is reflective of stress. It plays a role in focus. If Glutamate is elevated, one should check labels of foods that are being consumed since MSG (monosodium glutamate) and the many names that it is called as a food additive can be the culprit. Excess glutamate levels can cause significant anxiety, restlessness, sleep cycle disturbances, tics, migraines and headaches. The body will excrete more glutamate when serotonin is low as well.



Histamine II

Histamine is a stimulating neurotransmitter that plays a role in responding to inflammation or allergy. Low levels of histamine are indicative of fatigue.



5HTP IV

A naturally occurring amino acid and chemical precursor as well as a metabolic intermediate in the biosynthesis of the neurotransmitter serotonin. Low levels may be related to poor serotonin synthesis. Elevated levels are typically related to supplementation of 5HTP.



Creatinine I

A measurement in urine which determines whether a sample is viable for testing (hydration/dehydration). Please note that all parameters are calculated around creatinine. Higher creatinine levels will result in lower values across the board. Lower creatinine will result in higher values across the board.



Product Descriptions



5-HTP is the amino acid intermediate to the mood regulating neurotransmitter serotonin. 5-HTP crosses the blood brain barrier converting into serotonin in serotonin producing nerve cells. Besides benefiting mood, supporting serotonin levels can also help fight sugar and carbohydrate cravings and improve sleep quality by converting into melatonin. Melatonin is a hormone that regulates the sleep/wake cycle.



The amino acid dl-phenylalanine is the precursor to the neurotransmitters norepinephrine, epinephrine and dopamine. These neurotransmitters are involved in mood regulation, cognitive function as well as maintaining metabolism and energy levels. DL-phenylalanine is also the precursor to the neurotransmitter PEA (phenylethylamine), which is also involved in mood and cognitive function.



Magnesium is an essential mineral responsible for over 300 enzymatic reactions in the body including neuronal activity, cardiac health, bone metabolism, hormone regulation, relaxation, activation of muscle tissue, and energy (ATP) production. Magnesium helps to reduce excessive glutamate excretion and supports the adrenals. Magnesium is a smooth muscle relaxer and will also help to keep bowels regular. MagComplex is a blend of three bio-available forms of magnesium, designed to provide optimal absorption and utilization of magnesium, while being gentle on bowels. Each capsule contains 125 mg of magnesium.



Neuro Nutrients 3 contains optimal amounts of many nutrients not easily obtained in most diets. It uses higher quality ingredients than most multivitamins, including vitamin E as high gamma mixed-tocopherols, a proprietary NatureFolate™ blend of active isomer naturally-occurring folates, and TRAACS® true amino acid chelate minerals for optimal tolerance and absorption. These exceptional ingredients are combined in an up-to-date, science-based formulation to create a truly superior multivitamin.*



EPA and DHA from fish oil promote cardiovascular health by supporting optimal triglyceride and cholesterol levels and reducing platelet aggregation. Fish oil has also been shown to promote optimal joint function and overall brain and nervous system function.



Product Descriptions



Digestzymes™ is comprised of a proprietary blend of digestive enzymes along with betaine HCL to support optimal digestion of proteins, fats, and carbohydrates. This product contains the special protease DPP IV (dipeptidyl peptidase IV), which aids in the breakdown of casomorphin (from casein) and gluteomorphin (from gluten). Digestzymes™ also includes the enzyme lactase, which helps break down the dairy sugar lactose. The use of Digestzymes™ before meals may be helpful when patients experience gas and bloating after eating, constipation, or a feeling of fullness after eating only a small quantity of food.*



BH4-Assist (MOOD BOOST) may aid in maintaining proper levels of tetrahydrobiopterin, BH4. BH4 is an important molecule that plays a critical role in both neurotransmitter and nitric oxide production, thereby supporting sexual, cardiovascular, mental & neurological health and immunity. This formulation contains two forms of folate (folinic acid & L-5-Methyltetrahydrofolate) and SAME to support proper methylation and cell production. Royal Jelly has been included for its naturally occurring Bh4. Lithium has been noted in clinical research to increase Bh4 levels.



PharmaGABA features a natural source of the inhibitory neurotransmitter – GABA. GABA supports restful sleep, acts like a "brake" on stress, and provides a focused state of mind.*