Health Report - June 30, 2024

Key Findings

How to read your report

Optimal - Your biomarker is at an **optimal** range. Keep it up!
Monitor only - Your biomarker is **trending away from the optimal range,** but not significantly enough to need immediate attention.
Pay attention - Your biomarker is **outside the optimal range** and is something to pay attention to.

Note: The provided reference ranges are preliminary and might still change slightly in the future. Values represent the marker's concentrations in micromolar (µM).

CATEGORY	CONTRIBUTING FACTORS	STEPS TO IMPROVE
Fat Burning Efficiency Pay Attention	**Factors:** • Low BMI of 16.83 • Limited exercise (1 time per week or less) • Low energy levels (rated 3 out of 5) **How they affect you:** • Your low BMI suggests a need for optimized nutrient intake to support metabolic function • Limited exercise may result in reduced metabolic rate and fat-burning efficiency • Low energy levels could indicate suboptimal fat metabolism	• Add 1-2 tablespoons of MCT oil to morning coffee or smoothies • Gradually increase exercise frequency, focusing on both cardio and strength training • Ensure adequate protein intake to support lean muscle mass
Metabolic Health Pay Attention	**Factors:** • Low BMI of 16.83 • Limited exercise (1 time per week or less) • Low energy levels (rated 3 out of 5) **How they affect you:** • Low BMI may indicate potential metabolic inefficiencies • Limited exercise can impact overall metabolic health and insulin sensitivity • Low energy levels could be a sign of suboptimal metabolic function	• Ensure adequate protein intake (at least 1.2g per kg of body weight daily) • Gradually increase exercise frequency, focusing on both cardio and strength training • Consider metabolic-supporting supplements like CoQ10 or alpha-lipoic acid
Digestive Health Pay Attention	**Factors:** • Dairy intolerance • Low vegetable intake (3-4 servings a week) • Mood swings and irritability symptoms **How they affect you:** • Dairy intolerance may affect nutrient absorption and gut microbiome balanceCertainly, I'll continue with the summary from where I left off:	• Name: Digestive Health • Your Health Factors That Can Affect Blood Values: • Dairy intolerance • Low vegetable intake (3-4 servings a week) • Mood swings and irritability symptoms • Read More on How These Health Factors Affect Your Values: • Dairy intolerance may affect nutrient absorption and gut microbiome balanceCertainly, I'll continue with the summary from where I left off:
Brain Toxins Pay Attention	**Factors:** • Modafinil medication use • Low sleep quality (rated 2 out of 5) • Mood swings and irritability symptoms **How they affect you:** • Modafinil can affect neurotransmitter levels, potentially impacting brain toxin clearance • Poor sleep quality may hinder the brain's natural detoxification processes • Mood swings could be related to imbalances in neurotransmitters or brain toxin accumulation	• Take a magnesium supplement (200-400mg daily) with professional guidance • Include magnesium-rich foods like spinach and almonds in your diet • Limit glutamate-rich foods such as processed meats and certain cheeses

CATEGORY	CONTRIBUTING FACTORS	STEPS TO IMPROVE
Longevity Pay Attention	**Factors:** • Age (35 years old) • Low BMI of 16.83 • Limited exercise (1 time per week or less) **How they affect you:** • Your age is a good time to focus on longevity-promoting habits • Low BMI may impact overall health and longevity if associated with malnutrition • Limited exercise can affect long-term health and lifespan	• Focus on a nutrient-dense, balanced diet • Gradually increase exercise frequency, including both cardio and strength training • Prioritize stress management and quality sleep
Inflammation Pay Attention	**Factors:** • History of high cholesterol • Low vegetable intake (3-4 servings a week) • Mood swings and irritability symptoms **How they affect you:** • History of high cholesterol may be associated with chronic low-grade inflammation • Low vegetable intake could result in insufficient anti-inflammatory nutrients • Mood swings and irritability may be linked to inflammatory processes	• Increase intake of fatty fish rich in omega-3s (2-3 times weekly) • Add turmeric and ginger to meals for their anti-inflammatory properties • Include a variety of colorful fruits and vegetables in your diet
Hormonal Health Pay Attention	**Factors:** • Age (35 years old) • Low BMI of 16.83 • Mood swings and irritability symptoms **How they affect you:** • Your age is a factor in natural hormonal changes • Low BMI may impact hormone production and balance • Mood swings and irritability could be related to hormonal imbalances	• Consider adaptogenic herbs like ashwagandha or rhodiola • Ensure adequate healthy fat intake for hormone production • Prioritize stress management techniques like meditation or yoga
Mental Health Optimal	**Factors:** • Mood swings and irritability symptoms • Low sleep quality (rated 2 out of 5) • Modafinil medication use **How they affect you:** • Mood swings and irritability indicate a need for mental health support • Poor sleep quality can significantly impact mental well-being • Modafinil use may influence mood and cognitive function	• Establish a consistent sleep routine and improve sleep hygiene • Practice mindfulness or meditation daily for stress reduction • Consider cognitive behavioral therapy for mood management
Heart Health Pay Attention	**Factors:** • History of high cholesterol • Limited exercise (1 time per week or less) • Low vegetable intake (3-4 servings a week) **How they affect you:** • Your history of high cholesterol indicates a need for cardiovascular health support • Limited exercise may impact heart health and cholesterol metabolism • Low vegetable intake could result in insufficient heart-healthy nutrients and antioxidants	• Increase intake of omega-3 rich foods like fatty fish, walnuts, and chia seeds • Gradually increase exercise frequency, aiming for at least 150 minutes per week • Include heart-healthy foods like leafy greens, berries, and whole grains

CATEGORY	CONTRIBUTING FACTORS	STEPS TO IMPROVE
Kidney Health Optimal	**Factors:** • Low BMI of 16.83 • Modafinil medication use • Low vegetable intake (3-4 servings a week) **How they affect you:** • Low BMI may impact overall nutrient status, potentially affecting kidney function • Modafinil use may influence kidney function and fluid balance • Low vegetable intake could result in insufficient kidney-supportive nutrients	• Ensure adequate hydration throughout the day • Include kidney-supportive foods like cranberries, blueberries, and leafy greens • Monitor blood pressure and maintain it within a healthy range
Bone Health Optimal	**Factors:** • Low BMI of 16.83 • Limited exercise (1 time per week or less) • Low vegetable intake (3-4 servings a week) **How they affect you:** • Your low BMI may indicate insufficient nutrient intake, potentially affecting bone density • Limited exercise can lead to reduced bone strength and mineral density over time • Low vegetable intake may result in inadequate calcium and vitamin K intake, crucial for bone health	• Increase calcium-rich food intake (leafy greens, fortified plant-based milk) • Incorporate weight-bearing exercises 2-3 times per week • Consider vitamin D supplementation after consulting with a healthcare provider
Colorectal Carcinogens Optimal	**Factors:** • Low vegetable intake (3-4 servings a week) • Low fruit intake (1-2 servings a week) • Limited exercise (1 time per week or less) **How they affect you:** • Low vegetable and fruit intake may result in insufficient fiber, antioxidants, and protective compounds • Limited exercise can slow down bowel transit time, potentially increasing exposure to carcinogens • Your optimal deoxycholic acid levels suggest good colorectal health despite these factors	• Gradually increase fiber intake through vegetables, fruits, and whole grains • Aim for at least 30 minutes of moderate exercise most days of the week • Stay hydrated to support healthy bowel function
Liver Health Optimal	**Factors:** • History of high cholesterol • Modafinil medication use • Low vegetable intake (3-4 servings a week) **How they affect you:** • History of high cholesterol may impact liver function and metabolism • Modafinil is processed by the liver and may influence its function • Low vegetable intake could result in insufficient liver-supportive nutrients	• Include liver-supportive foods like garlic, beets, and cruciferous vegetables • Consider milk thistle supplementation with professional guidance • Maintain a balanced diet and avoid excessive alcohol consumption
Immune Health Optimal	**Factors:** • Low vegetable intake (3-4 servings a week) • Low fruit intake (1-2 servings a week) • Limited exercise (1 time per week or less) **How they affect you:** • Low vegetable and fruit intake may result in insufficient immune-boosting nutrients • Limited exercise can impact immune system function and regulation • Your optimal spermidine levels suggest good immune health despite these factors	• Increase intake of colorful fruits and vegetables rich in antioxidants • Gradually increase exercise frequency to support immune function • Consider immune-supporting supplements like vitamin C or zinc

CATEGORY	CONTRIBUTING FACTORS	STEPS TO IMPROVE
Omega-3 fatty acid balance Optimal	**Factors:** • Low fish/seafood intake (not mentioned in dietary habits) • Low vegetable intake (3-4 servings a week) • History of high cholesterol **How they affect you:** • Low fish/seafood intake may result in insufficient omega-3 fatty acids • Low vegetable intake could limit plant-based sources of omega-3s • History of high cholesterol suggests a need for improved omega-3 balance	• Include fatty fish like salmon or sardines 2-3 times weekly • Add chia seeds or ground flaxseeds to meals for plant-based omega-3s • Consider a high-quality omega-3 supplement if dietary intake is insufficient
Stress Optimal	**Factors:** • Mood swings and irritability symptoms • Low sleep quality (rated 2 out of 5) • Low energy levels (rated 3 out of 5) **How they affect you:** • Mood swings and irritability may be signs of chronic stress • Poor sleep quality can both result from and contribute to increased stress levels • Low energy levels could be related to chronic stress and its impact on the body	• Practice daily stress-reduction techniques like deep breathing or meditation • Improve sleep hygiene and establish a consistent sleep routine • Consider adaptogens like ashwagandha or rhodiola for stress support
Gut Microbiome Health Optimal	**Factors:** • Dairy intolerance • Low vegetable intake (3-4 servings a week) • Low fruit intake (1-2 servings a week) **How they affect you:** • Dairy intolerance may alter your gut microbiome composition • Low vegetable and fruit intake can result in insufficient prebiotic fiber for beneficial gut bacteria • Your optimal indolepropionic acid levels suggest good gut health despite these factors	• Gradually increase fiber intake through diverse plant-based foods • Consider a high-quality probiotic supplement • Experiment with fermented foods like sauerkraut or kimchi
Oxidative Stress Optimal	**Factors:** • Low vegetable intake (3-4 servings a week) • Low fruit intake (1-2 servings a week) • Limited exercise (1 time per week or less) **How they affect you:** • Low vegetable and fruit intake may result in insufficient antioxidants • Limited exercise can impact the body's natural antioxidant defenses • Your optimal hypoxanthine-to-xanthine ratio suggests good oxidative stress management	• Increase intake of colorful fruits and vegetables rich in antioxidants • Gradually increase exercise frequency to boost natural antioxidant defenses • Consider antioxidant supplements like vitamin C or E with professional guidance
Health Booster	**Factors:** • Low coffee intake (1 serving a month) • Taurine supplementation • Low energy levels (rated 3 out of 5) **How they affect you:** • Your low coffee intake may limit exposure to certain beneficial compounds found in coffee • Taurine supplementation is a positive factor for overall health • Low energy levels suggest a need for additional health-boosting strategies	• Consider moderate coffee consumption (1-2 cups daily) if tolerated • Maintain taurine supplementation as directed • Explore other antioxidant-rich beverages like green tea

Your Recommendations

How to Use These Recommendations

Start Here: Begin with the top 2-4 recommendations labeled as "High" priority. These are designed to have the most significant impact on your health.
Take Action: Follow the action steps provided for each recommendation consistently.
Track Your Progress: Take iollo tests every 2-3 months to monitor your health and biomarker levels. Adjust your actions based on the results to see continuous improvements.

Note: These **recommendations are prioritized** to help you achieve the best health outcomes. Focus on the high-priority items first, then move on to others as you see fit.

RECOMMENDATION	ACTION STEPS	PRIORITY & IMPACT	WHY IT`S GOOD FOR YOU
Boost Glutamine Levels for Digestive Health	• Include glutamine-rich foods like bone broth, cabbage, and spinach in your diet. • Consider a glutamine supplement (5-10g per day) with guidance from a healthcare professional. • Engage in stress-reducing activities to support glutamine levels.	**High** *Improved digestive health, enhanced gut lining integrity, and better overall well-being:* • Digestive Health • Gut Lining Integrity • Overall Well-being *Improves your values for:* • Glutamine (currently 3.146µM, pay attention)	Your low glutamine levels (3.146µM, pay attention) indicate a need for digestive support. Given your dairy intolerance and symptoms of mood swings and irritability, boosting glutamine levels can help improve gut health, which is closely linked to mood regulation. This recommendation addresses your specific digestive needs and may contribute to better overall well-being and energy levels.
Enhance Fat-Burning Efficiency with MCT Oil	• Add 1-2 tablespoons of MCT oil to your morning coffee or smoothie. • Use MCT oil as a salad dressing or drizzle over cooked vegetables. • Gradually increase the dosage to avoid gastrointestinal discomfort.	**High** *Improved fat-burning efficiency, increased energy levels, and enhanced metabolic health:* • Fat-Burning Efficiency • Energy Levels • Metabolic Health *Improves your values for:* • Hydroxybutyrylcarnitine (currently 4.233µM, pay attention) • BMI (currently 16.83)	Your elevated hydroxybutyrylcarnitine levels (4.233µM, pay attention) indicate a need to improve fat-burning efficiency. Given your low BMI of 16.83 and focus on being more energetic and productive, incorporating MCT oil can provide a quick source of energy and support ketone production. This can help optimize your fat metabolism and address your specific metabolic needs.
Incorporate Anti-Inflammatory Foods to Lower Arachidonic Acid	• Increase your intake of fatty fish like salmon, mackerel, and sardines to 2-3 times per week. • Add turmeric and ginger to your meals for their anti-inflammatory properties. • Use olive oil as your primary cooking oil. • Include a daily serving of walnuts or chia seeds for additional omega-3s.	**High** *Reduced inflammation, improved cardiovascular health, and enhanced overall well-being:* • Inflammation • Cardiovascular Health • Overall Well-being *Improves your values for:* • Arachidonic acid (currently 9.716µM, pay attention)	Your elevated arachidonic acid levels (9.716µM, pay attention) indicate a need to address inflammation. Given your history of high cholesterol and focus on long-term health, incorporating anti-inflammatory foods can help balance your omega-3 to omega-6 ratio and support cardiovascular health. This tailored approach addresses your specific inflammatory markers and aligns with your health goals.

RECOMMENDATION	ACTION STEPS	PRIORITY & IMPACT	WHY IT`S GOOD FOR YOU
Optimize Protein Intake for Metabolic Health	• Increase your intake of lean protein sources such as chicken breast, turkey, and fish. • Incorporate plant-based proteins like lentils, chickpeas, and quinoa into your meals. • Aim for a protein intake of at least 1.2 grams per kilogram of body weight per day. • Consider a high-quality protein supplement if dietary intake is insufficient.	**High** *Significant improvement in metabolic health, muscle maintenance, and energy levels:* • Metabolic Health • Muscle Maintenance • Energy Levels *Improves your values for:* • Leucine (currently 264.829µM, pay attention) • Asparagine (currently 14.763µM, pay attention) • BMI (currently 16.83)	Given your suboptimal markers for metabolic health, including elevated leucine levels (264.829µM, pay attention) and low asparagine levels (14.763µM, pay attention), optimizing your protein intake is crucial. Your current BMI of 16.83 indicates potential underweight status, which further emphasizes the need for adequate protein intake. By increasing your protein consumption, you can support muscle maintenance, improve metabolic function, and address your goal of being more energetic and productive.
Reduce Glutamate Levels with Magnesium Supplementation	• Take a magnesium supplement (200-400mg per day) with guidance from a healthcare professional. • Include magnesium-rich foods like almonds, spinach, and black beans in your diet. • Avoid excessive intake of glutamate-rich foods like processed meats and certain cheeses.	**High** *Reduced brain toxins, improved mental clarity, and enhanced neurological function:* • Brain Health • Mental Clarity • Neurological Function *Improves your values for:* • Glutamate (currently 336.865µM, pay attention)	Your elevated glutamate levels (336.865µM, pay attention) suggest a need to address brain toxins. Given your symptoms of mood swings and irritability, and your goal to improve mental clarity, reducing glutamate levels through magnesium supplementation can be particularly beneficial. This approach targets your specific neurological needs and may help alleviate mood-related symptoms.
Boost Energy with Coenzyme Q10 (CoQ10)	• Take a CoQ10 supplement (100-200mg per day) with guidance from a healthcare professional. • Include CoQ10-rich foods like organ meats, fatty fish, and spinach in your diet.	**Medium** *Increased energy levels, improved mitochondrial function, and enhanced overall well-being:* • Energy Levels • Mitochondrial Function • Overall Well-being *Improves your values for:* • Energy levels (currently rated 3 out of 5) • Lactate (currently 20476.982µM, pay attention)	Given your goal to be more energetic and productive, and your current energy level rating of 3 out of 5, supplementing with CoQ10 can be particularly beneficial. CoQ10 plays a crucial role in energy production at the cellular level and can help address your specific energy concerns. This tailored approach complements your current supplement regimen and may contribute to improved overall energy levels and mitochondrial function.

RECOMMENDATION	ACTION STEPS	PRIORITY & IMPACT	WHY IT`S GOOD FOR YOU
Enhance Mood and Energy with B-Vitamins	• Take a high-quality B-complex supplement daily. • Include B-vitamin-rich foods like eggs, leafy greens, and whole grains in your diet. • Consider a sublingual B12 supplement if you have absorption issues.	**Medium** *Improved mood, increased energy levels, and enhanced mental health:* • Mood • Energy Levels • Mental Health *Improves your values for:* • Energy levels (currently rated 3 out of 5)	Given your symptoms of mood swings and irritability, and your goal to be more energetic and productive, enhancing your B-vitamin intake can be particularly beneficial. B-vitamins play a crucial role in energy production and neurotransmitter synthesis, which can help address your specific mood and energy concerns. This tailored approach complements your current supplement regimen of taurine and may contribute to better overall mental health.
Improve Sleep Quality with a Consistent Routine	• Establish a consistent sleep schedule by going to bed and waking up at the same time every day. • Create a relaxing bedtime routine, such as reading or taking a warm bath. • Avoid screens and bright lights at least an hour before bed. • Consider using a white noise machine or earplugs to minimize disturbances.	**Medium** *Enhanced sleep quality, improved mental health, and better overall well-being:* • Sleep Quality • Mental Health • Overall Well-being *Improves your values for:* • Sleep quality (currently rated 2 out of 5)	Your current sleep quality rating of 2 out of 5 indicates a need for improvement. Given your symptoms of mood swings and irritability, and your goal to be more energetic and productive, enhancing sleep quality can have a significant impact on your overall well-being. This personalized approach addresses your specific sleep issues and may contribute to better mood regulation and increased energy levels.
Incorporate Mindfulness Practices for Stress Reduction	• Set aside 5-10 minutes daily for mindfulness meditation or deep breathing exercises. • Use apps like Headspace or Calm for guided meditation sessions. • Practice mindful eating by focusing on the sensory aspects of your food.	**Medium** *Reduced stress, improved mental health, and enhanced overall well-being:* • Stress Management • Mental Health • Overall Well-being *Improves your values for:* • Cortisol (currently 0.258µM, optimal)	Given your symptoms of mood swings and irritability, and your goal to be more energetic and productive, incorporating mindfulness practices can be particularly beneficial. Mindfulness can help reduce stress, improve emotional regulation, and enhance overall well-being. This personalized approach addresses your specific mood-related concerns and may contribute to better stress management and mental clarity.
Support Hormonal Health with Adaptogens	• Incorporate adaptogenic herbs like ashwagandha, rhodiola, and holy basil into your daily routine. • Take an ashwagandha supplement (300-500mg per day) with guidance from a healthcare professional. • Add rhodiola to your morning smoothie or tea.	**Medium** *Improved hormonal balance, enhanced stress resilience, and better overall well-being:* • Hormonal Health • Stress Resilience • Overall Well-being *Improves your values for:* • Dehydroepiandrosterone sulfate (currently 3.686µM, pay attention)	Your elevated dehydroepiandrosterone sulfate levels (3.686µM, pay attention) suggest a need for hormonal support. Given your symptoms of mood swings and irritability, and your goal to be more energetic and productive, adaptogens can help balance your hormones and improve stress resilience. This personalized approach addresses your specific hormonal imbalances and may contribute to better mood regulation and energy levels.

Your Health Categories

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
Fat Burning Efficiency			
Hydroxybutyrylcarnitine Hydroxybutyrylcarnitine is a key helper in our body's process of breaking down small fat molecules to create energy. Higher levels in blood have been associated with the risk to develop insulin resistance and diabetes. References [1, 2]	4.23 points	less than 1.48 points	Pay Attention
Palmitoylcarnitine Palmitoylcarnitine serves as a transport form for fat, enabling cells to convert it into energy. The presence of palmitoylcarnitine in the bloodstream signifies a disruption in this fat metabolism process. Research has demonstrated that increased blood concentrations may be linked to diminished heart function. References [1, 2]	0.65 µM	less than 1.68 µM	Optimal
Metabolic Health			
Asparagine Asparagine is a naturally occurring amino acid that plays a crucial role in cellular processes, including energy metabolism and protein synthesis. Research has shown that low levels of asparagine may be linked to an increased risk of developing diabetes in the future. References [1, 2, 3]	14.76 µM	higher than 21.48 µM	Pay Attention
Leucine Leucine is a branched-chain amino acid. High levels have been associated with diabetes, obesity, and cardiovascular disease. This can be a sign of an unhealthy lifestyle and might affect people of all weight ranges, not just those who are overweight. References [1, 2]	0.26 mM	less than 0.18 mM	Pay Attention
Lactate Lactate is a byproduct of sugar breakdown in your body, especially during physical exercise. High levels of this metabolite in a fasting state have been associated with various metabolic conditions, including obesity, dyslipidemia and hypertension. References [1, 2, 3, 4]	20.48 mM	less than 14.48 mM	Pay Attention
Isoleucine Isoleucine is a branched-chain amino acid. High levels have been associated with diabetes, obesity, and cardiovascular disease. This can be a sign of an unhealthy lifestyle and might affect people of all weight ranges, not just those who are overweight. References [1, 2]	0.11 mM	less than 0.097 mM	Monitor only
Aromatic amino acids This measure determines the concentrations of certain amino acids in your blood. High levels have been associated with insulin resistance and future diabetes. References [1, 2]	0.23 mM	less than 0.23 mM	Monitor only
Serine Serine is an amino acid with various roles in the body, including the protein synthesis, supporting the immune system, and the generation of essential phospholipids. Low levels have been associated with type 1 and type 2 diabetes. References [1]	0.29 mM	higher than 0.068 mM	Optimal

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
Tyrosine Tyrosine is an amino acid in your body and one of the building blocks of proteins. High levels in blood have been associated with insulin resistance and an increased risk for diabetes. References [1, 2, 3]	64.05 µM	less than 78.29 µM	Optimal
Alpha-aminoadipic acid Alpha-aminoadipic acid is an amino acid in your body. A clinical study has shown that it is a biomarker for future diabetes. References [1, 2, 3, 4]	1.2 µM	less than 1.38 µM	Optimal
Choline-to-betaine ratio Choline and betaine are common nutrients and serve as building blocks for fat molecules. An increased choline-to-betaine ratio has been associated with heart disease and liver disease. References [1, 2, 3, 4]	3.22 µM/µM	less than 4.44 µM/µM	Optimal
Diglycerides Diglycerides are a type of fat that your body uses for energy. High levels in blood have been shown to interfere with sugar regulation, which might increase the risk for diabetes and metabolic disease. References [1, 2]	7.58 points	less than 9.93 points	Optimal
Phospholipids Phospholipids are a type of building block for all cells in the body and have been associated with insulin resistance which lead to high blood sugar levels and increased risk of diabetes. References [1, 2, 3]	4.32 points	higher than 3.97 points	Optimal
Digestive Health			
Glutamine Glutamine is an amino acid that is found in high amounts in blood and is an important source of energy for many tissues in the body. Low levels have been linked to damage to the lining of the intestines, which may contribute to inflammatory bowel syndrome, leaky gut syndrome, and other gastrointestinal diseases. References [1, 2]	3.15 µM	higher than 111.57 µM	Pay Attention
Brain Toxins			
Glutamate Glutamate is an amino acid that has been found to be toxic for the brain. It has been found to be elevated in various neurological diseases, such as multiple sclerosis and Parkinson's disease. References [1, 2, 3, 4, 5]	0.34 mM	less than 0.28 mM	Pay Attention
Glycodeoxycholic acid GDCA is a molecule produced by the bacteria in your gut. High concentrations have been associated with cognitive decline in the context of Alzheimer's disease. References [1, 2, 3]	0.085 µM	less than 0.38 µM	Optimal
Glycolithocholic acid GLCA is a molecule produced by the bacteria in your gut. High concentrations have been associated with cognitive decline in the context of Alzheimer's disease. References [1, 2, 3]	2.2 nM	less than 15.17 nM	Optimal

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
Longevity			
Methionine Methionine is one of the essential amino acids your body needs for basic functioning. However, too high levels of methionine have been associated with heart problems and accelerated aging. References [1, 2, 3, 4]	35.25 µM	less than 29.43 µM	Pay Attention
Taurine Taurine is a nutrient in our bodies that reduces as we age. Studies have shown that when animals have more taurine, they live longer and are healthier. In humans, low taurine levels are associated with several age-related health problems. Additionally, exercise appears to increase our body's taurine levels, suggesting its potential role in maintaining our health as we age. References [1]	0.18 mM	higher than 0.098 mM	Optimal
Heart Health			
Asymmetric dimethylarginine ADMA is a byproduct of protein breakdown and plays a role in regulating blood vessel function. It can interfere with a molecule called nitric oxide, which helps our blood vessels relax and maintain a healthy blood flow. High levels of ADMA have been linked to cardiovascular diseases and other health issues. References [1, 2]	0.67 µM	less than 0.52 µM	Pay Attention
Succinate Succinate is a substance involved in central metabolic processes in the body. High levels have been associated with heart-related conditions, such as hypertension, ischemic heart disease, and diabetes. References [1, 2, 3]	37.49 µM	less than 26.21 µM	Pay Attention
3-Methylhistidine 3-Methylhistidine is a biomarker for poultry consumption, such as chicken, turkey, duck, and others. High levels may indicate a high consumption of poultry. While lean poultry, like chicken breast, may be healthy, consuming too much poultry that contains fat, such as chicken skin, may increase your cholesterol levels which in turn has been associated with heart diseases. References [1, 2, 3, 4]	0.25 µM	less than 23.21 µM	Optimal
Homoarginine Homoarginine is a molecule involved in the regulation of blood pressure and the functioning of the immune system. Low levels of homoarginine have been linked to an increased risk of cardiovascular disease. References [1, 2, 3]	1.07 µM	higher than 0.41 µM	Optimal
Ceramide 18:0 Ceramides are a type of fat that regulate various processes in the body. The particular ceramide reported here called "18:0" has been reported to predict future heart events, such as myocardial infarction. References [1, 2]	0.94 points	less than 1.4 points	Optimal
Triglycerides Triglycerides are a type of fat that your body uses for energy. High levels or too much of it in blood have been associated with various heart-related conditions. References [1, 2]	112.05 points	less than 144.36 points	Optimal
Inflammation			

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
Arachidonic acid Arachidonic acid is an omega-6 fatty acid that is involved in the regulation of inflammation in the body. High levels have been associated with various metabolic diseases, including obesity, diabetes, non-alcoholic fatty liver disease, and cardiovascular disease. References [1, 2]	9.72 points	less than 2.42 points	Pay Attention
Kynurenine-to-Tryptophan ratio An increased kynurenine-to-tryptophan ratio has been associated with inflammation and various related diseases, such as diabetes and cardiovascular disease, liver issues, a weakened immune system, and the risk for certain types of cancer. References [1, 2, 3, 4]	13.47 nM/µM	less than 47.83 nM/µM	Optimal
Hormonal Health			
Dehydroepiandrosterone sulfate DHEAS is a sex hormone found in both men and women. It controls heart rate, blood pressure, and other functions in your body. You have high levels of DHEAS. This can be associated with hair loss or excessive hair growth, acne, and dysfunction of the reproductive system in women. References [1, 2]	3.69 µM	0.46 to 2.8 µM	Pay Attention
Mental Health			
Acetylcarnitine Acetylcarnitine is a metabolite related to energy metabolism in your body. Low levels have been associated with depression, narcolepsy, as well as Alzheimer's disease and dementia. References [1, 2, 3, 4, 5]	13.06 µM	higher than 4.48 µM	Optimal
Indoxyl sulfate Indoxyl sulfate is a toxin produced by specific bacteria in your gut when they break down the amino acid tryptophan, which is contained in some foods. High Indoxyl sulfate levels can increase the risk for anxiety, depression, and dementia. References [1, 2, 3, 4, 5, 6, 7, 8, 9]	0.16 µM	less than 4.38 µM	Optimal
Kidney Health			
Symmetric dimethylarginine SDMA is a byproduct of proteins breaking down in your body and is passed out by your kidneys. Studies have demonstrated that SDMA in blood reflects kidney function better than the commonly used eGFR measurement. High blood levels of SDMA have been shown to be an early sign of kidney damage. References [1, 2, 3]	0.25 µM	less than 0.4 µM	Optimal
p-Cresol sulfate p-Cresol sulfate is a so-called uremic toxin produced by specific bacteria in your gut when they consume the amino acid tyrosine contained in certain foods in your diet. High levels of this chemical have been shown to damage your kidneys. References [1, 2, 3, 4, 5]	0.3 µM	less than 50.11 µM	Optimal
Bone Health			

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
trans-Hydroxyproline Trans-Hydroxyproline is a molecule involved in the production of collagen, a protein that provides structure and support to tissues in your body. High levels of trans-hydroxyproline have been linked to an increased risk of osteoporosis, a condition in which the bones become weak and fragile. PC References [1, 2, 3, 4, 5]	9.79 µM	less than 24.14 µM	Optimal
Colorectal Carcinogens			
Deoxycholic acid DCA is a molecule produced by bacteria in your gut. A long stool transit time causes the accumulation of this molecule in the intestines. This molecule damages cells in your colon and may lead to the development of colorectal cancer. References [1, 2, 3, 4]	0.039 µM	less than 0.38 µM	Optimal
Liver Health			
Glycocholic acid GCA is a molecule produced by the bacteria in your gut and has been shown to be an indicator of liver function. High levels in blood have been associated with liver diseases, scarring and dysfunction. References [1, 2, 3, 4, 5, 6, 7, 8, 9]	0.73 µM	less than 0.92 µM	Optimal
Fischer's ratio This measure determines the balance of certain amino acids in your blood. A low level has been associated with liver disease. References [1, 2, 3, 4]	2.84 µM/µM	higher than 1.85 µM/µM	Optimal
Immune Health			
Spermidine Spermidine is a beneficial molecule that has been found to be anti-inflammatory, to boost the immune system, and to generally slow down the process of aging. Low levels may indicate issues with your immune system and stress levels. References [1, 2, 3, 4, 5, 6]	4.12 µM	higher than 2.33 µM	Optimal
Omega-3 fatty acid balance			
Docosahexaenoic Acid DHA is an omega-3 fatty acid, which is an essential fat that improves health. High levels have an anti-inflammatory and antioxidant effect in the body. Low levels have been linked to various health-related issues, such as multiple sclerosis and Parkinson's disease. References [1, 2, 3, 4]	1.79 µM	higher than 1.21 µM	Optimal
Stress			
Cortisol Cortisol is a hormone that helps your body respond to stress. High levels of cortisol might indicate acute or chronic stress. Please note that cortisol levels are also higher in the morning and can be increased by coffee consumption. References [1, 2, 3]	0.26 µM	less than 0.3 µM	Optimal
Gut Microbiome Health			

MARKER	RESULT	OPTIMAL RANGE	CLASSIFICATION
Indolepropionic acid Indolepropionic acid is a molecule produced by the bacteria in your gut and has neuroprotective and antioxidant effects. Low levels have been linked to an imbalance in the gut microbiome that could lead to higher risk of heart, metabolic and neurodegenerative diseases. References [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]	1.23 µM	higher than 0.11 µM	Optimal
Oxidative Stress			
Hypoxanthine-to-Xanthine ratio Xanthine and Hypoxanthine are two molecules involved in the degradation of purines, the building blocks of DNA and RNA. An increased hypoxanthine-to-xanthine ratio has been associated with oxidative stress in various diseases. References [1, 2, 3, 4, 5, 6]	12.73 µM/µM	less than 39.29 µM/µM	Optimal
Health Booster			
Trigonelline Trigonelline is an antioxidant plant hormone, or “phytohormone”, that has been suggested to have beneficial effects for humans, including sugar regulation and protection of the brain. References [1, 2, 3, 4]	1.49 µM	higher than 4.16 µM	Normal

Fat Burning Efficiency
Pay Attention

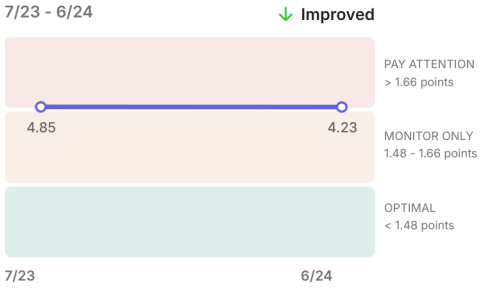
Hydroxybutyrylcarnitine (Butyryl C)
Pay Attention

What was measured in your blood?

Hydroxybutyrylcarnitine. Your value is 4.23 points, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 1.48 points
Monitor only: 1.48 to 1.66 points
Pay Attention: higher than 1.66 points

Pay Attention



What is it?

Hydroxybutyrylcarnitine is a key helper in our body's process of breaking down small fat molecules to create energy. Higher levels in blood have been associated with the risk to develop insulin resistance and diabetes.

References [1, 2]

Fat Burning Efficiency

Pay Attention

Palmitoylcarnitine (Palm C)

Optimal

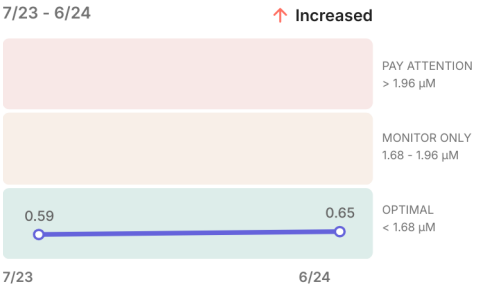
What was measured in your blood?

Palmitoylcarnitine. Your value is 0.65 µM, which is in the **optimal** range.

Reference ranges:

Optimal: less than 1.68 µM
Monitor only: 1.68 to 1.96 µM
Pay Attention: higher than 1.96 µM

Optimal



What is it?

Palmitoylcarnitine serves as a transport form for fat, enabling cells to convert it into energy. The presence of palmitoylcarnitine in the bloodstream signifies a disruption in this fat metabolism process. Research has demonstrated that increased blood concentrations may be linked to diminished heart function.

References [1, 2]

Metabolic Health
Pay Attention

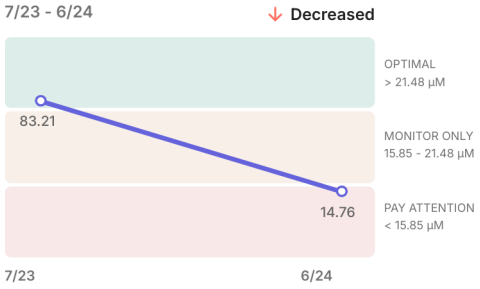
Asparagine (Asp)
Pay Attention

What was measured in your blood?

Asparagine. Your value is 14.76 µM, which is **lower** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: higher than 21.48 µM
Monitor only: 15.85 to 21.48 µM
Pay Attention: less than 15.85 µM

Pay Attention



What is it?

Asparagine is a naturally occurring amino acid that plays a crucial role in cellular processes, including energy metabolism and protein synthesis. Research has shown that low levels of asparagine may be linked to an increased risk of developing diabetes in the future.

References [1, 2, 3]

Metabolic Health
Pay Attention

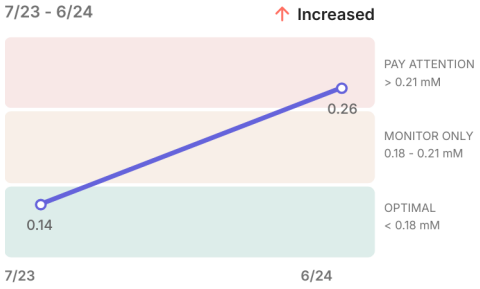
Leucine
Pay Attention

What was measured in your blood?

Leucine. Your value is 0.26 mM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 0.18 mM
Monitor only: 0.18 to 0.21 mM
Pay Attention: higher than 0.21 mM

Pay Attention



What is it?

Leucine is a branched-chain amino acid. High levels have been associated with diabetes, obesity, and cardiovascular disease. This can be a sign of an unhealthy lifestyle and might affect people of all weight ranges, not just those who are overweight.

References [1, 2]

Metabolic Health
Pay Attention

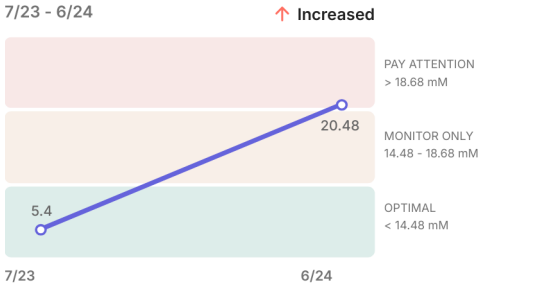
Lactate
Pay Attention

What was measured in your blood?

Lactate. Your value is 20.48 mM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 14.48 mM
Monitor only: 14.48 to 18.68 mM
Pay Attention: higher than 18.68 mM

Pay Attention



What is it?

Lactate is a byproduct of sugar breakdown in your body, especially during physical exercise. High levels of this metabolite in a fasting state have been associated with various metabolic conditions, including obesity, dyslipidemia and hypertension.

References [1, 2, 3, 4]

Metabolic Health

Pay Attention

Isoleucine

Monitor Only

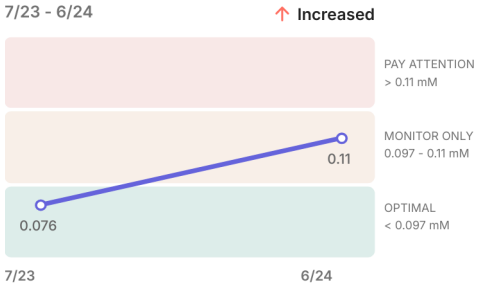
What was measured in your blood?

Isoleucine. Your value is 0.11 mM, which is **slightly higher** compared to the optimal range. This puts you in the **monitor only** range, meaning that your values are trending towards levels considered outside of the optimal range.

Reference ranges:

Optimal: less than 0.097 mM
Monitor only: 0.097 to 0.11 mM
Pay Attention: higher than 0.11 mM

Monitor only



What is it?

Isoleucine is a branched-chain amino acid. High levels have been associated with diabetes, obesity, and cardiovascular disease. This can be a sign of an unhealthy lifestyle and might affect people of all weight ranges, not just those who are overweight.

References [1, 2]

Metabolic Health
Pay Attention

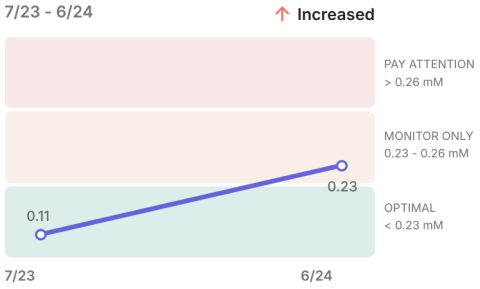
Aromatic amino acids (Aro-AAs)
Monitor Only

What was measured in your blood?

Aromatic amino acids. Your value is 0.23 mM, which is **slightly higher** compared to the optimal range. This puts you in the **monitor only** range, meaning that your values are trending towards levels considered outside of the optimal range.

Reference ranges:
Optimal: less than 0.23 mM
Monitor only: 0.23 to 0.26 mM
Pay Attention: higher than 0.26 mM

Monitor only



What is it?

This measure determines the concentrations of certain amino acids in your blood. High levels have been associated with insulin resistance and future diabetes.

This marker includes the following molecules: Phenylalanine, Tryptophan, Tyrosine.

References [1, 2]

Metabolic Health

Pay Attention

Serine

Optimal

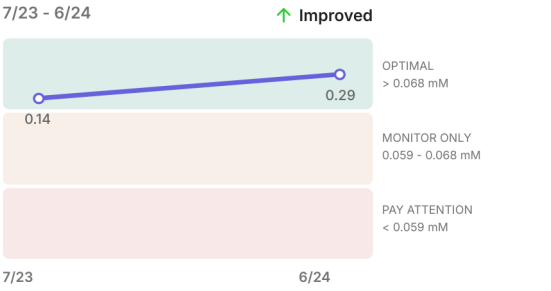
What was measured in your blood?

Serine. Your value is 0.29 mM, which is in the **optimal** range.

Reference ranges:

Optimal: higher than 0.068 mM
Monitor only: 0.059 to 0.068 mM
Pay Attention: less than 0.059 mM

Optimal



What is it?

Serine is an amino acid with various roles in the body, including the protein synthesis, supporting the immune system, and the generation of essential phospholipids. Low levels have been associated with type 1 and type 2 diabetes.

References [1]

Metabolic Health
Pay Attention

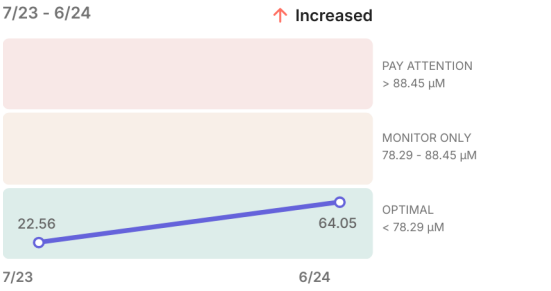
Tyrosine
Optimal

What was measured in your blood?

Tyrosine. Your value is 64.05 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 78.29 µM
Monitor only: 78.29 to 88.45 µM
Pay Attention: higher than 88.45 µM

Optimal



What is it?

Tyrosine is an amino acid in your body and one of the building blocks of proteins. High levels in blood have been associated with insulin resistance and an increased risk for diabetes.

References [1, 2, 3]

Metabolic Health
Pay Attention

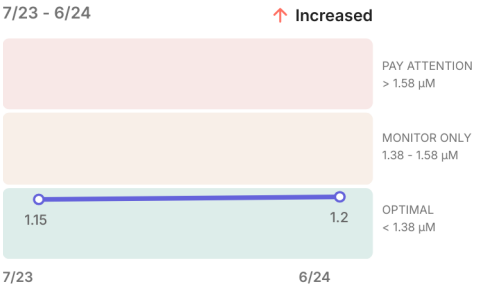
Alpha-aminoadipic acid (alpha-AAA)
Optimal

What was measured in your blood?

Alpha-aminoadipic acid. Your value is 1.2 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 1.38 µM
Monitor only: 1.38 to 1.58 µM
Pay Attention: higher than 1.58 µM

Optimal



What is it?

Alpha-aminoadipic acid is an amino acid in your body. A clinical study has shown that it is a biomarker for future diabetes.

References [1, 2, 3, 4]

Metabolic Health
Pay Attention

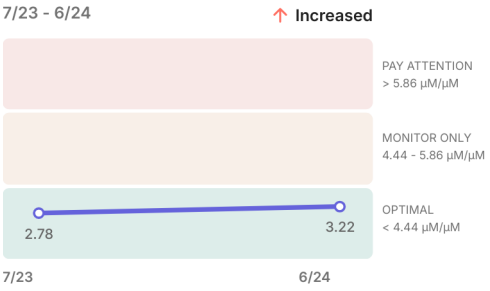
Choline-to-betaine ratio (CB ratio)
Optimal

What was measured in your blood?

Choline-to-betaine ratio. Your value is 3.22 µM/µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 4.44 µM/µM
Monitor only: 4.44 to 5.86 µM/µM
Pay Attention: higher than 5.86 µM/µM

Optimal



What is it?

Choline and betaine are common nutrients and serve as building blocks for fat molecules. An increased choline-to-betaine ratio has been associated with heart disease and liver disease.

References [1, 2, 3, 4]

Metabolic Health

Pay Attention

Diglycerides (DGs) Beta

Optimal

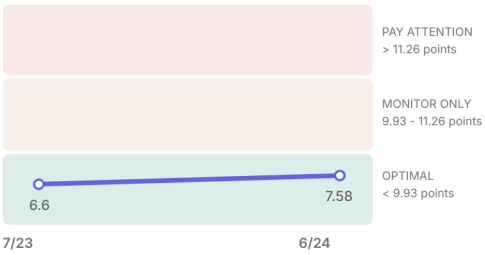
What was measured in your blood?

Diglycerides. Your value is 7.58 points, which is in the **optimal** range.

Reference ranges:
Optimal: less than 9.93 points
Monitor only: 9.93 to 11.26 points
Pay Attention: higher than 11.26 points

Optimal

7/23 - 6/24 ↑ Increased



What is it?

Diglycerides are a type of fat that your body uses for energy. High levels in blood have been shown to interfere with sugar regulation, which might increase the risk for diabetes and metabolic disease.

This marker includes the following molecules: DG(16:0_18:2), DG(16:0_20:0), DG(16:1_18:0), DG(16:1_18:2), and others.

References [1, 2]

Metabolic Health

Pay Attention

Phospholipids (PCs) Beta

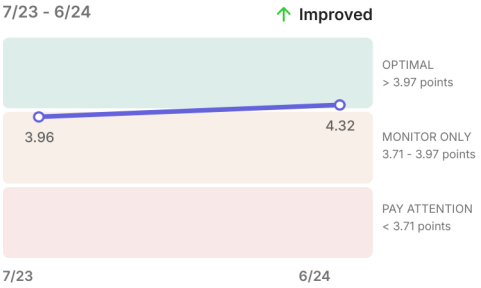
Optimal

What was measured in your blood?

Phospholipids. Your value is 4.32 points, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 3.97 points
Monitor only: 3.71 to 3.97 points
Pay Attention: less than 3.71 points

Optimal



What is it?

Phospholipids are a type of building block for all cells in the body and have been associated with insulin resistance which lead to high blood sugar levels and increased risk of diabetes.

This marker includes the following molecules: PC ae C34:0, PC ae C34:1, PC ae C36:3, PC ae C44:5, and others.

References [1, 2, 3]

Digestive Health
Pay Attention

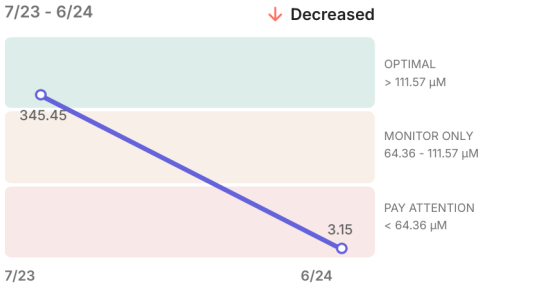
Glutamine
Pay Attention

What was measured in your blood?

Glutamine. Your value is 3.15 µM, which is **lower** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: higher than 111.57 µM
Monitor only: 64.36 to 111.57 µM
Pay Attention: less than 64.36 µM

Pay Attention



What is it?

Glutamine is an amino acid that is found in high amounts in blood and is an important source of energy for many tissues in the body.

Low levels have been linked to damage to the lining of the intestines, which may contribute to inflammatory bowel syndrome, leaky gut syndrome, and other gastrointestinal diseases.

References [1, 2]

Brain Toxins
Pay Attention

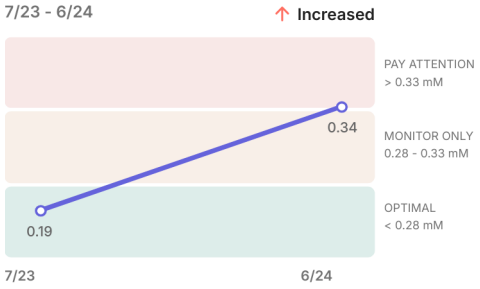
Glutamate
Pay Attention

What was measured in your blood?

Glutamate. Your value is 0.34 mM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 0.28 mM
Monitor only: 0.28 to 0.33 mM
Pay Attention: higher than 0.33 mM

Pay Attention



What is it?

Glutamate is an amino acid that has been found to be toxic for the brain. It has been found to be elevated in various neurological diseases, such as multiple sclerosis and Parkinson's disease.

References [1, 2, 3, 4, 5]

Brain Toxins
Pay Attention

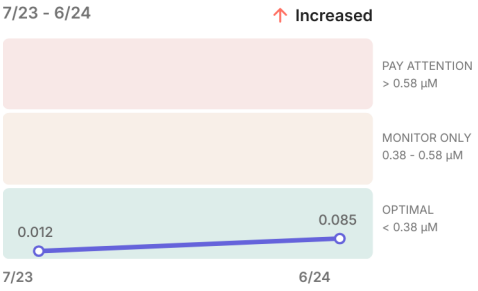
Glycodeoxycholic acid (GDCA)
Optimal

What was measured in your blood?

Glycodeoxycholic acid. Your value is 0.085 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 0.38 µM
Monitor only: 0.38 to 0.58 µM
Pay Attention: higher than 0.58 µM

Optimal



What is it?

GDCA is a molecule produced by the bacteria in your gut. High concentrations have been associated with cognitive decline in the context of Alzheimer's disease.

References [1, 2, 3]

Brain Toxins
Pay Attention

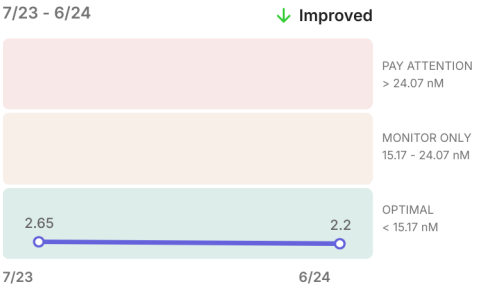
Glycolithocholic acid (GLCA)
Optimal

What was measured in your blood?

Glycolithocholic acid. Your value is 2.2 nM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 15.17 nM
Monitor only: 15.17 to 24.07 nM
Pay Attention: higher than 24.07 nM

Optimal



What is it?

GLCA is a molecule produced by the bacteria in your gut. High concentrations have been associated with cognitive decline in the context of Alzheimer's disease.

References [1, 2, 3]

Longevity
Pay Attention

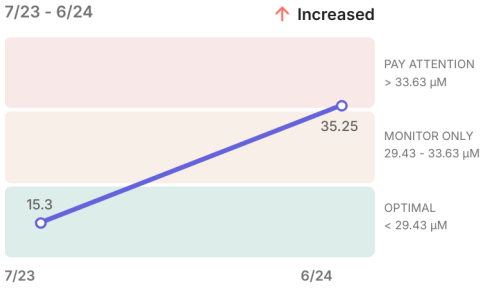
Methionine
Pay Attention

What was measured in your blood?

Methionine. Your value is 35.25 µM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 29.43 µM
Monitor only: 29.43 to 33.63 µM
Pay Attention: higher than 33.63 µM

Pay Attention



What is it?

Methionine is one of the essential amino acids your body needs for basic functioning. However, too high levels of methionine have been associated with heart problems and accelerated aging.

References [1, 2, 3, 4]

Longevity
Pay Attention

Taurine
Optimal

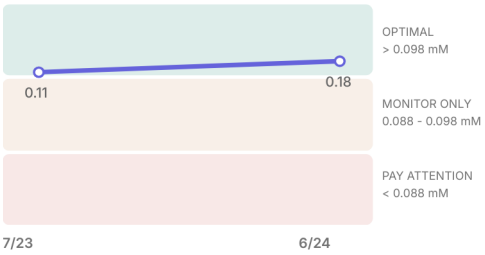
What was measured in your blood?

Taurine. Your value is 0.18 mM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 0.098 mM
Monitor only: 0.088 to 0.098 mM
Pay Attention: less than 0.088 mM

Optimal

7/23 - 6/24 ↑ Improved



What is it?

Taurine is a nutrient in our bodies that reduces as we age. Studies have shown that when animals have more taurine, they live longer and are healthier. In humans, low taurine levels are associated with several age-related health problems. Additionally, exercise appears to increase our body's taurine levels, suggesting its potential role in maintaining our health as we age.

References [1]

Heart Health
Pay Attention

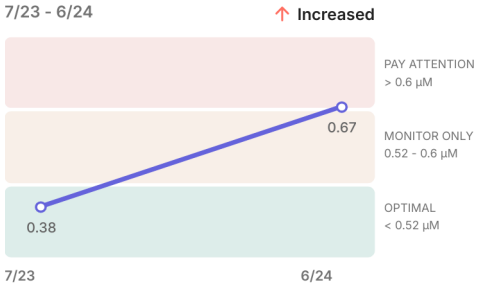
Asymmetric dimethylarginine (ADMA)
Pay Attention

What was measured in your blood?

Asymmetric dimethylarginine. Your value is 0.67 µM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 0.52 µM
Monitor only: 0.52 to 0.6 µM
Pay Attention: higher than 0.6 µM

Pay Attention



What is it?

ADMA is a byproduct of protein breakdown and plays a role in regulating blood vessel function. It can interfere with a molecule called nitric oxide, which helps our blood vessels relax and maintain a healthy blood flow. High levels of ADMA have been linked to cardiovascular diseases and other health issues.

References [1, 2]

Heart Health
Pay Attention

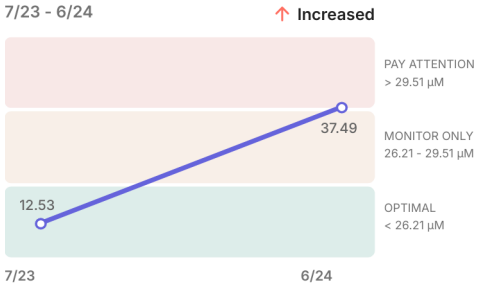
Succinate
Pay Attention

What was measured in your blood?

Succinate. Your value is 37.49 µM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 26.21 µM
Monitor only: 26.21 to 29.51 µM
Pay Attention: higher than 29.51 µM

Pay Attention



What is it?

Succinate is a substance involved in central metabolic processes in the body. High levels have been associated with heart-related conditions, such as hypertension, ischemic heart disease, and diabetes.

References [1, 2, 3]

Heart Health
Pay Attention

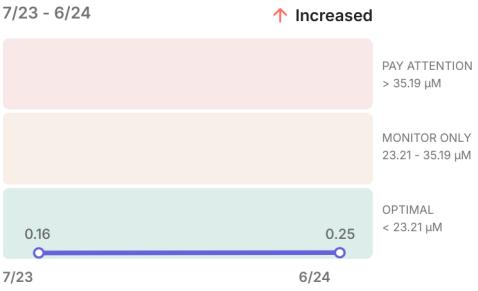
3-Methylhistidine (3-MH)
Optimal

What was measured in your blood?

3-Methylhistidine. Your value is 0.25 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 23.21 µM
Monitor only: 23.21 to 35.19 µM
Pay Attention: higher than 35.19 µM

Optimal



What is it?

3-Methylhistidine is a biomarker for poultry consumption, such as chicken, turkey, duck, and others.

High levels may indicate a high consumption of poultry. While lean poultry, like chicken breast, may be healthy, consuming too much poultry that contains fat, such as chicken skin, may increase your cholesterol levels which in turn has been associated with heart diseases.

References [1, 2, 3, 4]

Heart Health
Pay Attention

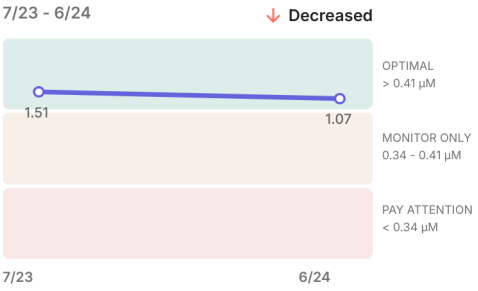
Homoarginine (Homo Arg)
Optimal

What was measured in your blood?

Homoarginine. Your value is 1.07 µM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 0.41 µM
Monitor only: 0.34 to 0.41 µM
Pay Attention: less than 0.34 µM

Optimal



What is it?

Homoarginine is a molecule involved in the regulation of blood pressure and the functioning of the immune system.

Low levels of homoarginine have been linked to an increased risk of cardiovascular disease.

References [1, 2, 3]

Heart Health
Pay Attention

Ceramide 18:0 (Cer 18:0)
Optimal

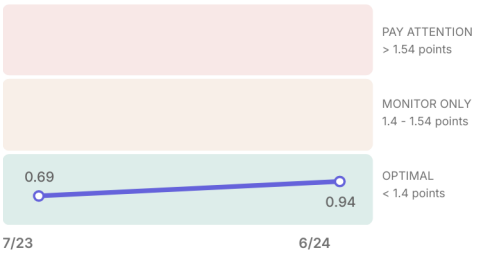
What was measured in your blood?

Ceramide 18:0. Your value is 0.94 points, which is in the **optimal** range.

Reference ranges:
Optimal: less than 1.4 points
Monitor only: 1.4 to 1.54 points
Pay Attention: higher than 1.54 points

Optimal

7/23 - 6/24 ↑ Increased



What is it?

Ceramides are a type of fat that regulate various processes in the body. The particular ceramide reported here called “18:0” has been reported to predict future heart events, such as myocardial infarction.

References [1, 2]

Heart Health

Pay Attention

Triglycerides (TGs) Beta

Optimal

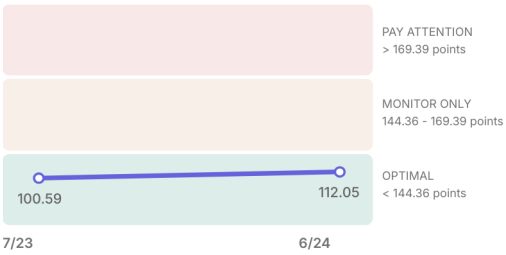
What was measured in your blood?

Triglycerides. Your value is 112.05 points, which is in the **optimal** range.

Reference ranges:
Optimal: less than 144.36 points
Monitor only: 144.36 to 169.39 points
Pay Attention: higher than 169.39 points

Optimal

7/23 - 6/24 ↑ Increased



What is it?

Triglycerides are a type of fat that your body uses for energy. High levels or too much of it in blood have been associated with various heart-related conditions.

This marker includes the following molecules: TG(14:0_36:2), TG(14:0_36:3), TG(14:0_38:4), TG(16:0_32:3), and others.

References [1, 2]

Inflammation
Pay Attention

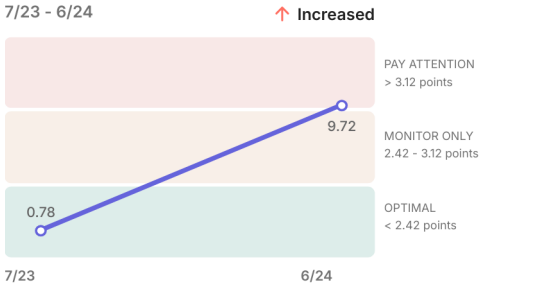
Arachidonic acid (AA)
Pay Attention

What was measured in your blood?

Arachidonic acid. Your value is 9.72 points, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: less than 2.42 points
Monitor only: 2.42 to 3.12 points
Pay Attention: higher than 3.12 points

Pay Attention



What is it?

Arachidonic acid is an omega-6 fatty acid that is involved in the regulation of inflammation in the body. High levels have been associated with various metabolic diseases, including obesity, diabetes, non-alcoholic fatty liver disease, and cardiovascular disease.

References [1, 2]

Inflammation
Pay Attention

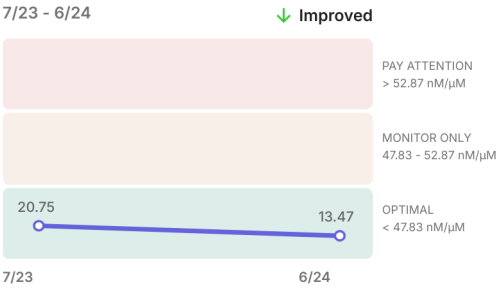
Kynurenine-to-Tryptophan ratio (KT ratio)
Optimal

What was measured in your blood?

Kynurenine-to-Tryptophan ratio. Your value is 13.47 nM/µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 47.83 nM/µM
Monitor only: 47.83 to 52.87 nM/µM
Pay Attention: higher than 52.87 nM/µM

Optimal



What is it?

An increased kynurenine-to-tryptophan ratio has been associated with inflammation and various related diseases, such as diabetes and cardiovascular disease, liver issues, a weakened immune system, and the risk for certain types of cancer.

References [1, 2, 3, 4]

Hormonal Health
Pay Attention

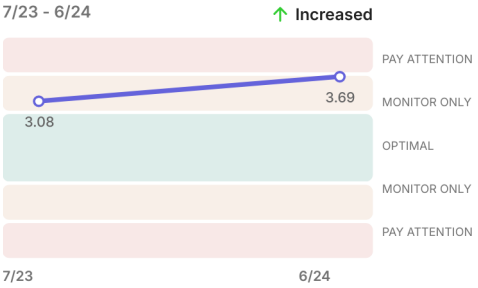
Dehydroepiandrosterone sulfate (DHEAS)
Pay Attention

What was measured in your blood?

Dehydroepiandrosterone sulfate. Your value is 3.69 µM, which is **higher** compared to the optimal range. This puts you in the **pay attention** range, meaning that your values are considered outside of the optimal range.

Reference ranges:
Optimal: 0.46 to 2.8 µM
Monitor only:
- Slightly low: 0.36 to 0.46 µM
- Slightly high: 2.8 to 3.61 µM
Pay Attention:
- Low: less than 0.36 µM
- High: more than 3.61 µM

Pay Attention



What is it?

DHEAS is a sex hormone found in both men and women. It controls heart rate, blood pressure, and other functions in your body.

You have high levels of DHEAS. This can be associated with hair loss or excessive hair growth, acne, and dysfunction of the reproductive system in women.

References [1, 2]

Mental Health
Optimal

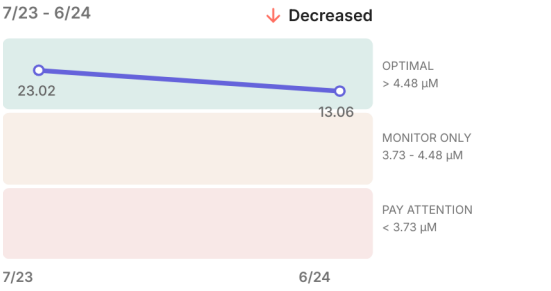
Acetylcarnitine (Acetyl C)
Optimal

What was measured in your blood?

Acetylcarnitine. Your value is 13.06 µM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 4.48 µM
Monitor only: 3.73 to 4.48 µM
Pay Attention: less than 3.73 µM

Optimal



What is it?

Acetylcarnitine is a metabolite related to energy metabolism in your body. Low levels have been associated with depression, narcolepsy, as well as Alzheimer's disease and dementia.

References [1, 2, 3, 4, 5]

Mental Health
Optimal

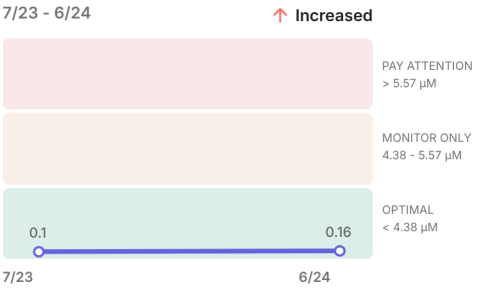
Indoxyl sulfate (Indoxyl S)
Optimal

What was measured in your blood?

Indoxyl sulfate. Your value is 0.16 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 4.38 µM
Monitor only: 4.38 to 5.57 µM
Pay Attention: higher than 5.57 µM

Optimal



What is it?

Indoxyl sulfate is a toxin produced by specific bacteria in your gut when they break down the amino acid tryptophan, which is contained in some foods. High Indoxyl sulfate levels can increase the risk for anxiety, depression, and dementia.

References [1, 2, 3, 4, 5, 6, 7, 8]

Kidney Health
Optimal

Symmetric dimethylarginine (SDMA)
Optimal

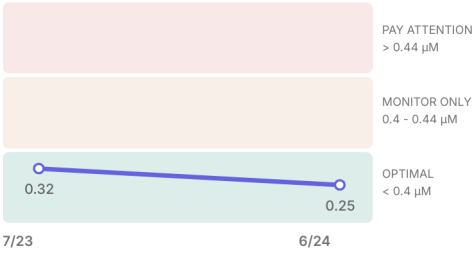
What was measured in your blood?

Symmetric dimethylarginine. Your value is 0.25 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 0.4 µM
Monitor only: 0.4 to 0.44 µM
Pay Attention: higher than 0.44 µM

Optimal

7/23 - 6/24 ↓ Improved



What is it?

SDMA is a byproduct of proteins breaking down in your body and is passed out by your kidneys. Studies have demonstrated that SDMA in blood reflects kidney function better than the commonly used eGFR measurement. High blood levels of SDMA have been shown to be an early sign of kidney damage.

References [1, 2, 3]

Kidney Health
Optimal

p-Cresol sulfate (Cresol S)
Optimal

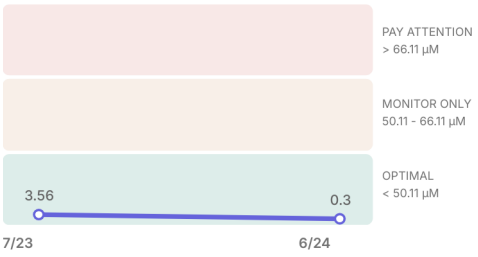
What was measured in your blood?

p-Cresol sulfate. Your value is 0.3 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 50.11 µM
Monitor only: 50.11 to 66.11 µM
Pay Attention: higher than 66.11 µM

Optimal

7/23 - 6/24 ↓ Improved



What is it?

p-Cresol sulfate is a so-called uremic toxin produced by specific bacteria in your gut when they consume the amino acid tyrosine contained in certain foods in your diet. High levels of this chemical have been shown to damage your kidneys.

References [1, 2, 3, 4, 5]

Bone Health
Optimal

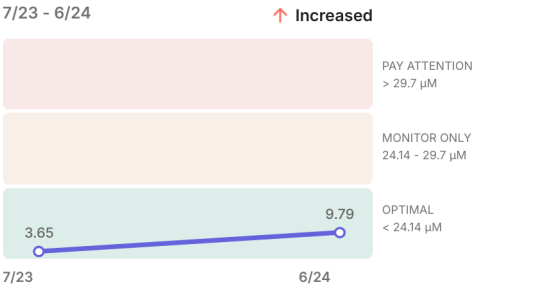
trans-Hydroxyproline (TransOHP)
Optimal

What was measured in your blood?

trans-Hydroxyproline. Your value is 9.79 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 24.14 µM
Monitor only: 24.14 to 29.7 µM
Pay Attention: higher than 29.7 µM

Optimal



What is it?

Trans-Hydroxyproline is a molecule involved in the production of collagen, a protein that provides structure and support to tissues in your body.

High levels of trans-hydroxyproline have been linked to an increased risk of osteoporosis, a condition in which the bones become weak and fragile. PC

References [1, 2, 3, 4]

Colorectal Carcinogens
Optimal

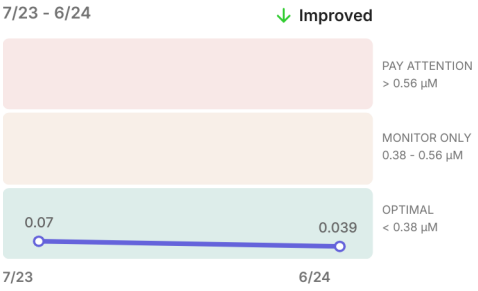
Deoxycholic acid (DCA)
Optimal

What was measured in your blood?

Deoxycholic acid. Your value is 0.039 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 0.38 µM
Monitor only: 0.38 to 0.56 µM
Pay Attention: higher than 0.56 µM

Optimal



What is it?

DCA is a molecule produced by bacteria in your gut. A long stool transit time causes the accumulation of this molecule in the intestines. This molecule damages cells in your colon and may lead to the development of colorectal cancer.

References [1, 2, 3, 4]

Liver Health
Optimal

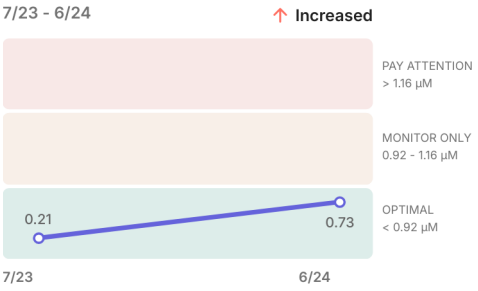
Glycocholic acid (GCA)
Optimal

What was measured in your blood?

Glycocholic acid. Your value is 0.73 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 0.92 µM
Monitor only: 0.92 to 1.16 µM
Pay Attention: higher than 1.16 µM

Optimal



What is it?

GCA is a molecule produced by the bacteria in your gut and has been shown to be an indicator of liver function.

High levels in blood have been associated with liver diseases, scarring and dysfunction.

References [1, 2, 3, 4, 5, 6, 7, 8, 9]

Liver Health
Optimal

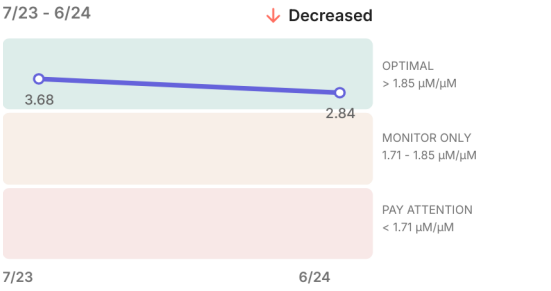
Fischer's ratio (F ratio)
Optimal

What was measured in your blood?

Fischer's ratio. Your value is 2.84 µM/µM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 1.85 µM/µM
Monitor only: 1.71 to 1.85 µM/µM
Pay Attention: less than 1.71 µM/µM

Optimal



What is it?

This measure determines the balance of certain amino acids in your blood. A low level has been associated with liver disease.

This marker includes the following molecules: Isoleucine, Leucine, Valine, Phenylalanine, and others.

References [1, 2, 3, 4]

Immune Health
Optimal

Spermidine (Spr)
Optimal

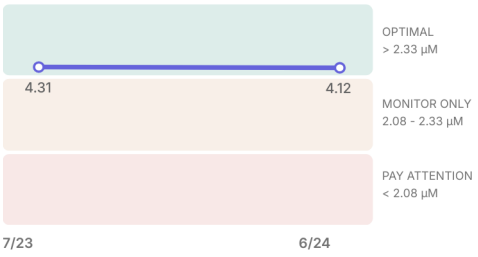
What was measured in your blood?

Spermidine. Your value is 4.12 µM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 2.33 µM
Monitor only: 2.08 to 2.33 µM
Pay Attention: less than 2.08 µM

Optimal

7/23 - 6/24 ↓ Decreased



What is it?

Spermidine is a beneficial molecule that has been found to be anti-inflammatory, to boost the immune system, and to generally slow down the process of aging. Low levels may indicate issues with your immune system and stress levels.

References [1, 2, 3, 4, 5, 6]

Omega-3 Fatty Acid Balance

Optimal

Docosahexaenoic Acid (DHA)

Optimal

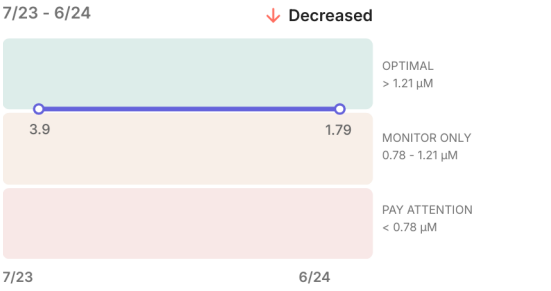
What was measured in your blood?

Docosahexaenoic Acid. Your value is 1.79 µM, which is in the **optimal** range.

Reference ranges:

Optimal: higher than 1.21 µM
Monitor only: 0.78 to 1.21 µM
Pay Attention: less than 0.78 µM

Optimal



What is it?

DHA is an omega-3 fatty acid, which is an essential fat that improves health. High levels have an anti-inflammatory and antioxidant effect in the body. Low levels have been linked to various health-related issues, such as multiple sclerosis and Parkinson's disease.

References [1, 2, 3, 4]

Stress
Optimal

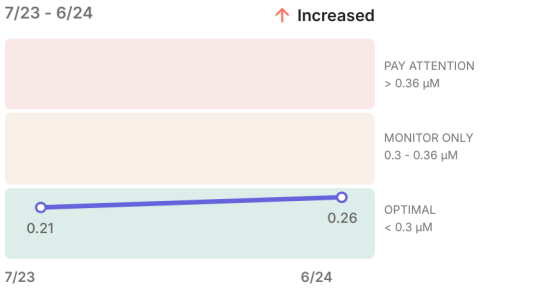
Cortisol
Optimal

What was measured in your blood?

Cortisol. Your value is 0.26 µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 0.3 µM
Monitor only: 0.3 to 0.36 µM
Pay Attention: higher than 0.36 µM

Optimal



What is it?

Cortisol is a hormone that helps your body respond to stress.

High levels of cortisol might indicate acute or chronic stress. Please note that cortisol levels are also higher in the morning and can be increased by coffee consumption.

References [1, 2, 3]

Gut Microbiome Health
Optimal

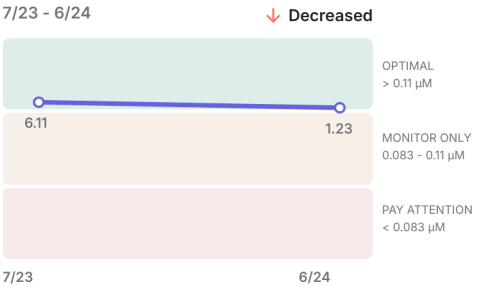
Indolepropionic acid (IPA)
Optimal

What was measured in your blood?

Indolepropionic acid. Your value is 1.23 µM, which is in the **optimal** range.

Reference ranges:
Optimal: higher than 0.11 µM
Monitor only: 0.083 to 0.11 µM
Pay Attention: less than 0.083 µM

Optimal



What is it?

Indolepropionic acid is a molecule produced by the bacteria in your gut and has neuroprotective and antioxidant effects.

Low levels have been linked to an imbalance in the gut microbiome that could lead to higher risk of heart, metabolic and neurodegenerative diseases.

References [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]

Oxidative Stress

Optimal

Hypoxanthine-to-Xanthine ratio (HXX ratio) Beta

Optimal

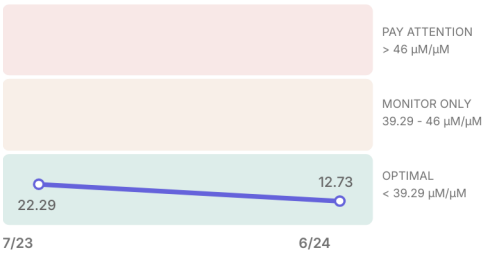
What was measured in your blood?

Hypoxanthine-to-Xanthine ratio. Your value is 12.73 µM/µM, which is in the **optimal** range.

Reference ranges:
Optimal: less than 39.29 µM/µM
Monitor only: 39.29 to 46 µM/µM
Pay Attention: higher than 46 µM/µM

Optimal

7/23 - 6/24 ↓ Improved



What is it?

Xanthine and Hypoxanthine are two molecules involved in the degradation of purines, the building blocks of DNA and RNA. An increased hypoxanthine-to-xanthine ratio has been associated with oxidative stress in various diseases.

References [1, 2, 3, 4, 5]

Health Booster

Trigonelline (Trg)

Normal

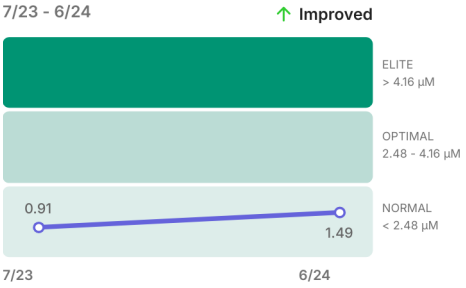
What was measured in your blood?

Trigonelline. Your value is 1.49 µM, which is **lower** compared to the optimal range. This puts you in the **normal** range, meaning that your values are considered outside of the optimal range.

Reference ranges:

Elite: higher than 4.16 µM
Optimal: 2.48 to 4.16 µM
Normal: less than 2.48 µM

Normal



What is it?

Trigonelline is an antioxidant plant hormone, or “phytohormone”, that has been suggested to have beneficial effects for humans, including sugar regulation and protection of the brain.

References [1, 2, 3, 4]

If your test results are non-optimal, it may indicate a health problem. Consult a medical professional to determine the cause and appropriate course of action. It's important to understand that optimal test results do not guarantee overall health in that specific area, as there are other markers of health that may not be measured by iollo.