OptimalDX

Functional Health Report

A comprehensive analysis of your test results.

BLOOD CHEMISTRY ANALYSIS

Patient Report

Prepared for	Rebecca Denburg
	57 year old female born Aug 06, 1967
	Fasting

Requested by	Dr. David Schnitzer, L.Acu
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balance point

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Lab	Lab Corp

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What's Inside?

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An introduction to Functional Blood Chemistry Analysis and your Functional Health Report (FHR).

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Introduction

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Functional Blood Chemistry Analysis (FBCA)

Functional Blood Chemistry Analysis, or FBCA, takes a deep dive into what your blood can tell us about your health. It's a way of sorting through all the different markers in your blood to get a clear picture of how your body's systems are doing. Think of it as a comprehensive health check-up that looks not just at how your body is working right now, but also checks if you're getting all the nutrients you need. Plus, it helps us see if you're moving towards better health or if there are areas we need to work on to get you feeling your best.

Dr. David Schnitzer, L.Acu
Balance Point Acupuncture Clinic

WHY BLOOD TESTING?

Your blood tells a comprehensive story about your health. Among all medical lab tests, the Blood Chemistry and CBC/hematology test stands out as the most frequently ordered. It's a cornerstone of Western clinical medicine, helping doctors make informed diagnostic decisions. You've likely been told that blood testing is a standard procedure for assessing health.

Yet, many people start feeling unwell long before traditional blood tests show anything amiss. Often, you might hear from your doctor that "everything on your blood test looks normal," even when you don't feel right.

NORMAL IS NOT OPTIMAL

If you're feeling "unwell" but your blood test comes back "normal," it doesn't necessarily mean everything is fine. Clinical experience shows that being "normal" is quite different from being functionally optimal. You might not have a diagnosed disease, but it's possible to be dysfunctional, meaning your body's systems aren't operating as well as they should, and you're starting to feel the effects.

The problem isn't with the blood tests themselves—they're powerful diagnostic tools. The issue lies in the reference ranges used, which are based on average populations, not indicators of optimal health or function. "Normal" ranges are often too broad to detect early signs of health issues or to identify when you're moving away from optimal health.

THE FUNCTIONAL APPROACH

The functional approach to blood testing focuses on changes in your body's function rather than looking for disease. We use optimal physiological ranges instead of "normal" population averages. This results in a more precise "Functional Physiological Range." It helps us spot issues within the "normal" range that could indicate your body's systems are starting to struggle. This approach enables us to detect shifts in your physiological function and identify what might be preventing you from reaching your best physiological, biochemical, and metabolic health.

Unlike traditional methods, which examine each biomarker in isolation, Functional Blood Chemistry Analysis uses trends and relationships between biomarkers to uncover hidden risks and opportunities for improving your health.

THE FUNCTIONAL HEALTH REPORT

The Functional Health Report is generated from an in-depth algorithmic analysis of your blood test results. Our software digs into the data, uncovering the intricate patterns and subtle indicators of functional changes in your body, often before you're aware anything's amiss.

SUMMARY

Blood testing has evolved beyond its role in diagnosing disease or managing injury. It's now an essential element of Functional Medicine, offering a critical window into your health. It helps reveal hidden health trends and is a key tool in promoting overall wellness and preventing disease.

Patient Report

Your report is the result of a detailed and proprietary algorithmic analysis of your complex and comprehensive blood biomarkers.

Dr. David Schnitzer, L.Acu
Balance Point Acupuncture Clinic

THE FUNCTIONAL HEALTH REPORT

Your blood test results have been analyzed for their hidden meaning and the subtle, web-like patterns concealed within the numbers that signal the first stages of functional change in your body. The Functional Health Report (FHR) takes all of this analytical information and provides a comprehensive interpretation of the results in a written and graphical format.

The report gives you a window into the state of health in the main functional physiological systems of the body, its supporting accessory systems, and the degree of deficiency in individual nutrients. The report is broken down into 3 main sections:

ASSESSMENT

The Assessment section is at the very heart of the Functional Health Report. It is here that the findings of the risk analysis are presented.

The Functional Body Systems and Accessory reports show the risk of dysfunction in the various physiological and supporting accessory systems in your body.

The Nutrient Status report gives you an indication of your general nutritional status and the Nutrient Deficiencies report shows the risk of deficiency for individual nutrients.

Each of the assessment reports is accompanied by a section that contains detailed descriptions and explanations of the results presented in each of the reports in this section.

ANALYSIS

The Analysis section shows you the actual results of your blood test itself.

The Blood Test Results Report lists your blood test results and shows if an individual biomarker is optimal, outside the optimal range or outside of the standard range.

The Blood Test Results Comparative Report compares results of the latest and previous blood test and gives you a sense of whether or not there has been an improvement in the individual biomarker results.

The Blood Test History report allows you to compare results over time and see where improvement has been made and allows you to track progress in the individual biomarkers.

The Out of Optimal Range report shows all of the biomarkers that are out of the optimal range and gives you some important information as to why each biomarker might be elevated or decreased. Each biomarker in the Out of Optimal Range report hyperlinks back into the Blood Test Results report so you can see a more detailed view of the blood test results.

HEALTH CONCERNS

All the information on the Assessment and Analysis sections of the report are summarized in the Health Concerns section, which focuses on the top areas of need as presented in this report.

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A comprehensive assessment of Functional Body Systems plus a detailed evaluation of your Nutrient Status, ensuring a holistic understanding of your health and well-being.

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Assessment

Functional Body Systems
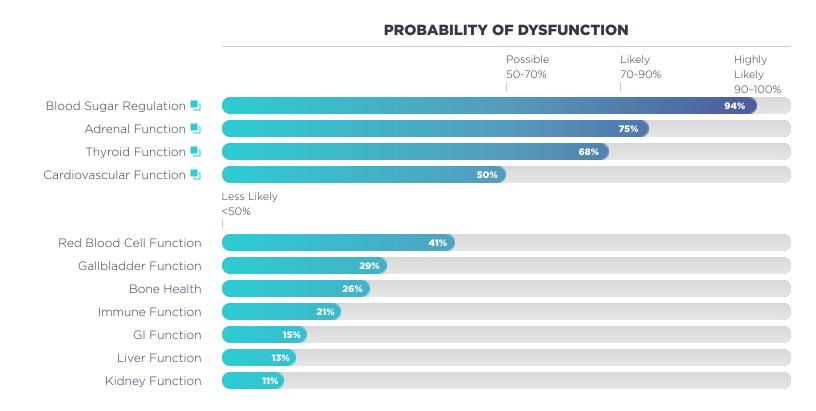
The Functional Body System results represent an algorithmic analysis of this blood test. These results have been converted into your individual Functional Body Systems Report based on our latest research.
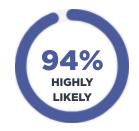
This report gives you an indication of the level of dysfunction that exists in the various physiological systems in your body.

Each Body System that has a probability of dysfunction above 50% is included in the section that follows so you can read a detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DYSFUNCTION

	Possible 50-70%	Likely 70-90%	Highly Likely 90–100%

System	Value
Blood Sugar Regulation	94%
Adrenal Function	75%
Thyroid Function	68%
Cardiovascular Function	50%

Less Likely <50%

System	Value
Red Blood Cell Function	41%
Gallbladder Function	29%
Bone Health	26%
Immune Function	21%
GI Function	15%
Liver Function	13%
Kidney Function	11%

Functional Body Systems Details

This section contains detailed descriptions and explanations of the results presented in the Functional Body Systems Report including all the biomarkers considered in the algorithmic analysis and the rationale behind the interpretation.

94%
HIGHLY LIKELY

Dysfunction Highly Likely. Much improvement required.

BLOOD SUGAR REGULATION

The Blood Sugar Regulation score looks for clues in your blood test that can help determine how well your body regulates the sugar in your blood. Some factors that affect the regulation of your blood glucose include the type and amount of protein, fat, and carbohydrates in your diet, inactivity, stress, tiredness, and hormones such as insulin released in response to elevated blood sugar levels. A high Blood Sugar Regulation score indicates that you may be at an increased risk of Blood Sugar dysregulation, causing a trend in increasing blood glucose levels. Blood sugar dysregulation is very common, but it doesn't suddenly emerge but develops slowly. In summary, your score is high, which indicates that your blood sugar regulation might not function as optimally as it should and may need support moving forward.

Rationale

Glucose Fasting ↑, Hemoglobin A1C ↑, Cholesterol - Total ↑, LDL Cholesterol ↑

Biomarkers considered

Glucose Fasting, Hemoglobin A1C, Cholesterol - Total, Triglycerides, LDL Cholesterol, HDL Cholesterol

Biomarkers not available in this test - consider having run in future tests:

HOMA2-IR, LDH, Insulin - Fasting, DHEA-S - Female, Leptin - Female, C-Peptide, Fructosamine

75%
LIKELY

Dysfunction Likely Improvement required.

ADRENAL FUNCTION

The Adrenal Function score reflects the degree of risk in the function of your adrenal glands. Your Adrenal Function score indicates that your risk of developing adrenal dysfunction is increasing. The adrenal glands produce certain hormones in response to stress. They are responsible for what is commonly called "the fight or flight response." Unfortunately, when your body is under constant stress, which is very common, your adrenal glands become less functional. Often the body's response to stress is mild and may go unnoticed. However, your blood work has uncovered an emerging trend toward adrenal dysfunction. Your score is moderate, which indicates that your adrenal function is not as optimal as it should be and may need support moving forward.

Rationale

Sodium : Potassium ↑, Potassium ↓, Chloride ↓

Biomarkers considered

Sodium : Potassium, Sodium, Potassium, Chloride

Biomarkers not available in this test - consider having run in future tests:

Cortisol - Total/AM, Aldosterone, DHEA-S - Female, Cortisol - PM

68%
POSSIBLE

Dysfunction Possible
There may be
improvement needed in
certain areas.

THYROID FUNCTION

It is possible that you may be at risk of an emerging thyroid dysfunction. While this may not require immediate attention, we will want to watch this on future blood tests.

Rationale

TSH ↑

Biomarkers considered

TSH, T4 - Total, T3 Uptake, Free Thyroxine Index (T7)

Biomarkers not available in this test - consider having run in future tests:

T4 - Free, T3 - Total, T3 - Free, Reverse T3, Free T3 : Reverse T3

50%
POSSIBLE

Dysfunction Possible
There may be
improvement needed in
certain areas.

CARDIOVASCULAR FUNCTION

It is possible that you may be at risk of an emerging cardiometabolic dysfunction. While this may not require immediate attention, we will want to watch this on future blood tests.

Rationale

Glucose Fasting ↑ , Cholesterol - Total ↑ , LDL Cholesterol ↑ , Hs CRP - Female ↑ , Testosterone Free - Female ↓ , Vitamin D (25-OH) ↓

Biomarkers considered

Triglyceride:HDL, Glucose Fasting, Cholesterol - Total, Triglycerides, LDL Cholesterol, HDL Cholesterol, Ferritin, Hs CRP - Female, Hemoglobin A1C, Testosterone Free - Female, Vitamin D (25-OH)

Biomarkers not available in this test - consider having run in future tests:

Lipoprotein (a), Omega 3 Index, LDH, Fibrinogen Activity, Homocysteine, Insulin - Fasting

ASSESSMENT

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Functional Body Systems

Accessory Systems

Nutrient Status

Nutrient Deficiencies
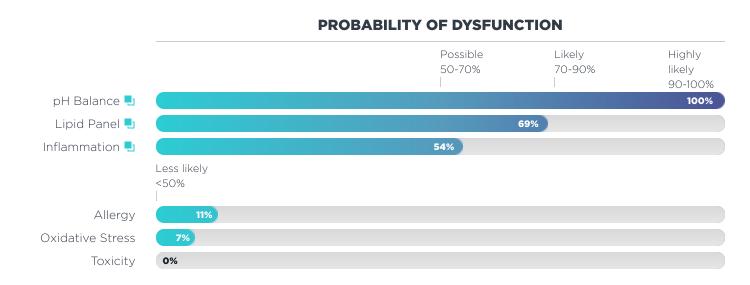
Accessory Systems

The Accessory Systems are additional physiological systems that are not related to individual organs or body systems.

The Accessory Systems Report represents an algorithmic analysis of this blood test. These results have been converted into an individualized risk evaluation based on the latest research.

Each Accessory System that has a probability of dysfunction above 50% is included in the section that follows so you can read a detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DYSFUNCTION

	Possible 50-70%	Likely 70-90%	Highly likely 90-100%
pH Balance			100%
Lipid Panel	69%		
Inflammation	54%		

Less likely <50%

Allergy	11%
Oxidative Stress	7%
Toxicity	0%

Accessory Systems Details

This section contains detailed descriptions and explanations of the results presented in the Accessory Systems report including all the biomarkers considered in the algorithmic analysis and the rationale behind the interpretation.

100%
HIGHLY LIKELY

Dysfunction Highly Likely. Much improvement required.

PH BALANCE

The pH Balance score looks at biomarkers on this blood test that help evaluate the function of your body's pH (acid-alkaline) regulation system. A high pH Balance Score indicates that you may be at an increased risk of an imbalance in the body's pH (acid-alkaline) regulation system. Several biomarkers in the blood will go out of balance when the body gets too acidic or too alkaline. It is important to remember that we are talking about functional imbalances in the acid/alkaline system. In summary, your risk of pH imbalance is high, which indicates that your body's ability to regulate acid-alkaline balance is not functioning as optimally as it should and may need support.

Rationale

Anion Gap ↑ , Potassium ↓ , Chloride ↓

Biomarkers considered

Anion Gap, Potassium, Chloride, CO2, Calcium

69%
POSSIBLE

Dysfunction Possible. There may be improvement needed in certain areas.

LIPID PANEL

It is possible that you are starting to show signs of an imbalance in your blood fats (cholesterol, Triglycerides, etc.), causing an increase in your Lipid Panel score. While this may not require immediate attention, we will want to keep an eye on this in future blood tests.

Rationale

Cholesterol - Total ↑ , LDL Cholesterol ↑

Biomarkers considered

Cholesterol - Total, Triglycerides, LDL Cholesterol, Cholesterol : HDL, Triglyceride:HDL, HDL Cholesterol

54%
POSSIBLE

Dysfunction Possible.
There may be
improvement needed in
certain areas.

INFLAMMATION

It is possible that you are in the early stages of inflammation, which is causing certain biomarkers in your blood that are associated with inflammation to no longer be optimal. While this may not require immediate attention, we will want to keep an eye on this on future blood tests.

Rationale

Hs CRP - Female ↑, RDW ↑, Neutrophil : Lymphocyte ↑, Basophils - % ↑, Platelet : Lymphocyte (PLR) ↑, Vitamin D (25-OH) ↓

Biomarkers considered

Hs CRP - Female, RDW, Neutrophil : Lymphocyte, Cholesterol - Total, Triglycerides, HDL Cholesterol, Iron - Serum, Ferritin, Lymphocytes - %, Basophils - %, Platelet : Lymphocyte (PLR), Albumin, ALT, Vitamin D (25-OH)

Biomarkers not available in this test - consider having run in future tests:

Fibrinogen Activity, Homocysteine, Myeloperoxidase (MPO), Uric Acid - Female, LDH, Omega 3 Index, ESR - Female, Creatine Kinase, C-Reactive Protein

ASSESSMENT

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Functional Body
Systems

Accessory
Systems

Nutrient Status

Nutrient
Deficiencies

Nutrient Status
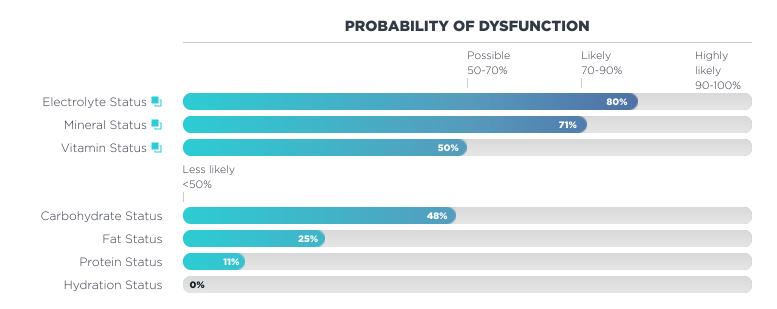
The Nutrient Status results represent an algorithmic analysis of this blood test. These results have been converted into your individual Nutrient Status Report based on our latest research.

This report gives you an indication of your general nutritional status. The Nutrient Status is influenced by actual dietary intake, digestion, absorption, assimilation, and cellular uptake of the nutrients themselves.

Each Nutrient category that has a probability of dysfunction above 50% is included in the section that follows so you can read a detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DYSFUNCTION

	Possible 50-70%	Likely 70-90%	Highly likely 90-100%
Electrolyte Status		80%	
Mineral Status	71%		
Vitamin Status	50%		

Less likely <50%

Carbohydrate Status	48%		
Fat Status	25%		
Protein Status	11%		
Hydration Status	0%		

Nutrient Status Details

This section contains detailed descriptions and explanations of the results presented in the Nutrient Status report including all the biomarkers considered in the algorithmic analysis and the rationale behind the interpretation.

80%
LIKELY

Dysfunction Likely.
Improvement required.

ELECTROLYTE STATUS

Your elevated Electrolyte Status score shows that you may be trending toward an imbalance in your electrolytes. Electrolytes such as calcium, potassium, sodium, and magnesium are essential for optimal health and wellness. Your Electrolyte Status score is higher than ideal, indicating that we may need to support this moving forward.

Rationale
Potassium ↓ , Chloride ↓
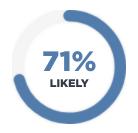
Biomarkers considered
Sodium, Potassium, Chloride, Calcium

Biomarkers not available in this test - consider having run in future tests:
Phosphorus, Magnesium - Serum

71%
LIKELY

Dysfunction Likely.
Improvement required.

MINERAL STATUS

You may be trending toward a mineral deficiency or need, causing an increase in your Mineral Status score. Mineral levels in the body are closely regulated. Deficiency in one or more minerals may be due to several factors, such as the amount in your diet, the ability to digest and break down individual minerals from the food or supplements you consume, and the ability of those minerals to be absorbed, transported and ultimately taken up by the cells themselves. Your Mineral Status score is higher than ideal, indicating that you may need mineral support moving forward.

Rationale
Magnesium - RBC ↓ , Potassium ↓ , Iron - Serum ↓

Biomarkers considered
Magnesium - RBC, Potassium, Calcium, Alk Phos, Iron - Serum, Ferritin

Biomarkers not available in this test - consider having run in future tests:
Magnesium - Serum, Selenium - Serum, Zinc - RBC, Selenium - RBC, Chromium, Copper - RBC, Copper - Serum, Zinc - Serum, Uric Acid - Female, Phosphorus

50%
POSSIBLE

Dysfunction Possible.
There may be
improvement needed in
certain areas.

VITAMIN STATUS

You may be in the early stages of vitamin deficiency or need, which may cause an increase in your Vitamin Status score. While this may not require immediate attention, we will want to monitor your vitamin levels on future blood tests.

Rationale

Anion Gap ↑, Vitamin D (25-OH) ↓

Biomarkers considered

Anion Gap, Albumin, AST, ALT, GGT, Vitamin D (25-OH), MCV, Vitamin B12

Biomarkers not available in this test - consider having run in future tests:

Homocysteine, Methylmalonic Acid, Folate - RBC, Folate - Serum

ASSESSMENT

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Functional Body
Systems

Accessory
Systems

Nutrient Status

**Nutrient
Deficiencies**
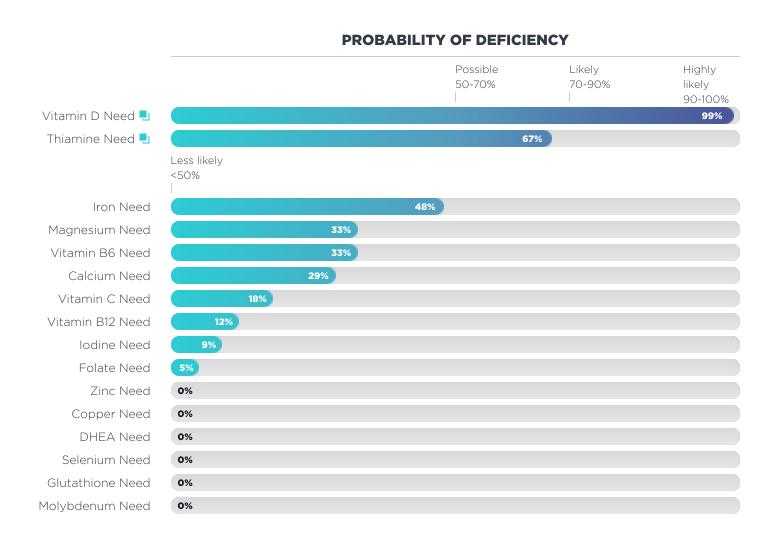
Individual Nutrient Deficiencies

The scores represent the degree of deficiency for individual nutrients based on your blood results. The status of an individual nutrient is based on a number of factors such as actual dietary intake, digestion, absorption, assimilation and cellular uptake of the nutrients themselves. All of these factors will be taken into consideration before determining whether or not you actually need an individual nutrient.

Each individual Nutrient Deficiency that has a probability of dysfunction above 50% is included in the section that follows so you can read a detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DEFICIENCY

	Possible 50-70%	Likely 70-90%	Highly likely 90-100%

Nutrient	Probability
Vitamin D Need	99%
Thiamine Need	67%

Less likely <50%

Nutrient	Probability
Iron Need	48%
Magnesium Need	33%
Vitamin B6 Need	33%
Calcium Need	29%
Vitamin C Need	18%
Vitamin B12 Need	12%
Iodine Need	9%
Folate Need	5%
Zinc Need	0%
Copper Need	0%
DHEA Need	0%
Selenium Need	0%
Glutathione Need	0%
Molybdenum Need	0%

Individual Nutrient Deficiency Details

This section contains detailed descriptions and explanations of the results presented in the Nutrient Deficiencies report including all the biomarkers considered in the algorithmic analysis and the rationale behind the interpretation.

99% HIGHLY LIKELY

Deficiency Highly Likely. Much improvement required.

VITAMIN D NEED

Your blood test results show a high need for vitamin D, indicating that you are very likely not getting enough of this important vitamin. Low vitamin D levels can lead to bone pain, muscle weakness, getting sick more often, and feeling tired. To boost your vitamin D levels, try to spend some time in the sun and eat foods rich in vitamin D, like fatty fish (salmon, mackerel), fortified dairy products, and egg yolks. If you have conditions that limit your sun exposure or affect your ability to absorb vitamin D, or if you have darker skin or are overweight, it might be harder for you to get enough vitamin D.

Rationale
Vitamin D (25-OH) ↓

Biomarkers considered
Vitamin D (25-OH)

67% POSSIBLE

Deficiency Possible. There may be improvement needed in certain areas.

THIAMINE NEED

Your blood test results show that you may be starting to have a thiamine deficiency. Although it may not be a major concern yet, it is important to monitor your thiamine levels and include more thiamine-rich foods in your diet. Keep an eye on your energy levels and cognitive function, and talk to us about any conditions or lifestyle factors that might affect your thiamine absorption. With regular monitoring, we can likely prevent further deficiency.

Rationale
Anion Gap ↑, Glucose Fasting ↑, Hemoglobin - Female ↓

Biomarkers considered
Anion Gap, CO2, Glucose Fasting, Hemoglobin - Female, Hematocrit - Female

Biomarkers not available in this test - consider having run in future tests:
LDH

3

A full breakdown of all the individual biomarker results, showing if a particular biomarker is outside the optimal range or the standard range, plus a comparative and historical view.

Analytics

Blood Test Results

The Blood Test Results Report lists the results from your Chemistry Screen and CBC and shows you whether or not an individual biomarker is optimal, outside of the optimal range, or outside of the standard range. The biomarkers are grouped into their most common categories.

Some biomarkers in the Blood Test Results Report that are above or below the Optimal or marked Low or High may be hyperlinked into the "Out of Optimal Range Report", so you can read some background information on those biomarkers and why they may be high or low.

0	2	12	43	10	8	0	77
Alarm Low	Low	Below Optimal	Optimal	Above Optimal	High	Alarm High	Total

BLOOD GLUCOSE

Glucose Fasting
87.00 mg/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 65.00	65.00 - 75.00	75.00 - 86.00	86.00 - 99.00	> 99.00

Hemoglobin A1C
5.40 %

Below Optimal	Optimal	Above Optimal	High
< 4.60	4.60 - 5.30	5.30 - 5.60	> 5.60

eAG
108.28 mg/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 82.00	82.00 - 85.00	85.00 - 105.00	105.00 - 154.00	> 154.00

Triglyceride-Glucose Index (TyG)
4.26 Index

Optimal	Above Optimal	High
0 - 4.40	4.40 - 4.50	> 4.50

KIDNEY

BUN
12.00 mg/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 6.00	6.00 - 10.00	10.00 - 16.00	16.00 - 24.00	> 24.00

Creatinine
0.80 mg/dL

Low	Below Optimal	Optimal	Above Optimal
< 0.57	0.57 - 0.80	0.80 - 1.10	> 1.10

BUN : Creatinine
15.00 Ratio

Low	Below Optimal	Optimal	Above Optimal	High
< 9.00	9.00 - 10.00	10.00 - 16.00	16.00 - 23.00	> 23.00

eGFR
86.00 mL/min

Low	Below Optimal	Optimal	Above Optimal	High
< 60.00	60.00 - 90.00	90.00 - 120.00	120.00 - 160.00	> 160.00

ELECTROLYTES

Sodium
140.00 mEq/L

Low	Below Optimal	Optimal	Above Optimal	High
< 134.00	134.00 - 137.00	137.00 - 142.00	142.00 - 144.00	> 144.00

Potassium
3.50 mEq/L

Low	Below Optimal	Optimal	Above Optimal	High
< 3.50	3.50 - 4.00	4.00 - 5.00	5.00 - 5.20	> 5.20

Chloride
99.00 mEq/L

Low	Below Optimal	Optimal	Above Optimal
< 96.00	96.00 - 100.00	100.00 - 106.00	> 106.00

CO2
28.00 mEq/L

Low	Below Optimal	Optimal	Above Optimal
< 20.00	20.00 - 25.00	25.00 - 30.00	> 30.00

Sodium : Potassium
40.00 ratio

Below Optimal	Optimal	Above Optimal
< 30.00	30.00 - 35.00	> 35.00

METABOLIC

Anion Gap
16.50 mEq/L

Low	Below Optimal	Optimal	Above Optimal	High
< 6.00	6.00 - 7.00	7.00 - 12.00	12.00 - 16.00	> 16.00

PROTEINS

Protein - Total
7.10 g/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 6.00	6.00 - 6.90	6.90 - 8.10	8.10 - 8.50	> 8.50

Albumin
4.70 g/dL

	Low < 3.80	Below Optimal 3.80 - 4.50	**Optimal** 4.50 - 5.00	Above Optimal > 5.00

Globulin - Total
2.40 g/dL

	Low < 1.50	Below Optimal 1.50 - 2.40	**Optimal** 2.40 - 2.80	Above Optimal 2.80 - 4.50	High > 4.50

Albumin : Globulin
1.96 ratio

	Low < 1.20	Below Optimal 1.20 - 1.40	**Optimal** 1.40 - 2.10	Above Optimal 2.10 - 2.20	High > 2.20

MINERALS

Calcium
9.30 mg/dL

	Low < 8.70	Below Optimal 8.70 - 8.90	**Optimal** 8.90 - 9.50	Above Optimal 9.50 - 10.20	High > 10.20

Magnesium - RBC
5.60 mg/dL

	Low < 4.20	**Below Optimal** 4.20 - 6.00	Optimal 6.00 - 6.80	Above Optimal > 6.80

Calcium : Albumin
1.98 ratio

	Optimal 0 - 2.18	Above Optimal 2.18 - 2.60	High > 2.60

LIVER AND GB

Alk Phos
84.00 IU/L

	Low < 44.00	Below Optimal 44.00 - 45.00	**Optimal** 45.00 - 100.00	Above Optimal 100.00 - 121.00	High > 121.00

AST
23.00 IU/L

	Below Optimal < 10.00	**Optimal** 10.00 - 26.00	Above Optimal 26.00 - 40.00	High > 40.00

ALT
22.00 IU/L

	Below Optimal < 10.00	**Optimal** 10.00 - 26.00	Above Optimal 26.00 - 32.00	High > 32.00

Bilirubin - Total
0.60 mg/dL

	Below Optimal < 0.50	**Optimal** 0.50 - 0.90	Above Optimal 0.90 - 1.20	High > 1.20

GGT
12.00 IU/L

	Below Optimal < 10.00	**Optimal** 10.00 - 17.00	Above Optimal 17.00 - 65.00	High > 65.00

IRON MARKERS

Iron - Serum
63.00 µg/dL

	Low < 27.00	**Below Optimal** 27.00 - 85.00	Optimal 85.00 - 130.00	Above Optimal 130.00 - 139.00	High > 139.00

Ferritin
111.00 ng/mL

Low	Below Optimal	Optimal	Above Optimal	High
< 15.00	15.00 - 45.00	45.00 - 79.00	**79.00 - 150.00**	> 150.00

TIBC
324.00 µg/dL

Below Optimal	Optimal	Above Optimal	High
< 250.00	**250.00 - 350.00**	350.00 - 450.00	> 450.00

UIBC
261.00 µg/dL

Below Optimal	Optimal	Above Optimal	High
< 130.00	**130.00 - 300.00**	300.00 - 425.00	> 425.00

% Transferrin saturation
19.00 %

Low	Below Optimal	Optimal	Above Optimal	High
< 15.00	**15.00 - 24.00**	24.00 - 35.00	35.00 - 55.00	> 55.00

LIPIDS

Cholesterol - Total
231.00 mg/dL

Low	Below Optimal	Optimal	Above Optimal
< 100.00	100.00 - 160.00	160.00 - 199.00	**> 199.00**

Triglycerides
58.00 mg/dL

Below Optimal	Optimal	Above Optimal	High
< 70.00	70.00 - 80.00	80.00 - 149.00	> 149.00

LDL Cholesterol
139.00 mg/dL

Below Optimal	Optimal	Above Optimal
< 80.00	80.00 - 99.99	**> 99.99**

HDL Cholesterol
82.00 mg/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 39.00	39.00 - 55.00	**55.00 - 93.00**	93.00 - 100.00	> 100.00

Non-HDL Cholesterol
149.00 mg/dL

Below Optimal	Optimal	Above Optimal	High
< 70.00	70.00 - 99.00	99.00 - 129.99	**> 129.99**

VLDL Cholesterol
10.00 mg/dL

Optimal	Above Optimal	High
0 - 15.00	15.00 - 40.00	> 40.00

LDL : HDL - Female
1.70 Ratio

Optimal	Above Optimal	High
0 - 2.34	2.34 - 3.20	> 3.20

Triglyceride:HDL
0.71 ratio

Below Optimal	Optimal	Above Optimal	High
< 0.50	**0.50 - 1.90**	1.90 - 2.00	> 2.00

Cholesterol : HDL
2.82 Ratio

Optimal	Above Optimal	High
0 - 3.00	3.00 - 4.40	> 4.40

CARDIOMETABOLIC

Atherogenic Index of Plasma (AIP)

-0.51 Index

Below Optimal	Optimal	Above Optimal
< -0.50	-0.50 - 0.11	> 0.11

THYROID

TSH

2.99 mIU/L

Low	Below Optimal	Optimal	Above Optimal	High
< 0.45	0.45 - 1.00	1.00 - 2.00	2.00 - 4.50	> 4.50

T4 - Total

9.20 µg/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 4.50	4.50 - 6.00	6.00 - 11.90	11.90 - 12.00	> 12.00

T3 Uptake

28.00 %

Low	Below Optimal	Optimal	Above Optimal	High
< 24.00	24.00 - 27.00	27.00 - 35.00	35.00 - 39.00	> 39.00

Free Thyroxine Index (T7)

2.57 Index

Low	Below Optimal	Optimal	Above Optimal	High
< 1.20	1.20 - 1.70	1.70 - 4.60	4.60 - 4.90	> 4.90

INFLAMMATION

Hs CRP - Female

1.91 mg/L

Optimal	Above Optimal	High
0 - 1.00	1.00 - 3.00	> 3.00

Platelet : Lymphocyte (PLR)

169.33 Ratio

Optimal	Above Optimal	High
0 - 128.00	128.00 - 150.00	> 150.00

VITAMINS

Vitamin D (25-OH)

43.70 ng/mL

Low	Below Optimal	Optimal	Above Optimal	High
< 30.00	30.00 - 50.00	50.00 - 90.00	90.00 - 100.00	> 100.00

Vitamin B12

1420.00 pg/mL

Low	Below Optimal	Optimal	Above Optimal	High
< 232.00	232.00 - 545.00	545.00 - 1100.00	1100.00 - 1245.00	> 1245.00

HORMONES

Testosterone Total - Female

<3.00 ng/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 4.00	4.00 - 35.00	35.00 - 45.00	45.00 - 50.00	> 50.00

Testosterone Free - Female
0.29 pg/mL

	Below Optimal	Optimal	Above Optimal	
	< 3.25	3.25 - 4.60	> 4.60	

Sex Hormone Binding Globulin - Female
76.10 nmol/L

Low	Below Optimal	Optimal	Above Optimal	High
< 17.30	17.30 - 50.00	50.00 - 80.00	80.00 - 125.00	> 125.00

Estradiol - Female
Unknown
5.20 pg/mL

Follicular	12.50-166.00	Luteal	43.80-211.00
Ovulation	85.80-498.00	Post Menopausal	6.00-27.00

Progesterone - Female
Unknown
0.20 ng/mL

Follicular	0.10-0.90	Luteal	1.80-23.90
Ovulation	0.10-12.00	Post Menopausal	0.00-0.10

Testosterone Bioavailable - Female
0.75 ng/dL

Low	Below Optimal	Optimal	Above Optimal
< 0.50	0.50 - 5.50	5.50 - 8.50	> 8.50

CBC

RBC - Female
4.65 m/cumm

Low	Below Optimal	Optimal	Above Optimal	High
< 3.80	3.80 - 4.30	4.30 - 4.80	4.80 - 5.10	> 5.10

Hemoglobin - Female
13.20 g/dL

Low	Below Optimal	Optimal	Above Optimal	High
< 11.10	11.10 - 13.50	13.50 - 14.50	14.50 - 15.90	> 15.90

Hematocrit - Female
40.40 %

Low	Below Optimal	Optimal	Above Optimal	High
< 34.00	34.00 - 37.00	37.00 - 44.00	44.00 - 46.60	> 46.60

MCV
87.00 fL

Low	Below Optimal	Optimal	Above Optimal	High
< 79.00	79.00 - 82.00	82.00 - 89.90	89.90 - 97.00	> 97.00

MCH
28.40 pg

Low	Below Optimal	Optimal	Above Optimal	High
< 26.60	26.60 - 28.00	28.00 - 31.90	31.90 - 33.00	> 33.00

MCHC
32.70 g/dL

Low	Below Optimal	Optimal	Above Optimal
< 31.50	31.50 - 34.00	34.00 - 36.00	> 36.00

Platelets
254.00 10E3/uL

Low	Below Optimal	Optimal	Above Optimal	High
< 150.00	150.00 - 190.00	190.00 - 300.00	300.00 - 450.00	> 450.00

RDW 🔲
13.10 %

	Below Optimal	Optimal	Above Optimal	High
	< 11.00	11.00 - 12.60	**12.60 - 15.40**	> 15.40

WBCS

Total WBCs
4.70 k/cumm

Low	Below Optimal	Optimal	Above Optimal	High
< 3.40	3.40 - 3.80	**3.80 - 6.00**	6.00 - 10.80	> 10.80

Neutrophils - %
54.00 %

Low	Below Optimal	Optimal	Above Optimal	High
< 38.00	38.00 - 50.00	**50.00 - 60.00**	60.00 - 74.00	> 74.00

Immature Granulocytes - %
0.00 %

Optimal	Above Optimal	High
0 - 0.50	0.50 - 1.00	> 1.00

Lymphocytes - %
31.00 %

Low	Below Optimal	Optimal	Above Optimal	High
< 14.00	14.00 - 30.00	**30.00 - 35.00**	35.00 - 46.00	> 46.00

Monocytes - % 🔲
10.00 %

Below Optimal	Optimal	Above Optimal	High
< 4.00	4.00 - 7.00	**7.00 - 13.00**	> 13.00

Eosinophils - %
3.00 %

Optimal	Above Optimal
0 - 3.00	> 3.00

Basophils - % 🔲
2.00 %

Optimal	Above Optimal
0 - 1.00	**> 1.00**

Neutrophils - Absolute
2.60 k/cumm

Low	Below Optimal	Optimal	Above Optimal	High
< 1.40	1.40 - 1.90	**1.90 - 4.20**	4.20 - 7.00	> 7.00

Immature Granulocytes - Absolute
0.00 k/cumm

Optimal	Above Optimal	High
0 - 0.03	0.03 - 0.10	> 0.10

Lymphocytes - Absolute
1.50 k/cumm

Low	Below Optimal	Optimal	Above Optimal	High
< 0.70	0.70 - 1.44	**1.44 - 2.54**	2.54 - 3.10	> 3.10

Monocytes - Absolute 🔲
0.50 k/cumm

Low	Below Optimal	Optimal	Above Optimal	High
< 0.10	0.10 - 0.20	0.20 - 0.40	**0.40 - 0.90**	> 0.90

Eosinophils - Absolute
0.10 k/cumm

Below Optimal	Optimal	Above Optimal	High
< 0.03	**0.03 - 0.20**	0.20 - 0.40	> 0.40

Basophils - Absolute

0.10 k/cumm

	Optimal	Above Optimal	High
	0 - 0.10	0.10 - 0.20	> 0.20

Neutrophil : Lymphocyte

1.73 Ratio

Below Optimal	Optimal	Above Optimal	High
< 1.00	1.00 - 1.70	1.70 - 3.00	> 3.00

Blood Test Results Comparative

The Blood Test Results Comparative Report lists the results of this blood test and compares it to a previous blood test thus allowing you to visualize change in your biomarker results. The thumbs-up and down icons help to show change, whether it is moving in the right direction or further away from optimal. Even though a result may be out of the optimal or standard range, a thumbs up indicates that the most recent result is moving toward optimal.

A comparison of the total number of biomarkers by optimal range

	Alarm Low	Low	Below Optimal	Optimal	Above Optimal	High	Alarm High
Current	0	2	12	43	10	8	0
Previous	0	0	0	0	0	0	0

Biomarker	Lab Corp Current Jan 08 2025	Optimal Range	Standard Range	Units
BLOOD GLUCOSE				
Glucose Fasting	87.00 ↑	75.00 - 86.00	65.00 - 99.00	mg/dL
Hemoglobin A1C	5.40 ↑	4.60 - 5.30	4.80 - 5.60	%
eAG	108.28 ↑	85.00 - 105.00	82.00 - 154.00	mg/dL
Triglyceride-Glucose Index (TyG)	4.26	0 - 4.40	0 - 4.50	Index
KIDNEY				
BUN	12.00	10.00 - 16.00	6.00 - 24.00	mg/dL
Creatinine	0.80	0.80 - 1.10	0.57 - 1.00	mg/dL
BUN : Creatinine	15.00	10.00 - 16.00	9.00 - 23.00	Ratio
eGFR	86.00 ↓	90.00 - 120.00	60.00 - 160.00	mL/min
ELECTROLYTES				
Sodium	140.00	137.00 - 142.00	134.00 - 144.00	mEq/L
Potassium	3.50 ↓	4.00 - 5.00	3.50 - 5.20	mEq/L

Biomarker	Lab Corp			
	Current Jan 08 2025	Optimal Range	Standard Range	Units
Chloride	99.00 ↓	100.00 - 106.00	96.00 - 106.00	mEq/L
CO2	28.00	25.00 - 30.00	20.00 - 29.00	mEq/L
Sodium : Potassium	40.00 ↑ ↑	30.00 - 35.00		ratio
METABOLIC				
Anion Gap	16.50 ↑ ↑	7.00 - 12.00	6.00 - 16.00	mEq/L
PROTEINS				
Protein - Total	7.10	6.90 - 8.10	6.00 - 8.50	g/dL
Albumin	4.70	4.50 - 5.00	3.80 - 4.90	g/dL
Globulin - Total	2.40	2.40 - 2.80	1.50 - 4.50	g/dL
Albumin : Globulin	1.96	1.40 - 2.10	1.20 - 2.20	ratio
MINERALS				
Calcium	9.30	8.90 - 9.50	8.70 - 10.20	mg/dL
Magnesium - RBC	5.60 ↓	6.00 - 6.80	4.20 - 6.80	mg/dL
Calcium : Albumin	1.98	0 - 2.18	0 - 2.60	ratio
LIVER AND GB				
Alk Phos	84.00	45.00 - 100.00	44.00 - 121.00	IU/L
AST	23.00	10.00 - 26.00	0.00 - 40.00	IU/L
ALT	22.00	10.00 - 26.00	0.00 - 32.00	IU/L
Bilirubin - Total	0.60	0.50 - 0.90	0.00 - 1.20	mg/dL
GGT	12.00	10.00 - 17.00	0.00 - 65.00	IU/L
IRON MARKERS				
Iron - Serum	63.00 ↓	85.00 - 130.00	27.00 - 139.00	µg/dL
Ferritin	111.00 ↑	45.00 - 79.00	15.00 - 150.00	ng/mL
TIBC	324.00	250.00 - 350.00	250.00 - 450.00	µg/dL
UIBC	261.00	130.00 - 300.00	131.00 - 425.00	µg/dL
% Transferrin saturation	19.00 ↓	24.00 - 35.00	15.00 - 55.00	%
LIPIDS				
Cholesterol - Total	231.00 ↑ ↑	160.00 - 199.00	100.00 - 199.00	mg/dL
Triglycerides	58.00 ↓	70.00 - 80.00	0 - 149.00	mg/dL
LDL Cholesterol	139.00 ↑ ↑	80.00 - 99.99	0 - 99.00	mg/dL
HDL Cholesterol	82.00	55.00 - 93.00	39.00 - 100.00	mg/dL
Non-HDL Cholesterol	149.00 ↑ ↑	70.00 - 99.00	0 - 129.99	mg/dL
VLDL Cholesterol	10.00	0 - 15.00	5.00 - 40.00	mg/dL
LDL : HDL - Female	1.70	0 - 2.34	0 - 3.20	Ratio
Triglyceride:HDL	0.71	0.50 - 1.90	0 - 2.00	ratio
Cholesterol : HDL	2.82	0 - 3.00	0 - 4.40	Ratio
CARDIOMETABOLIC				
Atherogenic Index of Plasma (AIP)	-0.51 ↓ ↓	-0.50 - 0.11		Index

Biomarker	Lab Corp			
	Current Jan 08 2025	Optimal Range	Standard Range	Units
THYROID				
TSH	2.99 ↑	1.00 - 2.00	0.45 - 4.50	mIU/L
T4 - Total	9.20	6.00 - 11.90	4.50 - 12.00	µg/dL
T3 Uptake	28.00	27.00 - 35.00	24.00 - 39.00	%
Free Thyroxine Index (T7)	2.57	1.70 - 4.60	1.20 - 4.90	Index
INFLAMMATION				
Hs CRP - Female	1.91 ↑	0 - 1.00	0 - 3.00	mg/L
Platelet : Lymphocyte (PLR)	169.33 ↑ ↑	0 - 128.00	0 - 150.00	Ratio
VITAMINS				
Vitamin D (25-OH)	43.70 ↓	50.00 - 90.00	30.00 - 100.00	ng/mL
Vitamin B12	1420.00 ↑ ↑	545.00 - 1100.00	232.00 - 1245.00	pg/mL
HORMONES				
Testosterone Total - Female	<3.00 ↓ ↓	35.00 - 45.00	4.00 - 50.00	ng/dL
Testosterone Free - Female	0.29 ↓	3.25 - 4.60	0.00 - 4.20	pg/mL
Sex Hormone Binding Globulin - Female	76.10	50.00 - 80.00	17.30 - 125.00	nmol/L
Estradiol - Female	5.20 UNKNOWN	Follicular Luteal Ovulation Post Menopausal	12.50 - 166.00 43.80 - 211.00 85.80 - 498.00 6.00 - 27.00	pg/mL
Progesterone - Female	0.20 UNKNOWN	Follicular Luteal Ovulation Post Menopausal	0.10 - 0.90 1.80 - 23.90 0.10 - 12.00 0.00 - 0.10	ng/mL
Testosterone Bioavailable - Female	0.75 ↓	5.50 - 8.50	0.50 - 8.50	ng/dL
CBC				
RBC - Female	4.65	4.30 - 4.80	3.80 - 5.10	m/cumm
Hemoglobin - Female	13.20 ↓	13.50 - 14.50	11.10 - 15.90	g/dL
Hematocrit - Female	40.40	37.00 - 44.00	34.00 - 46.60	%
MCV	87.00	82.00 - 89.90	79.00 - 97.00	fL
MCH	28.40	28.00 - 31.90	26.60 - 33.00	pg
MCHC	32.70 ↓	34.00 - 36.00	31.50 - 35.70	g/dL
Platelets	254.00	190.00 - 300.00	150.00 - 450.00	10E3/uL
RDW	13.10 ↑	11.00 - 12.60	11.60 - 15.40	%
WBCS				
Total WBCs	4.70	3.80 - 6.00	3.40 - 10.80	k/cumm
Neutrophils - %	54.00	50.00 - 60.00	38.00 - 74.00	%
Immature Granulocytes - %	0.00	0 - 0.50	0 - 1.00	%
Lymphocytes - %	31.00	30.00 - 35.00	14.00 - 46.00	%
Monocytes - %	10.00 ↑	4.00 - 7.00	4.00 - 13.00	%
Eosinophils - %	3.00	0 - 3.00		%
Basophils - %	2.00 ↑ ↑	0 - 1.00		%
Neutrophils - Absolute	2.60	1.90 - 4.20	1.40 - 7.00	k/cumm

Biomarker	Lab Corp			
	Current Jan 08 2025	Optimal Range	Standard Range	Units
Immature Granulocytes - Absolute 🔲	0.00	0 - 0.03	0 - 0.10	k/cumm
Lymphocytes - Absolute 🔲	1.50	1.44 - 2.54	0.70 - 3.10	k/cumm
Monocytes - Absolute 🔲	0.50 ↑	0.20 - 0.40	0.10 - 0.90	k/cumm
Eosinophils - Absolute 🔲	0.10	0.03 - 0.20	0 - 0.40	k/cumm
Basophils - Absolute 🔲	0.10	0 - 0.10	0 - 0.20	k/cumm
Neutrophil : Lymphocyte 🔲	1.73 ↑	1.00 - 1.70	1.00 - 3.00	Ratio

ASSESSMENT

🏠 ◁ ▷

Blood Test
Results

Blood Test
Comparative

**Blood Test
History**

Out of Optimal
Range

Key

🔵 Optimal

🔵 Above / Below Optimal

🔵 High/ Low

🔴 Alarm High / Alarm Low

Blood Test History

The Blood Test History Report lists the results of your blood test results side by side with the latest test listed on the right-hand side. This report allows you to compare results over time and see where improvement has been made, allowing you to track your progress towards optimal health.

Biomarker	Latest Test Result Lab Corp Jan 08 2025
BLOOD GLUCOSE	
Glucose Fasting 🔳	87.00 ↑
Hemoglobin A1C 🔳	5.40 ↑
eAG 🔳	108.28 ↑
Triglyceride-Glucose Index (TyG) 🔳	4.26
KIDNEY	
BUN 🔳	12.00
Creatinine 🔳	0.80
BUN : Creatinine 🔳	15.00
eGFR 🔳	86.00 ↓
ELECTROLYTES	
Sodium 🔳	140.00
Potassium 🔳	3.50 ↓
Chloride 🔳	99.00 ↓
CO2 🔳	28.00
Sodium : Potassium 🔳	40.00 ↑ ↑
METABOLIC	
Anion Gap 🔳	16.50 ↑ ↑
PROTEINS	

Biomarker	Latest Test Result Lab Corp Jan 08 2025
Protein - Total ▣	7.10
Albumin ▣	4.70
Globulin - Total ▣	2.40
Albumin : Globulin ▣	1.96

MINERALS

Calcium ▣	9.30
Magnesium - RBC ▣	5.60 ↓
Calcium : Albumin ▣	1.98

LIVER AND GB

Alk Phos ▣	84.00
AST ▣	23.00
ALT ▣	22.00
Bilirubin - Total ▣	0.60
GGT ▣	12.00

IRON MARKERS

Iron - Serum ▣	63.00 ↓
Ferritin ▣	111.00 ↑
TIBC ▣	324.00
UIBC ▣	261.00
% Transferrin saturation ▣	19.00 ↓

LIPIDS

Cholesterol - Total ▣	231.00 ↑ ↑
Triglycerides ▣	58.00 ↓
LDL Cholesterol ▣	139.00 ↑ ↑
HDL Cholesterol ▣	82.00
Non-HDL Cholesterol ▣	149.00 ↑ ↑

Biomarker	Latest Test Result Lab Corp Jan 08 2025
VLDL Cholesterol	10.00
LDL : HDL - Female	1.70
Triglyceride:HDL	0.71
Cholesterol : HDL	2.82

CARDIOMETABOLIC

Atherogenic Index of Plasma (AIP)	-0.51 ↓ ↓

THYROID

TSH	2.99 ↑
T4 - Total	9.20
T3 Uptake	28.00
Free Thyroxine Index (T7)	2.57

INFLAMMATION

Hs CRP - Female	1.91 ↑
Platelet : Lymphocyte (PLR)	169.33 ↑ ↑

VITAMINS

Vitamin D (25-OH)	43.70 ↓
Vitamin B12	1420.00 ↑ ↑

HORMONES

Testosterone Total - Female	<3.00 ↓ ↓
Testosterone Free - Female	0.29 ↓
Sex Hormone Binding Globulin - Female	76.10
Estradiol - Female	5.20 UNKNOWN
Progesterone - Female	0.20 UNKNOWN
Testosterone Bioavailable - Female	0.75 ↓

CBC

RBC - Female	4.65

Biomarker	Latest Test Result Lab Corp Jan 08 2025
Hemoglobin - Female 📑	13.20 ↓
Hematocrit - Female 📑	40.40
MCV 📑	87.00
MCH 📑	28.40
MCHC 📑	32.70 ↓
Platelets 📑	254.00
RDW 📑	13.10 ↑

WBCS

Biomarker	Latest Test Result
Total WBCs 📑	4.70
Neutrophils - % 📑	54.00
Immature Granulocytes - % 📑	0.00
Lymphocytes - % 📑	31.00
Monocytes - % 📑	10.00 ↑
Eosinophils - % 📑	3.00
Basophils - % 📑	2.00 ↑ ↑
Neutrophils - Absolute 📑	2.60
Immature Granulocytes - Absolute 📑	0.00
Lymphocytes - Absolute 📑	1.50
Monocytes - Absolute 📑	0.50 ↑
Eosinophils - Absolute 📑	0.10
Basophils - Absolute 📑	0.10
Neutrophil : Lymphocyte 📑	1.73 ↑

ANALYTICS

⌂ ⊙ ⊙

Blood Test
Results

Blood Test
Comparative

Blood Test
History

**Out of Optimal
Range**

Out of Optimal Range

The following report shows all of the biomarkers that are out of the optimal range and gives you some important information as to why each biomarker might be elevated or decreased.

Each biomarker in the Out of Optimal Range report hyperlinks back into the Blood Test Results report so you can a see a more detailed view of the blood test result itself.

Total number of biomarkers by range

0	2	12	43	10	8	0	75
Alarm Low	Low	Below Optimal	Optimal	Above Optimal	High	Alarm High	Total

Above Optimal

Platelet : Lymphocyte (PLR) 🗐

169.33 Ratio

The Platelet-Lymphocyte Ratio, or PLR for short, is a way to look at your blood to get clues about inflammation and clotting in your body. If the PLR is higher than what's typical, it might mean there's more inflammation in your body. This can be linked to various health problems, including issues with the heart and circulation.

Vitamin B12 🗐

1420.00 pg/mL

Vitamin B12 is an essential nutrient for DNA synthesis and red blood cell maturation and is also necessary for myelin sheath formation and the maintenance of nerves in the body. Paradoxically, elevated serum B12 levels may be accompanied by signs of B12 deficiency and may indicate a functional deficiency marked by inadequate uptake at the tissue level.

Cholesterol - Total 🗐

231.00 mg/dL

Cholesterol is a type of fat in your blood that your body needs to make cells and hormones. It's important to keep cholesterol at a healthy level. When there's too much cholesterol in your blood, it can be a problem. High cholesterol is one of several factors that can increase your risk of heart and blood vessel issues. It can also be linked to other health concerns, including blood sugar dysregulation, thyroid problems, issues with the bile flow in your liver, and a condition where there's too much fat in the liver.

Anion Gap

16.50 mEq/L

The anion gap is the measurement of the difference between the sum of the sodium and potassium levels and the sum of the serum CO2/bicarbonate and chloride levels. Increased levels are associated with thiamine deficiency and metabolic acidosis.

Sodium : Potassium

40.00 ratio

The Sodium:Potassium ratio is determined from the serum sodium and serum potassium levels. Both of these elements are under the influence of the adrenal glands. An increased Sodium:Potassium ratio is associated with acute stress.

Basophils - %

2.00 %

Basophils are a type of white blood cell that plays a key role in your body's immune response. They are part of the larger family of cells that help protect you from infections and respond to allergies. Basophils are particularly important in fighting parasitic infections and are involved in allergic reactions. When you have an allergic reaction, basophils release chemicals like histamine, which cause inflammation and other symptoms typical of allergies, such as itching, swelling, and redness. In general, basophils make up a very small portion of your white blood cells, and their levels can change based on your health condition. Elevated levels of basophils can indicate an allergic reaction, an ongoing infection with parasites, or certain immune system-related health issues.

Non-HDL Cholesterol

149.00 mg/dL

Non-HDL cholesterol represents the circulating cholesterol not carried by HDL (the protective carrier that collects cholesterol from tissues and blood vessels and transports it back to the liver). Elevated Non-HDL Cholesterol is associated with an increased risk of cardiovascular disease and related events.

LDL Cholesterol

139.00 mg/dL

LDL functions to transport cholesterol and other fatty acids from the liver to the peripheral tissues for uptake and metabolism by the cells. It is known as "bad cholesterol" because it is thought that this process of bringing cholesterol from the liver to the peripheral tissue increases the risk for atherosclerosis. An increased LDL cholesterol is just one of many independent risk factors for cardiovascular disease. It is also associated with metabolic syndrome, oxidative stress, and fatty liver.

Neutrophil : Lymphocyte

1.73 Ratio

The neutrophil-lymphocyte ratio (NLR) reflects important components of the cell-mediated inflammatory response, i.e. neutrophils and lymphocytes. Elevated levels are seen in bacterial infections and are considered a marker of systemic inflammation and metabolic dysfunction such as metabolic syndrome and thyroid dysfunction.

Glucose Fasting

87.00 mg/dL

Fasting blood glucose (FBG) is a critical indicator of metabolic status and reflects the intricate balance of glucose homeostasis, primarily mediated by the hormones insulin and glucagon. Insulin facilitates cellular glucose uptake and inhibits hepatic glucose production, while glucagon promotes glycogenolysis and gluconeogenesis in the liver. Elevated FBG levels are typically indicative of disrupted insulin activity or insufficient insulin secretion, commonly seen in conditions such as type 1 diabetes mellitus, where pancreatic beta-cell destruction leads to severe insulin deficiency, and type 2 diabetes mellitus, characterized by insulin resistance and eventual pancreatic beta-cell exhaustion. Additionally, increased FBG can signal underlying metabolic syndrome or prediabetic states, suggesting a broader spectrum of insulin resistance encompassing impaired glucose tolerance and altered lipid metabolism.

Hemoglobin A1C

5.40 %

The Hemoglobin A1C (HgbA1C) test measures the amount of glucose that combines with hemoglobin during the normal lifespan of a red blood cell, which is about 120 days. Elevated levels of HgbA1C are associated with elevated blood glucose in the past 120 days. Hemoglobin A1C is used primarily to monitor long-term blood glucose control and to help determine therapeutic options for treatment and management. Studies have shown that the closer to normal the hemoglobin A1C levels are kept, the less likely those patients are to develop the long-term complications of diabetes.

eAG

108.28 mg/dL

Estimated Average Glucose or eAG represents average daily glucose levels over a 2-3 month period. The eAG is calculated using the Hemoglobin A1C, a measurement of the amount of hemoglobin that is bound to glucose due to elevated blood sugar. Elevated levels of eAG are associated with a hemoglobin A1C above the ODX optimal of 5.5% and point to a trend towards pre-diabetes, metabolic syndrome, insulin resistance, and diabetes.

RDW

13.10 %

The Red Cell Distribution Width (RDW) is essentially an indication of the degree of abnormal variation in the size of red blood cells (called anisocytosis). Although the RDW will increase with vitamin B12 deficiency, folic acid, and iron anemia, it is increased most frequently with vitamin B12 deficiency anemia.

Monocytes - Absolute

0.50 k/cumm

Monocytes are white blood cells that are the body's second line of defense against infection. They are phagocytic cells that are capable of movement and remove dead cells, microorganisms, and particulate matter from circulating blood. Levels tend to rise at the recovery phase of an infection or with chronic infection.

Hs CRP - Female

1.91 mg/L

High Sensitivity C-Reactive Protein (Hs-CRP) is a blood marker that can help indicate the level of chronic inflammation in the body. Increased levels are associated with an increased risk of inflammation, cardiovascular disease, stroke, and diabetes.

Ferritin

111.00 ng/mL

Ferritin is the main storage form of iron in the body. Increased levels are associated with iron overload, an increasing risk of cardiovascular disease, inflammation and oxidative stress.

TSH

2.99 mIU/L

TSH or thyroid-stimulating hormone is a hormone produced by the anterior pituitary to control the thyroid gland's production of the thyroid hormone thyroxine (T4). TSH levels can be confusing because TSH levels increase when there is too little thyroid hormone in circulation. An elevated TSH is a sign that the body needs more thyroid hormone. Elevated levels of TSH are associated with primary hypothyroidism.

Monocytes - %

10.00 %

Monocytes are white blood cells that are the body's second line of defense against infection. They are phagocytic cells that are capable of movement and remove dead cells, microorganisms, and particulate matter from circulating blood. Levels tend to rise at the recovery phase of an infection or with chronic infection.

Below Optimal

Atherogenic Index of Plasma (AIP) 🗐

-0.51 Index

The atherogenic index of plasma (AIP) is a mathematical calculation based on blood levels of triglycerides and HDL-C. The AIP increases as triglycerides increase or HDL-C decreases. A low AIP suggests a reduced risk of cardiovascular disease and associated events. However, an abnormally low AIP might indicate triglyceride and/or HDL values that are out of optimal.

Testosterone Total - Female 🗐

<3.00 ng/dL

The total testosterone test measures both the testosterone that is bound to serum proteins and the unbound form (free testosterone). In women, low total testosterone levels have been linked to an increased risk for the following: osteoporosis, decreased lean body mass and decreased libido.

eGFR 🗐

86.00 mL/min

The eGFR is a calculated estimate of the kidney's Glomerular Filtration Rate. It uses 4 variables: age, race, creatinine levels and gender to estimate kidney function. Levels below 90 are an indication of a mild loss of kidney function. Levels below 60 indicate a moderate loss of kidney function and may require a visit to a renal specialist for further evaluation.

Vitamin D (25-OH) 🗐

43.70 ng/mL

This vitamin D test measures for levels of 25-OH vitamin D and is a very good way to assess vitamin D status. Decreased vitamin D levels are a sign of Vitamin D deficiency.

Chloride 🗐

99.00 mEq/L

Chloride plays an important role in human physiology. The amount of serum chloride is carefully regulated by the kidneys. Chloride is involved in regulating acid-base balance in the body. Decreased levels are associated with metabolic alkalosis. Chloride is an important molecule in the production of hydrochloric acid in the stomach so decreased levels are associated with hypochlorhydria.

Hemoglobin - Female 🗐

13.20 g/dL

Hemoglobin is the oxygen-carrying molecule in red blood cells. Low levels of hemoglobin are associated with anemia. Measuring hemoglobin is useful to determine the cause and type of anemia and for evaluating the efficacy of anemia treatment.

% Transferrin saturation 🗐

19.00 %

The % Transferrin saturation is a measure that helps us understand how much iron is being carried in your blood. It's an important marker because iron is crucial for making red blood cells, which carry oxygen throughout your body. This test essentially shows how well iron is being transported to where it's needed. Low transferrin saturation levels can be a sign that there's not enough iron being transported in your blood. This might indicate iron deficiency, which can lead to anemia—a condition where you don't have enough healthy red blood cells to carry adequate oxygen to your body's tissues.

Iron - Serum 🗐

63.00 µg/dL

Serum iron reflects iron that is bound to serum proteins such as transferrin. Serum iron levels will begin to fall somewhere between the depletion of the iron stores and the development of anemia. Decreased iron levels are associated with iron deficiency anemia, hypochlorhydria and internal bleeding. The degree of iron deficiency is best appreciated with ferritin, TIBC and % transferrin saturation levels.

Magnesium - RBC 🗐

5.60 mg/dL

Magnesium is important for many different enzymatic reactions, including carbohydrate metabolism, protein synthesis, nucleic acid synthesis, and muscular contraction. Magnesium is also needed for energy production and is used by the body in the blood clotting mechanism. A decreased RBC magnesium is a sign of magnesium deficiency and is a common finding with muscle cramps.

Potassium

3.50 mEq/L

Potassium is one of the main electrolytes in the body. Due to the critical functions of potassium for human metabolism and physiology, it is essential for the body to maintain optimal serum levels even though a small concentration is found outside of the cell. Potassium levels should always be viewed in relation to the other electrolytes. Potassium concentration is greatly influenced by adrenal hormones. Decreased levels are associated with adrenal stress and may also be decreased with high blood pressure.

MCHC

32.70 g/dL

The Mean Corpuscular Hemoglobin Concentration (MCHC) measures the average concentration of hemoglobin in the red blood cells. It is a calculated value. Decreased levels are associated with a vitamin C need, vitamin B6 and iron deficiencies, and a heavy metal body burden.

Triglycerides

58.00 mg/dL

Serum triglycerides are composed of fatty acid molecules that enter the bloodstream either from the liver or from the diet. Serum Triglyceride levels may be decreased in liver dysfunction, a diet deficient in fat, and inflammatory processes.

Testosterone Bioavailable - Female

0.75 ng/dL

Bioavailable testosterone is the amount of testosterone in the blood is readily available for biological activity. In women, low total testosterone levels have been linked to an increased risk for the following: osteoporosis, decreased lean body mass and decreased libido.

Testosterone Free - Female

0.29 pg/mL

The free testosterone test measures the testosterone that is unbound to serum proteins such as Sex Hormone Binding Globulin. In women, low free testosterone levels have been linked to an increased risk for the following: osteoporosis, decreased lean body mass and decreased libido.

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The Health Concerns report takes all the information on this report and focuses on the top areas that need the most support.
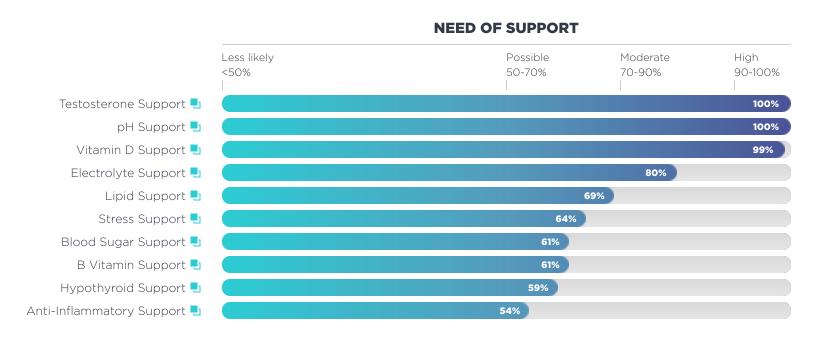
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Health Concerns

Health Concerns Report

The Health Concerns Report takes all the information in this report and focuses on the top areas that need the most support.

Each health concern is included in the following section so you can read an explanation of the results shown in this report.

NEED OF SUPPORT

	Less likely <50%	Possible 50-70%	Moderate 70-90%	High 90-100%

Testosterone Support	100%
pH Support	100%
Vitamin D Support	99%
Electrolyte Support	80%
Lipid Support	69%
Stress Support	64%
Blood Sugar Support	61%
B Vitamin Support	61%
Hypothyroid Support	59%
Anti-Inflammatory Support	54%

Health Concerns Details

This section contains an explanation of the results presented in the Health Concerns Report including all the biomarkers considered in the analysis and the rationale behind the interpretation.

TESTOSTERONE SUPPORT ⬒

The results of your blood test indicate a trend towards testosterone deficiency and a need for testosterone metabolism support.

Rationale

Testosterone Free - Female ↓ , Testosterone Total - Female ↓

100%
HIGH

PH SUPPORT ⬒

The results of your blood test indicate a tendency towards metabolic acidosis and a need for pH support.

Rationale

Anion Gap ↑ , Potassium ↓ , Chloride ↓

100%
HIGH

VITAMIN D SUPPORT ⬒

The results of your blood test indicate that your vitamin D levels might be lower than optimal and shows a need for vitamin D supplementation.

Rationale

Vitamin D (25-OH) ↓

99%
HIGH

ELECTROLYTE SUPPORT ⬒

The results of your blood test indicate that your electrolytes might be lower than optimal and shows a need for electrolyte/mineral supplementation.

Rationale

Potassium ↓ , Chloride ↓

80%
MODERATE

LIPID SUPPORT ⬒

The results of your blood test indicate that you have higher than optimal levels of cholesterol and fat in your blood (a condition called hyperlipidemia), which is associated with an increased risk of cardiovascular disease. There is a need for cardiovascular support, especially support to help lower excessive blood fats.

Rationale

Cholesterol - Total ↑ , LDL Cholesterol ↑

69%
POSSIBLE

STRESS SUPPORT

The results of your blood test indicate a tendency towards adrenal stress and adrenal hyperfunction and a need for adrenal gland support.

Rationale

Potassium ↓ , Sodium : Potassium ↑

64% POSSIBLE

BLOOD SUGAR SUPPORT

The results of your blood test indicate a tendency towards blood sugar dysregulation and a need for blood sugar support.

Rationale

Glucose Fasting ↑ , Hemoglobin A1C ↑ , Cholesterol - Total ↑ , LDL Cholesterol ↑

61% POSSIBLE

B VITAMIN SUPPORT

The results of your blood test indicate that your B vitamin levels might be lower than optimal and shows a need for B complex supplementation.

Rationale

Anion Gap ↑ , Glucose Fasting ↑ , Hemoglobin - Female ↓

61% POSSIBLE

HYPOTHYROID SUPPORT

The results of your blood test indicate a tendency towards hypothyroidism and a need for thyroid gland support.

Rationale

TSH ↑ , Cholesterol - Total ↑

59% POSSIBLE

ANTI-INFLAMMATORY SUPPORT

The results of your blood test indicate a tendency towards inflammation and show a need for anti-inflammatory support.

Rationale

Hs CRP - Female ↑ , RDW ↑ , Neutrophil : Lymphocyte ↑ , Basophils - % ↑ , Vitamin D (25-OH) ↓ , Platelet : Lymphocyte (PLR) ↑

54% POSSIBLE

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