



Functional Health Report

A comprehensive analysis of your test results.

BLOOD CHEMISTRY ANALYSIS



Patient Report

Prepared for

56 year old female born

Non-fasting

Requested by

Epicentre

Collected Date

Jun 19, 2024

Lab

Default

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

Introduction

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Patient Report

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

Ms Cherie Cawood
Epicentre

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.



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.

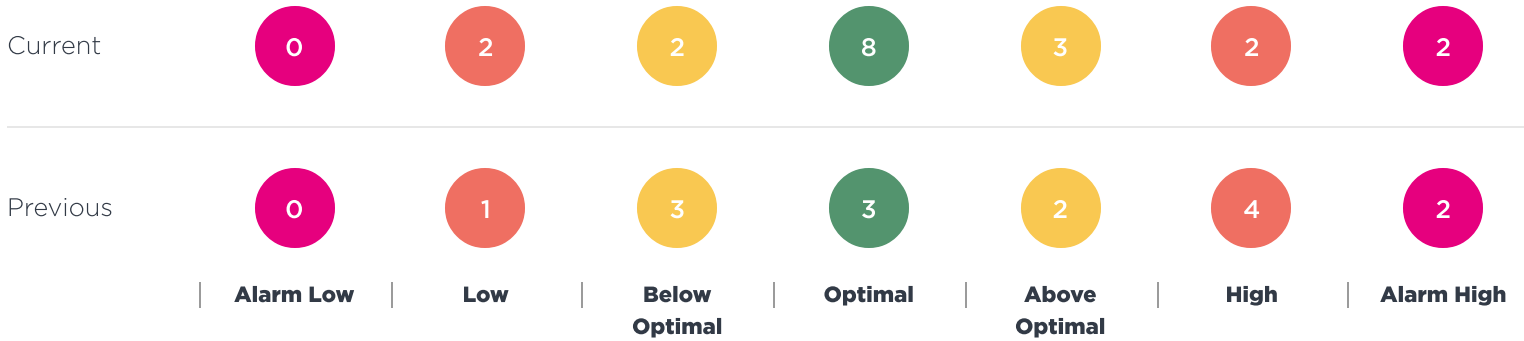
Analytics

- 5 Blood Test Comparative
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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



Biomarker	Default		Optimal Range	Standard Range	Units	
	Previous Mar 14 2024	Current Jun 19 2024				
BLOOD GLUCOSE						
Hemoglobin A1C		5.3	4.60 - 5.30	0 - 5.70	%	
eAG		106.29	85.00 - 105.00	82.00 - 154.00	mg/dL	
LIPIDS						
Cholesterol - Total		251.35	238.59	160.00 - 199.00	125.00 - 199.00	mg/dL
Triglycerides		183.35	89.46	70.00 - 80.00	0 - 149.99	mg/dL
LDL Cholesterol		174.40	165.51	80.00 - 99.99	0 - 99.99	mg/dL
HDL Cholesterol		65.35	76.57	55.00 - 93.00	45.00 - 100.00	mg/dL
Non-HDL Cholesterol		185.71	161.78	70.00 - 99.00	0 - 129.99	mg/dL
LDL : HDL - Female		2.67	2.16	0 - 2.34	0 - 4.12	Ratio
Triglyceride:HDL		2.80	1.17	0.50 - 1.90	0 - 2.00	ratio
Cholesterol : HDL		3.85	3.12	0 - 3.00	0 - 5.00	Ratio

CARDIOMETABOLIC

Biomarker	Default	Default	Optimal Range	Standard Range	Units
	Previous Mar 14 2024	Current Jun 19 2024			
Atherogenic Index of Plasma (AIP)		-0.29	-0.50 - 0.11		Index

THYROID

TSH		1.56	1.69	1.00 - 2.00	0.40 - 4.50	mIU/L
T4 - Free		0.99 ↓	1.10	1.00 - 1.50	0.80 - 1.80	ng/dL
T3 - Free		2.47 ↓	2.08 ↓ ↓	3.00 - 3.50	2.30 - 4.20	pg/mL
Thyroid Peroxidase (TPO) Abs		302 ⚠	227.75 ⚠	0 - 6.80	0 - 9.00	IU/mL
Free T3 : Free T4		2.51	1.9 ↓ ↓	2.40 - 2.70	2.20 - 2.90	Ratio

VITAMINS

Vitamin D (25-OH)		24.96 ↓ ↓	53.70	50.00 - 90.00	30.00 - 100.00	ng/mL
Vitamin B12			276.00 ↓	545.00 - 1100.00	200.00 - 1100.00	pg/mL

HORMONES

DHEA-S - Female		55.56 ↓	191.85 ↓	275.00 - 391.00	18.00 - 391.00	μg/dL
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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.

Key

- Optimal
- Above / Below Optimal
- High/ Low
- Alarm High / Alarm Low

Biomarker	Latest 4 Test Results			
	Default	Default	Default	Default
	Nov 30 2022	Nov 22 2023	Mar 14 2024	Jun 19 2024

BLOOD GLUCOSE

Glucose Fasting		93.68 ↑		
Hemoglobin A1C		5.6 ↑		5.3
eAG		114.03 ↑		106.29 ↑
Insulin - Fasting		4.59		
HOMA2-%B		62.1 ↓ ↓		
HOMA2-%S		164.9		
HOMA2-IR		0.6 ↓		
QUICKI		0.38 ↓		
Triglyceride-Glucose Index (TyG)		4.68 ↑ ↑		

KIDNEY

BUN		14.01	12.61	
Creatinine		0.67 ↓	0.80	
BUN : Creatinine		19.81 ↑	14.86	
eGFR		97	79 ↓	

ELECTROLYTES

Sodium		136 ↓	139	
Potassium		4.7	4.6	

Biomarker	Latest 4 Test Results			
	Default	Default	Default	Default
	Nov 30 2022	Nov 22 2023	Mar 14 2024	Jun 19 2024
Chloride		99 ↓	104	
CO2		27		
Sodium : Potassium		28.94 ↓ ↓	30.22	
METABOLIC				
Anion Gap		14.7 ↑		
Uric Acid - Female		4.37		
PROTEINS				
Protein - Total		6.3 ↓	6.7 ↓	6.9
Albumin		3.6 ↓	4.4 ↓	4.5
Globulin - Total		2.3 ↓		
Albumin : Globulin		1.91		
MINERALS				
Calcium		9.04		
Phosphorus		3.59 ↑		
Magnesium - Serum		2.00 ↓	2.15 ↓	
Calcium : Albumin		2		
Calcium : Phosphorus		2.52		
LIVER AND GB				
Alk Phos		217 ↑ ↑	51	56
AST		303 ⚠	19	20
ALT		317 ⚠	10	9 ↓
LDH		145		
Bilirubin - Total		1.74 ↑ ↑	0.44 ↓	0.64
Bilirubin - Direct		1 ⚠	0.09 ↓	0.12
Bilirubin - Indirect		0.74	0.36 ↓	0.53
GGT		479 ⚠	22 ↑	20 ↑

Biomarker	Latest 4 Test Results				
	Default	Default	Default	Default	
	Nov 30 2022	Nov 22 2023	Mar 14 2024	Jun 19 2024	
AST : ALT		0.96	1.9 ↑↑	2.22 ↑↑	
IRON MARKERS					
Iron - Serum			53.63 ↓	53.63 ↓	
Ferritin			85.2 ↑	90.1 ↑	
% Transferrin saturation			16 ↓↓	15 ↓↓	
Transferrin			226	270	
LIPIDS					
Cholesterol - Total 			218.87 ↑↑	251.35 ↑↑	238.59 ↑↑
Triglycerides 			124.00 ↑	183.35 ↑↑	89.46 ↑
LDL Cholesterol 			157.00 ▲	174.40 ▲	165.51 ▲
HDL Cholesterol 			69.61	65.35	76.57
Non-HDL Cholesterol 			149.03 ↑↑	185.71 ↑↑	161.78 ↑↑
LDL : HDL - Female 			2.26	2.67 ↑	2.16
Triglyceride:HDL 			1.79	2.80 ↑↑	1.17
Cholesterol : HDL 			3.14 ↑	3.85 ↑	3.12 ↑
CARDIOMETABOLIC					
Homocysteine			9.5 ↑	12 ↑↑	
Atherogenic Index of Plasma (AIP) 					-0.29
THYROID					
TSH 			0.29 ▲	1.56	1.69
T4 - Free 			0.63 ↓↓	0.99 ↓	1.10
T3 - Free 			1.43 ▲	2.47 ↓	2.08 ↓↓
Reverse T3			27.27 ↑↑		
Thyroid Peroxidase (TPO) Abs 			420 ▲	302 ▲	227.75 ▲
Thyroglobulin Abs			2.62 ▲		
Thyroglobulin			0.1 ↓↓		

Biomarker	Latest 4 Test Results			
	Default	Default	Default	Default
	Nov 30 2022	Nov 22 2023	Mar 14 2024	Jun 19 2024
Free T3 : Reverse T3		5.24 ↓		
Free T3 : Free T4		2.28 ↓	2.51	1.9 ↓ ↓
INFLAMMATION				
Hs CRP - Female		1.60 ↑ ↑	0.21	
ESR - Female		3	1	
Fibrinogen Activity		289.12		
Platelet : Lymphocyte (PLR)		130 ↑	107.37	
VITAMINS				
Vitamin D (25-OH)			24.96 ↓ ↓	53.70
Vitamin B12				276.00 ↓
HORMONES				
DHEA-S - Female		70.37 ↓	55.56 ↓	191.85 ↓
Testosterone Total - Female		28.27 ↓		
Testosterone Free - Female		3.04 ↓		
Sex Hormone Binding Globulin - Female		69		
Estradiol - Female		18.80 <i>POST MENOPAUSAL</i>		
Testosterone Bioavailable - Female		7.21		
CBC				
RBC - Female		4.29 ↓	3.98 ↓	
Hemoglobin - Female		14.4	13.6	
Hematocrit - Female		42	38	
MCV		98.9 ↑	96.8 ↑	
MCH		33.6 ↑ ↑	34.2 ↑ ↑	
MCHC		34	35.3	
Platelets		208	204	
RDW		13.6 ↑	14.1 ↑	

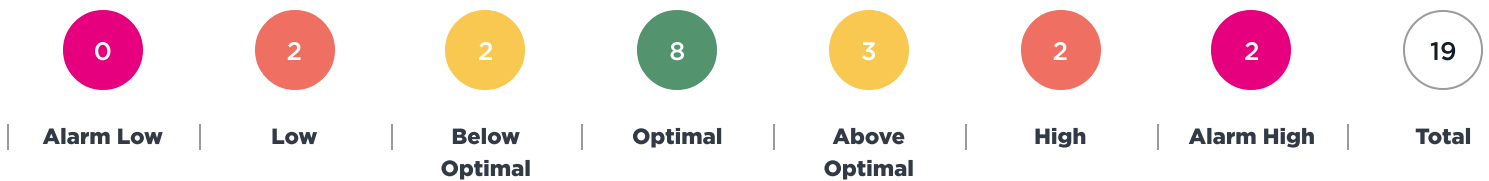
Biomarker	Latest 4 Test Results			
	Default	Default	Default	Default
	Nov 30 2022	Nov 22 2023	Mar 14 2024	Jun 19 2024
WBCS				
Total WBCs		5.9	6.5 ↑	
Neutrophils - %		64.41 ↑	61.54 ↑	
Lymphocytes - %		27.12 ↓	29.23 ↓	
Monocytes - %		5.8		
Eosinophils - %		1.69	1.54	
Basophils - %		0	0	
Neutrophils - Absolute		3.8	4	
Lymphocytes - Absolute		1.6	1.9	
Monocytes - Absolute		0.3		
Eosinophils - Absolute		0.1	0.1	
Basophils - Absolute		0	0	
Neutrophil : Lymphocyte		2.38 ↑	2.11 ↑	

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 see a more detailed view of the blood test result itself.

Total number of biomarkers by range



Above Optimal

LDL Cholesterol

165.51 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.

Thyroid Peroxidase (TPO) Abs

227.75 IU/mL

Thyroid peroxidase (TPO) is an enzyme inside the cells of the thyroid that attaches iodine molecules to a tyrosine molecule to form the thyroid hormone Thyroxine or T4. The Thyroid Peroxidase (TPO) antibody test measures the level of antibodies in the blood that attacks the TPO enzyme inside the thyroid cells. Elevated levels of Thyroid Peroxidase (TPO) Antibodies are found in Autoimmune Thyroiditis, such as Hashimoto’s Thyroiditis.

Cholesterol - Total

238.59 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.

Non-HDL Cholesterol

161.78 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.

Cholesterol : HDL

3.12 Ratio

The ratio of total cholesterol to HDL is a far better predictor of cardiovascular disease than cholesterol by itself. A lower ratio is ideal because you want to lower cholesterol (but not too low) and raise HDL. A level below 3.0 would be ideal. Every increase of 1.0, i.e. 3.0 to 4.0 increases the risk of heart attack by 60%.

eAG

106.29 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.

Triglycerides

89.46 mg/dL

Serum triglycerides are composed of fatty acid molecules that enter the bloodstream either from the liver or from the diet. Levels will be elevated in metabolic syndrome, fatty liver, in people with an increased risk of cardiovascular disease, hypothyroidism, and adrenal dysfunction

Below Optimal

Free T3 : Free T4

1.9 Ratio

The Free T3: Free T4 ratio is a measure that assesses the balance between two important thyroid hormones in your blood: Free T3 (triiodothyronine) and Free T4 (thyroxine). These hormones play vital roles in regulating energy, metabolism, and many other bodily functions. A normal ratio indicates a balanced conversion of T4 (a storage hormone) to T3 (the active hormone). If the ratio is low, it suggests that the body may not be converting T4 to T3 efficiently, which can lead to symptoms of low thyroid function, even if individual T4 levels are normal.

DHEA-S - Female

191.85 µg/dL

DHEA is produced primarily from the adrenals and is the most abundant circulating steroid in the human body and influences more than 150 known anabolic (repair) functions throughout the body and brain. It is the precursor for the sex hormones: testosterone, progesterone, and estrogen. Decreased levels are associated with many common age-related conditions, including diseases of the nervous, cardiovascular, and immune systems such as metabolic syndrome, coronary artery disease, osteoporosis, mood disorders and sexual dysfunction. Ideally, DHEA levels should be maintained at the level of a healthy 30-year-old to maximize the anti-aging effects.

T3 - Free

2.08 pg/mL

T-3 is the most active thyroid hormone and is primarily produced from the conversion of thyroxine (T-4) in the peripheral tissue. Free T3 is the unbound form of T3 measured in the blood. Free T3 represents approximately 8 – 10% of circulating T3 in the blood. Free T-3 levels may be decreased with hypothyroidism and is associated with selenium deficiency.

Vitamin B12

276.00 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. Decreased serum B12 levels are associated with a deficiency of B12, insufficient B12 intake in the diet, or malabsorption.



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.

Assessment

- 16 Nutrient Status
- 17 Nutrient Deficiencies

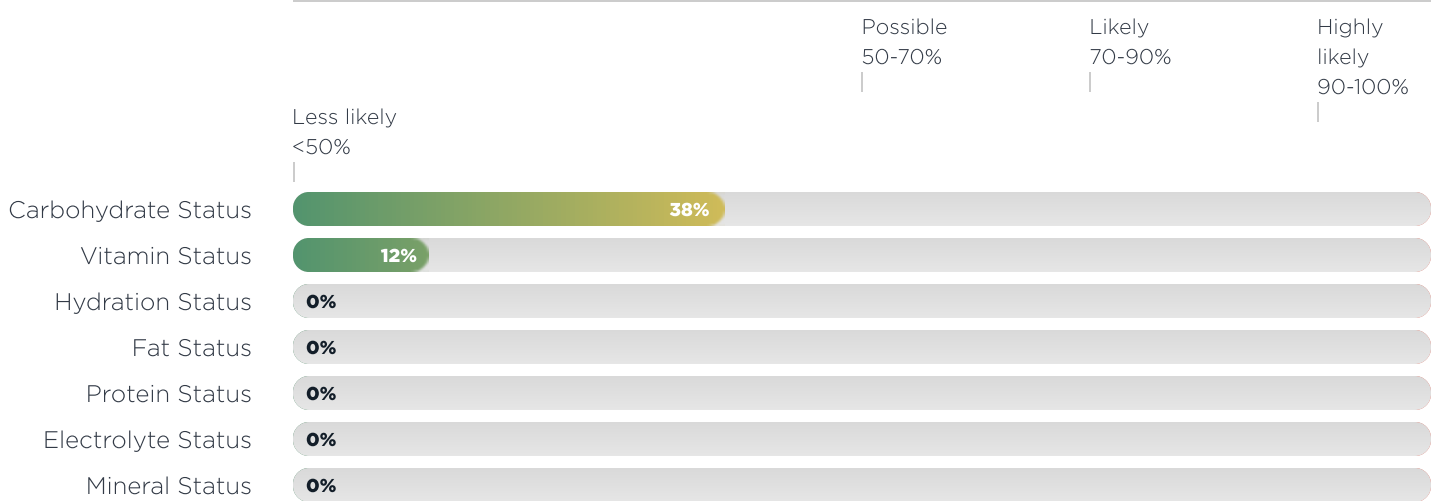
Nutrient Status

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



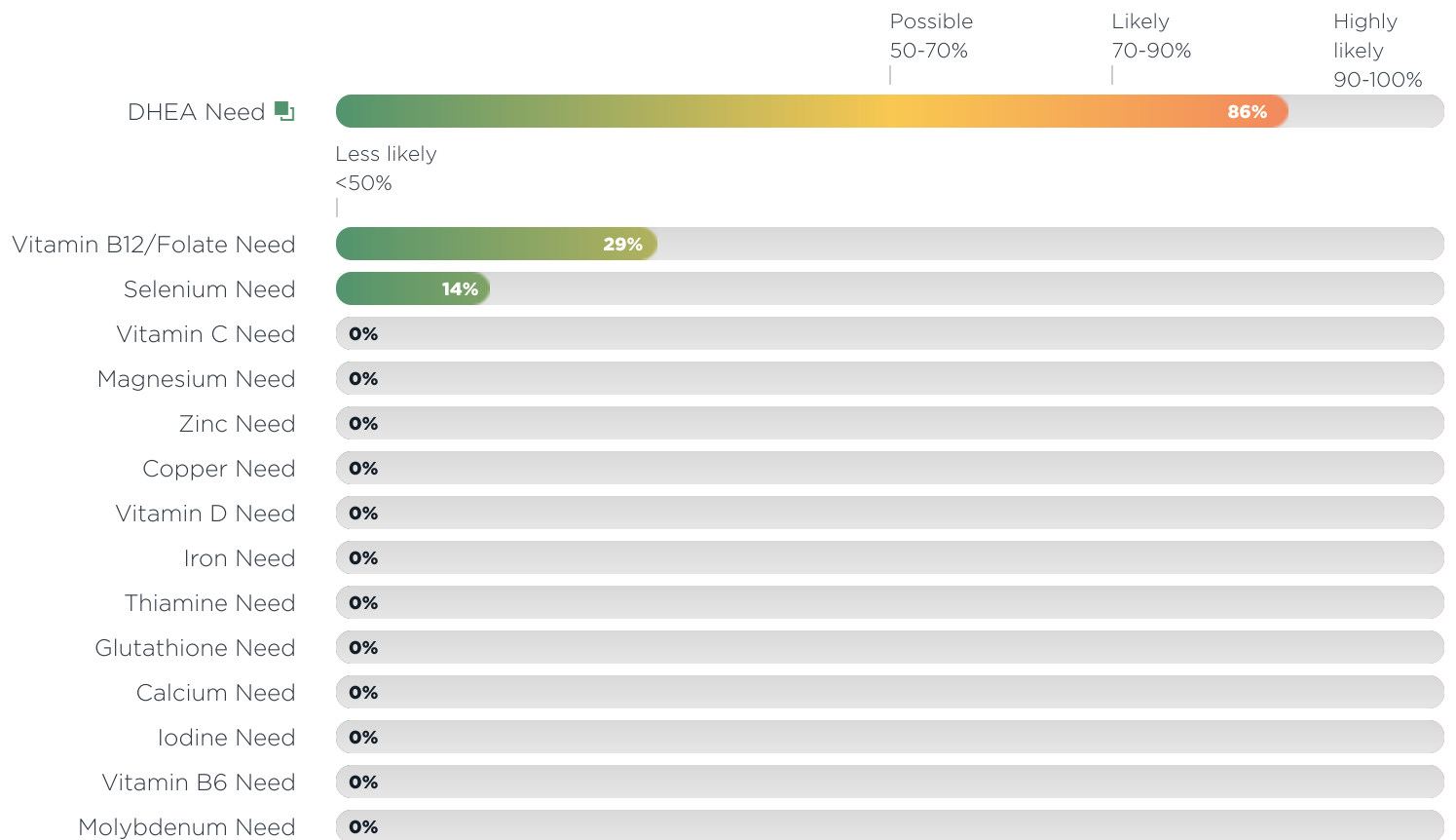


Individual Nutrient Deficiencies

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.

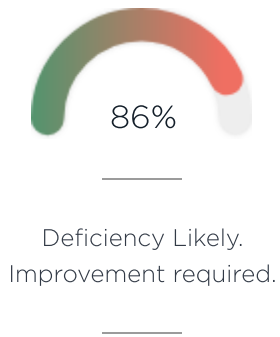
Each individual Nutrient Deficiency that has a probability of dysfunction above 50% is included in the section that follows so you can read a detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DEFICIENCY



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.



DHEA NEED

Your blood test results suggest that you are likely not getting enough DHEA, which can affect your energy levels and mood. To help prevent further decline in DHEA levels, focus on healthy lifestyle choices like regular exercise, a balanced diet, and stress management. Some conditions, like chronic stress or aging, can make it harder for your body to maintain adequate DHEA levels.

Rationale

DHEA-S - Female 

Biomarkers considered

DHEA-S - Female



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

Health Concerns

20 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



Health Concerns Details

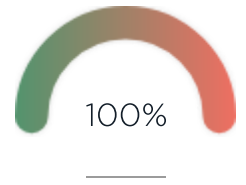
This section contains an explanation of the results presented in the Health Concerns Report including all the biomarkers considered in the analysis and the rationale behind the interpretation.

THYROID CONVERSION SUPPORT

The results of your blood test indicate a tendency towards a difficulty converting thyroxine (T4) into triiodothyronine (T3), which can cause symptoms of hypothyroidism, and a need for thyroid gland support.

Rationale

T3 - Free ↓ , Free T3 : Free T4 ↓

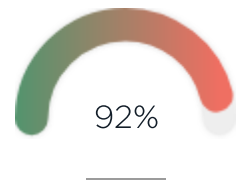


LIPID SUPPORT

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 ↑ , Triglycerides ↑ , LDL Cholesterol ↑

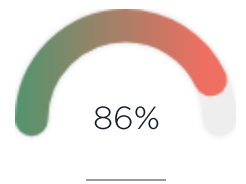


DHEA SUPPORT

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

Rationale

DHEA-S - Female ↓





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Disclaimer

23 Disclaimer



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