



# Blood Chemistry Analysis Functional Health Report



## Practitioner Report

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**Prepared for**

Male Sample  
57 year old male born Nov 01,  
1966  
Fasting



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**Requested by**

Mrs. Fera Butts  
Tactical Health 100



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**Collected  
Date**

Dec 01, 2023

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**Lab**

Quest

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**Powered by**



# What's Inside?

## SECTION 1: INTRODUCTION

An introduction to Functional Blood Chemistry Analysis and this report.

1 What's Inside?

## SECTION 2: ANALYSIS

A full breakdown of all individual biomarker results.

3 Blood Test Results

14 Blood Test Comparative

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23 Blood Test History

## SECTION 3: APPENDIX

Additional information pertinent to this report.

30 Disclaimer



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

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## Analytics

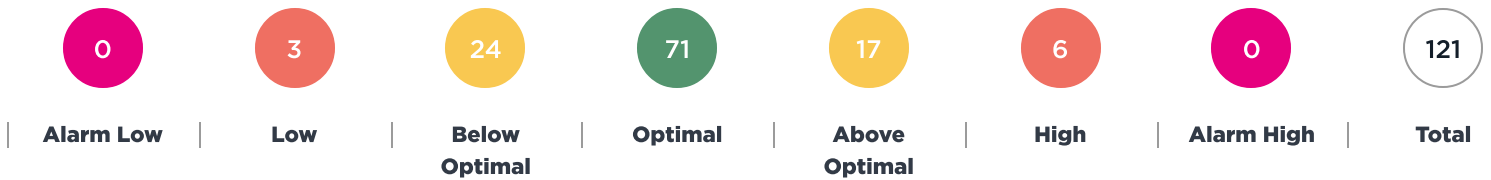
- 3 Blood Test Results
- 14 Blood Test Comparative
- 19 Blood Test Score
- 23 Blood Test History

Blood Glucose	Renal	Prostate	Electrolytes	Metabolic
Enzymes	Proteins	Minerals	Liver and GB	Iron Markers
Lipids	Cardiometabolic	Thyroid	Inflammation	Vitamins
Hormones	CBC	WBCs		

# Blood Test Results

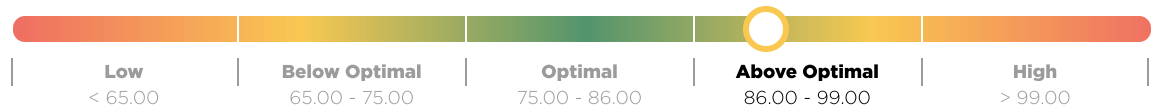
The Blood Test Results Report lists the results of your patient's Chemistry Screen and CBC and shows you whether or not an individual biomarker is optimal, outside of the optimal range, or outside of the standard range. The biomarkers are grouped into their most common categories.

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.



## BLOOD GLUCOSE

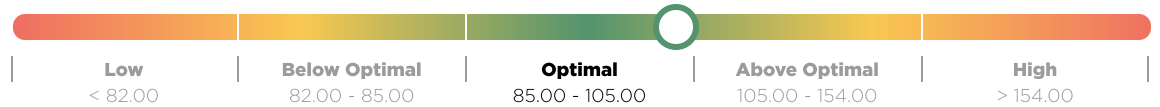
Glucose - Fasting  
90.00 mg/dL



Hemoglobin A1C  
5.20 %



eAG  
103.00 mg/dl



Insulin - Fasting  
5.20 µIU/ml



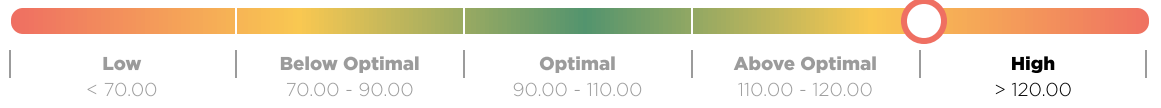
C-Peptide  
2.10 ng/ml



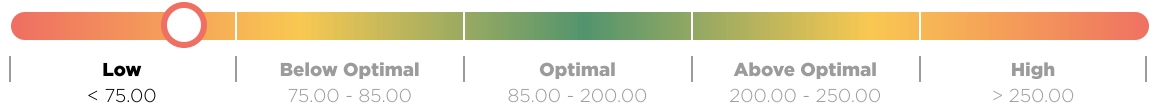
Fructosamine  
193.70  $\mu\text{mol/L}$



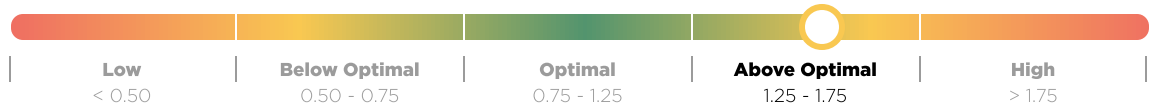
HOMA2-%B  
128.20 %



HOMA2-%S  
65.00 %



HOMA2-IR  
1.53 Index



QUICKI  
0.37 Index

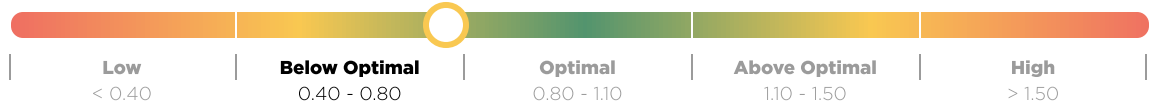


## RENAL

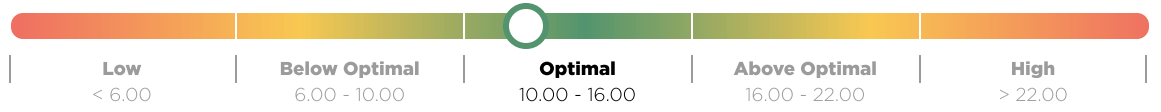
BUN  
9.00 mg/dL



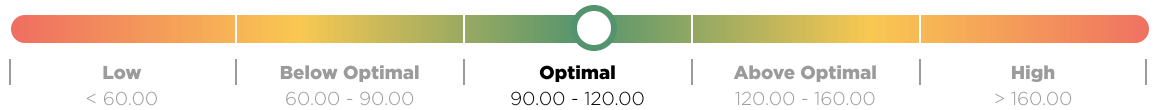
Creatinine  
0.77 mg/dL



BUN : Creatinine  
11.69 Ratio

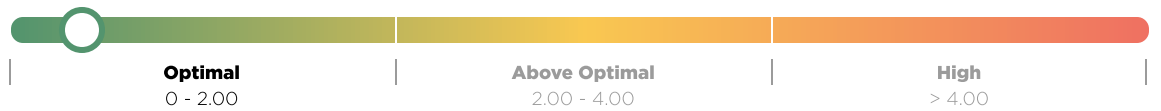


eGFR  
107.00 mL/min/1.73m<sup>2</sup>



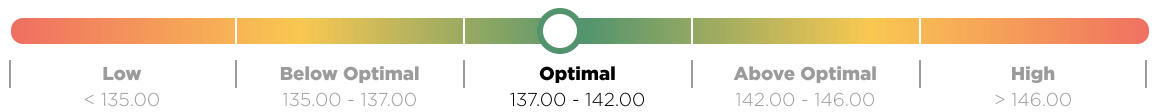
## PROSTATE

PSA - Total  
0.40 ng/ml



## ELECTROLYTES

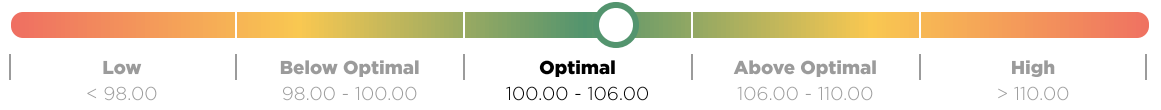
Sodium  
139.00 mEq/L



Potassium  
4.70 mEq/L



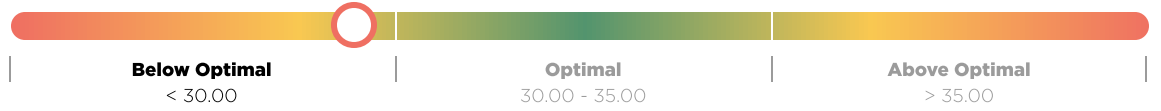
Chloride  
104.00 mEq/L



CO2  
25.00 mEq/L

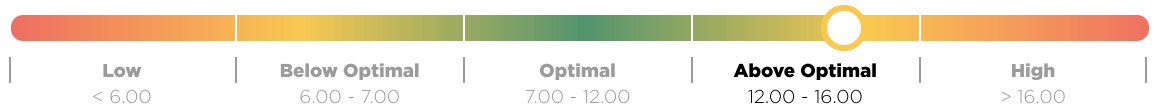


Sodium : Potassium  
29.57 ratio

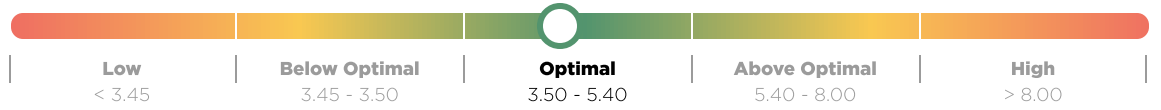


## METABOLIC

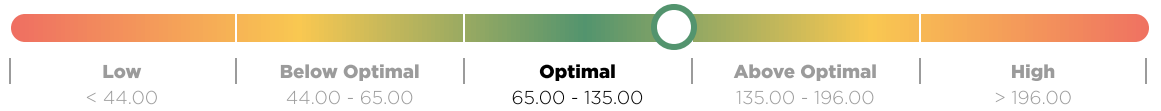
Anion Gap  
14.70 mEq/L



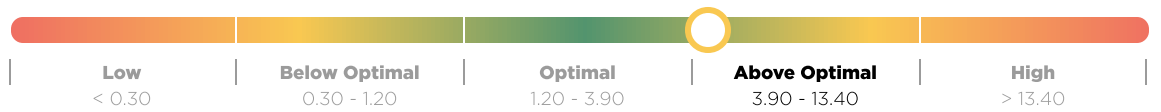
Uric Acid - Male  
4.30 mg/dL



Creatine Kinase  
130.00 u/l

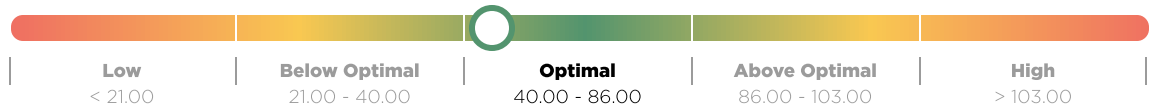


Leptin - Male  
4.50 ng/ml



## ENZYMES

Amylase  
45.00 U/L



Lipase  
43.00 U/L

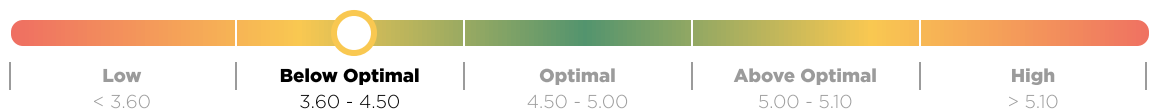


## PROTEINS

Protein - Total  
6.86 g/dL

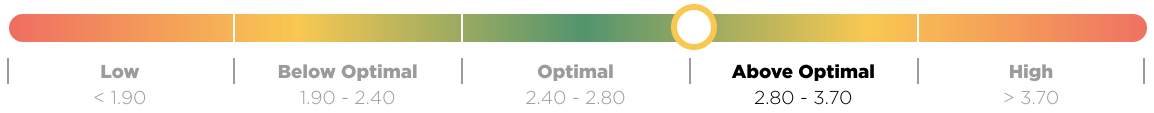


Albumin  
4.05 g/dL



Globulin - Total

2.81 g/dL



Albumin : Globulin

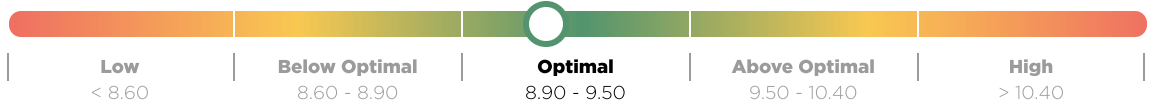
1.44 ratio



### MINERALS

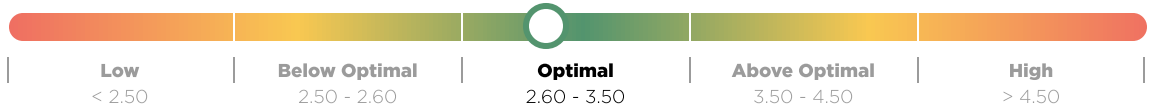
Calcium

9.12 mg/dL



Phosphorus

2.92 mg/dL



Magnesium - Serum

2.10 mg/dl



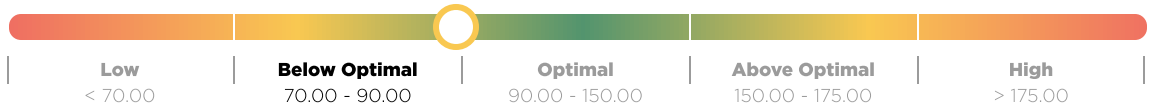
Magnesium - RBC

5.80 mg/dl



Copper - Serum

89.20 µg/dL



Zinc - Serum

76.20 µg/dL



Zinc - RBC

9.10 mg/L



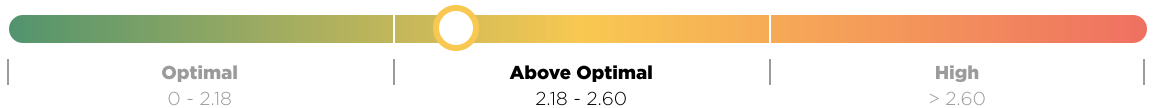
Copper : Zinc Ratio

1.17 Ratio



Calcium : Albumin

2.25 ratio

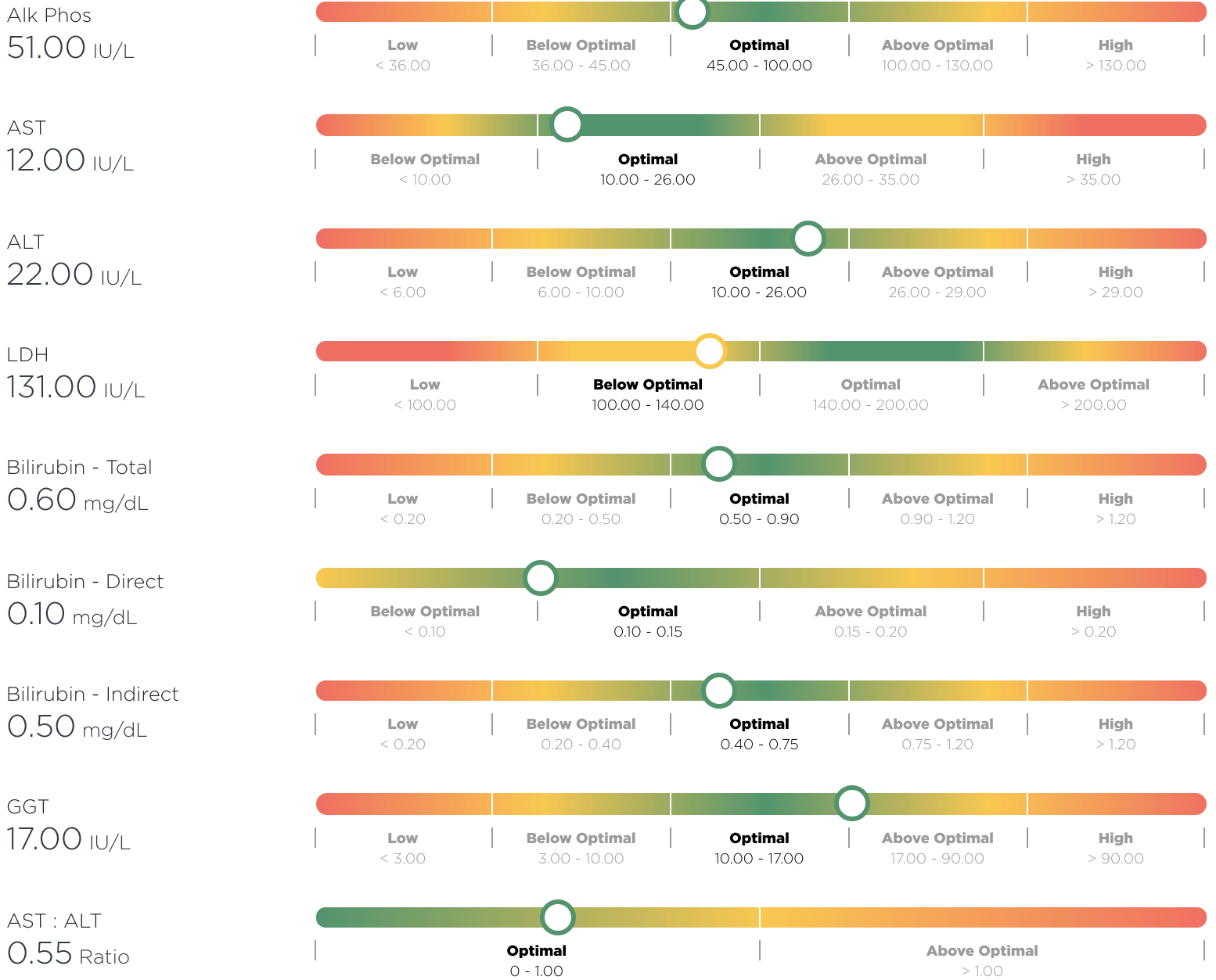


Calcium : Phosphorus

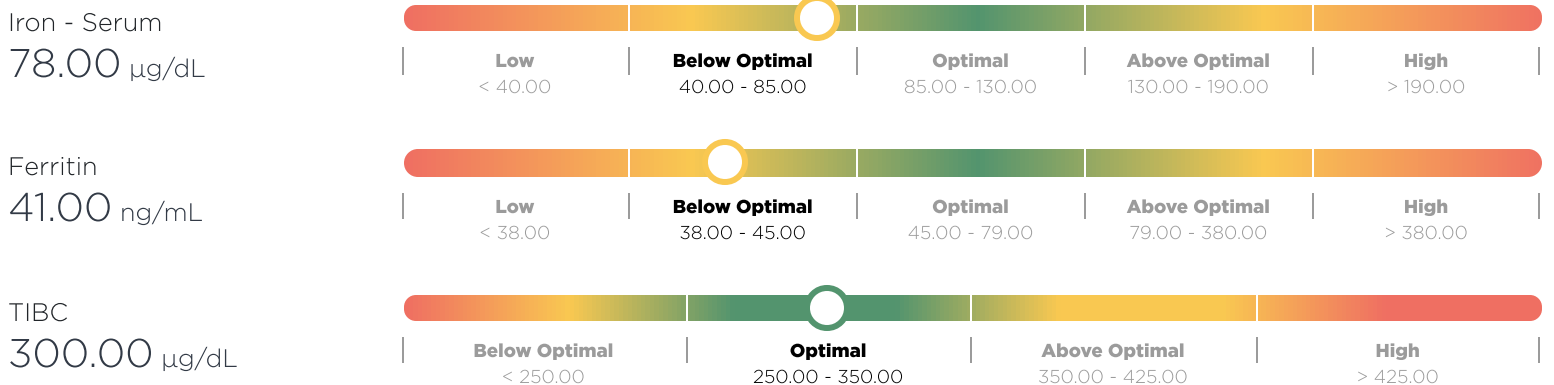
3.12 ratio



## LIVER AND GB

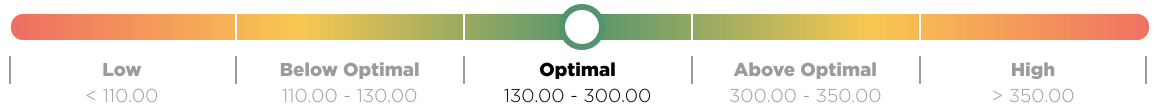


## IRON MARKERS

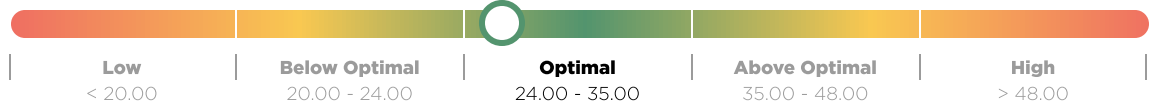




UIBC  
222.00 µg/dL



% Transferrin saturation  
26.00 %



## LIPIDS

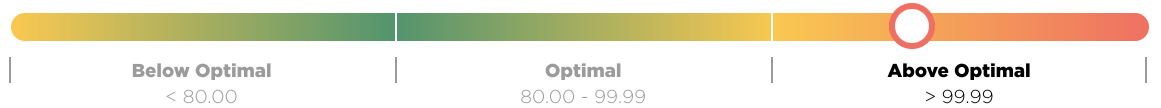
Cholesterol - Total  
203.00 mg/dL



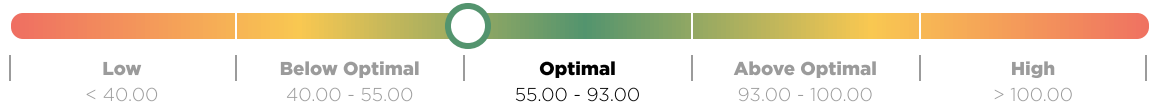
Triglycerides  
96.00 mg/dL



LDL Cholesterol  
122.00 mg/dL



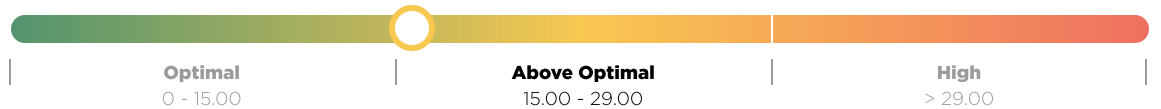
HDL Cholesterol  
56.00 mg/dL



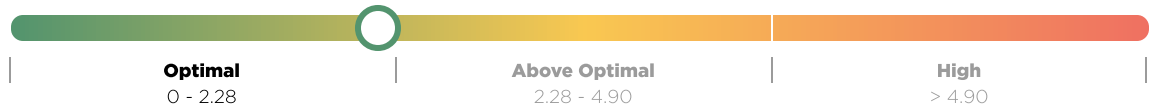
Non-HDL Cholesterol  
147.00 mg/dl



VLDL Cholesterol  
15.60 mg/dl



LDL : HDL - Male  
2.18 Ratio



Triglyceride:HDL  
1.71 ratio



Cholesterol : HDL  
3.62 Ratio

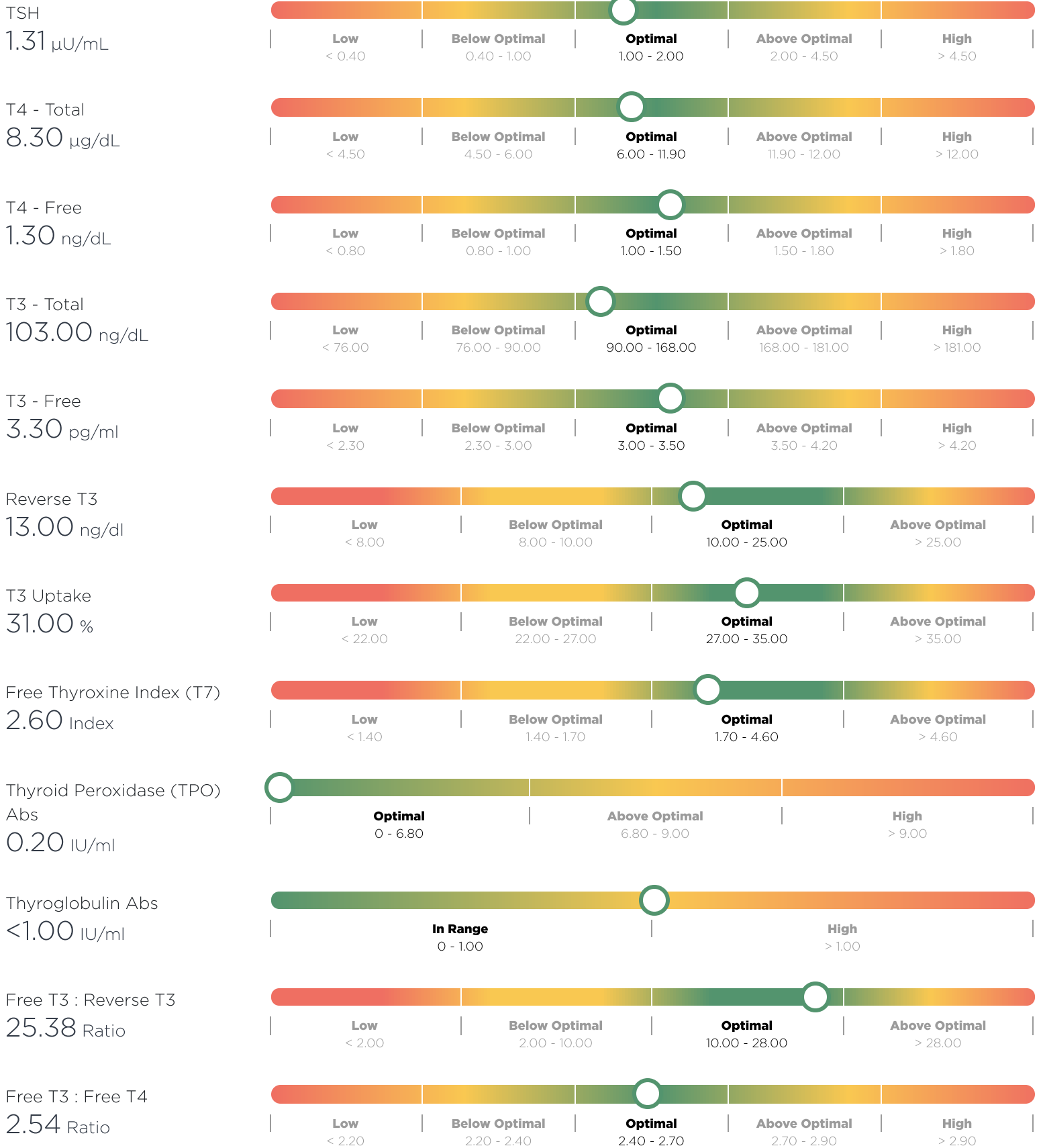


## CARDIOMETABOLIC

Homocysteine  
7.30 µmol/L



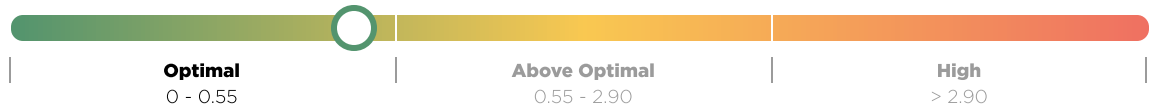
# THYROID



## INFLAMMATION

Hs CRP - Male

0.50 mg/L



C-Reactive Protein

4.10 mg/L



ESR - Male

4.80 mm/hr



Fibrinogen

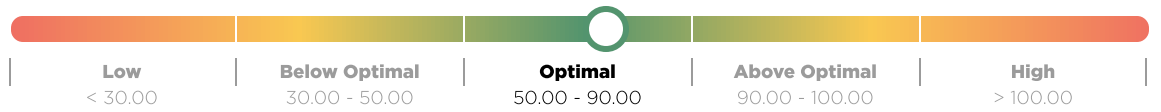
283.00 mg/dl



## VITAMINS

Vitamin D (25-OH)

74.00 ng/ml



Vitamin B12

427.00 pg/ml



Folate - Serum

14.20 ng/ml



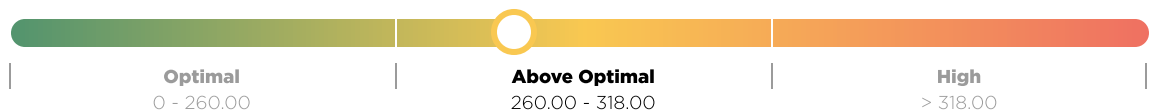
Folate - RBC

398.10 ng/ml



Methylmalonic Acid

278.20 nmol/L



## HORMONES

DHEA-S - Male

75.00 µg/dL



FSH - Male

5.90 mIU/ml



LH - Male

4.30 mIU/ml



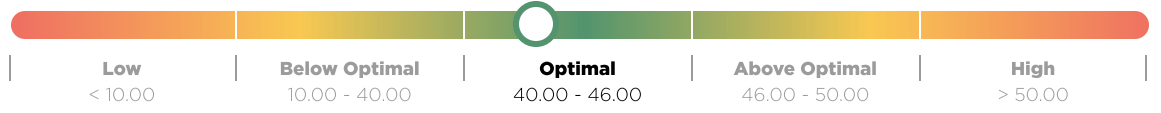
Testosterone Total - Male  
650.00 ng/dl



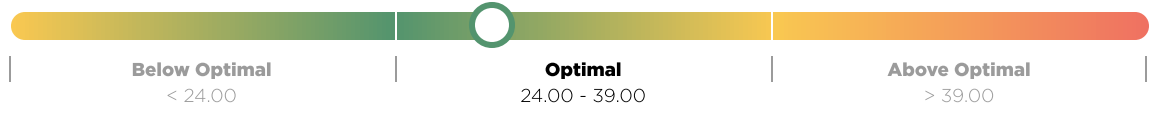
Testosterone Free - Male  
127.44 pg/ml



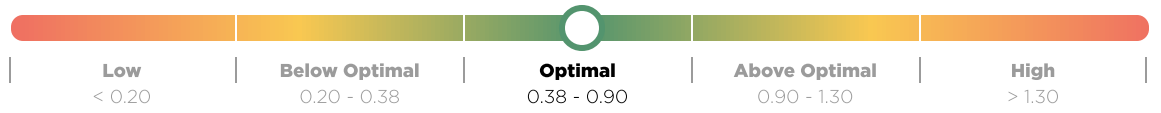
Sex Hormone Binding  
Globulin - Male  
42.00 nmol/L



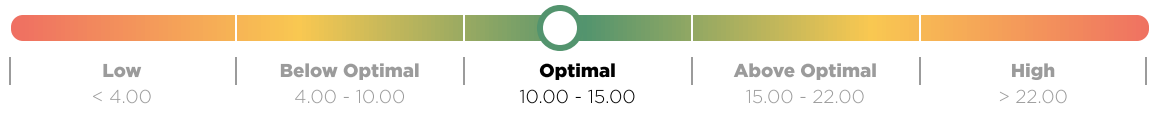
Estradiol - Male  
28.00 pg/ml



Progesterone - Male  
0.65 ng/ml



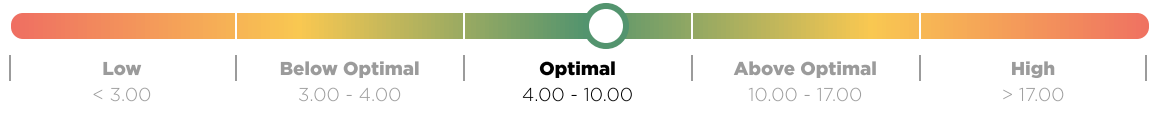
Cortisol - Total/AM  
12.20 µg/dL



Cortisol : DHEA-S  
0.16 ratio



Cortisol - PM  
7.80 µg/dL



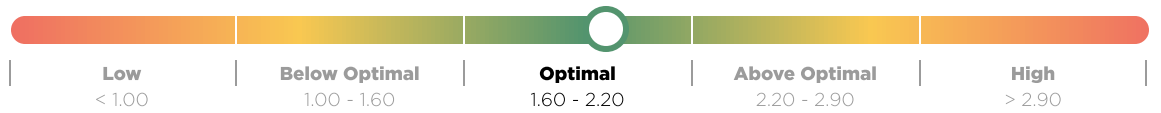
Gastrin  
42.50 pg/ml



% Testosterone Bioavailable -  
Male  
43.27 %



% Testosterone Free - Male  
1.96 %

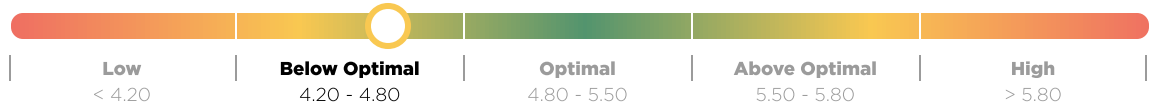


Testosterone Bioavailable -  
Male  
281.23 ng/dl

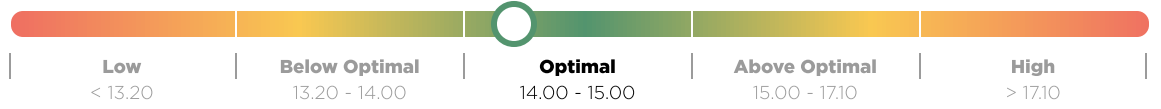


## CBC

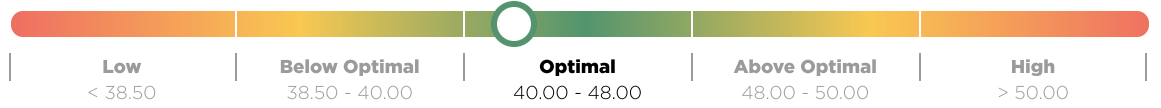
RBC - Male  
4.60 m/cumm



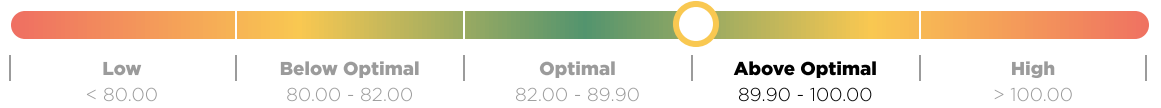
Hemoglobin - Male  
14.20 g/dl



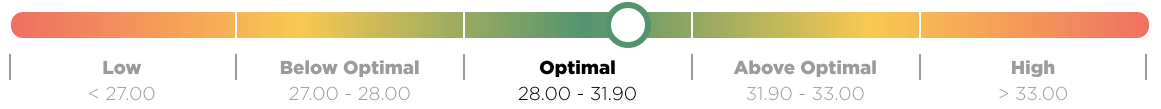
Hematocrit - Male  
41.60 %



MCV  
90.40 fL



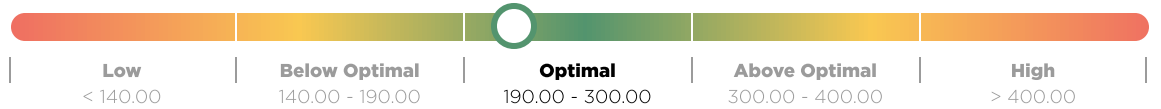
MCH  
30.90 pg



MCHC  
34.10 g/dL



Platelets  
217.00 10E3/ $\mu$ L



MPV  
11.20 fL



RDW  
12.40 %

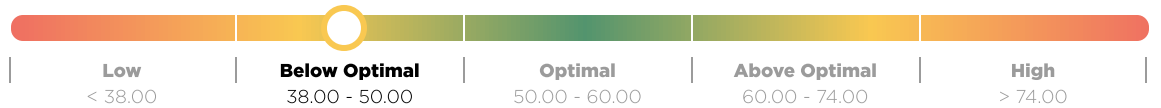


## WBCS

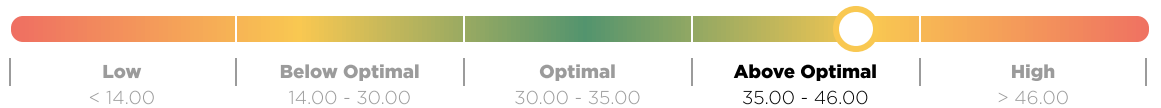
Total WBCs  
4.30 k/cumm



Neutrophils - %  
43.40 %



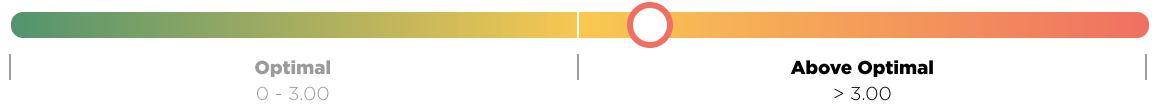
Lymphocytes - %  
43.00 %



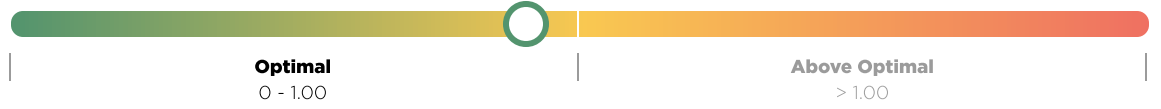
Monocytes - %  
8.20 %



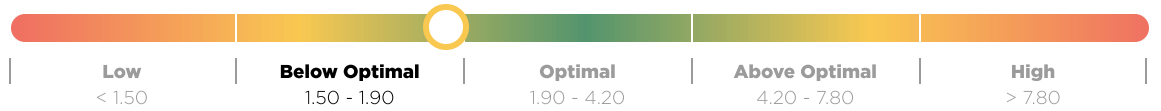
Eosinophils - %  
4.50 %



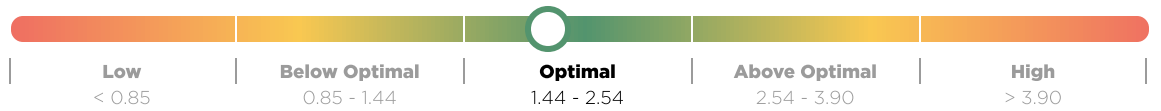
Basophils - %  
0.90 %



Neutrophils - Absolute  
1.87 k/cumm



Lymphocytes - Absolute  
1.85 k/cumm



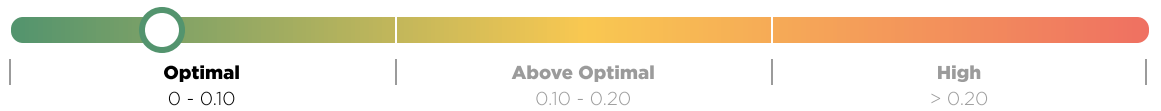
Monocytes - Absolute  
0.35 k/cumm



Eosinophils - Absolute  
0.19 k/cumm



Basophils - Absolute  
0.04 k/cumm



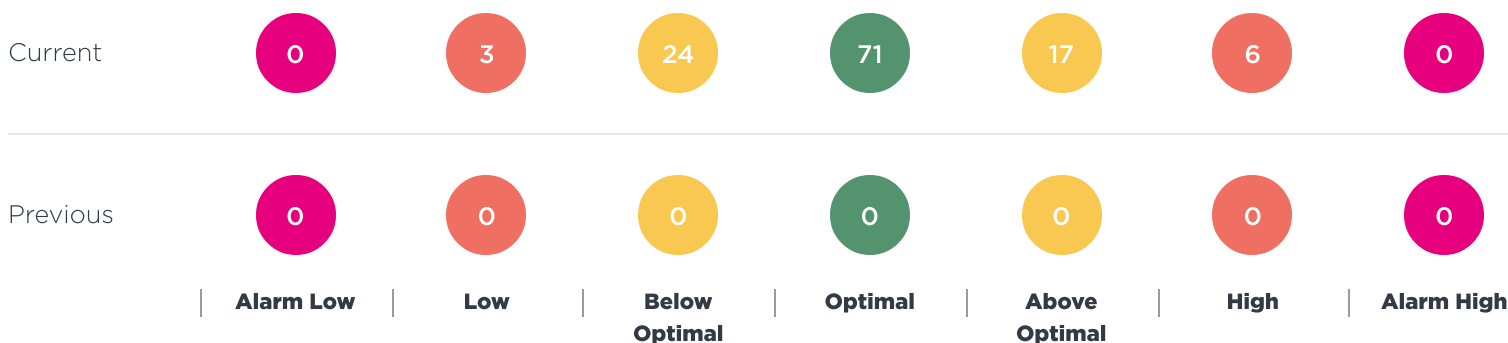
Neutrophil : Lymphocyte  
1.01 Ratio



# Blood Test Results Comparative

The Blood Test Results Comparative Report lists the results of your patient's latest and previous 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.

## A comparison of the total number of biomarkers by optimal range



Biomarker	Quest	Current	Optimal range	Standard range	Units
		Dec 01 2023			

### BLOOD GLUCOSE

Glucose - Fasting	90.00 ↑	75.00 - 86.00	65.00 - 99.00	mg/dL
Hemoglobin A1C	5.20	4.60 - 5.30	0 - 5.70	%
eAG	103.00	85.00 - 105.00	82.00 - 154.00	mg/dl
Insulin - Fasting	5.20 ↑	2.00 - 5.00	0 - 18.40	μIU/ml
C-Peptide	2.10	1.10 - 2.10	0.80 - 3.85	ng/ml
Fructosamine	193.70	190.00 - 228.00	190.00 - 270.00	μmol/L
HOMA2-%B	128.20 ↑↑	90.00 - 110.00	70.00 - 120.00	%
HOMA2-%S	65.00 ↓↓	85.00 - 200.00	75.00 - 250.00	%
HOMA2-IR	1.53 ↑	0.75 - 1.25	0.50 - 1.75	Index
QUICKI	0.37 ↓	0.45 - 5.00	0.34 - 5.00	Index

### RENAL

BUN	9.00 ↓	10.00 - 16.00	7.00 - 25.00	mg/dL
Creatinine	0.77 ↓	0.80 - 1.10	0.40 - 1.50	mg/dL
BUN : Creatinine	11.69	10.00 - 16.00	6.00 - 22.00	Ratio
eGFR	107.00	90.00 - 120.00	60.00 - 160.00	mL/min/1.73m2

Biomarker	Quest			
	Current Dec 01 2023	Optimal range	Standard range	Units
<b>PROSTATE</b>				
PSA - Total	0.40	0 - 2.00	0 - 4.00	ng/ml
<b>ELECTROLYTES</b>				
Sodium	139.00	137.00 - 142.00	135.00 - 146.00	mEq/L
Potassium	4.70	4.00 - 5.00	3.50 - 5.30	mEq/L
Chloride	104.00	100.00 - 106.00	98.00 - 110.00	mEq/L
CO2	25.00	25.00 - 30.00	19.00 - 30.00	mEq/L
Sodium : Potassium	29.57 ↓ ↓	30.00 - 35.00		ratio
<b>METABOLIC</b>				
Anion Gap	14.70 ↑	7.00 - 12.00	6.00 - 16.00	mEq/L
Uric Acid - Male	4.30	3.50 - 5.40	3.45 - 8.00	mg/dL
Creatine Kinase	130.00	65.00 - 135.00	44.00 - 196.00	u/l
Leptin - Male	4.50 ↑	1.20 - 3.90	0.30 - 13.40	ng/ml
<b>ENZYMES</b>				
Amylase	45.00	40.00 - 86.00	21.00 - 103.00	U/L
Lipase	43.00	22.00 - 51.00	13.00 - 60.00	U/L
<b>PROTEINS</b>				
Protein - Total	6.86 ↓	6.90 - 8.10	6.10 - 8.10	g/dL
Albumin	4.05 ↓	4.50 - 5.00	3.60 - 5.10	g/dL
Globulin - Total	2.81 ↑	2.40 - 2.80	1.90 - 3.70	g/dL
Albumin : Globulin	1.44	1.40 - 2.10	1.00 - 2.50	ratio
<b>MINERALS</b>				
Calcium	9.12	8.90 - 9.50	8.60 - 10.40	mg/dL
Phosphorus	2.92	2.60 - 3.50	2.50 - 4.50	mg/dL
Magnesium - Serum	2.10 ↓	2.20 - 2.50	1.50 - 2.50	mg/dl
Magnesium - RBC	5.80 ↓	6.00 - 6.80	4.00 - 6.80	mg/dl
Copper - Serum	89.20 ↓	90.00 - 150.00	70.00 - 175.00	µg/dL
Zinc - Serum	76.20 ↓	99.00 - 130.00	50.00 - 130.00	µg/dL
Zinc - RBC	9.10 ↓	10.40 - 14.70	9.00 - 14.70	mg/L
Copper : Zinc Ratio	1.17	0.70 - 1.50	0.80 - 2.00	Ratio
Calcium : Albumin	2.25 ↑	0 - 2.18	0 - 2.60	ratio
Calcium : Phosphorus	3.12	2.30 - 3.20	1.90 - 4.20	ratio
<b>LIVER AND GB</b>				
Alk Phos	51.00	45.00 - 100.00	36.00 - 130.00	IU/L
AST	12.00	10.00 - 26.00	10.00 - 35.00	IU/L
ALT	22.00	10.00 - 26.00	6.00 - 29.00	IU/L
LDH	131.00 ↓	140.00 - 200.00	100.00 - 200.00	IU/L
Bilirubin - Total	0.60	0.50 - 0.90	0.20 - 1.20	mg/dL
Bilirubin - Direct	0.10	0.10 - 0.15	0 - 0.20	mg/dL



Biomarker	Quest			Units
	Current Dec 01 2023	Optimal range	Standard range	
Bilirubin - Indirect	0.50	0.40 - 0.75	0.20 - 1.20	mg/dL
GGT	17.00	10.00 - 17.00	3.00 - 90.00	IU/L
AST : ALT	0.55	0 - 1.00		Ratio

### IRON MARKERS

Iron - Serum	78.00 ↓	85.00 - 130.00	40.00 - 190.00	µg/dL
Ferritin	41.00 ↓	45.00 - 79.00	38.00 - 380.00	ng/mL
TIBC	300.00	250.00 - 350.00	250.00 - 425.00	µg/dL
UIBC	222.00	130.00 - 300.00	110.00 - 350.00	µg/dL
% Transferrin saturation	26.00	24.00 - 35.00	20.00 - 48.00	%

### LIPIDS

Cholesterol - Total	203.00 ↑ ↑	160.00 - 199.00	125.00 - 199.00	mg/dL
Triglycerides	96.00 ↑	70.00 - 80.00	0 - 149.99	mg/dL
LDL Cholesterol	122.00 ↑ ↑	80.00 - 99.99	0 - 99.99	mg/dL
HDL Cholesterol	56.00	55.00 - 93.00	40.00 - 100.00	mg/dL
Non-HDL Cholesterol	147.00 ↑ ↑	70.00 - 99.00	0 - 129.99	mg/dl
VLDL Cholesterol	15.60 ↑	0 - 15.00	0 - 29.00	mg/dl
LDL : HDL - Male	2.18	0 - 2.28	0 - 4.90	Ratio
Triglyceride:HDL	1.71	0.50 - 1.90	0 - 2.00	ratio
Cholesterol : HDL	3.62 ↑	0 - 3.00	0 - 5.00	Ratio

### CARDIOMETABOLIC

Homocysteine	7.30 ↑	5.00 - 7.20	0 - 10.30	µmol/L
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### THYROID

TSH	1.31	1.00 - 2.00	0.40 - 4.50	µU/mL
T4 - Total	8.30	6.00 - 11.90	4.50 - 12.00	µg/dL
T4 - Free	1.30	1.00 - 1.50	0.80 - 1.80	ng/dL
T3 - Total	103.00	90.00 - 168.00	76.00 - 181.00	ng/dL
T3 - Free	3.30	3.00 - 3.50	2.30 - 4.20	pg/ml
Reverse T3	13.00	10.00 - 25.00	8.00 - 25.00	ng/dl
T3 Uptake	31.00	27.00 - 35.00	22.00 - 35.00	%
Free Thyroxine Index (T7)	2.60	1.70 - 4.60	1.40 - 3.80	Index
Thyroid Peroxidase (TPO) Abs	0.20	0 - 6.80	0 - 9.00	IU/ml
Thyroglobulin Abs	<1.00		0 - 1.00	IU/ml
Free T3 : Reverse T3	25.38	10.00 - 28.00	2.00 - 28.00	Ratio
Free T3 : Free T4	2.54	2.40 - 2.70	2.20 - 2.90	Ratio

### INFLAMMATION

Hs CRP - Male	0.50	0 - 0.55	0 - 2.90	mg/L
C-Reactive Protein	4.10 ↑	0 - 3.00	0 - 7.90	mg/L
ESR - Male	4.80	0 - 5.00	0 - 15.00	mm/hr
Fibrinogen	283.00	175.00 - 300.00	175.00 - 425.00	mg/dl

Biomarker	Quest			
	Current Dec 01 2023	Optimal range	Standard range	Units

### VITAMINS

Vitamin D (25-OH)	74.00	50.00 - 90.00	30.00 - 100.00	ng/ml
Vitamin B12	427.00 ↓	545.00 - 1100.00	200.00 - 1100.00	pg/ml
Folate - Serum	14.20 ↓	15.00 - 27.00	5.50 - 27.00	ng/ml
Folate - RBC	398.10 ↓	500.00 - 1504.00	280.00 - 1504.00	ng/ml
Methylmalonic Acid	278.20 ↑	0 - 260.00	0 - 318.00	nmol/L

### HORMONES





DHEA-S - Male	75.00 ↓ ↓	350.00 - 690.00	85.00 - 690.00	µg/dL
FSH - Male	5.90	1.60 - 8.00		mIU/ml
LH - Male	4.30	1.50 - 6.15	1.50 - 9.30	mIU/ml
Testosterone Total - Male	650.00 ↓	700.00 - 1100.00	250.00 - 1100.00	ng/dl
Testosterone Free - Male	127.44 ↓	150.00 - 224.00	46.00 - 224.00	pg/ml
Sex Hormone Binding Globulin - Male	42.00	40.00 - 46.00	10.00 - 50.00	nmol/L
Estradiol - Male	28.00	24.00 - 39.00	0 - 39.00	pg/ml
Progesterone - Male	0.65	0.38 - 0.90	0.20 - 1.30	ng/ml
Cortisol - Total/AM	12.20	10.00 - 15.00	4.00 - 22.00	µg/dL
Cortisol : DHEA-S	0.16 ↑ ↑	0 - 0.09		ratio
Cortisol - PM	7.80	4.00 - 10.00	3.00 - 17.00	µg/dL
Gastrin	42.50 ↓	45.00 - 90.00	0 - 100.00	pg/ml
% Testosterone Bioavailable - Male	43.27 ↓	53.00 - 65.00	35.00 - 65.00	%
% Testosterone Free - Male	1.96	1.60 - 2.20	1.00 - 2.90	%
Testosterone Bioavailable - Male	281.23 ↓	375.00 - 575.00	110.00 - 575.00	ng/dl

### CBC

RBC - Male	4.60 ↓	4.80 - 5.50	4.20 - 5.80	m/cumm
Hemoglobin - Male	14.20	14.00 - 15.00	13.20 - 17.10	g/dl
Hematocrit - Male	41.60	40.00 - 48.00	38.50 - 50.00	%
MCV	90.40 ↑	82.00 - 89.90	80.00 - 100.00	fL
MCH	30.90	28.00 - 31.90	27.00 - 33.00	pg
MCHC	34.10	34.00 - 36.00	32.00 - 36.00	g/dL
Platelets	217.00	190.00 - 300.00	140.00 - 400.00	10E3/µL
MPV	11.20 ↑	7.50 - 8.20	7.50 - 11.50	fL
RDW	12.40	11.00 - 12.60	11.00 - 15.00	%

### WBCS

Total WBCs	4.30	3.80 - 6.00	3.80 - 10.80	k/cumm
Neutrophils - %	43.40 ↓	50.00 - 60.00	38.00 - 74.00	%
Lymphocytes - %	43.00 ↑	30.00 - 35.00	14.00 - 46.00	%
Monocytes - %	8.20 ↑	4.00 - 7.00	4.00 - 13.00	%
Eosinophils - %	4.50 ↑ ↑	0 - 3.00		%
Basophils - %	0.90	0 - 1.00		%
Neutrophils - Absolute	1.87 ↓	1.90 - 4.20	1.50 - 7.80	k/cumm
Lymphocytes - Absolute	1.85	1.44 - 2.54	0.85 - 3.90	k/cumm

Biomarker	Quest			
	Current Dec 01 2023	Optimal range	Standard range	Units
Monocytes - Absolute 	0.35	0.20 - 0.40	0.20 - 0.95	k/cumm
Eosinophils - Absolute 	0.19	0 - 0.20	0 - 0.50	k/cumm
Basophils - Absolute 	0.04	0 - 0.10	0 - 0.20	k/cumm
Neutrophil : Lymphocyte 	1.01	1.00 - 1.70	1.00 - 3.00	Ratio

# Blood Test Score Report

This report shows the biomarkers on the blood test that are farthest from the median expressed as a %.

The biomarkers that appear closest to the top and the bottom are those biomarkers that are farthest from the median and should be carefully reviewed.

Biomarker	Lab result	Optimal range		% deviation	Optimal range	
		Low	High		Low	High
MPV	11.20	7.50	8.20	479		
Non-HDL Cholesterol	147.00	70.00	99.00	216		
Triglycerides	96.00	70.00	80.00	210		
Lymphocytes - %	43.00	30.00	35.00	210		
LDL Cholesterol	122.00	80.00	99.99	160		
HOMA2-%B	128.20	90.00	110.00	141		
Cortisol : DHEA-S	0.16	0	0.09	128		
HOMA2-IR	1.53	0.75	1.25	106		
Anion Gap	14.70	7.00	12.00	104		
Eosinophils - %	4.50	0	3.00	100		
Monocytes - %	8.20	4.00	7.00	90		
C-Reactive Protein	4.10	0	3.00	87		
Glucose - Fasting	90.00	75.00	86.00	86		
Leptin - Male	4.50	1.20	3.90	72		
Cholesterol : HDL	3.62	0	3.00	71		
Cholesterol - Total	203.00	160.00	199.00	60		
Methylmalonic Acid	278.20	0	260.00	57		
Insulin - Fasting	5.20	2.00	5.00	57		
MCV	90.40	82.00	89.90	56		
Homocysteine	7.30	5.00	7.20	55		
VLDL Cholesterol	15.60	0	15.00	54		
Calcium : Albumin	2.25	0	2.18	53		
Globulin - Total	2.81	2.40	2.80	52		
GGT	17.00	10.00	17.00	50		
Thyroglobulin Abs	<1.00	0	1.00	50		
C-Peptide	2.10	1.10	2.10	50		
ESR - Male	4.80	0	5.00	46		
LDL : HDL - Male	2.18	0	2.28	46		
Eosinophils - Absolute	0.19	0	0.20	45		
Creatine Kinase	130.00	65.00	135.00	43		
Calcium : Phosphorus	3.12	2.30	3.20	41		
Hs CRP - Male	0.50	0	0.55	41		

Biomarker	Lab result	Optimal range		% deviation	Optimal range	
		Low	High		Low	High
Basophils - %	0.90	0	1.00	40		
eAG	103.00	85.00	105.00	40		
RDW	12.40	11.00	12.60	38		
Triglyceride:HDL	1.71	0.50	1.90	36		
Fibrinogen	283.00	175.00	300.00	36		
Hemoglobin A1C	5.20	4.60	5.30	36		
Free T3 : Reverse T3	25.38	10.00	28.00	35		
ALT	22.00	10.00	26.00	25		
Monocytes - Absolute	0.35	0.20	0.40	25		
MCH	30.90	28.00	31.90	24		
Lipase	43.00	22.00	51.00	22		
Potassium	4.70	4.00	5.00	20		
FSH - Male	5.90	1.60	8.00	17		
Chloride	104.00	100.00	106.00	17		
Cortisol - PM	7.80	4.00	10.00	13		
LH - Male	4.30	1.50	6.15	10		
T4 - Free	1.30	1.00	1.50	10		
T3 - Free	3.30	3.00	3.50	10		
Vitamin D (25-OH)	74.00	50.00	90.00	10		
% Testosterone Free - Male	1.96	1.60	2.20	10		
Copper : Zinc Ratio	1.17	0.70	1.50	9		
eGFR	107.00	90.00	120.00	7		
AST : ALT	0.55	0	1.00	5		
UIBC	222.00	130.00	300.00	4		
Progesterone - Male	0.65	0.38	0.90	2		
TIBC	300.00	250.00	350.00	0		
T3 Uptake	31.00	27.00	35.00	0		
Free T3 : Free T4	2.54	2.40	2.70	-3		
Cortisol - Total/AM	12.20	10.00	15.00	-6		
Uric Acid - Male	4.30	3.50	5.40	-8		
Sodium	139.00	137.00	142.00	-10		
Basophils - Absolute	0.04	0	0.10	-10		
T4 - Total	8.30	6.00	11.90	-11		
Lymphocytes - Absolute	1.85	1.44	2.54	-13		
Calcium	9.12	8.90	9.50	-13		
Phosphorus	2.92	2.60	3.50	-14		
Sex Hormone Binding Globulin - Male	42.00	40.00	46.00	-17		
Free Thyroxine Index (T7)	2.60	1.70	4.60	-19		
TSH	1.31	1.00	2.00	-19		
Bilirubin - Indirect	0.50	0.40	0.75	-21		
BUN : Creatinine	11.69	10.00	16.00	-22		

Biomarker	Lab result	Optimal range		% deviation	Optimal range	
		Low	High		Low	High
Estradiol - Male	28.00	24.00	39.00	-23		
Bilirubin - Total	0.60	0.50	0.90	-25		
Platelets	217.00	190.00	300.00	-25		
Total WBCs	4.30	3.80	6.00	-27		
Reverse T3	13.00	10.00	25.00	-30		
PSA - Total	0.40	0	2.00	-30		
Hemoglobin - Male	14.20	14.00	15.00	-30		
Hematocrit - Male	41.60	40.00	48.00	-30		
% Transferrin saturation	26.00	24.00	35.00	-32		
T3 - Total	103.00	90.00	168.00	-33		
AST	12.00	10.00	26.00	-38		
Alk Phos	51.00	45.00	100.00	-39		
Amylase	45.00	40.00	86.00	-39		
Fructosamine	193.70	190.00	228.00	-40		
Albumin : Globulin	1.44	1.40	2.10	-44		
MCHC	34.10	34.00	36.00	-45		
Thyroid Peroxidase (TPO) Abs	0.20	0	6.80	-47		
HDL Cholesterol	56.00	55.00	93.00	-47		
Neutrophil : Lymphocyte	1.01	1.00	1.70	-49		
CO2	25.00	25.00	30.00	-50		
Bilirubin - Direct	0.10	0.10	0.15	-50		
Neutrophils - Absolute	1.87	1.90	4.20	-51		
Copper - Serum	89.20	90.00	150.00	-51		
QUICKI	0.37	0.45	5.00	-52		
Protein - Total	6.86	6.90	8.10	-53		
Gastrin	42.50	45.00	90.00	-56		
Folate - Serum	14.20	15.00	27.00	-57		
Sodium : Potassium	29.57	30.00	35.00	-59		
Creatinine	0.77	0.80	1.10	-60		
Folate - RBC	398.10	500.00	1504.00	-60		
Ferritin	41.00	45.00	79.00	-62		
Testosterone Total - Male	650.00	700.00	1100.00	-62		
LDH	131.00	140.00	200.00	-65		
Iron - Serum	78.00	85.00	130.00	-66		
BUN	9.00	10.00	16.00	-67		
HOMA2-%S	65.00	85.00	200.00	-67		
Vitamin B12	427.00	545.00	1100.00	-71		
Magnesium - RBC	5.80	6.00	6.80	-75		
RBC - Male	4.60	4.80	5.50	-79		
Zinc - RBC	9.10	10.40	14.70	-80		
Testosterone Free - Male	127.44	150.00	224.00	-80		

Biomarker	Lab result	Optimal range		% deviation	Optimal range	
		Low	High		Low	High
Magnesium - Serum	2.10	2.20	2.50	-83		
Testosterone Bioavailable - Male	281.23	375.00	575.00	-97		
Neutrophils - %	43.40	50.00	60.00	-116		
Zinc - Serum	76.20	99.00	130.00	-124		
DHEA-S - Male	75.00	350.00	690.00	-131		
% Testosterone Bioavailable - Male	43.27	53.00	65.00	-131		
Albumin	4.05	4.50	5.00	-140		

# Blood Test History











The Blood Test History Report lists the results of your patient's Chemistry Screen and CBC tests 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 and allows you to track progress.

## Key

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

Biomarker	Latest Test Result Quest Dec 01 2023
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## BLOOD GLUCOSE

Glucose - Fasting 	90.00 ↑
Hemoglobin A1C 	5.20
eAG 	103.00
Insulin - Fasting 	5.20 ↑
C-Peptide 	2.10
Fructosamine 	193.70
HOMA2-%B 	128.20 ↑ ↑
HOMA2-%S 	65.00 ↓ ↓
HOMA2-IR 	1.53 ↑
QUICKI 	0.37 ↓

## RENAL






BUN 	9.00 ↓
Creatinine 	0.77 ↓
BUN : Creatinine 	11.69
eGFR 	107.00

## PROSTATE


PSA - Total 	0.40
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## ELECTROLYTES





Biomarker	Latest Test Result
	Quest
	Dec 01 2023
Sodium 	139.00
Potassium 	4.70
Chloride 	104.00
CO2 	25.00
Sodium : Potassium 	29.57 ↓ ↓

### METABOLIC

Anion Gap 	14.70 ↑
Uric Acid - Male 	4.30
Creatine Kinase 	130.00
Leptin - Male 	4.50 ↑








### ENZYMES

Amylase 	45.00
Lipase 	43.00

### PROTEINS

Protein - Total 	6.86 ↓
Albumin 	4.05 ↓
Globulin - Total 	2.81 ↑
Albumin : Globulin 	1.44

### MINERALS

Calcium 	9.12
Phosphorus 	2.92
Magnesium - Serum 	2.10 ↓
Magnesium - RBC 	5.80 ↓
Copper - Serum 	89.20 ↓
Zinc - Serum 	76.20 ↓
Zinc - RBC 	9.10 ↓

Biomarker	Latest Test Result
	Quest
	Dec 01 2023
Copper : Zinc Ratio	1.17
Calcium : Albumin	2.25 ↑
Calcium : Phosphorus	3.12

### LIVER AND GB

Alk Phos	51.00
AST	12.00
ALT	22.00
LDH	131.00 ↓
Bilirubin - Total	0.60
Bilirubin - Direct	0.10
Bilirubin - Indirect	0.50
GGT	17.00
AST : ALT	0.55

### IRON MARKERS

Iron - Serum	78.00 ↓
Ferritin	41.00 ↓
TIBC	300.00
UIBC	222.00
% Transferrin saturation	26.00

### LIPIDS

Cholesterol - Total	203.00 ↑ ↑
Triglycerides	96.00 ↑
LDL Cholesterol	122.00 ↑ ↑
HDL Cholesterol	56.00
Non-HDL Cholesterol	147.00 ↑ ↑
VLDL Cholesterol	15.60 ↑

Biomarker	Latest Test Result
	Quest
	Dec 01 2023
LDL : HDL - Male	2.18
Triglyceride:HDL	1.71
Cholesterol : HDL	3.62 ↑

### CARDIOMETABOLIC

Homocysteine	7.30 ↑
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### THYROID

TSH	1.31
T4 - Total	8.30
T4 - Free	1.30
T3 - Total	103.00
T3 - Free	3.30
Reverse T3	13.00
T3 Uptake	31.00
Free Thyroxine Index (T7)	2.60
Thyroid Peroxidase (TPO) Abs	0.20
Thyroglobulin Abs	<1.00
Free T3 : Reverse T3	25.38
Free T3 : Free T4	2.54

### INFLAMMATION

Hs CRP - Male	0.50
C-Reactive Protein	4.10 ↑
ESR - Male	4.80
Fibrinogen	283.00

### VITAMINS

Vitamin D (25-OH)	74.00
Vitamin B12	427.00 ↓




Biomarker	Latest Test Result
	Quest
	Dec 01 2023
Folate - Serum	14.20 ↓
Folate - RBC	398.10 ↓
Methylmalonic Acid	278.20 ↑

### HORMONES













DHEA-S - Male	75.00 ↓ ↓
FSH - Male	5.90
LH - Male	4.30
Testosterone Total - Male	650.00 ↓
Testosterone Free - Male	127.44 ↓
Sex Hormone Binding Globulin - Male	42.00
Estradiol - Male	28.00
Progesterone - Male	0.65
Cortisol - Total/AM	12.20
Cortisol : DHEA-S	0.16 ↑ ↑
Cortisol - PM	7.80
Gastrin	42.50 ↓
% Testosterone Bioavailable - Male	43.27 ↓
% Testosterone Free - Male	1.96
Testosterone Bioavailable - Male	281.23 ↓

### CBC

RBC - Male	4.60 ↓
Hemoglobin - Male	14.20
Hematocrit - Male	41.60
MCV	90.40 ↑
MCH	30.90
MCHC	34.10

Biomarker	Latest Test Result
	Quest
	Dec 01 2023
Platelets 	217.00
MPV 	11.20 ↑
RDW 	12.40

### WBCS

Total WBCs 	4.30
Neutrophils - % 	43.40 ↓
Lymphocytes - % 	43.00 ↑
Monocytes - % 	8.20 ↑
Eosinophils - % 	4.50 ↑ ↑
Basophils - % 	0.90
Neutrophils - Absolute 	1.87 ↓
Lymphocytes - Absolute 	1.85
Monocytes - Absolute 	0.35
Eosinophils - Absolute 	0.19
Basophils - Absolute 	0.04
Neutrophil : Lymphocyte 	1.01

# 3

Highly detailed and interpretive descriptions of the results presented in each of the assessment and analysis section reports.

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## Appendix

30 Disclaimer



# Disclaimer

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The absence of a warning for a given drug or supplement or any combination thereof in no way should be construed to indicate that the drug or supplement or any combination thereof is safe, effective, or appropriate for you. Statements made about a supplement, product, or treatment have not been evaluated by the Food and Drug Administration (FDA) U.S. or MHRA U.K. Any mentioned supplement, product, or treatment is not intended to diagnose, treat, cure or prevent any disease. The FDA or MHRA U.K. has not evaluated the information contained in this Report.

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Consult your physician or a qualified healthcare practitioner regarding the applicability of any of the information or materials provided in this Report in regards to your symptoms or medical condition. Always consult your physician before beginning a new treatment, diet, exercise, fitness plan, or health plan or program, and before taking any drug, supplement, or any combination thereof; or if you have questions or concerns about your health, a medical condition, or any plan or course of treatment. If you think you have a medical emergency, call 911 or your doctor immediately.