



FunctionalDX

MaxDX

**Functional
Performance
Analysis**



Patient Report

Prepared for	John Doe
Requested by	Mr. Jonathan Cohen FDx Clinic
Test date	Nov 01, 2016

What's Inside?

An introduction to functional blood chemistry analysis and your report.

Your view into your health through an in-depth functional system and nutrient evaluation.

A full breakdown of all individual biomarker results, showing distance from optimal, comparative and historical views.

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

SECTION 1: INTRODUCTION

- 3 What's Inside?
- 4 Functional BCA
- 5 Patient Report

SECTION 2: ASSESSMENT

- 7 Functional Body Systems
- 8 Accessory Systems
- 9 Macronutrient Status
- 10 Nutrient Deficiencies
- 11 Health Improvement

SECTION 3: ANALYSIS

- 13 Blood Test Results
- 27 Blood Test Results Comp.
- 31 % Deviation From Optimal
- 34 Blood Test History
- 45 Out of Optimal Range

SECTION 4: APPENDIX

- 56 Functional Body Systems
- 61 Accessory Systems
- 63 Macro Nutrient Status
- 65 Nutrient Deficiencies
- 67 Health Improvement
- 73 Disclaimer

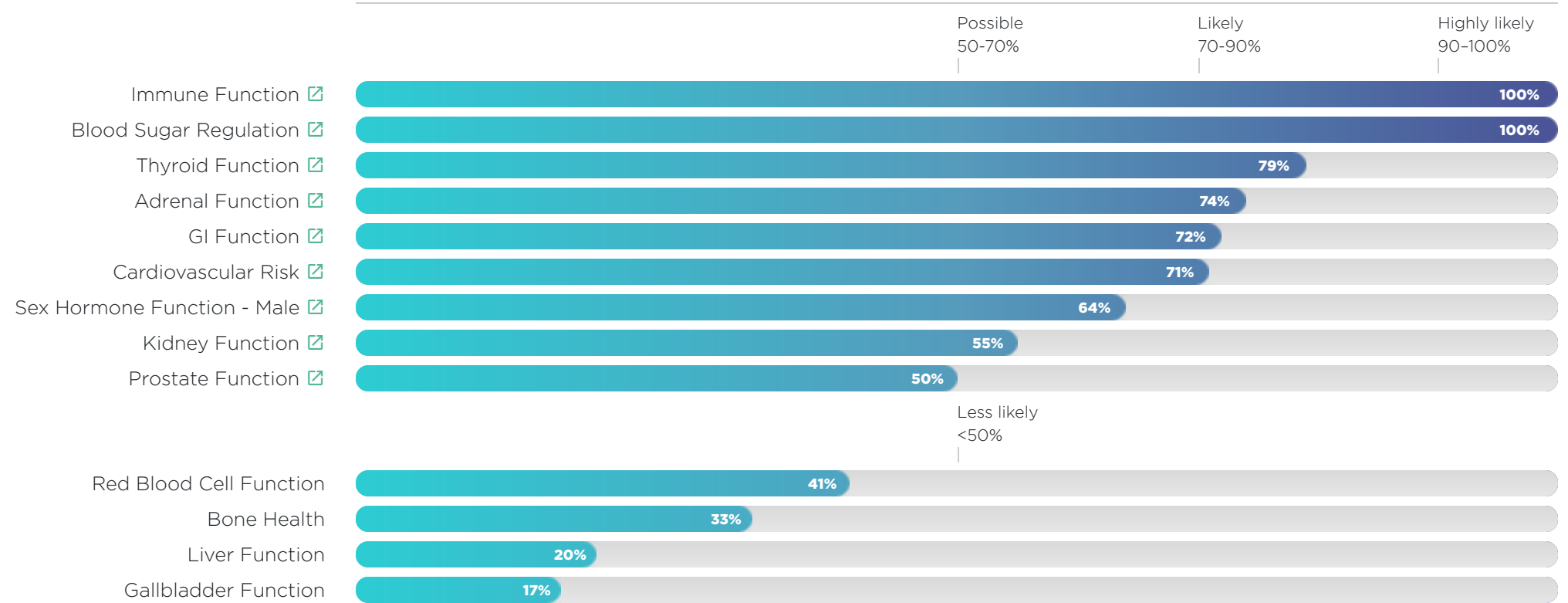
Functional Body Systems

The Functional Body System results opposite 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 hyperlinked into the appendix section so you can read a highly detailed description and individual explanation of the results shown in this report.

PROBABILITY OF DYSFUNCTION

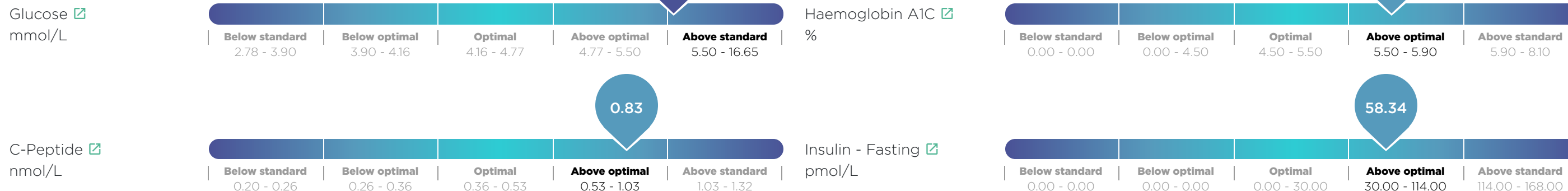


Blood Test Results

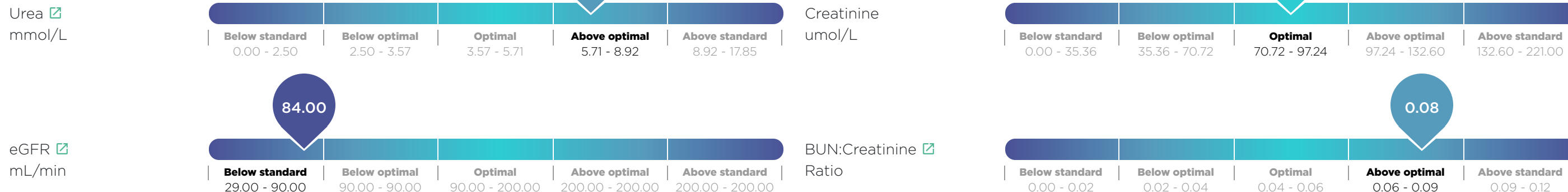
Blood Test Results Comp. % Deviation From Optimal Blood Test History Out of Optimal Range

Blood Glucose Renal Prostate Electrolytes Metabolic Proteins Minerals
 Liver and Gallbladder Iron Markers Lipids Thyroid Inflammation/Oxidation Vitamins Hormones
 CBC/Hematology White Blood Cells

BLOOD GLUCOSE



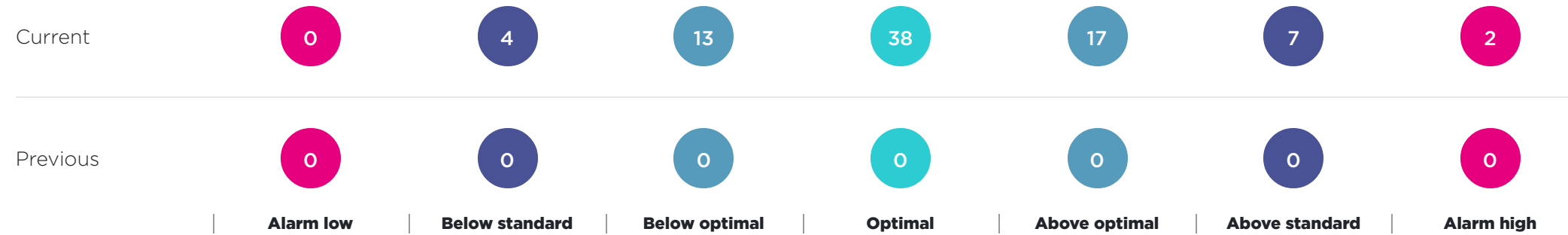
RENAL



Blood Test Results Comparative

The Blood Test Results Comparative Report lists the results of the latest and previous Chemistry Screen and CBC and shows you whether or not an individual biomarker is outside of the optimal range and/or outside of the clinical lab range.

Comparative total number of biomarkers by optimal range



Comparative Report

continued

Biomarker	Current Nov 01 2016	Optimal range	Standard range	Units
RBC - Male	4.97	4.20 - 4.90	4.20 - 5.80	x10*12/L
Haemoglobin - Male	166.00	140.00 - 150.00	132.00 - 171.00	g/L
Haematocrit - Male	0.50	0.40 - 0.48	0.38 - 0.50	Prop. of 1.0
MCV	102.20	82.00 - 89.90	80.00 - 100.00	fL
MCH	33.40	28.00 - 31.90	27.00 - 33.00	pg
MCHC	327.00	320.00 - 350.00	320.00 - 360.00	g/L
RDW	14.50	11.70 - 13.00	11.00 - 15.00	%
Total WBCs	6.59	5.50 - 7.50	3.80 - 10.80	x10*9/l
Neutrophils	71.40	40.00 - 60.00	38.00 - 74.00	%
Lymphocytes	15.80	24.00 - 44.00	14.00 - 46.00	%
Monocytes	11.10	0.00 - 7.00	4.00 - 13.00	%
Eosinophils	1.20	0.00 - 3.00	0.00 - 3.00	%
Basophils	0.50	0.00 - 1.00	0.00 - 1.00	%
Platelets	270.00	155.00 - 385.00	140.00 - 400.00	x10*9/l
Glucose	5.87	4.16 - 4.77	3.90 - 5.50	mmol/L
Haemoglobin A1C	5.64	4.50 - 5.50	0.00 - 5.90	%
Iron - Serum	18.70	15.22 - 23.27	5.83 - 34.50	µmol/L
Cholesterol - Total	6.03	4.14 - 4.65	3.23 - 5.17	mmol/L
Triglycerides	0.95	0.79 - 0.90	0.00 - 1.69	mmol/L
HDL Cholesterol	1.99	1.42 - 1.81	1.19 - 2.59	mmol/L
LDL Cholesterol	3.60	0.00 - 3.11	0.00 - 3.37	mmol/L
VLDL Cholesterol	0.44	0.00 - 2.59	0.00 - 7.51	mmol/L
Cholesterol:HDL	3.03	0.00 - 4.00	0.00 - 5.00	Ratio
Triglyceride:HDL	0.47	0.00 - 0.87	0.00 - 0.87	Ratio
Alk Phos	46.00	70.00 - 100.00	40.00 - 129.00	U/L
AST (SGOT)	23.00	10.00 - 26.00	0.00 - 32.00	IU/L
ALT (SGPT)	17.00	10.00 - 26.00	0.00 - 33.00	U/L
GGT	14.00	10.00 - 30.00	3.00 - 70.00	U/L
Protein - Total	65.90	69.00 - 74.00	64.00 - 83.00	g/L
Albumin	45.30	40.00 - 50.00	35.00 - 52.00	g/L
Globulin - Total	20.60	24.00 - 28.00	19.00 - 37.00	g/L
Albumin:Globulin	2.19	1.40 - 2.10	0.90 - 2.00	Ratio
Bilirubin - Total	4.00	1.71 - 15.39	3.42 - 20.52	µmol/L
Bilirubin - Direct	2.70	0.00 - 3.25	0.00 - 3.42	Umol/L

Biomarker

2016 Nov 1

PHOSPHORUS

1.05

MAGNESIUM

0.77

LDH

153

ALT (SGPT)

17

Biomarker

2016 Nov 1

CALCIUM:PHOSPHOROUS

2.2

ALK PHOS

46

AST (SGOT)

23

GGT

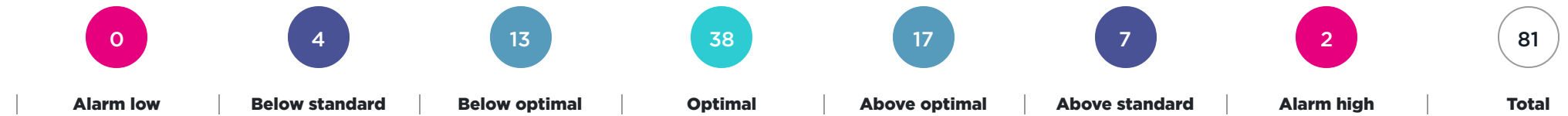
14

Out of Optimal Range

The following report shows all of the biomarkers that are out of the optimal reference 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 optimal range



Above Optimal

91.50
nmol/L

SEX HORMONE BINDING GLOBULIN - MALE [🔗](#)

Sex Hormone Binding Globulin (SHBG) is a protein produced primarily in the liver and to some extent the testes, uterus, brain, and placenta. SHBG acts as a transport molecule for carrying estrogen and testosterone around the body and delivering them to receptors on the cells.

6.03
mmol/L

CHOLESTEROL - TOTAL [🔗](#)

Cholesterol is a steroid found in every cell of the body and in the plasma. It is an essential component in the structure of the cell membrane where it controls membrane fluidity. It provides the structural backbone for every steroid hormone in the body, which includes adrenal and sex hormones and vitamin D. The myelin sheaths of nerve fibers are derived from cholesterol and the bile salts that emulsify fats are composed of cholesterol. Cholesterol is made in the body by the liver and other organs, and from dietary sources. The liver, the intestines, and the skin produce between 60-80% of the body's cholesterol. The remainder comes from the diet. An increased cholesterol is just one of many independent risk factors for cardiovascular disease. It is also associated with metabolic syndrome, hypothyroidism, biliary stasis, and fatty liver. Decreased cholesterol levels are a strong indicator of gallbladder dysfunction, oxidative stress, inflammatory process, low fat diets and an increased heavy metal burden.

21.52
nmol/L

HS CRP - MALE [🔗](#)

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.

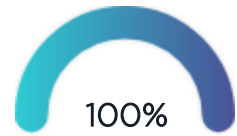
0.83
nmol/L

C-PEPTIDE [🔗](#)

C-Peptide is used as an indicator for insulin production from the pancreas. It can help assess whether a high blood glucose is due to reduced insulin output from the pancreas or due to reduced glucose uptake by the cells, a condition called insulin resistance.

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.



100%

Dysfunction Highly Likely.
Much improvement required.

IMMUNE FUNCTION [🔗](#)

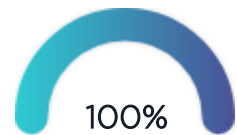
The Immune Function score allows us to assess the state of function in your immune system. When the immune system is in a state of balance we are able to cope and deal with infections with little or no lasting negative side-effects. Biomarkers on a blood test allow us to check and see if the immune system is in a state of balance or not. Some of the factors to consider include a low functioning immune system (a condition called immune insufficiency), bacterial or viral infections or GI dysfunction associated with decreased immune function: abnormal immunity in the gut lining, a decrease in immune cell function in the gut or an increase in abnormal bacteria, etc. in the gut (a condition called dysbiosis).

Rationale

Globulin - Total ↓, Neutrophils ↑, Lymphocytes ↓, Monocytes ↑, Alk Phos ↓

Biomarkers considered

Total WBCs, Globulin - Total, Neutrophils, Lymphocytes, Monocytes, Albumin, Alk Phos, Iron - Serum, Ferritin



100%

Dysfunction Highly Likely.
Much improvement required.

BLOOD SUGAR REGULATION [🔗](#)

The Blood Sugar Regulation score tells us how well your body is regulating blood glucose. Blood sugar dysregulation is very common. It doesn't suddenly emerge but rather develops slowly, so we can look for clues in your blood test that can help us determine if there's dysregulation and if so what it is. Some conditions associated with blood sugar dysregulation include hypoglycemia (periods of low blood sugar), metabolic syndrome, hyperinsulinemia and diabetes.

Rationale

Glucose ↑, Haemoglobin A1C ↑, Insulin - Fasting ↑, Cholesterol - Total ↑, LDL Cholesterol ↑, DHEA-S - Male ↓, C-Peptide ↑

Biomarkers considered

Glucose, LDH, Haemoglobin A1C, Insulin - Fasting, Cholesterol - Total, Triglycerides, LDL Cholesterol, HDL Cholesterol, DHEA-S - Male, C-Peptide

Patient result not available - consider running in future tests:

Fructosamine

Disclaimer

This Report contains information for the exclusive use of the above named recipient only, and contains confidential, and privileged information. If you are not the above named recipient or have not been given permission by the person, you are prohibited from reading or utilizing this report in any way, and you are further notified that any distribution, dissemination, or copying of this Report is strictly prohibited.

All information provided in this Report is provided for educational purposes only, including without limitation the 'optimal ranges' set forth in this Report. Neither this Report, nor any of the information contained in this Report, is intended for, or should be used for the purpose of, medical diagnosis, prevention, or treatment, including self-diagnosis, prevention, or treatment. This Report should not be used as a substitute for professional medical care, and should not be relied upon in diagnosing or treating a medical condition, ailment, or disease.

The 'optimal ranges' set forth in this Report are general reference recommendations only, and are not intended to be guidelines for any specific individual. The 'optimal ranges' set forth in this Report are for educational purposes only, and are not intended to be, nor should they be construed as, a claim or representation of medical diagnosis or treatment.

Neither this Report, nor any information contained in this Report, should be considered complete, or exhaustive. This report does not contain information on all diseases, ailments, physical conditions or their treatment. This report is based on the lab data provided, which may or may not include all relevant and appropriate measures of your biochemistry.

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) and any mentioned supplement, product or treatment is not intended to diagnose, treat, cure or prevent any disease. The information contained in this Report has not been evaluated by the FDA.

You are encouraged to confirm any information obtained from this Report with other sources, and review all information regarding any medical condition or the treatment of such condition with your physician.

NEVER DISREGARD PROFESSIONAL MEDICAL ADVICE, DELAY SEEKING MEDICAL ADVICE OR TREATMENT, OR STOP CURRENT MEDICAL TREATMENT, BECAUSE OF SOMETHING YOU HAVE READ IN THIS REPORT.

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.