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Functional Health Report

Patient Copy

JANE DOE

Lab Test on Mar 11, 2017
Conventional US Units

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Health Improvement Plan



The Health Improvement Plan takes all the information on this report and focuses on the top areas that need the most attention.

Fatty Liver/ Steatosis

The results of your blood test indicate a tendency towards fatty liver and a need for liver support.

Rationale:

ALT (SGPT) ↑, AST (SGOT) ↑, Ferritin ↑

Increased Cardiovascular Disease Risk

The results of your blood test indicate a higher than optimal risk of you developing cardiovascular disease and shows a need for cardiovascular support.*

Rationale:

AST (SGOT) ↑, Triglycerides ↑, Ferritin ↑, Hs CRP, Female ↑, Homocysteine ↑, Vitamin D (25-OH) ↓

Inflammation

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

Rationale:

Hs CRP, Female ↑, Uric Acid, female ↑, Homocysteine ↑, Sodium/Potassium Ratio ↑, Ferritin ↑, Lymphocytes ↑

Endothelial Dysfunction

The results of your blood test indicate a tendency towards endothelial dysfunction and a need for support for your cardiovascular system.

Rationale:

Hs CRP, Female ↑, Homocysteine ↑

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

Viral Infection

The results of your blood test indicate a tendency towards a viral infection and a need for immune support.

Rationale:

Lymphocytes ↑, Monocytes ↑

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This Health Improvement Plan has been prepared for **JANE DOE** by **Dr JOHN SMITH**. Additional personalized recommendations for nutritional support may be applicable based on this laboratory evaluation, your history and other clinical findings.

Suggested Individual Nutrient Recommendations

The Health Improvement Plan takes all the information on this report and focuses on the top areas that need the most attention.

Vitamin B12/Folate Need

The results of your blood test indicate that your vitamin B12/folate levels might be lower than optimal and shows a need for vitamin B12/folate supplementation.

Rationale:

MCV ↑, Homocysteine ↑, Total WBCs ↓, Hemoglobin, Female ↓, MCH ↑

Vitamin D Need

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) ↓

Zinc Need

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

Rationale:

Alk Phos ↓

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This Health Improvement Plan has been prepared for **JANE DOE** by **Dr JOHN SMITH**. Additional personalized recommendations for nutritional support may be applicable based on this laboratory evaluation, your history and other clinical findings.

Blood Test Results Report



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

Above Optimal Range 11 Current 12 Previous ↑	Above Standard Range 5 Current 9 Previous ↑	Alarm High 2 Current 2 Previous
Below Optimal Range 9 Current 11 Previous ↓	Below Standard Range 1 Current 0 Previous ↓	Alarm Low 0 Current 0 Previous

Element	Current	Previous		Impr	Optimal Range	Standard Range	Units
	Mar 11 2015	Jan 20 2015					
Glucose	90.00	95.00	↑		72.00 - 90.00	65.00 - 99.00	mg/dL
Hemoglobin A1C	5.20	5.80	↑		4.00 - 5.40	0.00 - 5.60	%
BUN	16.00	13.00			10.00 - 16.00	7.00 - 25.00	mg/dL
Creatinine	0.75	0.73	↓		0.80 - 1.10	0.40 - 1.35	mg/dL
BUN/Creatinine Ratio	21.33	17.80	↑		10.00 - 16.00	6.00 - 22.00	Ratio
eGFR Non-Afr. American	80.00	83.00			60.00 - 128.00	60.00 - 128.00	/min/1.73r
eGFR African American	93.00	96.00			60.00 - 128.00	60.00 - 128.00	/min/1.73r
Sodium	136.00	135.00			135.00 - 142.00	135.00 - 146.00	mEq/L
Potassium	3.70	3.90	↓		4.00 - 4.50	3.50 - 5.30	mEq/L
Sodium/Potassium Ratio	36.75	34.61	↑		30.00 - 35.00	30.00 - 35.00	ratio
Chloride	102.00	100.00			100.00 - 106.00	98.00 - 110.00	mEq/L
CO2	26.00	27.00			25.00 - 30.00	19.00 - 30.00	mEq/L
Anion gap	11.70	11.90			7.00 - 12.00	6.00 - 16.00	mEq/L
Uric Acid, female	5.90	6.70	↑		3.00 - 5.50	2.50 - 7.00	mg/dL
Protein, total	6.70	6.50	↓		6.90 - 7.40	6.10 - 8.10	g/dL
Albumin	4.30	4.20			4.00 - 5.00	3.60 - 5.10	g/dL
Globulin, total	2.40	2.30	↓		2.40 - 2.80	2.00 - 3.50	g/dL
Albumin/Globulin Ratio	1.80	1.80			1.40 - 2.10	1.00 - 2.50	ratio
Calcium	9.40	9.30	↓		9.40 - 10.10	8.60 - 10.40	mg/dL
Calcium/Albumin Ratio	2.18	2.21			0.00 - 2.60	0.00 - 2.70	ratio
Phosphorus	4.30	4.00	↑		3.50 - 4.00	2.50 - 4.50	mg/dL
Calcium/Phosphorous Ratio	2.18	2.32	↓		2.30 - 2.70	2.30 - 2.70	ratio
Magnesium	2.00	1.90	↓		2.20 - 2.50	1.50 - 2.50	mg/dl
Alk Phos	49.00	51.00	↓		70.00 - 100.00	35.00 - 115.00	IU/L
AST (SGOT)	28.00	34.00	↑		10.00 - 26.00	10.00 - 35.00	IU/L
ALT (SGPT)	33.00	46.00	↑		10.00 - 26.00	6.00 - 29.00	IU/L

LDH	157.00	150.00			140.00 - 200.00	120.00 - 250.00	IU/L
Bilirubin - Total	1.00	0.70	↑	👎	0.10 - 0.90	0.20 - 1.20	mg/dL
Bilirubin - Direct	0.20	0.10			0.00 - 0.20	0.00 - 0.19	mg/dL
Bilirubin - Indirect	0.80	0.60	↑	👎	0.10 - 0.70	0.20 - 1.20	mg/dL
GGT	25.00	43.00	↑	👍	10.00 - 30.00	3.00 - 70.00	IU/L
Iron - Serum	120.00	137.00	↑	👍	85.00 - 130.00	40.00 - 160.00	µg/dL
Ferritin	688.00	869.00	⚠️	👍	40.00 - 150.00	10.00 - 232.00	ng/mL
TIBC	271.00	262.00			250.00 - 350.00	250.00 - 425.00	mg/dL
% Transferrin saturation	44.00	52.00	↑	👍	24.00 - 50.00	15.00 - 50.00	%
Cholesterol - Total	178.00	228.00	↑	👍	155.00 - 190.00	125.00 - 200.00	mg/dL
Triglycerides	117.00	186.00	↑	👍	50.00 - 100.00	0.00 - 150.00	mg/dL
LDL Cholesterol	97.00	137.00	↑	👍	0.00 - 120.00	0.00 - 130.00	mg/dL
HDL Cholesterol	58.00	54.00	↓	👍	55.00 - 70.00	46.00 - 100.00	mg/dL
Cholesterol/HDL Ratio	3.10	4.20	↑	👍	0.00 - 3.00	0.00 - 5.00	Ratio
Triglyceride/HDL Ratio	2.01	3.44	↑	👍	0.00 - 2.00	0.00 - 3.30	ratio
TSH	0.80	2.30	↓	👎	1.00 - 3.50	0.40 - 4.50	µU/mL
Total T4	9.00	7.10			6.00 - 11.90	4.50 - 12.00	µg/dL
T3 Uptake	35.00	34.00			27.00 - 37.00	22.00 - 37.00	%
Free Thyroxine Index (T7)	3.15	2.41			1.70 - 4.60	1.40 - 3.80	Index
Hs CRP, Female	2.70	3.50	↑	👍	0.00 - 0.99	0.00 - 2.90	mg/L
ESR, Female	9.00	14.00	↑	👍	0.00 - 10.00	0.00 - 20.00	mm/hr
Homocysteine	15.40	10.30	↑	👎	0.00 - 6.00	0.00 - 10.30	µmol/L
Vitamin D (25-OH)	46.00	38.00	↓	👍	50.00 - 90.00	30.00 - 100.00	ng/ml
Total WBCs	5.20	5.00	↓	👍	5.30 - 7.50	3.80 - 10.80	k/cumm
RBC, Female	3.99	4.10			3.90 - 4.50	3.80 - 5.10	m/cumm
Hemoglobin, Female	13.40	13.40	↓	👎	13.50 - 14.50	11.70 - 15.50	g/dl
Hematocrit, Female	39.10	39.90			37.00 - 44.00	35.00 - 45.00	%
MCV	98.00	97.40	↑	👎	85.00 - 92.00	80.00 - 100.00	fL
MCH	33.50	32.60	↑	👎	27.00 - 31.90	27.00 - 33.00	pg
MCHC	34.20	33.50			32.00 - 35.00	32.00 - 36.00	g/dL
Platelets	155.00	164.00			150.00 - 400.00	140.00 - 415.00	k/cumm
RDW	13.00	13.60	↑	👍	11.70 - 13.00	11.00 - 15.00	%
Neutrophils	43.50	42.90			40.00 - 60.00	40.00 - 60.00	%
Lymphocytes	42.20	42.60	↑	👍	25.00 - 40.00	25.00 - 40.00	%
Monocytes	11.30	12.00	↑	👍	0.00 - 7.00	0.00 - 7.00	%
Eosinophils	2.50	2.20			0.00 - 3.00	0.00 - 3.00	%
Basophils	0.50	0.30			0.00 - 1.00	0.00 - 1.00	%

Out of Optimal Range Report



The following results show all of the elements that are out of the optimal reference range. The elements that appear closest to the top of each section are those elements that are farthest from optimal.

Above Optimal Range

18 Total



Below Optimal Range

10 Total



Above Optimal

Ferritin ↑ 688.00 ng/mL (+ 539 %)

Ferritin is the main storage form of iron in the body. Decreased levels are strongly associated with iron deficiency where it is the most sensitive test to detect iron deficiency. Increased levels are associated with iron overload, an increasing risk of cardiovascular disease, inflammation and oxidative stress.

Hs CRP, Female ↑ 2.70 mg/L (+ 223 %)

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.

Homocysteine ↑ 15.40 μmol/L (+ 207 %)

Homocysteine is a molecule formed from the incomplete metabolism of the amino acid methionine. Deficiencies in Vitamins B6, B12 and folate cause methionine to be converted into homocysteine. Homocysteine increases the risk of cardiovascular disease by causing damage to the endothelial lining of the arteries, especially in the heart. Increased levels of homocysteine are associated with an increased risk of cardiovascular disease and stroke, as well as cancer, depression and inflammatory bowel disease.

BUN/Creatinine Ratio ↑ 21.33 Ratio (+ 139 %)

The BUN/Creatinine is a ratio between the BUN and Creatinine levels. An increased level is associated with renal dysfunction. A decreased level is associated with a diet low in protein.

MCV ↑ 98.00 fL (+ 136 %)

The MCV is a measurement of the volume in cubic microns of an average single red blood cell. MCV indicates whether the red blood cell size appears normal (normocytic), small (microcytic), or large (macrocytic). An increase or decrease in MCV can help determine the type of anemia present. An increased MCV is associated with B12, folate, or vitamin C deficiency. A decreased MCV is associated with iron and B6 deficiency.

Monocytes ↑ 11.30 % (+ 111 %)

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.

Phosphorus ↑ 4.30 mg/dL (+ 110 %)

Phosphorous levels, like calcium, are regulated by parathyroid hormone (PTH). Phosphate levels are closely tied with calcium, but they are not as strictly controlled as calcium. Plasma levels may be decreased after a high carbohydrate meal or in people with a diet high in refined carbohydrates. Serum phosphorous is a general marker for digestion. Decreased phosphorous levels are associated with hypochlorhydria. Serum levels of phosphorous may be increased with a high phosphate consumption in the diet, with parathyroid hypofunction and renal insufficiency.

ALT (SGPT) ↑ 33.00 IU/L (+ 94 %)

SGPT/ALT is an enzyme present in high concentrations in the liver and to lesser extent skeletal muscle, the heart, and kidney. SGPT/ALT will be liberated into the bloodstream following cell damage or destruction. Any condition or situation that causes damage to the hepatocytes will cause a leakage of SGPT/ALT in to the bloodstream. These would be exposure to chemicals, viruses (viral hepatitis, mononucleosis, cytomegalovirus, Epstein Barr, etc.), alcoholic hepatitis. The most common non-infectious cause of an increased ALT is a condition called steatosis (fatty liver).

Sodium/Potassium Ratio ↑ 36.75 ratio (+ 85 %)

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 and a decreased sodium:potassium ratio is associated with chronic stress and adrenal insufficiency.

Triglycerides ↑ 117.00 mg/dL (+ 84 %)

Serum triglycerides are composed of fatty acid molecules that enter the blood stream either from the liver or from the diet. Patients that are optimally metabolizing their fats and carbohydrates tend to have a triglyceride level about one-half of the total cholesterol level. Levels will be elevated in metabolic syndrome, fatty liver, in patients with an increased risk of cardiovascular disease, hypothyroidism and adrenal dysfunction. Levels will be decreased in liver dysfunction, a diet deficient in fat, and inflammatory processes.

MCH ↑ 33.50 pg (+ 83 %)

The Mean Corpuscular Hemoglobin (MCH) is a calculated value and is an expression of the average weight of hemoglobin per red blood cell. MCH, along with MCV can be helpful in determining the type of anemia present.

Bilirubin - Indirect ↑ 0.80 mg/dL (+ 67 %)

Bilirubin is formed from the breakdown of red blood cells. Indirect or unconjugated bilirubin is the protein (albumin) bound form of bilirubin that circulates in the blood on its way to the liver prior to being eliminated from the body in the bile. Elevated levels of indirect or unconjugated bilirubin are usually associated with increased red blood cell destruction.

Uric Acid, female ↑ 5.90 mg/dL (+ 66 %)

Uric acid is produced as an end product of purine, nucleic acid, and nucleoprotein metabolism. Levels can increase due to over-production by the body or decreased excretion by the kidneys. Increased uric acid levels are associated with gout, atherosclerosis, oxidative stress, arthritis, kidney dysfunction, circulatory disorders and intestinal permeability. Decreased levels are associated with detoxification issues, molybdenum deficiency, B12/folate anemia and copper deficiency.

Lymphocytes ↑ 42.20 % (+ 65 %)

Lymphocytes are a type of white blood cell. An increase in lymphocyte concentration is usually a sign of a viral infection but can also be a sign of increased toxicity in the body or inflammation. Decreased levels are often seen in a chronic viral infection when the body can use up a large number of lymphocytes and oxidative stress..

AST (SGOT) ↑ 28.00 IU/L (+ 62 %)

SGOT/AST is an enzyme present in highly metabolic tissues such as skeletal muscle, the liver, the heart, kidney, and lungs. This enzyme is at times released into the bloodstream following cell damage or destruction. AST levels will be increased when liver cells and/or heart muscle cells and/or skeletal muscle cells are damaged. The cause of the damage must be investigated. Low levels are associated with a B6 deficiency.

Bilirubin - Total ↑ 1.00 mg/dL (+ 62 %)

The total bilirubin is composed of two forms of bilirubin: Indirect or unconjugated bilirubin, which circulates in the blood on its way to the liver and direct or conjugated bilirubin, which is the form of bilirubin made water soluble before it is excreted in the bile. An increase in total bilirubin is associated with a dysfunction or blockage in the liver, gallbladder, or biliary tree, oxidative stress or red blood cell hemolysis.

Cholesterol/HDL Ratio ↑ 3.10 Ratio (+ 53 %)

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%.

Triglyceride/HDL Ratio ↑ 2.01 ratio (+ 50 %)

The Triglyceride:HDL ratio is determined from serum triglyceride and HDL levels. Increased ratios are associated with an increased risk of developing insulin resistance and Type II Diabetes. A decreased ratio is associated with a decreased risk of developing insulin resistance and Type II Diabetes.

Below Optimal

Alk Phos ↓ 49.00 IU/L (- 120 %)

Alkaline phosphatase (ALP) is a group of isoenzymes that originate in the bone, liver, intestines, skin, and placenta. It has a maximal activity at a pH of 9.0-10.0, hence the term alkaline phosphatase. Decreased levels of ALP have been associated with zinc deficiency.

Magnesium ↓ 2.00 mg/dl (- 117 %)

The majority of magnesium is found inside the cell so measuring magnesium levels in the serum may not be the best way to assess for magnesium deficiency. That being said, an increased serum magnesium is associated with kidney dysfunction and thyroid hypofunction. A decreased magnesium is a common finding with muscle cramps.

Potassium ↓ 3.70 mEq/L (- 110 %)

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 optimum 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. As such, potassium levels can be a marker for adrenal dysfunction.

Protein, total ↓ 6.70 g/dL (- 90 %)

Total serum protein is composed of albumin and total globulin. Conditions that affect albumin and total globulin readings will impact the total protein value. A decreased total protein can be an indication of malnutrition, digestive dysfunction due to HCl need, or liver dysfunction. Malnutrition leads to a decreased total protein level in the serum primarily from lack of available essential amino acids. An increased total protein is most often due to dehydration.

Calcium/Phosphorous Ratio ↓ 2.18 ratio (- 80 %)

The calcium:phosphorous ratio is determined from the serum calcium and serum phosphorous levels. This ratio is maintained by the parathyroid glands and is also affected by various foods. Foods high in phosphorus and low in calcium tend to disrupt the balance and shift the body toward metabolic acidity, depleting calcium and other minerals and increasing inflammation.

Creatinine ↓ 0.75 mg/dL (- 67 %)

Creatinine is produced primarily from the contraction of muscle and is removed by the kidneys. A disorder of the kidney and/or urinary tract will reduce the excretion of creatinine and thus raise blood serum levels. Creatinine is traditionally used with BUN to assess for impaired kidney function. Elevated levels can also indicate dysfunction in the prostate.

Vitamin D (25-OH) ↓ 46.00 ng/ml (- 60 %)

This vitamin D test measures for levels of 25-OH vitamin D and is a very good way to assess vitamin D status. Vitamin D deficiency has been associated with many disorders including many forms of cancer, hypertension, cardiovascular disease, chronic inflammation, chronic pain, mental illness including depression, diabetes, multiple sclerosis to name just a few.

Hemoglobin, Female ↓ 13.40 g/dl (- 60 %)

Hemoglobin is the oxygen carrying molecule in red blood cells. Measuring hemoglobin is useful to determine the cause and type of anemia and for evaluating the efficacy of anemia treatment. Hemoglobin levels may be increased in cases of dehydration.

TSH ↓ 0.80 μU/mL (- 58 %)

TSH is a hormone produced from the anterior pituitary to control thyroid function. TSH stimulates the thyroid cells to increase the production of thyroid hormone (T-4), to store thyroid hormone and to release thyroid hormone into the blood stream. TSH synthesis and secretion is regulated by the release of TRH (Thyroid Releasing Hormone) from the hypothalamus. TSH levels describes the body's desire for more thyroid hormone (T4 or T3), which is done in relation to the body's ability to use energy. A high TSH is the body's way of saying "we need more thyroid hormone". A low TSH is a reflection of the body's low need for thyroid hormone. Optimal TSH levels tell us that the thyroid hormone levels match the body's current need and/or ability to utilize the energy.

Total WBCs ↓ 5.20 k/cumm (- 55 %)

The total White Blood Cell (WBC) count measures the sum of all the WBCs in the peripheral blood. White Blood Cells fight infection, defend the body through a process called phagocytosis, and produce, transport and distribute antibodies as part of the immune process. It is important to look at the WBC differential count (neutrophils, lymphocytes, etc.) to locate the source of an increased or decreased WBC count.

Functional Index Report



The indices shown below represent an analysis of your blood test results. These results have been converted into your individual Functional Indices Report based on our latest research. This report gives me an indication of the level of dysfunction that exists in the various physiological systems in your body from the digestion of the food you eat to the health of your liver and the strength of your immune system – which are all key factors in maintaining optimal health. We can use this information to put together a unique treatment plan designed to bring your body back into a state of functional health, wellness and energy.

Score Guide: 90% - 100% - Dysfunction Highly Likely, 70% - 90% - Dysfunction Likely, 50% - 70% - Dysfunction Possible, < 50% - Dysfunction Less Likely.

Functional Index	0%	100%
Immune Function Index		94%
Thyroid Function Index		69%
Cardiovascular Risk Index		67%
Inflammation Index		67%
Electrolyte Index		67%
Adrenal Function Index		58%
Liver Function Index		54%
Kidney Function Index		45%
GI Function Index		44%
Oxidative Stress Index		38%
Heavy Metal Index		38%
Red Blood Cell Index		38%
Lipid Panel Index		27%
Gallbladder Function Index		25%
Bone Health Index		24%
Acid-Base Index		20%
Toxicity Index		18%
Blood Sugar Index		12%
Allergy Index	0%	
Sex Hormone Index - Female	0%	

Immune Function Index

The Immune Function Index 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. Elements 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). For your blood test, your Immune Function Index is:

[94%] - Dysfunction Highly Likely. Much improvement required.

Rationale:

Total WBCs ↓, Lymphocytes ↑, Monocytes ↑, Alk Phos ↓

Thyroid Function Index

The Thyroid Function Index allows us to assess the functional health of your thyroid. The thyroid produces hormones that control how the body uses energy. They are responsible for controlling metabolism in the body, for maintaining body temperature, regulating cholesterol and controlling mood. By examining specific elements on the blood test we can see if your thyroid is in a state of increased function (a condition called hyperthyroidism), in a state of decreased function (hypothyroidism) or hopefully optimal function! For your blood test, your Thyroid Function Index is:

[69%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

TSH ↓

Cardiovascular Risk Index

The Cardiovascular Risk Index looks at 15 elements on a blood test to assess for your risk of cardiovascular dysfunction. A high Cardiovascular Risk Index indicates that you may be at an increased risk of developing cardiovascular disease. The Cardiovascular Risk index will be used along with information from an examination of your diet, lifestyle, exercise, body mass index and family history to give us a more complete picture of what is going on. For your blood test, your Cardiovascular Risk Index is:

[67%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

AST (SGOT) ↑, Triglycerides ↑, Ferritin ↑, Hs CRP, Female ↑, Homocysteine ↑, Vitamin D (25-OH) ↓

Inflammation Index

The Inflammation Index can help us identify whether or not you are suffering from inflammation. This is important because inflammation can be silent, i.e. not have any symptoms. A number of elements on a blood test can indicate the presence of inflammation. These are markers for inflammation and are not specific to any particular inflammatory condition or disease but they can help us look at the underlying dysfunctions that are the true cause of inflammation in the body. For your blood test, your Inflammation Index is:

[67%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

Hs CRP, Female ↑, Uric Acid, female ↑, Homocysteine ↑, Sodium/Potassium Ratio ↑, Ferritin ↑, Lymphocytes ↑

Electrolyte Index

The Electrolyte Index gives us a sense of the balance of electrolytes in your body. Electrolytes such as calcium, potassium, sodium and magnesium are essential for optimal health and wellness. An electrolyte imbalance can show up as low blood pressure, cold hands or feet, poor circulation, swelling in the ankles and immune insufficiency. For your blood test, your Electrolyte Index is:

[67%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

Potassium ↓, Magnesium ↓

Adrenal Function Index

The Adrenal Function Index reflects the degree of function in your adrenal glands. 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. Adrenal dysfunction can be caused by an increase output of stress hormones (adrenal stress) or more commonly a decrease output of adrenal hormones (adrenal insufficiency). We can look at elements in the blood to assess the functional state of your adrenals. For your blood test, your Adrenal Function Index is:

[58%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

Potassium ↓, Sodium/Potassium Ratio ↑, Triglycerides ↑

Liver Function Index

The Liver Function Index reflects the degree of function in your liver. The liver has over 500 known functions. It is involved with detoxification, digestion, the hormonal system, the immune system, controlling blood sugar, storing nutrients, and protein and fat metabolism. The liver also produces a substance called bile that is stored in the gallbladder. Bile is essential for proper fat digestion and is also a major route of elimination for the body. Factors affecting liver function include the accumulation of fat within the liver (a condition called fatty liver), inflammation of the liver cells from infections, toxins, etc. (a condition called hepatitis), actual damage to the liver cells themselves (a condition called cirrhosis) or a decrease in the ability of the liver to detoxify, which leads to detoxification issues. There are elements in the blood that we can measure that can indicate the relative function of the liver. For your blood test, your Liver Function Index is:

[54%] - Dysfunction Possible. There may be improvement needed in certain areas.

Rationale:

ALT (SGPT) ↑, AST (SGOT) ↑, Bilirubin - Total ↑, Ferritin ↑

Nutrient Index Report



The indices shown below represent an analysis of your blood test results. These results have been converted into your individual Nutrient Assessment Report based on our latest research. This report gives me an indication of your nutritional status. Nutritional status is influenced by actual dietary intake, digestion, absorption, assimilation and cellular uptake of the nutrients themselves. We can use this information to put together a unique treatment plan designed to bring your body back into a state of functional health, wellness and energy.

Score Guide: 90% - 100% - Nutrient Status is Poor, 75% - 90% - Nutrient Status is Low, 50% - 75% - Moderate Nutrient Status, < 50% - Optimum Nutrient Status

Nutrient Index	0%	100%
Vitamin Index		100%
Protein Index		56%
Mineral Index		50%
Carbohydrate Index		38%
Fat Index	12%	
Hydration Index	0%	

Vitamin Index

The Vitamin Index gives us a general indication of the balance of certain vitamins in your body. Vitamin levels are constantly fluctuating based on a number of factors, such as the amount in your diet, your ability to digest and breakdown individual vitamins from the food or supplements you consume, the ability of those vitamins to be absorbed, transported and ultimately taken up into the cells themselves. For your blood test, your Vitamin Index is:

[100%] - Nutrient Status is Poor. Much improvement required.

Rationale:

Homocysteine ↑, Vitamin D (25-OH) ↓, MCV ↑

Protein Index

The Protein Index gives us an assessment of the protein levels in your body. We do this by measuring elements in the blood that can indicate protein deficiencies in the diet itself and also for the ability of your body to properly digest the proteins that you do consume in your diet. Protein deficiency is quite common and is often due to a diet that is low in protein and high in refined carbohydrates (white flour, white rice, white pasta, etc.) and sugars. Another reason for protein deficiency is what we call digestive dysfunction, which will greatly compromise protein digestion and absorption. Protein is an essential nutrient for the body and is a vital part of every tissue, cell and organ in your body. For your blood test, your Protein Index is:

[56%] - Moderate Nutrient Status. There may be improvement needed in certain areas.

Rationale:

Protein, total ↓, Creatinine ↓, Hs CRP, Female ↑, Total WBCs ↓, ALT (SGPT) ↑, AST (SGOT) ↑

Mineral Index

The Mineral Index gives us a general indication of the balance of certain minerals in your body based on the results of this blood test. Mineral levels in the body are closely regulated and deficiency in one or more minerals may be due to a number of factors such as the amount in your diet, the ability to digest and breakdown 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. For your blood test, the Mineral Index is:

[50%] - Moderate Nutrient Status. There may be improvement needed in certain areas.

Rationale:

Potassium ↓, Alk Phos ↓, Magnesium ↓

Individual Nutrient Values

The values below 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 must be taken into consideration before determining whether or not you actually need an individual nutrient. I will use the information in this section of your Nutrient Assessment Report to put together an individualized treatment plan to bring your body back into a state of optimal nutritional function.

Score Guide: 90% - 100% - Deficiency Highly Likely, 70% - 90% - Deficiency Likely, 50% - 70% - Deficiency Possible, < 50% - Deficiency Less Likely.

Individual Nutrients	0%	100%
Zinc Need		100%
Vitamin D Need		90%
Vitamin B12/Folate Need		89%
Magnesium Need		75%
Calcium Need		71%
Vitamin B6 Need	20%	
Vitamin C Need	20%	
Iron Deficiency	12%	
Thiamine Need	10%	
Iodine Need	0%	
DHEA Need	0%	
Molybdenum Need	0%	
Selenium Need	0%	
Glutathione Need	0%	

Zinc Need

The results of your blood test indicate that your Zinc levels might be lower than optimal.

[100%] - Dysfunction Highly Likely. Much improvement required.

Rationale:

Alk Phos ↓

Vitamin D Need

The results of your blood test indicate that your Vitamin D levels might be lower than optimal.

[90%] - Dysfunction Highly Likely. Much improvement required.

Rationale:

Vitamin D (25-OH) ↓

Vitamin B12/Folate Need

The results of your blood test indicate that your Vitamin B12 and Folate levels might be lower than optimal.

[89%] - Dysfunction Likely. Improvement required.

Rationale:

MCV ↑, Homocysteine ↑, Total WBCs ↓, Hemoglobin, Female ↓, MCH ↑

Magnesium Need

The results of your blood test indicate that your magnesium levels might be lower than optimal.

[75%] - Dysfunction Likely. Improvement required.

Rationale:

Magnesium ↓, Potassium ↓

Calcium Need

The results of your blood test indicate that your calcium levels might be lower than optimal.

[71%] - Dysfunction Likely. Improvement required.

Rationale:

Calcium/Phosphorous Ratio ↓, Phosphorus ↑, Vitamin D (25-OH) ↓

Blood Test History Report



The Blood Test History Report lists the results of your Blood Chemistry Screen and CBC tests side by side with the latest test listed on the left hand side. This report allows you to compare results over time and see where improvement has been made and allows you to track your progress.

Element	Latest 2 Test Results	
	Jan 20 2015	Mar 11 2015
Glucose	95.00 ↑	90.00
Hemoglobin A1C	5.80 ↑	5.20
Insulin - Fasting		
Fructosamine		
C-Peptide		
BUN	13.00	16.00
Creatinine	0.73 ↓	0.75 ↓
Creatinine, 24-hour urine		
Creatinine Clearance		
eGFR Non-Afr. American	83.00	80.00
eGFR African American	96.00	93.00
BUN/Creatinine Ratio	17.80 ↑	21.33 ↑
Sodium	135.00	136.00
Potassium	3.90 ↓	3.70 ↓
Sodium/Potassium Ratio	34.61	36.75 ↑
Chloride	100.00	102.00
CO2	27.00	26.00
Anion gap	11.90	11.70
Uric Acid, female	6.70 ↑	5.90 ↑
Protein, total	6.50 ↓	6.70 ↓
Albumin	4.20	4.30
Globulin, total	2.30 ↓	2.40
Albumin/Globulin Ratio	1.80	1.80
Calcium	9.30 ↓	9.40
Calcium/Albumin Ratio	2.21	2.18
Phosphorus	4.00	4.30 ↑
Calcium/Phosphorous Ratio	2.32	2.18 ↓

Element	Latest 2 Test Results	
	Jan 20 2015	Mar 11 2015
Collagen Cross-Linked NTx		
Magnesium	1.90 ↓	2.00 ↓
Alk Phos	51.00 ↓	49.00 ↓
LDH	150.00	157.00
AST (SGOT)	34.00 ↑	28.00 ↑
ALT (SGPT)	46.00 ↑	33.00 ↑
GGT	43.00 ↑	25.00
Bilirubin - Total	0.70	1.00 ↑
Bilirubin - Direct	0.10	0.20
Bilirubin - Indirect	0.60	0.80 ↑
Iron - Serum	137.00 ↑	120.00
Ferritin	869.00 ⚠	688.00 ⚠
TIBC	262.00	271.00
% Transferrin saturation	52.00 ⚠	44.00
Cholesterol - Total	228.00 ↑	178.00
Triglycerides	186.00 ↑	117.00 ↑
LDL Cholesterol	137.00 ↑	97.00
HDL Cholesterol	54.00 ↓	58.00
VLDL Cholesterol		
Cholesterol/HDL Ratio	4.20 ↑	3.10 ↑
Triglyceride/HDL Ratio	3.44 ↑	2.01 ↑
Leptin, Female		
TSH	2.30	0.80 ↓
Total T4	7.10	9.00
Total T3		
Free T4		
Free T3		
T3 Uptake	34.00	35.00
Free Thyroxine Index (T7)	2.41	3.15
Thyroid Peroxidase (TPO) Abs		
Thyroglobulin Abs		
Reverse T3		
C-Reactive Protein		

Element	Latest 2 Test Results	
	Jan 20 2015	Mar 11 2015
Hs CRP, Female	3.50 ↑	2.70 ↑
ESR, Female	14.00 ↑	9.00
Homocysteine	10.30 ↑	15.40 ⚠
Fibrinogen		
Creatine Kinase		
Vitamin D (25-OH)	38.00 ↓	46.00 ↓
Vitamin B12		
Folate		
DHEA-S, Female		
Cortisol - AM		
Cortisol - PM		
Testosterone, Free Female		
Testosterone, Total Female		
Testosterone - Bioavailable Female		
Sex Hormone Binding Globulin, female		
Estradiol, Female		
Progesterone, Female		
Total WBCs	5.00 ↓	5.20 ↓
RBC, Female	4.10	3.99
Reticulocyte count		
Hemoglobin, Female	13.40 ↓	13.40 ↓
Hematocrit, Female	39.90	39.10
MCV	97.40 ↑	98.00 ↑
MCH	32.60 ↑	33.50 ↑
MCHC	33.50	34.20
Platelets	164.00	155.00
RDW	13.60 ↑	13.00
Neutrophils	42.90	43.50
Bands		
Lymphocytes	42.60 ↑	42.20 ↑
Monocytes	12.00 ↑	11.30 ↑
Eosinophils	2.20	2.50
Basophils	0.30	0.50

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