

# WellnessFX

## Lab Results for Ben Greenfield

Last Test Date: 2013-08-13

### Let us know what you think

How likely are you to recommend WellnessFX to a friend or colleague?

1	2	3	4	5	6	7
<i>Not at all likely</i>		<i>Neutral</i>			<i>Extremely likely</i>	

### What's Next

#### Blood Draw

- Blood draw scheduled
- Lab Documents will be provided to you at the time of your blood draw
- Blood draw complete
- Complete your medical history
- Your lab results are in! Download our [iPhone app](#) to access your lab results wherever you go.

## Cardiovascular Health

Your cardiovascular system is made up of your heart and blood vessels, and is responsible for transporting oxygen, nutrients, hormones, and waste products throughout the body. A healthy cardiovascular system ensures a good balance of nutrients and optimal brain and body function.

### Basic Lipid Panel

The basic lipid panel includes cholesterol levels (both the good HDL and the bad LDL and other non-HDL cholesterol), as well as triglycerides. Elevated levels of triglycerides or non-HDL cholesterol can increase your risk of cardiovascular disease, which can lead to heart attacks and strokes. Higher levels of artery-clearing HDL, however, can reduce this risk.

<b>Total Cholesterol</b> A Type of Fat		237
<b>LDL</b> "Bad" Cholesterol		91
<b>HDL</b> "Good" Cholesterol		138
<b>Triglycerides</b> Type of Fat		38

### LDL Particles

Higher levels of LDL or "bad" cholesterol can result in increased amounts of plaque in your blood vessels, which can obstruct blood and oxygen flow to vital organs. While almost half of those with heart attacks have normal basic lipid panels, two-thirds of heart-attack victims have elevations in other types of LDL particles. By reducing those deeper LDL numbers, you can reduce your risk of a heart attack and stroke.

<b>vLDL-C</b> Precursor to LDL Cholest...		8
<b>LP(a)</b> Different Form of LDL		5
<b>Apo B</b> Protein in LDL ("Bad") Ch...		87

### Inflammation

Inflammation is your body's reaction to stress or injury. Though inflammation can be helpful in the short-term, long-term inflammation can be harmful and contribute to many chronic diseases, such as cardiovascular disease, cancer, diabetes, dementia, and osteoporosis.

<b>hs-CRP</b> General Inflammation Mar...		0.53
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# Metabolic Health

Metabolism is your body's way of chemically processing sugar and fat for use throughout the body as energy. An optimal metabolism supports healthy weight control and energy levels, while a dysfunctional metabolism can lead to undesired fluctuations in weight and fatigue or hyperactivity.

## Diabetes & Insulin Resistance

High blood sugar can lead to cardiovascular disease, kidney disease, blindness, or ulcers. Insulin, a hormone created in the pancreas, helps the body use or store blood glucose from food. Insulin resistance can lead to higher levels of insulin and blood sugar, resulting in type 2 diabetes.

<b>Glucose</b> Blood Sugar		86
<b>Insulin</b> Blood sugar storage hor...		2.7
<b>Hemoglobin A1c (...)</b> Average blood sugar level		5.4

## Reproductive Hormones

Reproductive hormones are controlled and produced by a complex interaction of your brain, adrenal glands, and reproductive organs. An imbalance in these hormones can affect many important functions, including overall growth and muscle gain, metabolism, mood, libido, and reproductive health.

<b>Estradiol</b> Main female sex hormone		15.6
<b>Testosterone (free)</b> Unbound Testosterone		5.9
<b>Testosterone (total)</b> Steroid hormone		386
<b>DHEA-S</b> DHEA Sulfate (androgen)		303.8
<b>SHBG</b> Sex Hormone Binding Gl...		65.2

## Thyroid

The thyroid gland is your body's regulator of metabolism. An underactive thyroid, or hypothyroid, can result in low energy, weight gain, and cold intolerance, while an overactive thyroid, or hyperthyroid, can cause hyperactivity, undesired weight loss, and heat intolerance.

<b>TSH</b> Thyroid-Stimulating Hor...		1.9
<b>Triiodothyronine (T...)</b> Total triiodothyronine (T3)		1.9
<b>T-Uptake</b> Thyroxine Binding Sites		34
<b>Thyroxine (T4, total)</b> Total thyroxine (T4) level		7.2
<b>Thyroxine (T4, free...)</b> Unbound thyroxine (T4) l...		1.4
<b>Free Thyroxine Ind...</b> A Thyroxine Index		2.4
<b>Triiodothyronine (T...)</b> Triiodothyronine (T3) Fre...		2
<b>Reverse T3</b> Reverse T3, Serum		17.5

## Metabolic Hormones

Hormones influence how you metabolize fat, sugar, and protein to produce and store energy, and build tissues such as fat or muscle. Hormonal imbalance can lead to excess fat storage or the inability to gain muscle.

<b>Cortisol</b> The body's main stress h...		21.4
<b>Insulin-Like Growt...</b> A Measure of Growth Hor...		139

# Liver Health

Your liver's main function is to filter blood coming from the digestive tract before passing it throughout the body. A vital organ, your liver is also responsible for detoxifying chemicals, metabolizing drugs, producing proteins, and more. Liver dysfunction can have a negative impact on your immune system and energy levels and can lead to liver disease and cancer.

## Liver Enzymes and Function Tests

Liver enzymes help monitor liver function and liver inflammation, most commonly from medications, infections, or excess fat on the body. A marked elevation in liver enzymes can signify liver dysfunction.

<b>ALT / SGPT</b> Alanine aminotransferase		46
<b>ALP</b> Alkaline Phosphatase		30
<b>AST / SGOT</b> Aspartate aminotransferase		70
<b>Bilirubin (total)</b> Made by the liver to help ...		0.4
<b>Albumin</b> Type of protein in blood		4.8
<b>Total Protein</b> Total protein amount (ser...		6.9
<b>Globulin</b> Immune protein		2.1
<b>A/G Ratio</b> Proportion, albumin/glob...		2.3

## Kidney Health

Your kidneys help maintain blood pressure, keep the blood's acid-base level within a healthy range, and filter the blood so nutrients are absorbed and waste is passed out of the body as urine.

### Kidney Function

Your kidney function reflects how well your kidneys are filtering your blood. Abnormal kidney function could result in the accumulation of waste products in the body, which can cause fatigue, headaches, nausea, and more.

<b>Creatinine (serum)</b> Creatinine in your blood		0.97
<b>eGFR</b> Marker for kidney function		104
<b>eGFR (African Am...)</b> eGFR if African American		120
<b>BUN</b> Blood Urea Nitrogen		20
<b>Albumin</b> Type of protein in blood		4.8
<b>BUN/Creatinine R...</b> BUN / Creatinine Serum		21

## Electrolyte Health

Electrolytes are minerals in your blood and other body fluids that affect your body's water levels, the acidity of your blood (pH), muscle function, proper cell and nerve conduction, and more. Electrolytes are lost through sweat and must be replenished often.

### Electrolytes

An electrolyte imbalance can lead to an imbalance in your body's acid-base status, hydration, or conduction of charges across cells, all of which are essential, especially with increased activity.

<b>Sodium</b> An electrolyte outside cells		139
<b>Potassium</b> An electrolyte inside cells		4.6
<b>Chloride</b> Balances other electrolytes		104
<b>CO2</b> Carbon dioxide in blood		21
<b>Calcium</b> Blood and Bone Mineral		9.7

## Bone Health

Your bones play many roles in your body, from storing minerals to protecting organs such as the brain. Bone markers are indicators of how well bone tissue is being removed and replaced, aka “bone remodeling.” Significantly abnormal marker levels suggest possible bone disorders.

### Bone

Bones are primarily made of calcium, supported by vitamin D, and regulated through constant bone remodeling. When bones remodel excessively or become inflamed, there may be large elevations in an enzyme called ALP (alkaline phosphatase).

<b>ALP</b> Alkaline Phosphatase		30
<b>25-Hydroxy Vitami...</b> Precursor to vitamin D		53.9
<b>Calcium</b> Blood and Bone Mineral		9.7

## Blood Health

Your blood consists of two main components: the cellular components (red blood cells, white blood cells, and the cell fragments known as platelets); and the liquid component, called plasma. Together, these two parts of the blood are responsible for many functions, including oxygen transport, temperature regulation, blood clotting, and immune defense.

### Red Blood Cells

Red blood cells are the most numerous cell type in your blood and have one main role: to carry oxygen to tissues in your body and transport carbon dioxide back to the lungs to be exhaled. If your blood lacks enough healthy red blood cells, you may be anemic.

<b>RBC</b> Red blood cell count		4.26
<b>Hemoglobin</b> Protein in red blood cells		13.1
<b>Hematocrit</b> Fraction of red blood cells		39.6
<b>MCV</b> Mean corpuscular volume		93
<b>MCH</b> Mean cell hemoglobin		30.8
<b>MCHC</b> RBC hemoglobin concen...		33.1
<b>RDW</b> Red cell distribution width		13.9

### White Blood Cells

Your white blood cells are responsible for protecting your body from disease and foreign materials. A low white blood cell count is a decrease in the disease-fighting cells your body depends on, while an overproduction of white blood cells could indicate the presence of diseases like leukemia.

<b>White Blood Cell C...</b> Immune system cells		5
<b>Neutrophil Count (...)</b> Type of white blood cell		3.2
<b>% Neutrophil</b> Part of WBC differential		63
<b>Lymphocyte Count...</b> Calculation of WBC type		1.3
<b>% Lymphocytes</b> Part of WBC differential		26
<b>Monocytes (absol...</b> type of white blood cell		0.3
<b>% Monocytes</b> Part of WBC differential		6
<b>Eosinophil (absolute)</b> Calculation of WBC type		0.2
<b>% Eosinophils</b> Part of WBC differential		3
<b>Basophil (absolute)</b> Calculation of WBC type		0.1
<b>% Basophils</b> Part of WBC differential		2
<b>Immature Granulo...</b> Immature granulocytes		0
<b>Immature Granulo...</b> Immature Granulocytes (...)		0

### Iron

Iron is an essential mineral needed to form hemoglobin, the main protein found in red blood cells. Iron deficiency can lead to anemia, while excess iron can be toxic to the liver or other organs.

<b>Iron (serum)</b> Iron in liquid part of blood		69
<b>Ferritin</b> Iron storage protein		56
<b>Total Iron Binding ...</b> Estimates Transferrin level		308
<b>Unsaturated Iron-...</b> Iron transport protein not...		239
<b>Iron Saturation</b> The percent of Iron trans...		22

### Platelets

Platelets help form blood clots at the site of an injured blood vessel. Knowing your platelet count, as well as how large your platelets are, may help reveal any bleeding or clotting problems.

<b>Platelet Count</b> Clot-forming cell fragments		213
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## Vitamins & Minerals

Vitamins and minerals are substances obtained from food and supplements needed for normal growth and body processes. Deficiencies in certain vitamins and minerals can interfere with normal body function.

### Vitamins

Vitamins are organic substances required for normal health and function. For example, vitamin B12 is essential for cellular development, including the development of red and white blood cells. Deficiency in B12 can lead to anemia and immune dysfunction.

<b>Vitamin B12</b> Essential nutrient for cells		1445
<b>25-Hydroxy Vitami...</b> Precursor to vitamin D		53.9
<b>RBC Folate</b> Folate in red blood cells		16.7
<b>Folate</b> Folic Acid		17.8

### Minerals

Minerals are inorganic substances needed for many of your body's processes such as cellular development, carrying oxygen to tissues, and bone growth. Mineral deficiencies result in weak bones, organ malfunction, and poor cellular development, which can cause conditions such as anemia.

<b>Ferritin</b> Iron storage protein		56
<b>Iron (serum)</b> Iron in liquid part of blood		69
<b>RBC Magnesium</b> The Magnesium in our cells		5
<b>RBC Folate</b> Folate in red blood cells		16.7
<b>Folate</b> Folic Acid		17.8

### Release Notes

- **2013-05-21**  
Lab Report released by a WellnessFX practitioner with note: No critical values were found.
- **2013-05-07**  
Lab Report released by a WellnessFX practitioner with note: No critical values were found.
- **2013-05-07**  
Lab Report released by a WellnessFX practitioner with note: No critical values were found.
- **2013-04-30**  
Lab Report released by a WellnessFX practitioner with practitioner. Adjustment of treatment plan recommended.
- **2012-09-28**  
Lab Report released by a WellnessFX practitioner with note: No critical values were found.
- **2012-09-28**  
Lab Report released by a WellnessFX practitioner with note: No critical values were found. Ensure to follow up to discuss treatment of all of your abnormal biomarkers.

### Lab Notes

- **2012-09-28 Total Cholesterol**  
\*\*Please note reference interval change\*\*
- **2012-09-28 LDL**  
\*\*Please note reference interval change\*\*
- **2013-05-07 HDL**  
\*\*Verified by repeat analysis\*\* According to ATP-III Guidelines, HDL-C >59 mg/dL is considered a negative risk factor for CHD.
- **2013-05-07 HDL**  
\*\*Verified by repeat analysis\*\* According to ATP-III Guidelines, HDL-C >59 mg/dL is considered a negative risk factor for CHD.
- **2013-04-30 HDL**  
Results confirmed on dilution. According to ATP-III Guidelines, HDL-C >59 mg/dL is considered a negative risk factor for CHD.
- **2012-09-28 HDL**  
\*\*Verified by repeat analysis\*\* According to ATP-III Guidelines, HDL-C >59 mg/dL is considered a negative risk factor for CHD.
- **2012-09-28 Triglycerides**

\*\*Please note reference interval change\*\*

- **2013-05-07 LP(a)**  
Desirable: <20 Borderline high risk: 20 - 30 High risk: 31 - 50 Very high risk: >50 . Note: Values >30 may indicate independent risk factor for CHD. Significance of high Lp(a) in non-white populations must be evaluated with caution.
- **2013-05-07 LP(a)**  
Desirable: <20 Borderline high risk: 20 - 30 High risk: 31 - 50 Very high risk: >50 . Note: Values >30 may indicate independent risk factor for CHD. Significance of high Lp(a) in non-white populations must be evaluated with caution.
- **2013-04-30 LP(a)**  
Desirable: <20 Borderline high risk: 20 - 30 High risk: 31 - 50 Very high risk: >50 . Note: Values >30 may indicate independent risk factor for CHD. Significance of high Lp(a) in non-white populations must be evaluated with caution.
- **2012-09-28 LP(a)**  
Desirable: <20 Borderline high risk: 20 - 30 High risk: 31 - 50 Very high risk: >50 . Note: Values >30 may indicate independent risk factor for CHD. Significance of high Lp(a) in non-white populations must be evaluated with caution.
- **2013-05-07 hs-CRP**  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- **2013-05-07 hs-CRP**  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- **2013-04-30 hs-CRP**  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- **2012-09-28 hs-CRP**  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- **2013-05-07 Hemoglobin A1c (HbA1c)**  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- **2013-05-07 Hemoglobin A1c (HbA1c)**  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- **2013-04-30 Hemoglobin A1c (HbA1c)**  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- **2012-09-28 Hemoglobin A1c (HbA1c)**  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- **2013-05-07 Estradiol**  
Roche ECLIA methodology
- **2013-05-07 Estradiol**  
Roche ECLIA methodology
- **2013-04-30 Estradiol**  
Roche ECLIA methodology
- **2013-05-07 Cortisol**  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- **2013-05-07 Cortisol**  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- **2013-04-30 Cortisol**  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- **2012-09-28 Cortisol**  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- **2013-05-07 25-Hydroxy Vitamin D**  
Vitamin D deficiency has been defined by the Institute of Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. JCEM. 2011 Jul; 96(7):1911-30. Medicine and an Endocrine Society practice guideline as a level of serum 25-OH vitamin D less than 20 ng/mL (1,2). The Endocrine Society went on to further define vitamin D insufficiency as a level between 21 and 29 ng/mL (2). 1. IOM (Institute of Medicine). 2010. Dietary reference intakes for calcium and D. Washington DC: The National Academies Press. 2. Holick MF, Binkley NC, Bischoff-Ferrari HA, et al.
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- **2013-05-07 Ferritin**

\*\*Effective May 20, 2013, Ferritin reference interval\*\* will be changing to: Male Female ng/mL ng/mL 0 - 5 months: 13 - 273 12 - 219 6 - 12 months: 12 - 95 12 - 110 1 - 5 years: 12 - 64 12 - 71 6 - 11 years: 16 - 77 15 - 79 12 - 19 years: 16 - 124 15 - 77 Adult: 30 - 400 15 - 150

- **2013-05-07 Ferritin**

\*\*Effective May 20, 2013, Ferritin reference interval\*\* will be changing to: Male Female ng/mL ng/mL 0 - 5 months: 13 - 273 12 - 219 6 - 12 months: 12 - 95 12 - 110 1 - 5 years: 12 - 64 12 - 71 6 - 11 years: 16 - 77 15 - 79 12 - 19 years: 16 - 124 15 - 77 Adult: 30 - 400 15 - 150

- **2013-05-07 Folate**

A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.

- **2013-05-07 Folate**

A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.

- **2013-04-30 Folate**

A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.

- **2012-09-28 Folate**

A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.

- **2012-09-28 RBC Magnesium**

Plasma NOT separated from cells; may falsely decrease RBC Magnesium levels. .

- **2013-05-21**

Siemens (DPC) ICMA Methodology

- **2012-09-28**

Written Authorization Received. Authorization received from SAMANTHA LEVINE 10-02-2012 Logged by Karlyn Ransom