

# WellnessFX

## Lab Results for Ben Greenfield

Last Test Date: 2013-04-30

Your medical history is not complete. [Complete Medical History](#)

### What's Next

#### Blood Draw

- Blood draw scheduled
- [Complete your medical history](#)
- Lab Documents will be provided to you at the time of your draw
- Blood draw complete
- [Your blood results are in!](#)

## Cardiovascular Health

Your heart and blood vessels are called your cardiovascular system. When bad cholesterol and triglycerides clog your arteries that feed your brain and heart, raising your risk for a stroke or heart attack, this is known as cardiovascular disease.

### Basic Lipid Panel

The basic lipid panel encompasses your cholesterol, including your good (HDL) and bad (LDL and other non-HDL) cholesterol, and fats in the blood.

<b>Total Cholesterol</b> A Type of Fat		233
<b>LDL-C Direct</b> "Bad" Cholesterol		93
<b>HDL-C Direct</b> "Good" Cholesterol		132
<b>Triglycerides</b> Type of Fat		39

### LDL Particles

Bad, or LDL, cholesterol has many parts and similar particles. By examining all of these particles, one can better understand their risk of atherosclerosis, or the clogging of blood vessels, leading to cardiovascular disease such as a heart attack or 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...		91

### Inflammation

Inflammation is our bodies reaction to stress or injury. Though this can be helpful in the short-term, long-term chronic inflammation can contribute to many chronic diseases.

<b>hs-CRP</b> General Inflammation Mar...		0.63
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## Metabolic

Metabolism includes many physical and chemical reactions that are needed to stay alive and in good health. The metabolic lab tests include markers for glucose use and storage, energy regulation, and gender-specific hormone tests.

### Diabetes & Insulin Resistance

Diabetes, a disease of persistently high blood sugar, can lead to cardiovascular disease, kidney disease, blindness, or ulcers in the legs.

<b>Glucose</b> Blood Sugar		87
<b>Insulin</b> Blood sugar storage hor...		1.3
<b>Hemoglobin A1c (...)</b> Average blood sugar level		5.5

### Reproductive Hormones

Hormones are substances that are produced in one part of the body and travel to another part of the body to exert their effects. Hormones can affect many processes in your body, including growth, metabolism, mood, sexual functioning, and reproductive ability.

<b>Estradiol</b> Main female sex hormone		13
<b>Testosterone (free)</b> Unbound Testosterone		4.2
<b>Testosterone (total)</b> Steroid hormone		356
<b>DHEA-S</b> DHEA Sulfate (androgen)		361.8
<b>SHBG</b> Sex Hormone Binding Gl...		65.7

### Thyroid

The thyroid gland makes hormones that regulate your body's metabolism. An underactive thyroid results in low energy and weight gain, while an overactive thyroid causes hyper-activity or excessive weight loss.

<b>TSH</b> Thyroid-Stimulating Hor...		5.52
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### Metabolic Hormones

Hormones influence how we metabolize fat, sugar, and protein to produce energy or store glycogen (stored blood sugar), muscle, and fat. These hormones govern are anabolic, or muscle building, fat-burning, pathways and our catabolic, or tissue breakdown, pathways.

<b>Cortisol</b> The body's main stress h...		23.1
<b>Insulin-Like Growt...</b> A Measure of Growth Hor...		95

## Liver

Your liver detoxifies, produces proteins, and performs many other vital functions. A marked elevation in liver enzymes can signify liver dysfunction.

### Liver Enzymes and Function Tests

Liver enzymes help monitor liver function and liver inflammation.

<b>ALT / SGPT</b> Alanine aminotransferase		38
<b>ALP</b> Alkaline Phosphatase		37
<b>AST / SGOT</b> Aspartate aminotransferase		76
<b>Bilirubin (total)</b> Made by the liver to help ...		0.4
<b>Albumin</b> Type of protein in blood		4.9
<b>Total Protein</b> Total protein amount (ser...		7
<b>Globulin</b> Immune protein		2.1
<b>A/G Ratio</b> Proportion, albumin/glob...		2.3

## Kidney

Your kidneys help maintain your blood pressure, keep your blood's acid-base level within a healthy range, and filter your blood so that needed substances are reabsorbed and waste substances are passed out of the body as urine.

## Kidney Function

Your kidney function tests reflect how well your kidneys are working--abnormal kidney function tests suggest that your kidneys may be damaged. By monitoring, you can detect and treat kidney problems as early as possible.

<b>Creatinine (serum)</b> Creatinine in your blood		1.14
<b>eGFR</b> Marker for kidney function		85
<b>eGFR (African Am...)</b> eGFR if African American		99
<b>BUN</b> Blood Urea Nitrogen		23
<b>Albumin</b> Type of protein in blood		4.9
<b>BUN/Creatinine R...</b> BUN / Creatinine Serum		20

## Electrolytes

### Electrolytes

<b>Sodium</b> An electrolyte outside cells		140
<b>Potassium</b> An electrolyte inside cells		4.2
<b>Chloride</b> Balances other electrolytes		102
<b>CO2</b> Carbon dioxide in blood		24
<b>Calcium</b> Blood and Bone Mineral		9.5

## Bone

Your bones play many roles in your body, ranging from storing minerals to protecting organs such as your brain. Bone tissue in your body undergoes constant remodeling--old bone is removed and new bone forms to replace it. Bone markers are indicators of how well bone remodeling is happening within your body; significantly abnormal marker levels suggest a possible bone disorder.

### 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 in bone called ALP (alkaline phosphatase).

<b>ALP</b> Alkaline Phosphatase		37
<b>25-Hydroxy Vitami...</b> Precursor to vitamin D		45.7
<b>Calcium</b> Blood and Bone Mineral		9.5

## Blood

Blood consists of two main components or parts: 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 carry carbon dioxide back to the lungs to be exhaled. The red blood cell lab tests are commonly done as part of routine health checks or if your doctor suspects you have anemia.

<b>RBC</b> Red blood cell count	●	4.36
<b>Hemoglobin</b> Protein in red blood cells	●	13.4
<b>Hematocrit</b> Fraction of red blood cells	●	40.6
<b>MCV</b> Mean corpuscular volume	●	93
<b>MCH</b> Mean cell hemoglobin	●	30.7
<b>MCHC</b> RBC hemoglobin concen...	●	33
<b>RDW</b> Red cell distribution width	●	14
<b>Folate</b> Folic Acid	● — ●	18.1

## White Blood Cells

Your white blood cell (WBC) panel includes a WBC count and a WBC differential. The WBC count measures the number of WBCs you have in a sample of blood; the differential is the proportion of the different WBC types present in the blood. Abnormal values for your WBC count or components of your WBC differential can indicate a wide variety of medical diseases and conditions.

<b>White Blood Cell C...</b> Immune system cells	●	4.9
<b>Neutrophil Count (...)</b> Type of white blood cell	●	3.2
<b>% Neutrophil</b> Part of WBC differential	●	65
<b>Lymphocyte Count...</b> Calculation of WBC type	●	1.2
<b>% Lymphocytes</b> Part of WBC differential	●	25
<b>Monocytes (absol...</b> type of white blood cell	●	0.3
<b>% Monocytes</b> Part of WBC differential	●	7
<b>Eosinophil (absolute)</b> Calculation of WBC type	●	0.1
<b>% Eosinophils</b> Part of WBC differential	●	2
<b>Basophil (absolute)</b> Calculation of WBC type	●	0
<b>% Basophils</b> Part of WBC differential	●	1
<b>Immature Granulo...</b> Immature granulocytes	●	0
<b>Immature Granulo...</b> Immature Granulocytes (...)	●	0

### Iron

Iron is an essential mineral; it is needed to form hemoglobin, the main protein found in red blood cells. Your iron panel includes tests that help your doctor detect conditions of iron deficiency or iron overload.

<b>Iron (serum)</b> Iron in liquid part of blood		69
<b>Ferritin</b> Iron storage protein		89
<b>Total Iron Binding ...</b> Estimates Transferrin level		297
<b>MCH</b> Mean cell hemoglobin		30.7
<b>MCV</b> Mean corpuscular volume		93
<b>Hematocrit</b> Fraction of red blood cells		40.6
<b>Hemoglobin</b> Protein in red blood cells		13.4
<b>Unsaturated Iron-...</b> Iron transport protein not...		228
<b>RBC (Red Blood C...</b> The Magnesium in our cells		4.8
<b>Iron Saturation</b> The percent of Iron trans...		23

### Platelets

Your platelets play a key part of an important process in your body: forming blood clots at the site of an injured blood vessel. Your platelet panel includes a measure of how many platelets you have circulating as well as how large your platelets are; these values can provide important information about your risk for bleeding problems or clotting problems.

<b>Platelet Count</b> Clot-forming cell fragments		227
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## Vitamins & Minerals

Vitamins are carbon-containing (organic) substances and minerals are inorganic substances; both are needed for normal body processes. Your vitamin and mineral levels provide important clues to your overall health and nutrition status.

### Vitamins

Vitamins are substances that are essential for normal health and well being.

<b>Vitamin B12</b> Essential nutrient for cells		1486
<b>25-Hydroxy Vitami...</b> Precursor to vitamin D		45.7
<b>Folate</b> Folic Acid		18.1

### Minerals

Minerals are inorganic substances that are needed for many processes in your body. A healthy diet can help prevent harmful mineral deficiencies.

<b>Ferritin</b> Iron storage protein		89
<b>Iron (serum)</b> Iron in liquid part of blood		69

Release Notes

- 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  
\*\*Please note reference interval change\*\*
- 2012-09-28  
\*\*Please note reference interval change\*\*
- 2013-04-30  
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  
\*\*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  
\*\*Please note reference interval change\*\*
- 2013-04-30  
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  
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- 2013-04-30  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- 2012-09-28  
Relative Risk for Future Cardiovascular Event Low <1.00 Average 1.00 - 3.00 High >3.00
- 2013-04-30  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- 2012-09-28  
. Increased risk for diabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0
- 2013-04-30  
Roche ECLIA methodology
- 2013-04-30  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- 2012-09-28  
Cortisol AM 6.2 - 19.4 Cortisol PM 2.3 - 11.9
- 2013-04-30  
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.
- 2012-09-28  
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- 2013-04-30  
A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.
- 2012-09-28  
A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.
- 2012-09-28  
Plasma NOT separated from cells; may falsely decrease RBC Magnesium levels. .
- 2012-09-28  
Written Authorization Received. Authorization received from SAMANTHA LEVINE 10-02-2012 Logged by Karlyn Ransom

