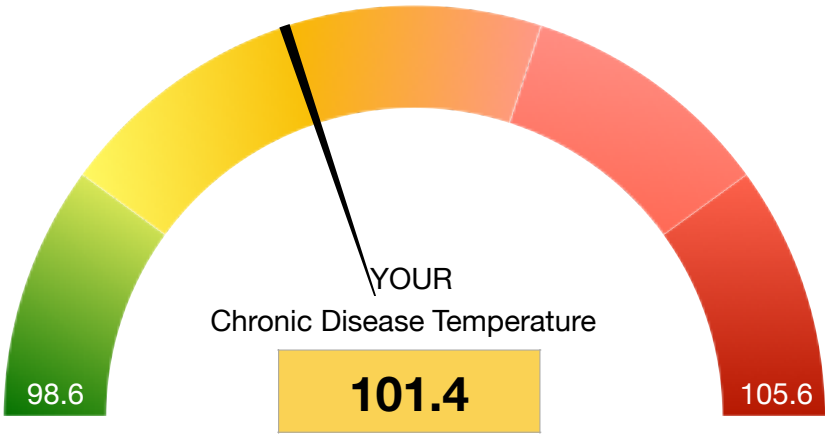
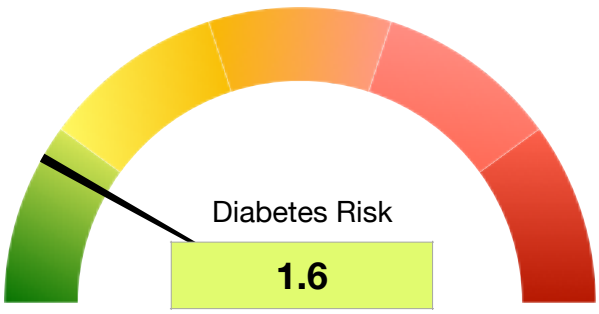
We all reside on the health / disease continuum

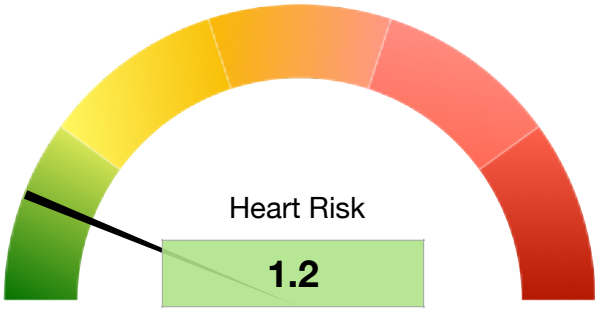
Your **Chronic Disease Temperature** (CDT) accurately places you on that continuum.
Work with us to improve your health status - and **lower** your CDT!

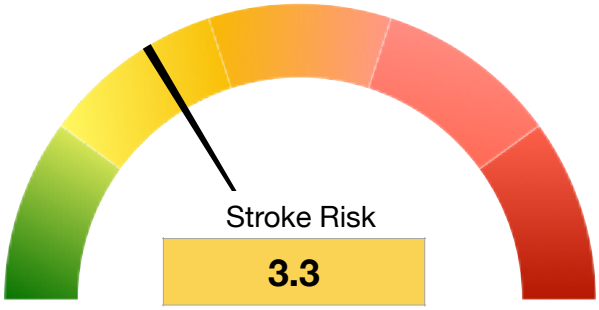


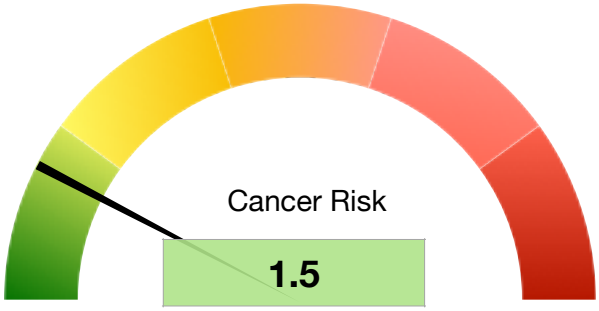
What is **your risk** for chronic diseases? Keep in mind that a diagnosis, like diabetes, is a **Human-made term**. Instead, we ALL occupy a position on the diabetes continuum - regardless of a diagnosis. And, 2 people with the same diagnosis lie at different point on the continuum.

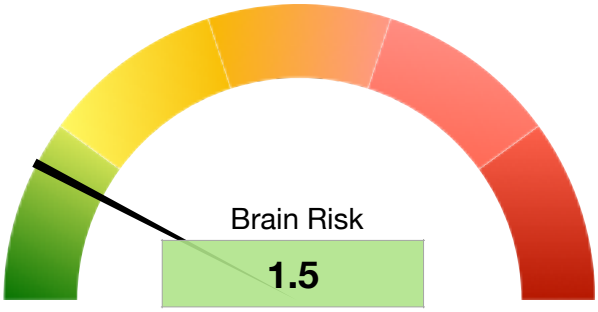
See where you are on the disease-specific continuums.

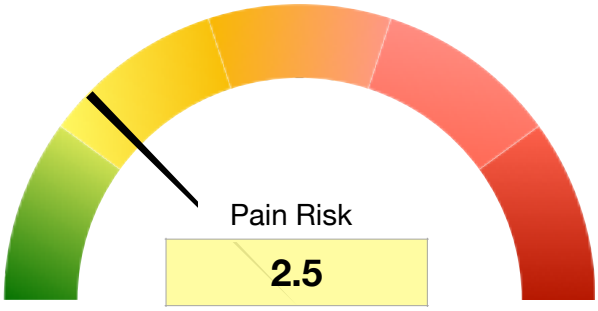












Patent Pending Chronic Disease Temperature Markers & Chronic Disease Algorithm

CDT Report	Sample Report	DATE		CDT	101.4	Risk
Diabetes	Glucose	A1C	Insulin	Triglycerides	Uric Acid	**Diabetes**
Optimal	65 - 80	4 - 5	2 - 6	<100	4 - 6	0 to 10 Scale
Value	**95**	**5.3**	**8.5**	**105**	**4.2**	1.6
Heart	WBC	RDW	Neutrophils	CRP	Homocysteine	**Heart**
Optimal	4000 - 6000	11 - 12.5	2000 - 3500	< 0.6	5 - 10	0 to 10 Scale
Value	**4900**	**12.4**	**2400**	**0.7**	**12.1**	**1.2**
Stroke	CRP	ESR	Fibrinogen	AIP	Insulin	**Stroke**
Optimal	<0.6	< 6.0	150 - 285	< 0.24	2 - 6	0 to 10 Scale
Value	**0.7**	**23**	**332**	**0.17**	**8.5**	**3.3**
Cancer	Insulin	WBC	Neutrophils	NLR	Vitamin D	**Cancer**
Optimal	2 - 6	4000 - 6000	2000 - 3500	< 1.5	55 - 100	0 to 10 Scale
Value	**8.5**	**4900**	**2400**	**1.2**	**39**	**1.2**
Kidney	Uric Acid	GFR-Filtration	BUN/Creat	CRP	Homocysteine	**Kidney**
Optimal	4 - 6	90 - 125	10 - 24	<0.6	5 - 10	0 to 10 Scale
Value	**4.2**	**78**	**24**	**0.7**	**12.1**	**1.2**
Brain	Homocysteine	CRP	Neutrophils	WBC	Insulin	**Brain**
Optimal	5 - 10	<0.6	2000 - 3500	4000 - 6000	2 - 6	0 to 10 Scale
Value	**12.1**	**0.7**	**2400**	**4900**	**8.5**	**1.5**
Pain	CRP	Vitamin D	Uric Acid	ESR	WBC	**Pain**
Optimal	<0.6	55 - 100	4 - 6	<6	4000 - 6000	0 to 10 Scale
Value	**0.7**	**39**	**4.2**	**23**	**4900**	**2.5**
Respiratory	WBC	Neutrophils	Vitamin D	ESR	CRP	**Respiratory**
Optimal	4000 - 6000	2000 - 3500	55 - 100	< 6.0	< 0.6	0 to 10 Scale
Value	**4900**	**2400**	**39**	**23**	**0.7**	**2.2**
Lipids/Other	Cholesterol	LDL	HDL	TSH	Ferritin	**Lipids**
Optimal	180 - 280	>100	>50	0.4 - 1.5	40 - 150	0 to 10 Scale
Value	**333**	**244**	**71**	**1.89**	**296**	**1.8**
WBC Diff	Lymphocytes	Monocytes	Eosinophils	Basophils	%Neut	**WBC Diff**
Optimal	700 - 2000	100 - 900	0 - 400	0 - 200	40 - 60	0 to 10 Scale
Value	**2000**	**400**	**200**	**0**	**48**	**0.3**
Blood	Hemoglobin	Hematocrit	MCV	MCH	Platelets	**Blood**
Optimal	12.0 - 15.5	37 - 45	82 - 94	27 - 31.9	150 - 379	0 to 10 Scale
Value	**14.6**	**45.1**	**94**	**30.4**	**236**	**1.0**
Liver	Alk Phos	AST	ALT	Bilirubin	Iron	**Liver**
Optimal	45 - 110	10 - 26	10 - 26	0.1 - 0.9	65 - 160	0 to 10 Scale
Value	**82**	**20**	**18**	**0.5**	**117**	**1.3**

Please view the following pages for a summary of each individual biomarker.

Understanding Your Labs: Individual lab values are important in understanding both your acute and chronic health risks. More important is the story your labs tell about your chronic health, when taken together. Many markers used to assess your chronic state of health also change (usually elevate) when you have an acute health problem. Analyzing and evaluating many different biomarkers often helps a trained practitioner to differentiate between acute and chronic conditions. We encourage you to consult with someone knowledgeable about labs to tell your "health story." The descriptions below describe each biomarker individually and give some reference to the connectivity of these markers.

Optimal Values: We have established science-based "optimal" biomarker ranges by determining, through researching the worldwide medical literature, when a level of a marker is associated with an increase in early mortality risk - based on sound statistical analysis. Any value that is highlighted with a color other than green implies that the marker, if it perpetuates at that level, may put you at future risk for an early or sudden death. Usually, when your mortality risk increases, so does you risk for chronic disease or debilitation (called morbidity).

Your "Chronic Disease Temperature" (CDT): This single value, displayed at the top of your report, is the combination for excess mortality risk from many of the important biomarkers for chronic risk. Of all the markers, it is the single most predictive of your current and future health risk because it combines markers that predict chronic disease across a broad spectrum, from cancer and heart disease, to diabetes and kidney diseases.
Your optimal Chronic Disease temperature is **98.6**. We use the same scale as your core body temperature (thermometer) scale - because no value above **98.6** is desirable - it implies some level of excess risk. However, a chronic disease temperature of **98.6** implies near perfect health - which is difficult to achieve. Importantly, if you work to and are successful at lowering your chronic disease temperature - and keeping it as low as possible - you most likely will live a longer and healthier life.

Your **CDT** value: **101.4**

On this chart and those below for each biomarker, the grey bar ( ) shows your value compared to ideal (green) and non-optimal or abnormal values (yellow - slightly out of optimal, orange - moderately out of optimal, or red - severely out of optimal).

Insulin is a hormone, the job of which is to maintain normal glucose levels in our blood. When we consume foods that produce a lot of glucose, insulin levels rise to remove these sugars. Our cells get what they need but excess sugars go to fat storage or feed cancer or infection. An insulin level above 6 (optimal is **2 - 6**) implies "**insulin resistance**" that occurs when you frequently take in more short-term calories than your cells need. Reversing insulin resistance is CRITICAL to good long-term health.

Your fasting **insulin** value: **8.5**

Glucose (blood sugar) is an important energy molecule for our cells. Too much glucose may lead to inflammation in our blood vessels and insulin resistance. **A high level of insulin resistance is called diabetes (type 2)**. The ideal level for fasting blood glucose is between **65 - 80**. Below 65 we often feel tired, jittery and sweaty (hypoglycemia). Above 80, we seldom have immediate symptoms but many chronic conditions stem from having an elevated blood glucose level for a long time. People with severe insulin resistance may feel the affects of hypoglycemia and glucose (sugar) levels well above 80 - depending upon the severity of their insulin resistance - which is best measured by the fasting insulin marker discussed above.

Your fasting **glucose** value: **95**

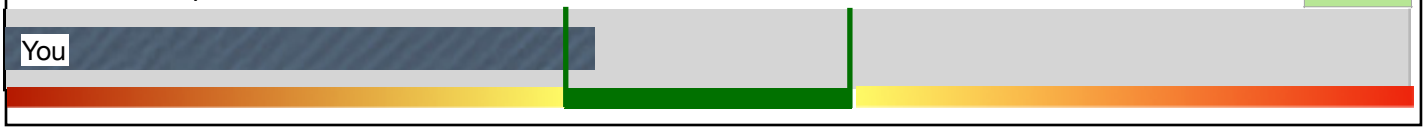
A1C is a 120 day look-back at your blood glucose (sugar) levels. A1C is formed from the reaction between our red blood cells and glucose (because glucose is very reactive and energetic - just like gasoline in our cars - you don't want gasoline in the passenger compartment!). A red blood cells stays in our body about 120 days before being discarded and replaced. A1C is considered an average of your blood glucose levels over that period (4 months). The optimal A1C level is 4 - 5. Any value above that implies some insulin resistance. 5.8 to 6.3 is considered "pre-diabetic," while **6.4 and above is consider diabetic**.

Your **A1C** value: **5.3**

Triglycerides are a measure of the storage management of sugars in our body. Triglycerides will be high if foods are consumed that rush sugars into our blood stream beyond cellular caloric needs. Sugary snacks and beverages are the worse offenders but many carbohydrate-based foods, like potatoes and processed foods with "empty" nutrient-depleted carbs also cause triglycerides to rise. Insulin resistance and diabetes also increases triglycerides. When body fat is being burned, for example in a low carb or high fat diet, "trigs" may also rise - but not to the high levels seen in people with diabetes.

Optimal is **40 - 100** mg/dL. Your **Triglycerides** value: **105**

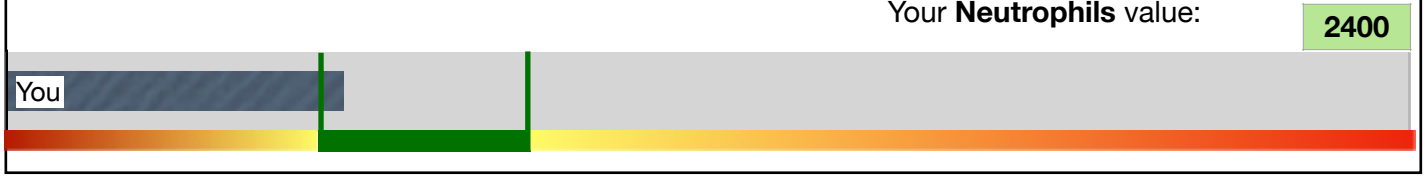
Uric acid is a waste product of cellular metabolism primarily but it also can stimulate the nervous system (like caffeine) and can control oxidative free radicals and "chelate" (grab) excess iron and remove it from your body. Generally uric acid may go up if: 1. Our kidneys are not functioning optimally; 2. If we have an inflammatory condition like diabetes or excess iron; or 3. The foods we eat are high in purines found in many foods. This is the least likely reason uric acid may elevate. The optimum range for uric acid is 4 - 6 mg/dL. Women usually have lower uric acid levels compared to men and their uric acid may be considered optimal at values as low as 3.5. Your **Uric Acid** value: **4.2**



WBC or white blood cell count is a measure of the activity of your immune system toward infection and disease including cancer and heart disease. A value above 11,000 means you may be becoming or are seriously acutely sick. In Septsis, a deadly infectious disease, white blood cell counts are around 14,000 or above. Two very large studies conducted by the NIH on over 125,000 people demonstrated that people with a WBC of 6700 are twice as likely to die in 6 years compared with people with a WBC of 4700. Some studies show that cancer mortality increases with a WBC as low at 5800. An optimum value is between **4000 - 6000** cells/uL. Your **WBC** value**:** **4900**

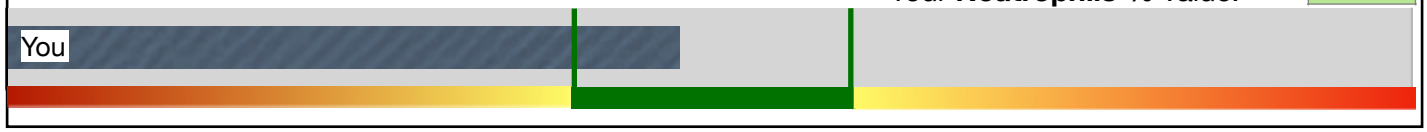
Neutrophils are a type of white blood cell (part of the WBC number) and is a measure of the activity of your immune system toward bacterial infection. This value is elevated slightly if you have a chronic infection and lowered with cancer and bone diseases. Very high values usually indicate an acute infection. However chronic elevated neutrophil counts may imply a bacterial infection that gets inside of cells. These types of infections, like the bug that causes Lyme disease are often ignored but are now known to cause or contribute to the major chronic diseases including: heart disease, cancer, Alzheimer's disease and autoimmune diseases. An optimum value is between **2000** and **3500** cells/uL.

Your **Neutrophils** value: **2400**



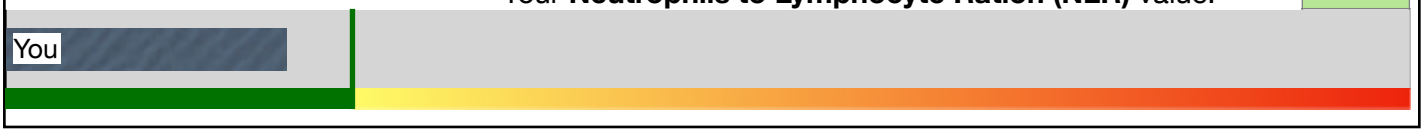
% Neutrophils: Neutrophils are 1 of 5 different white blood cells types that are a major part of our immune system. The percentage of these white blood cells tell a story about how your "innate" immune system is reacting to insults (attacks upon your body). A high percentage of neutrophils implies a bacterial infection, regardless of the "counts" value (see "Neutrophils above). A low neutrophil % indicates that one or more of the other type of WBC (Lymphocytes, Monocytes, Basophils, Eosinophils) are elevated - implying a different type of infection. Neutrophils & the % neutrophils tell an important story about your chronic health. An optimum value is between **40** and **60%**.

Your **Neutrophils %** value: **48**



NLR (Neutrophil-to-lymphocyte ratio) has a proven prognostic value in cardiovascular diseases, infections, inflammatory diseases and in **several types of cancers - including breast cancer.** It truly is an amplified signal for your innate immune system. These 2 white blood cell types go in opposite directions in the face of infection. Neutrophils go up in the presence of bacterial infection while Lymphocytes are known to go down with viral infections and cancer. Many people with chronic illness, including cancer, have both types of infection. An optimum value is **< 1.5**.

Your **Neutrophils to Lymphocyte Ration (NLR)** value: **1.2**

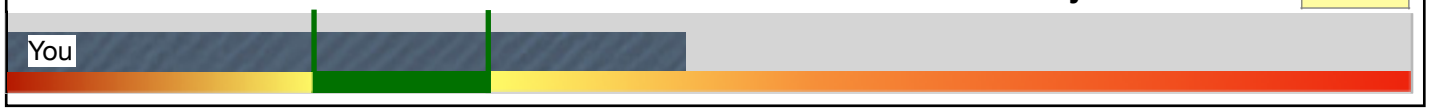


CRP (C-reactive protein or hs-CRP for high sensitivity CRP test). CRP is an "acute phase reactant protein" that increases in response to inflammatory stimuli. CRP will go up significantly with acute (immediate) inflammation like the flu or an injury. Importantly, CRP will go up slightly with chronic inflammation. Excess sugars (glucose >85mg/dL) in your blood every day creates inflammation in blood cell membranes and CRP goes up in response to that inflammation. Chronic infection will also cause CRP to elevate slightly or moderately over a long period of time. If you get acutely sick, CRP will go up and then return to baseline in about 4-7 days. Generally, slightly elevated CRP is a barometer of your chronic vascular (vessel) inflammation. Few doctors routinely measure CRP because it is "non-specific" and is elevated in cardiovascular disease, Alzheimer's disease, diabetes, cancer, and other chronic diseases. An optimum value is **<0.6** mg/L.

Your **CRP** value: **0.7**

Homocysteine is a naturally occurring amino acid produced as part of the body's methylation and metabolism process. High levels of homocysteine in your blood are recognized as a risk factor for chronic diseases such as cardiovascular disease and Alzheimer's. Inflammation, infection and deficiencies in vitamin B12, methyl folate, and vitamin B6 are associated with elevated homocysteine. High alcohol intake, some prescription drugs (antacids - PPIs), diabetes, arthritis and poor thyroid function are also associated with elevated homocysteine. High homocysteine is really a barometer for disruptions in metabolism - thus the associated chronic diseases. For every elevation of homocysteine of 5 umol/L above the optimal, your risk for Alzheimer's and heart diseases increases by 40%. Low homocysteine appears to put you at risk for excess oxidative stress as, at low levels, your master antioxidant - glutathione - may not be produced sufficiently. An optimum value is between **5 and 10** umol/L.

Your **Homocysteine** value: **12.1**



ESR or SED Rate measures how fast red blood cell platelets settle from the clear plasma that makes up blood. It is used to detect chronic inflammation associated with infections, autoimmune disorders, cancer and particularly stroke risk. SED rate is a way to estimate the relative charge on the cell platelets. Healthy blood cells hold a negative charge and this charge keeps the red blood cells from sticking together (settling) - explaining why a low ESR is associated with low stroke risk. A high "SED Rate" number implies low (poor) charge on the blood cells and is associated with a lack of minerals or absorption, higher levels of inflammation, stroke possibility, and early mortality. An optimum value is between **< 6** mm/hr.

Your **ESR (SED Rate)** value: **23**

Fibrinogen is a soluble protein in the plasma (blood) that is broken down to fibrin by the enzyme thrombin to form clots at the source of bleeding. It is one of several blood clotting factors. Fibrinogen is also a repair molecule. It goes up when vessels are inflamed, for example when glucose levels are above normal (>85). Glucose is inflammatory towards vessel walls and fibrinogen is part of a repair response. Slightly elevated levels indicate on-going repair of inflammation. Low levels could imply clotting throughout your body that is tying up fibrinogen. Very high levels could imply internal bleeding or repair from a recent cut or gash. An optimum value is between **150** and **285** mg/dL.

Your **Fibrinogen** value: **332**

RDW (Red Blood Cell Distribution Width) is a measure of the variability in red blood cell size. These cells are formed in the bone marrow and last ~120 days before being recycled and discarded. The young, immature red blood cells are larger than mature red blood cells. Although considered a marker for anemia, RDW is most useful at predicting vascular diseases and is a measure of vascular inflammation. The diameter of red blood cells is larger than the diameter of capillaries and these cells must "squeeze and deform" slightly in their journey through these vessels. Inflamed vessels thus contribute to changes in RDW and these changes (broader width) helps explain what is going on inside your vessels. An optimum value is **11 - 12.5%**.

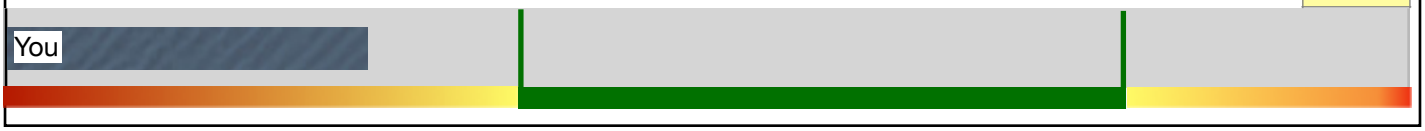
Your **RDW** value: **12.4**

AIP (Atherogenic Index of Plasma) is a ratio of triglycerides to HDL. It is a strong - but underused - marker to predict the risk of atherosclerosis and coronary heart disease. AIP reflects the true relationship between protective (HDL) and atherogenic (heart disease-causing) substances - excess sugars in your blood. AIP is much more predictive of heart disease compared to the usual cholesterol markers (total cholesterol and LDL). More importantly, while "cholesterol" levels are a poor predictor of future premature mortality risk, AIP provides robust prediction especially above levels of 0.24. An optimum value is **< 0.11**.

Your **AIP** value: **0.17**

Vitamin D is actually a hormone and hormones regulate cellular activity (metabolism and related processes). “Hormone” D is particularly involved in regulating cellular division. When vitamin D is produced on our skin it is through the action of sunlight on cholesterol - underscoring the importance of cholesterol. Also, vitamin D supplements are just “D3” or “D2” while, on our skin - many “types” of vitamin D are produced (D2 - D5). Vitamin D recommended limits are for bone health. Vitamin D, through calcitriol formed in the liver, helps with calcium absorption. Numerous studies show that vitamin D has anti-cancer properties at levels above 55 ng/ml. A level that is too high (100+ ng/ml) may impact calcium balance. The best sources of vitamin D are through sensible sun exposure and cod liver oil which contains the natural forms of vitamin D. An optimum value is between **55** and **100** ng/ml.

Your **Vitamin D** value: **39**



GFR (eGFR, estimated glomerular filtration rate) is a number based on a creatinine blood test, a waste product in your blood. It tells how well kidneys are working. Kidneys have a lot of excess capacity that is available to filter blood well when we are sick with tiny and delicate “coffee filters” called nephrons. GFR is more sensitive than creatinine since creatinine doesn’t start elevating until kidney function has reduced significantly. An optimum value is between **90** and **120** mL/min/1.73.

Your **GFR** value: **78**

Cholesterol (total) is a measure of your free cholesterol, HDL and LDL. Therefore your cholesterol may be “elevated” if any one of those values is high - including HDL! **Cholesterol is an extraordinarily important physiological (body function) substance**. Cholesterol is a fat-soluble molecule that is essential for human life. It has many roles that contribute to normally functioning cells. For example, cholesterol is an important component of the cell membrane. It contributes to the building block makeup of the membrane as well as improves its fluidity (stiff vs flexible) of cells. Cholesterol is required in the building of vitamin D, steroid hormones (e.g., cortisol and aldosterone and adrenal androgens), and sex hormones (e.g., testosterone, estrogens, and progesterone). Cholesterol is also a constituent of bile salt, which is used in digestion to facilitate absorption of fat-soluble vitamins A, D, E, and K. Very high values usually indicate an acute infection which should be investigated and treated rather than artificially reducing cholesterol levels.An optimum value for avoiding premature mortality (death) is between **180** and **280** mg/dL.

Your **cholesterol** value: **333**

LDL (low density lipoprotein) is one of several “transport” structures that carry important substances through the blood. Blood is made up of water and since “oil (fats) and water don’t mix” lipoproteins exist to transport fats to tissue where they are needed. Since cholesterol is fat soluble (lipophilic), it is transported through the blood, along with triglycerides and other fat-soluble substances like vitamin A, D, E and K. LDL, in particular, transports fats from the liver to cells where they are used. On a diet, for example, your body will burn fats as a fuel. In these instances, LDL may rise as directed by your brain and liver to move triglycerides to tissue to be burned. LDL is like a taxi taking important things (free cholesterol included) to where they are needed.

Studies on cholesterol and LDL have seldom included people over 60 years of age. New studies including more than 68,000 elderly people (>60 years of age), show that those with the highest LDL levels lived longer than those on statin (LDL) treatment. Numerous Japanese studies have found that high LDL is not a risk factor for CHD mortality or premature mortality in women of any age.
An optimum value is between **100** and **190** mg/dL.

Your **LDL** value: **244**

HDL (high density lipoprotein) is also called “good cholesterol.” HDL is a “family” of different lipoprotein that transport fats through our circulatory system and is not a cholesterol. It is involved in transportation of fats including cholesterol. HDL transports fats from tissue (the body) to the liver where the fats are either recycled or discarded. According to Harvard Medical School, “Although they all contain lipids (fats), cholesterol, and proteins called apolipoproteins, some types (of HDL) are spherical while others are doughnut-shaped. Some types of HDL are great at plucking cholesterol from LDL and artery walls while other types are indifferent to cholesterol, and some even transfer cholesterol to tissue rather than away from tissue.” Inflammation and infection may impair HDL production and function. HDL, LDL, and cholesterol are naturally produced in the liver based on our bodies need. When these substances are out of balance, further testing to find the root-cause should be conducted. An optimum value is **> 40** mg/dL.

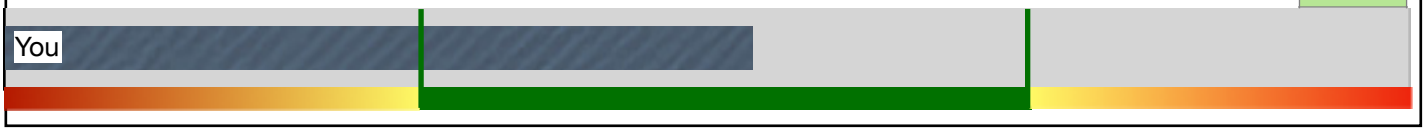
Your **HDL** value: **71**

TSH (Thyroid-stimulating hormone) is released from your pituitary gland to communicate with your thyroid. If your TSH is high, your brain is turning up the activity of you thyroid to produce more T4 and T3 hormone (the hormones that regulate metabolism and energy). An elevated TSH level may be associated with autoimmune conditions where the thyroid is being attacked. Often a leaky gut is the source of the “insult” that is damaging the thyroid. Another reason for a high TSH is a lack of minerals in your diet that are needed to convert your thyroid hormone into the “active” form (T3) from the “inactive” T4 hormone. Eating nutrient-rich foods may be a solution to a lack of energy. An optimum value is between **0.4** and **1.5** uIU/mL**.**

Your **TSH** value: **1.89**

Iron (serum iron) is an essential nutrient that, among other functions, is required for the production of healthy red blood cells (RBCs). It is a critical part of hemoglobin, the protein in RBCs that binds oxygen in the lungs and releases it as blood circulates to other parts of the body. The serum iron test measures the amount of iron in the liquid portion of blood. Although this test may help identify iron deficiency or overload, other iron-based tests including ferritin provide more detailed information on body iron balance. An optimum value is between **65** and **160** µg/dL.

Your **Iron** value: **117**



Ferritin is the iron storage warehouse. While iron is necessary for biological function, too much may cause harm over time. While anemia is a lack of available iron, overload (too much iron) is a more common and often ignored problem. Most men and postmenopausal women are at risk of excess iron - reflected in high ferritin levels. Blood loss is the primary way to lower excess iron, as the body does not have an active excretion mechanism. Red blood cells, when replaced by excretion into your stool, have their iron recycled, first, in the kidneys. Alcohol consumption is a key factor in excess iron which increases absorption from dietary iron. High ferritin is tied to autoimmune disease, infections and hemochromatosis while low ferritin is linked to blood loss, digestive imbalances, food sensitivities and a nutrient-poor diet. An optimum value is between **40** and **150** ng/mL.

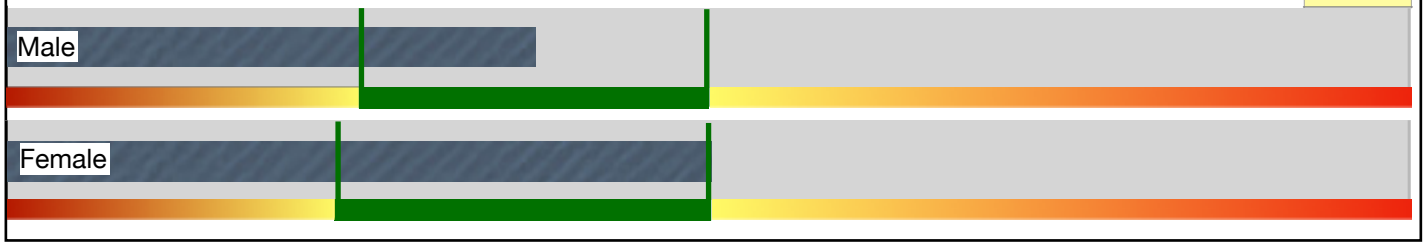
Your **Ferritin** value: **296**

Hemoglobin: Iron is an essential element for blood production. About 70 percent of our body's iron is found in the red blood cells as hemoglobin and in muscle cells as myoglobin. Hemoglobin is essential for transferring oxygen in blood from the lungs to the tissues. Myoglobin, in muscle cells, accepts, stores, transports and releases oxygen. Low hemoglobin count that is only slightly lower than normal and doesn't affect energy. More severely lowered hemoglobin values may indicate anemia. High hemoglobin may be due to dehydration, smoking or living at high altitudes. Polycythemia, a rare blood disease may also lead to high hemoglobin as does lung or heart diseases. An optimum value is between **12.0** and **15.5** g/dl.

Your **Hemoglobin** value: **14.6**

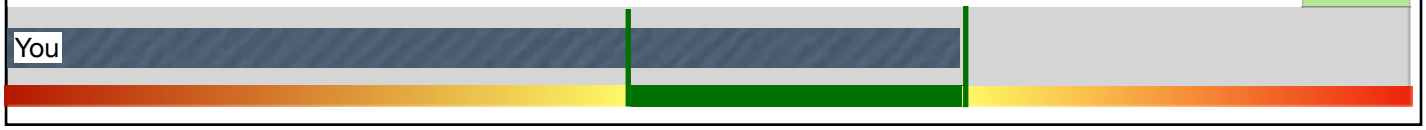
Hematocrit (Ht or HCT) is a measure of the volume percentage or red blood cells in blood. The measurement depends on the number and size of red bloods cells. It is normally 40.7% to 50.3% for men and 36.1% to 44.3% for women. A lower than normal value may imply anemia, excess white blood cells from chronic infection or a blood cell disorder such as leukemia or lymphoma, a vitamin or mineral deficiency, or recent or long-term blood loss. Higher than normal levels may be due to dehydration, a serious disease like polycythemia vera (rare) or a heart or lung disease. An optimum value is different for men and women. Please see the chart appropriate to your gender below.

Your **Hematocrit** value: **45**



MCV (mean corpuscular volume) provides the average size of red blood cells. This helps diagnose a cause of an anemia. Low values suggest iron deficiency - microcytic anemia; high values suggest either deficiencies of B12 or Folate, ineffective production in the bone marrow, or recent blood loss with replacement by newer, and larger, cells from the bone marrow. Dietary deficiencies and a lack of absorption may contribute to an abnormal value.
An optimum value is between **82** and **94** fL

Your **MCV** value: **94**



MCH levels refer to the average amount of hemoglobin found in the red blood cells in the body. Different types of anemia can cause low MCH levels. For example, microcytic anemia occurs when the blood cells are too small and cannot take in as much hemoglobin as they should. Low amounts of iron in the blood can cause low MCH levels. This “iron deficiency” anemia may be more common in vegetarians or people with poor nutritional intake. High MCH scores are commonly a sign of macrocytic anemia. This condition occurs when the blood cells are too big, which can be a result of not having enough vitamin B12 or folic acid in the body. High MCH may also be a result of liver diseases, overactive thyroid, consuming alcohol regularly, complications from certain cancers, infections or excess estrogen. An optimum value is between **27.0** and **31.9** pg.

Your **MCH** value: **30**

Platelets are the cells that circulate in blood and bind together when they recognize damaged blood vessels. They bind to the site of the damaged vessel, thereby causing a blood clot. Thrombocytosis or too many platelets may lead to spontaneous blood clots that may lead to heart attack and stroke. It may fundamentally be caused by anemia, cancer, inflammation, or infection. Too few platelets (thrombocytopenia) may result in easy bruising and frequent bleeding from the gums, nose, or GI tract. The causes of this condition are quite varied and include: medications, certain cancers, chemotherapy, kidney issues and excess alcohol. An optimum value is between **150** and **379** x1000/uL

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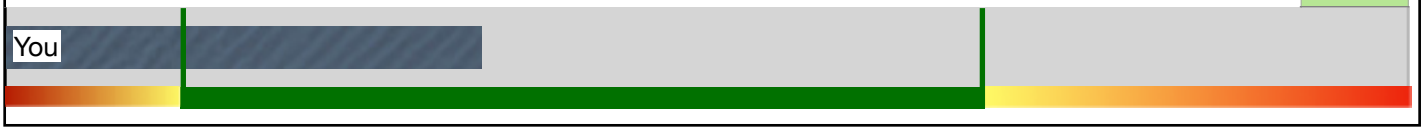
Your **Platelets** value: **236**



Lymphocytes are a type of white blood cell (part of the WBC number) and is a measure of the activity of your immune system toward insults including infection. Lymphocytes live primarily in lymph nodes, but also in the blood stream and tissue throughout the body. Higher than normal values may be caused by infection of various types, autoimmune and inflammatory disorders, and cancer of the blood or lymphatic system. Low lymphocytes (Lymphocytopenia) is more commonly caused by lymphocytes being destroyed by virus or cancer, or both, or by being trapped in the spleen. Low lymphocyte counts may also occur with low neutrophil counts when white blood cell production is being hampered by an inflammatory or infectious disease or a medical treatment like chemo. An optimum value is between **1300** and **2000** cells/uL.

Your **Lymphocytes** value: **2000**

Monocytes are 1 of 5 white blood cell types (part of the WBC number) and is a measure of the activity of your immune system toward bacteria, viruses and fungi. Monocytes are the biggest type of white blood cell in the immune system although the numbers are substantially lower compared to neutrophils or lymphocytes. Originally formed in the bone marrow, they are released into our blood and tissues. Monocytes can change into macrophages or dendritic cells and actually consume pathogens. Then, enzymes in the monocyte's body kill and break down the germs for “disposal.” Any infection or inflammation-related diseases often cause monocytes to increase. Certain steroids and “biologic” drugs along with autoimmune conditions may cause monocytes to be lowered. An optimum value is between **100** and **900** cells/uL.

Your **Monocytes** value: **400**

Eosinophils are 1 or 5 types of disease-fighting white blood cells. High levels of eosinophils in blood (eosinophilia) most often indicates a parasitic infection, an allergic reaction or cancer. You can have high levels of eosinophils in your blood or in tissues at the site of an infection or inflammation (tissue eosinophilia). Eosinophils destroy foreign substances flagged by the immune system. They also signal the immune system by creating inflammation - which is the immune response. Parasitic diseases and allergic reactions to medications are among the more common causes of high eosinophil counts. An optimum value is between **0** and **400** cells/uL**.**

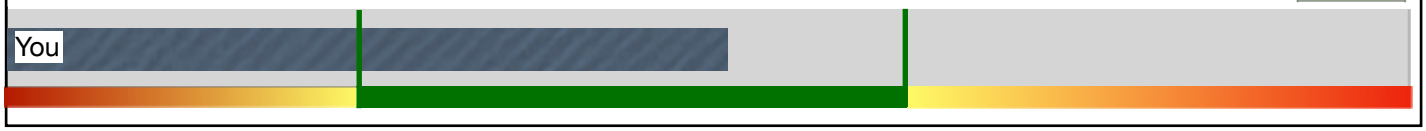
Your **Eosinophils** value: **200**

Basophils (granulocytes) are 1 of 5 types of white blood cell (part of the WBC number) and is a measure of the activity of your immune system toward infection and inflammation. Basophils contain anticoagulant heparin, which prevents blood from clotting too quickly. Like eosinophils, basophils play a role in both parasitic infections, including fungi (often associated with allergies) and allergies. They are found elevated in tissues where autoimmune or allergic reactions are occurring and may contribute to the severity of these reactions as they work to eliminate the root-cause of the response. They may also be elevated due to hypothyroidism. Sometimes an allergic reaction will cause basophil counts to be lower than normal as does hyperthyroidism and infections (which lower the total WBC - thus the basophils value). An optimum value is between **0** and **200** cells/uL.

Your **Basophils** value: **0**

Alkaline Phosphatase (ALP) test measures the amount of ALP in your blood. ALP is an enzyme found throughout the body, but it is mostly found in the liver, bones, kidneys, and digestive system (bile ducts). When the liver is damaged, ALP may leak into the bloodstream. Higher-than-normal levels of ALP may indicate liver damage or disease, such as a blocked bile duct, or certain bone diseases. An optimum value is between **45** and **110** IU/L.

Your **Alkaline Phosphatase** value: **82**



Alanine transaminase (ALT). ALT is an enzyme found in the liver that helps our body metabolize (break down and use) protein. When the liver is damaged, ALT is released into the bloodstream and levels increase.

Your **ALT** value: **18**

Aspartate transaminase (AST) is an enzyme that helps metabolize alanine, an amino acid. Like ALT, AST is normally present in blood at low levels. An increase in AST levels may indicate liver damage or disease or muscle damage. An optimum value is between **10** and **26** IU/L.

Your **AST** value: **20**

Bilirubin is a blood-based diagnostic test for health conditions like jaundice, anemia, and liver disease. If bilirubin levels are higher than normal, it's a sign that either red blood cells are breaking down at an unusual rate or that the liver isn't breaking down waste properly and clearing the bilirubin from your blood. An optimum value is between **0.1** and **0.9** mg/dL.

Your **Bilirubin** value: **0.5**

BUN/Creatinine Ratio. Blood Urea Nitrogen (**BUN**) is a normal waste product in your blood that comes from the breakdown of protein from the foods you eat and from your body metabolism. It is normally removed from your blood by your kidneys, but when kidney function slows down, the BUN level rises. Elevated **creatinine** level signifies impaired kidney function or kidney disease. As the kidneys become impaired for any reason, the creatinine level in the blood will rise due to poor clearance. Abnormally high levels of **creatinine** warn of possible malfunction or failure of the kidneys. The ratio of BUN to creatinine provides important information. An increased ratio may be due to a condition that causes a decrease in the flow of blood to the kidneys, such as congestive heart failure or dehydration. It may also be seen with increased protein, from gastrointestinal bleeding, or increased protein in the diet. The ratio may be decreased with liver disease (due to decrease in the formation of urea) and malnutrition. An optimum value is between **10** and **21**.

Your **Bun/Creatinine Ratio** value: **24**

Your "Chronic Disease Temperature" (CDT): This single value, displayed below, is the combination for excess mortality risk from many of the important biomarkers for chronic risk. Of all the markers, it is the single most predictive for your current and future health risk because it combines markers that predict chronic disease across a broad spectrum of disease, from cancer and heart disease, to diabetes and kidney diseases.

Your optimal Chronic Disease temperature is **98.6**. We use the same scale as your core body temperature (thermometer) scale - because no value above **98.6** is desirable - it implies some level of excess risk. However, a chronic disease temperature of **98.6** implies near perfect health - which is difficult to achieve. Importantly, if you work to and are successful at lowering your chronic disease temperature - and keeping it as low as possible - you most likely will live a longer and healthier life.

Your **CDT** value: **101.4**

End of Report