Corey Haines

Marek Health

Lab Report

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05/29/1995

Lab Report

Thank you for choosing Marek Health for your diagnostic testing.
This report was created just for you and is based on your individual blood test results in the context of your unique physiology. You may find that even small changes can significantly impact your health and well-being.

You will learn important information about your health and actionable recommendations in this report.

Marek Health is interested in helping you achieve optimal health, performance, and longevity.
You may notice that some of our recommendations are based on what we consider ideal blood ranges and may not match a typical "reference range." This is because we meticulously seek to achieve optimal lab values founded on evidence-based medicine and that of a young, healthy adult.
We don't just want you to get by – we want you to look, feel, and perform at your peak year-round.

Although this document presents suggestions, all prescription decisions will ultimately be made at the discretion of your medical provider.

Disclaimer: Laboratory results provided to you are for informational purposes only and not intended to replace the care of a medical provider. All inquiries regarding the meaning or interpretation of the test results should be made to the ordering medical provider.

Sincerely yours,

Dr. Adam Hotchkiss

Clinical Researcher

Marek Health

Testosterone

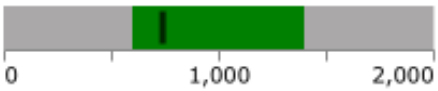
Testosterone is the primary sex hormone in men.
Low testosterone is associated with earlier death, erectile dysfunction, impaired libido, cognitive impairment, muscle wasting, fatigue, depression, infertility, osteoporosis, and heart disease.
Testosterone is correlated with ASCVD risk, renal stress, hair loss, and prostate pathology.
Optimal testosterone levels result in increased muscle mass and strength, improved endurance, enhanced libido and sexual drive, improved mood, lowered cholesterol, increased bone mineral density, improved executive function and memory, improved sleep architecture, and insulin sensitivity.

Total Testosterone (LC/MS)

Total Testosterone is a measure of the total amount of testosterone in your blood.

Result: 741.1 ng/dL
Optimal Range: 600-1400 ng/dL

Total Testosterone (LC/MS)



Total testosterone levels greater than 550 ng/dL rarely require any treatment, even in the context of optimization. Ultimately, your medical provider will decide based on a symptomatic assessment.

Despite this, there are potential adjunct treatment options to help you get the most out of your existing testosterone levels, as discussed below.

Potential Treatment Options:

L-Carnitine: L-Carnitine is an amino acid required in fatty acid oxidation. The reason why we recommend the use of L-Carnitine is for its effects on up-regulating androgen receptor density, the receptors where testosterone and other androgens bind to and exert effect. In short, the use of L-Carnitine can increase the effectiveness of testosterone in your body.
Additionally, L-Carnitine prevents the oxidation of LDL and reduces inflammatory cascades that are directly implicated in atherosclerosis. It works via increasing cholesterol transport, allowing cholesterol to be metabolized for energy, which not only lowers bad cholesterol but also aids in reducing body fat and increases energy and stamina.
We recommend injectable L-Carnitine over oral supplementation as gut microbes have been shown to significantly impact L-carnitine metabolism and convert it into metabolites such as TMAO, which is linked to increased atherosclerosis risk.

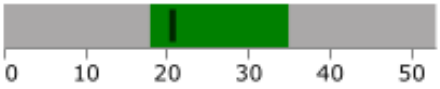
Your medical provider will advise you on the optimal dose and frequency for your individual physiology during your upcoming patient exam.

Low-dose daily Tadalafil: Tadalafil is a PDE5 inhibitor designed initially as a blood pressure medication and later re-purposed to treat erectile dysfunction.
We recommend most patients use low-dose daily Tadalafil due to its wide array of health benefits. Tadalafil increases androgen receptor density, allowing you to maximize the effect of your endogenous or exogenous testosterone. Additionally, Tadalafil reduces aromatase expression, the enzyme that converts testosterone to estrogen. Hence, Tadalafil can help improve the T:E ratio.
It works by increasing blood flow to the entire body, including the brain, so not only does it improve erection quality, but also pumps in the gym, hair growth, and cognition.
Tadalafil has also been shown to improve mood and positive affect, likely due to its potent antioxidant effects. It can increase both sexual desire and satisfaction as well as prevent and reverse benign prostatic hyperplasia.
Your medical provider will advise you on the optimal dose and frequency for your individual physiology at your upcoming patient exam.

Free Testosterone

Free Testosterone is a measure of unbound testosterone, which is the testosterone that is not bound to SHBG or albumin, and is available to the body's tissues.

Free Testosterone



Result: 20.75 ng/dL
Optimal Range: 18-35 ng/dL

Hormone Assay

These tests measure levels of the critical hormones and androgens that play an essential role in governing masculinity, vitality, and fertility.

Prolactin

Prolactin is a hormone produced in the pituitary gland. Elevated levels in men can cause reduced sex drive, lack of energy, erectile dysfunction, and impaired fertility.

Prolactin

Result: 18.0 ng/mL
Optimal Range: 3.5-9 ng/mL

Excess levels of Prolactin can cause symptoms of malaise, fatigue, low libido, and reduced sexual function.
Often, elevations in Prolactin are caused by the use of SSRIs, opioids (including Kratom), excessive THC intake, or sub-optimal thyroid function.

Recommendation:

P5P: P5P, the active form of Vitamin B6, plays important roles in dopamine synthesis. Dopamine, also known as Prolactin Inhibiting Hormone, combats prolactin excess by inhibiting the secretion of Prolactin in the pituitary. Additionally, P5P can help support sleep induction; hence, we recommend taking it at night before bed.
We recommend you supplement with 100mg of P5P per night.
A high-quality P5P supplement we recommend is available via Marek.

Cortisol

This test measures the "stress hormone" cortisol, which mobilizes the body's nutritional resources in stressful situations.

Cortisol

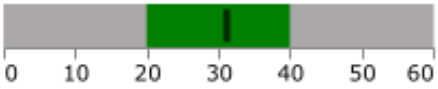
Result: 11.7 ug/dL
Optimal Range: 7-16 ug/dL

SHBG (Sex Hormone-Binding Globulin)

Sex Hormone Binding Globulin (SHBG) is a protein made in the liver that binds to sex hormones, helping to regulate, stabilize, and transport them.
Insufficient SHBG is associated with hormonal fluctuations, faster excretion of sex hormones, insulin resistance, and dyslipidemia.
Excessive SHBG concurrent with low total testosterone may result in impaired androgenic signaling.

Result: 31.2 nmol/L
Optimal Range: 20-40 nmol/L

SHBG (Sex Hormone-Binding Globulin)

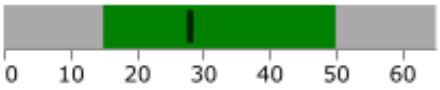


Estradiol, Sensitive

Estradiol or E2 is the main biologically active form of estrogen and is just as important in men as testosterone.

Result: 28.1 pg/mL
Optimal Range: 15-50 pg/mL

Estradiol, Sensitive



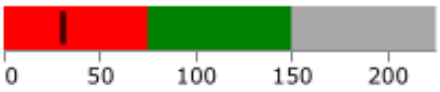
Neurosteroid Profile

Neurosteroids are steroid hormones synthesized locally within the CNS and play important biological roles in mood, mental drive, metabolism, cognitive function, sleep architecture, and sexual function.

Pregnenolone

Pregnenolone is the master neurosteroid. It is the precursor to DHEA, Progesterone, and other neurosteroids. Pregnenolone has pro-cognitive effects, enhances memory, increases motivation, prevents fatigue, and improves stress tolerance. Pregnenolone also plays an important role in immunity. Low levels of Pregnenolone are associated with brain fog and increased Alzheimer's disease risk.

Pregnenolone



Result: 31 ng/dL
Optimal Range: 75-150 ng/dL

Low levels of Pregnenolone are associated with an increased risk of Alzheimer's disease and impaired cognitive function.

Recommendation:

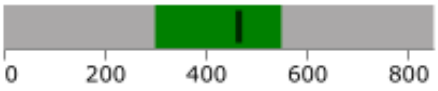
Pregnenolone: We recommend you begin supplementation with an oral sustained-release micronized Pregnenolone formulation, preferably pharmaceutical grade.
Your medical provider will advise you on the optimal dose for your individual physiology during your upcoming patient exam.

DHEA-S (Dehydroepiandrosterone Sulfate)

DHEA is the master sex hormone necessary for libido, energy levels, and immune function. It's the body's natural counterbalance to stress hormones like cortisol. Sufficient levels of DHEA are associated with improved cardiovascular health, reductions in visceral fat, improved mood and wellbeing, enhanced memory, improved sleep architecture, and blood glucose control.

Result: 466.0 ug/dL
Optimal Range: 300-550 ug/dL

DHEA-S (Dehydroepiandrosterone Sulfate)



Growth Hormone Profile

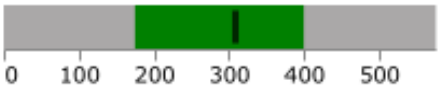
Screening for disorders of growth hormone secretion and dysfunction.

IGF-1 (Insulin-Like Growth Factor I)

IGF-1, or Insulin-Like Growth Factor 1, is our best biomarker for human growth hormone (HGH) status.
HGH is a hormone that stimulates growth, cell division, and regeneration and plays an important role in body composition and bone strength.
IGF-1, produced by HGH via the liver, stimulates muscle growth, protein synthesis, and lipolysis.

Result: 309 ng/mL
Optimal Range: 175-400 ng/mL

IGF-1 (Insulin-Like Growth Factor I)



Thyroid Function

The thyroid is a gland just below the Adam’s apple. It releases thyroid hormones that govern your energy and metabolism.
The pituitary stimulates the thyroid gland through a hormone called Thyroid Stimulating Hormone (TSH).
Insufficient thyroid hormone production leads to excessive TSH, which acts as a stress signal on the thyroid gland. Chronically elevated TSH may lead to goiter and increase the risk of thyroid cancer.

TSH (Thyroid Stimulating Hormone)

TSH is the signal the body produces when the body is not receiving sufficient levels of thyroid hormone. High levels of TSH indicate there are insufficient levels of thyroid hormone, and metabolism is not running optimally; hence there are often correlating symptoms of fatigue.

TSH (Thyroid Stimulating Hormone)

Result: 1.830 uIU/mL
Optimal Range: 0.25-1.5 uIU/mL

Elevations of TSH occur when the body requests more thyroid hormone than your thyroid gland can produce. The failure of the thyroid gland may occur due to age-related decline, excessive oxidative stress, auto-immune conditions such as Hashimoto's, or chronic nutrient deprivation.

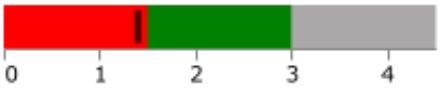
Recommendation:

Thyroid Support Complex: You may benefit from supplementing with the necessary co-factors for healthy thyroid function, such as Zinc, Selenium, Iodine, etc. Thyroid Support Complex is an essential blend of these micronutrients combined with B12, Tyrosine, Bacopa, Forskolin, and other botanicals to support healthy thyroid function and reduce symptoms of fatigue.
This high-quality vitamin blend is available via Marek.

Free T4 (Free Thyroxine)

T4, or Thyroxine, is the inactive thyroid hormone produced by the thyroid gland using iodine. T4 is converted via the liver and other tissues to the active T3 thyroid hormone as needed, and T3 drives metabolism. Aging impairs the conversion of inactive T4 > active T3, resulting in impaired metabolism.

Free T4 (Free Thyroxine)



Result: 1.40 ng/dL
Optimal Range: 1.5-3 ng/dL

Recommendation:

Thyroid Support Complex: You may benefit from supplementing with the necessary co-factors for healthy thyroid function, such as Zinc, Selenium, Iodine, etc. Thyroid Support Complex is an essential blend of these micronutrients combined with B12, Tyrosine, Bacopa, Forskolin, and other botanicals to support healthy thyroid function and reduce symptoms of fatigue.
This high-quality vitamin blend is available via Marek.

Free T3 (Free Triiodothyonine)

T3, or Triiodothyronine, is the active thyroid hormone; its job is to regulate metabolism, body temperature, and heart rate. Optimal levels of T3 improve brain function, insulin sensitivity, muscle growth, fat loss, and mood. Insufficient FT3 levels are associated with a slowed metabolism, weight gain, low body temperature, muscle loss, depression, fatigue, hair loss, constipation, and dry skin.

Free T3 (Free Triiodothyonine)

Result: 3.1 pg/mL
Optimal Range: 3.5-5 pg/mL

Low levels of T3, the active thyroid hormone, can impair optimal metabolism and energy levels. Additionally, T3 is necessary for LDL receptor expression. Low levels of T3 can lead to increases in atherogenic proteins such as ApoB and Lp(a), therefore increasing heart disease risk.

Recommendation:

Thyroid Support Complex: You may benefit from supplementing with the necessary co-factors for healthy thyroid function, such as Zinc, Selenium, Iodine, etc. Thyroid Support Complex is an essential blend of these micronutrients combined with B12, Tyrosine, Bacopa, Forskolin, and other botanicals to support healthy thyroid function and reduce symptoms of fatigue.
This high-quality vitamin blend is available via Marek.

Metabolic Health

Broad screening metabolic tests to determine insulin sensitivity and metabolic health.

Glucose

Serum glucose is a snapshot of the levels of glucose in your blood. High levels of glucose indicate insufficient insulin secretion or poor insulin sensitivity.

Result: 98 mg/dL
Optimal Range: <85 mg/dL

Glucose

HbA1c (Hemoglobin A1c)

HbA1c measures the glycation of red blood cells and provides an average indication of your blood glucose levels over the previous 2-3 months, reflective of the expected lifespan of your red blood cells. Elevated hbA1C levels indicate blood glucose levels have been high, and you may be at risk for developing type II diabetes.

Result: 5.6 %
Optimal Range: 4-5.2 %

HbA1c (Hemoglobin A1c)

Elevations of HbA1c >5.6 indicate pre-diabetes. We should be prudent in addressing this elevation to prevent it from developing into diabetes, which is associated with a significantly shorter health span and lifespan.

Recommendations:

CGM: We recommend all patients at Marek use a continuous glucose monitor, such as the FreeStyle Libre, for at least two weeks so they can see in real-time the effect diet, exercise, and sleep quality have on blood glucose levels and how that correlates to mood, energy, and cognition. The device attaches to your body, usually the upper arm, and takes ongoing measurements of glucose that are sent directly to your phone.

Cardio: We recommend introducing 45 minutes of zone 2 cardiovascular

exercise four times per week. Find a walking or jogging pace that is difficult but sustainable. For most, this will be a brisk walk. It should be challenging but possible to hold a conversation while exercising, if you are struggling to speak at all, you are likely pushing things too hard.

Potential Treatment Options:

Semaglutide: Semaglutide is the premiere GLP-1 agonist, which stimulates the feeling of being full and enhances insulin sensitivity leading to weight loss. It was recently shown that a once-weekly injection of Semaglutide alongside lifestyle intervention caused a 33lbs weight loss in patients compared to only 6lbs of weight loss in a comparative group with only lifestyle intervention. Other potential benefits of Semaglutide are neuroprotection, enhanced fertility, and improved sleep. Additionally, semaglutide has been shown to regenerate beta cells and restore pancreat health, leading to potential lifelong improvements in blood glucose control.

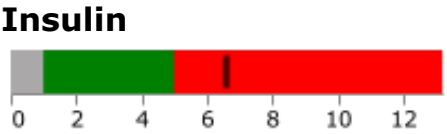
Canagliflozin: This SLGT2 inhibitor prevents the kidney from reabsorbing glucose, resulting in increased glucose excretion via urine. This leads to lowered blood glucose and is an efficacious insulin-independent mechanism to improve blood glucose control.
We have successfully successfully used Canagliflozin to improve insulin sensitivity, enhance weight loss, and reduce visceral adiposity. Moreover, Canagliflozin has been shown to improve kidney health, lower blood pressure, lower bad cholesterol, reduce stroke risk, lower triglycerides, and lower the risk of all-cause mortality.

Metformin: Metformin is used to help control blood glucose and restore insulin sensitivity. It works to decrease hepatic glucose production, decrease intestinal glucose absorption, and improve insulin sensitivity by increasing peripheral glucose uptake. It may reduce levels of inflammation, reduce oxidative damage, and induce autophagy. It is well known in some circles as a longevity drug.
This therapy may be associated with poor sperm health; it may not be a great option if you wish to have children within the next 12 months. Berberine is a viable alternative.

Your medical provider will assess which one of the above medications is suitable for you during your upcoming patient exam.

Insulin

Insulin is a hormone released to transport glucose inside the cell. Elevated levels of insulin may indicate insulin resistance, a precursor for type 2 diabetes.



Result: 6.6 uIU/mL
Optimal Range: 1-5 uIU/mL

Fasting Insulin is a leading indicator for the development of insulin resistance and metabolic syndrome.
Keeping fasting insulin levels below five is associated with better metabolic health, reduced risk of cancer, reduced all-cause mortality, and reduced risk of heart disease.

Recommendations:

CGM: We recommend all patients at Marek use a continuous glucose monitor, such as the FreeStyle Libre, for at least two weeks so they can see in real-time the effect diet, exercise, and sleep quality have on blood glucose levels and how that correlates to mood, energy, and cognition. The device attaches to your body, usually the upper arm, and takes ongoing measurements of glucose that are sent directly to your phone.

Cardio: We recommend introducing 45 minutes of zone 2 cardiovascular exercise four times per week. Zone 2 could be defined in many different ways; we refer to the biological definition: the highest level of output you can produce while keeping below the lactate threshold (2mmol/L). Unless you are willing to check your lactate while exercising, which can be expensive, a good approximation is steady-state cardio at 85% of your maximum heart rate. It should be challenging but possible to hold a conversation while exercising, if you are struggling to speak at all, you are likely pushing things too hard.

Potential Treatment Options:

Metformin: Metformin is used to help control blood glucose and restore insulin sensitivity. It works to decrease hepatic glucose production, decrease intestinal glucose absorption, and improve insulin sensitivity by increasing peripheral glucose uptake. It may reduce levels of inflammation, reduce oxidative damage, and induce autophagy. It is well known in some circles as a longevity drug.
This therapy may be associated with poor sperm health; it may not be a viable option if you wish to have children within the next 12 months.

Alternatively, the use of Berberine may be recommended.

Semaglutide: Semaglutide is the premiere GLP-1 agonist, which stimulates the feeling of being full and enhances insulin sensitivity leading to weight loss. It was recently shown that a once-weekly injection of Semaglutide alongside lifestyle intervention caused a 33lbs weight loss in patients compared to only 6lbs of weight loss in a comparative group with only lifestyle intervention. Other potential benefits of Semaglutide are neuroprotection, enhanced fertility, and improved sleep. Additionally, semaglutide has been shown to regenerate beta cells and restore pancreatic health, leading to potential lifelong improvements in blood glucose control.

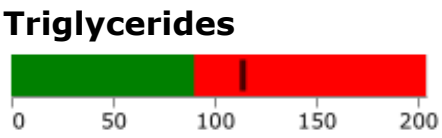
Note: If you have an elevated BMI or struggle with appetite control, Semaglutide is the preferred treatment option. Discuss further with your medical provider during your upcoming patient exam.

Heart Health Profile

Atherosclerosis is the buildup of cholesterols, fats, and other products in the artery walls. The arterial walls can become calcified, and macrophages present can decrease stability. The plaque that builds can obstruct blood flow. Atherosclerosis often has no symptoms until a plaque ruptures or the build-up is severe enough to block blood flow and cause a stroke.
Chronically elevated lipids, glucose, blood pressure, and inflammation can contribute to the development of atherosclerosis and associated heart disease risk.

Triglycerides

Triglycerides are a measurement of fats in the blood, which can harden and thicken the arterial walls increasing the ability of bad cholesterols to build up and increasing the risk of atherosclerosis.



Result: 114 mg/dL
Optimal Range: <90 mg/dL

Triglycerides are a measurement of fats in your blood. Elevated levels of Triglycerides are primarily mediated by diet. Elevations can lead to the hardening of arteries and are associated with an increased risk of heart disease.

Recommendations:

Diet: Reduce intake of saturated fatty acids, such as those from fatty cuts of red meat or full-fat dairy. Instead, opt for leaner cuts of beef or lite dairy options, and consider replacing those dietary fats with non-heated polyunsaturated or monounsaturated fats such as cold-pressed extra virgin olive oil, raw low-mercury fish, or avocado.

Choline: Increase intake of choline-rich foods, such as beef liver, or supplement with choline to reach at least 550mg of choline per day. This is because choline is essential for transporting Triglycerides away from the liver; a deficiency of choline in combination with elevated Triglyceride production will increase the risk of non-alcoholic fatty liver disease (NAFLD).
We recommend you begin eating 2-3oz of beef liver daily.
If you are unable or unwilling to eat beef liver, we recommend supplementation via oral or injectable administration. Both administration options are available via Marek.

EPA/DHA Ethyl Esters: These Omega-3 fatty acids have broad health benefits on cardiovascular and brain health. EPA and DHA have been shown to significantly reduce Triglyceride levels and reduce heart disease risk.
We recommend you begin supplementation with 4 grams of pharmaceutical grade Omega 3 Ethyl Esters per day, which your medical provider can prescribe in your upcoming patient exam. We specifically recommend this form of Omega-3 supplementation as it's been thoroughly vetted for mercury and oxidation, unlike many over-the-counter supplements.

Potential Treatment Options:

Low-dose Aspirin: This simple over-the-counter medication has been shown to be effective in treating hypertriglyceridemia by lowering the production of Triglycerides within the liver.
Your medical provider will assess if you are a good candidate for Aspirin and advise you on the optimal dosing protocol for your individual physiology during your upcoming patient exam.

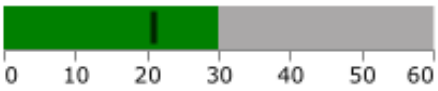
Tesamorelin: Tesamorelin is a growth hormone-releasing hormone designed to lower visceral fat specifically. It has powerful effects on lowering Triglycerides and is well tolerated. A short four-month course of Tesamorelin may be indicated to help quickly restore healthy Triglyceride concentrations.
You will need to be assessed by your medical provider during your upcoming patient exam to determine if this therapy is right for you.

VLDL Cholesterol

Very low-density lipoprotein is a type of "bad cholesterol" because it helps cholesterol build up on the walls of arteries. It is made primarly of triglycerides.

Result: 21 mg/dL
Optimal Range: <30 mg/dL

VLDL Cholesterol



C-Reactive Protein (CRP)

C-Reactive Protein (CRP) is a marker of inflammation status and a surrogate marker for cardiovascular disease risk.

Result: 0.42 mg/L
Optimal Range: <0.75 mg/L

C-Reactive Protein (CRP)

LDL Cholesterol

LDL Cholesterol, also known as "bad cholesterol", carries cholesterol from your liver around your body. It is dangerous when it is small or sticky because it can cause a build up of plaque in the arterial walls.

Result: 151 mg/dL
Optimal Range: 30-90 mg/dL

LDL Cholesterol

Potential Treatment Options:

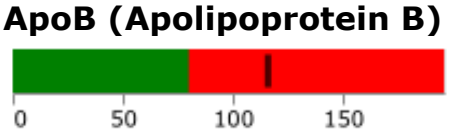
L-Carnitine: L-Carnitine is an amino acid required in fatty acid oxidation. It works via increasing cholesterol transport, allowing cholesterol to be metabolized for energy, which lowers lipids such as LDL-C and aids in the reduction of body fat, and increases energy and stamina.
More importantly, L-Carnitine prevents the oxidation of LDL-C and reduces inflammatory cascades that are directly implicated in atherosclerosis.
We recommend injectable L-Carnitine over oral supplementation as gut microbes have been shown to significantly impact L-carnitine metabolism and convert it into metabolites such as TMAO, linked to increased atherosclerosis risk.
Your medical provider will advise you on the optimal dose for your individual physiology during your upcoming patient exam.

Ezetimibe: Ezetimibe is the modern lipid-lowering agent of choice. It is distinct from other medications, such as statins, as it does not inhibit cholesterol synthesis. Ezetimibe works by selectively inhibiting the intestinal absorption of cholesterol. It is very well tolerated and has been shown to significantly decrease markers associated with cardiovascular disease, such as LDL-C, lipoprotein(a), and triglycerides. It also substantially increases HDL-C, or good cholesterol. It also may have protective effects against non-alcoholic fatty liver disease and lower stroke risk.

Additionally, Ezetimibe has been shown to cause significant reductions in inflammatory markers such as CRP.
Your medical provider will advise you on the optimal dose for your individual physiology during your upcoming patient exam.

ApoB (Apolipoprotein B)

ApoB is present in all atherogenic lipoproteins, including LDL, Lp(a), intermediate-density lipoprotein (IDL), and very low-density lipoprotein (VLDL) remnants. It's also known as bad cholesterol.



Result: 116 mg/dL
Optimal Range: <80 mg/dL

You may be familiar with LDL-Cholesterol (so-called "bad cholesterol"), this measurement is outdated and not a great predictor of cardiovascular disease risk. That is because LDL-Cholesterol is a surrogate marker for cholesterol concentration, while ApoB is a marker for the particles that are actually atherogenic.
Elevated ApoB is a superior marker to test, treat, and monitor to reduce CVD risk.

Potential Treatment Options:

L-Carnitine: L-Carnitine is an amino acid required in fatty acid oxidation. It works via increasing cholesterol transport, allowing cholesterol to be metabolized for energy, which lowers lipids such as ApoB and aids in the reduction of body fat, and increases energy and stamina.
More importantly, L-Carnitine prevents the oxidation of ApoB and reduces inflammatory cascades that are directly implicated in atherosclerosis.
We recommend injectable L-Carnitine over oral supplementation as gut microbes have been shown to significantly impact L-carnitine metabolism and convert it into metabolites such as TMAO, linked to increased atherosclerosis risk.
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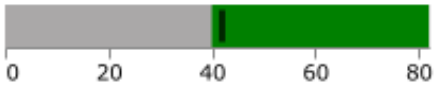
apolipoprotein B, lipoprotein(a), and triglycerides. It also substantially increases ApoA1, or good cholesterol. It also may have protective effects against non-alcoholic fatty liver disease and lower stroke risk.
Additionally, Ezetimibe has been shown to cause significant reductions in inflammatory markers such as CRP.
Your medical provider will advise you on the optimal dose for your individual physiology during your upcoming patient exam.

Monitor: We will re-check your ApoB levels during your follow-up diagnostic tests in 2-3 months and every six months after that. The goal is to reduce your ApoB levels to below 80 mg/dL to reduce heart disease risk.

HDL Cholesterol

High-density lipoprotein cholesterol (HDL-C) or "good" cholesterol is known to decrease the risk of heart attack and stroke by removing "bad" cholesterol from the blood. HDL-C helps to remove cholesterol from the peripheral tissues and vessel walls to the liver for processing and metabolism into bile salts.

HDL Cholesterol



Result: 42 mg/dL
Optimal Range: >40 mg/dL

Cancer Screening

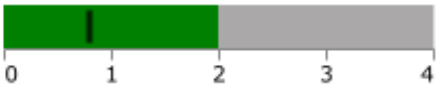
Cancer screening for early detection of potential markers of cancer.

PSA (Prostate Specific Antigen)

Prostate-Specific Antigen (PSA) is a protein produced in the prostate. Elevations in PSA are a marker of prostate cancer or other prostate dysfunction such as benign prostatic hyperplasia (BPH).
PSA levels above 4ng/mL may indicate the need for re-testing, a prostate exam, and potentially a biopsy.

Result: 0.8 ng/mL
Optimal Range: <2 ng/mL

PSA (Prostate Specific Antigen)



Blood Studies

The complete blood count is a broad screening test to check for such disorders as anemia, infection, and many other diseases. It is a group of tests that examine the blood and its constituents. Results from the tests provide a broad picture of your health.

Platelets

Responsible for blood clotting and healing. A high count can indicate a risk of thrombosis, whilst a low count can lead to easy bruising.

Result: 208 x10E3/uL
Optimal Range: 175-425 x10E3/uL

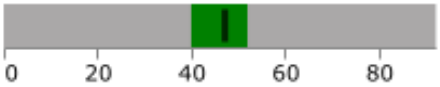
Platelets

Hematocrit (HCT)

Hematocrit is a measurement of the proportion of the blood that is made up of red blood cells and is dependent on the number and size of the red blood cells. A low hematocrit may be a sign of excessive bleeding or iron deficiency. Elevated Hematocrit can increase the risk of heart attack or stroke.

Result: 47.2 %
Optimal Range: 40-52 %

Hematocrit (HCT)

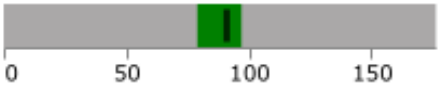


MCV (Mean Corpuscular Volume)

The mean red blood cell volume, mean corpuscular volume or MCV, is an evaluation of the average size of each red blood cell.

Result: 91 fL
Optimal Range: 79-97 fL

MCV (Mean Corpuscular Volume)

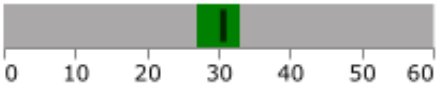


MCH (Mean Corpuscular Hemoglobin)

Mean corpuscular hemoglobin (MCH) is a calculation of the average amount of hemoglobin inside a single red blood cell.

Result: 30.7 pg
Optimal Range: 27-33 pg

MCH (Mean Corpuscular Hemoglobin)



WBC (White Blood Cells)

White blood cells, or leukocytes, function as phagocytes of bacteria, fungi, and viruses. Responsible for fighting infection. A high count can indicate recent infection and even stress, whilst a low count can result from vitamin deficiencies, liver disease, and immune diseases.

Result: 6.3 x10E3/uL
Optimal Range: 3.5-10.5 x10E3/uL

WBC (White Blood Cells)

Liver Health

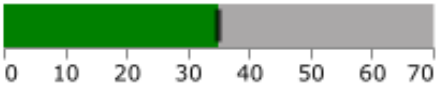
Your liver processes drugs and alcohol, filters toxic chemicals, stores vitamins, and minerals, and makes bile, proteins, and enzymes. This liver function test examines enzymes and other markers for evidence of damage to your liver cells or a blockage near your liver that can impair its function.

AST

Aspartate aminotransferase (AST) is an enzyme created mainly by the liver and the heart. High levels can indicate damage to your liver caused by alcohol, drugs, or hepatitis.

Result: 35 IU/L
Optimal Range: <35 IU/L

AST

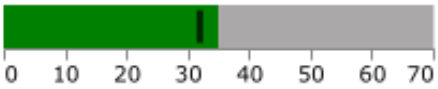


ALT

Alanine aminotransferase (ALT) is an enzyme mainly produced by the liver. A good indicator of liver damage caused by alcohol, drugs, or hepatitis. Recent exercise can cause a transient rise in ALT.

Result: 32 IU/L
Optimal Range: <35 IU/L

ALT



ALP (Alkaline Phosphatase)

Alkaline phosphatase (ALP) is an enzyme located mainly in the liver and the bones. High levels can indicate liver disease or bone growth. Low levels may indicate a zinc deficiency.

Result: 83 IU/L
Optimal Range: 40-120 IU/L

ALP (Alkaline Phosphatase)

Bilirubin

Bilirubin is a protein and natural by-product of red blood cell breakdown. Any increase in the body's synthesis or retention of bilirubin may result in jaundice.
Elevations in Bilirubin may indicate Gilbert's Syndrome or liver damage.

Result: 0.6 mg/dL
Optimal Range: <1.2 mg/dL

Bilirubin

Kidney Function

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. 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.

Creatinine

Creatinine is the break-down product of creatine phosphate in muscle and is usually produced at a fairly constant rate. Creatinine is filtered by the kidneys, therefore elevations may indicate kidney dysfunction. Creatine supplementation can increase serum Creatinine levels.

Result: 1.46 mg/dL
Optimal Range: 0.8-1.3 mg/dL

Creatinine

Blood Urea Nitrogen (BUN)

Blood Urea Nitrogen (BUN) is used to measure kidney function and is an indicator of dietary protein intake. BUN reflects the ratio between the production and clearance of urea in the body. Urea is formed in the liver during protein metabolism.

Result: 22 mg/dL
Optimal Range: 14-30 mg/dL

Blood Urea Nitrogen (BUN)