Blood Panel Results

Name: Sample Patient **Evaluation Date:** 03/02/2025
Blood Draw Date: 02/20/2025 **Practitioner:** Sample Practitioner

Above Optimal | Below Optimal | Above Lab | Below Lab | Optimal | Fasting ☐

Markers that are both Above/Below Optimal Range AND Lab Range are shown in red as Above/Below Lab Range

Summary of Markers Out of Optimal Range

Marker	Value	Optimal Range	Lab Range	Unit
Insulin - Fasting	18 ↑	3 - 10	2.60 - 24.90	uIU/mL
BUN (Blood Urea Nitrogen)	22 ↑	10 - 15	7 - 25	mg/dL
BUN/Creatinine Ratio	17 ↑	10 - 16	11 - 26	
eGFR (estimated Glomerular Filtration Rate)	↓ 67	90 - 999	59 - 999	ml/min/1.73
Potassium, Serum	4.9 ↑	4 - 4.50	3.50 - 5.30	mmol/L
Carbon Dioxide, Total	↓ 22	26 - 31	20 - 30	mmol/L
Anion Gap	15 ↑	8 - 12	7 - 16	mmol/L
Uric Acid, Serum	8.2 ↑	3.50 - 5.90	3.70 - 8.60	mg/dL
Protein, Total, Serum	7.8 ↑	6.60 - 7.40	6 - 8.50	g/dL
Globulin, Total	3.6 ↑	2.40 - 2.70	1.50 - 4.50	g/dL
Albumin/Globulin Ratio	↓ 1.17	1.50 - 2	1.10 - 2.50	
Calcium, Serum	↓ 9.1	9.40 - 10	8.60 - 10.20	mg/dL
Magnesium, Serum	↓ 1.7	2.20 - 3	1.60 - 2.30	mg/dL
LDL/HDL Ratio	4.7 ↑	0 - 3	0 - 5	Ratio
Thyroxine (T4)	↓ 5.1	6 - 12.50	4.50 - 12	ug/dL
Triiodothyronine (T3)	↓ 71	80 - 90	71 - 180	ng/dL
Triiodothyronine (T3), Free, Serum	↓ 2.2	2.40 - 5.50	2 - 4.40	pg/mL
T4, Free (Direct)	↓ 0.82	1 - 1.95	0.82 - 1.77	ng/dL
Vitamin B12	↓ 312	450 - 800	232 - 1,245	pg/mL
WBC (White Blood Cells)	8.9 ↑	4.50 - 8	3.40 - 10.80	x10E3/uL
Hematocrit	↓ 38.6	40 - 48	37 - 51	%
MCV (Mean Corpuscular Volume)	90 ↑	82 - 89.90	79 - 97	fL
Pregnenolone	↓ 41	125 - 237	22 - 237	ng/dL
Progesterone (male only)	↓ 0.19	0.30 - 0.80	0 - 0.50	ng/mL
Dehydroepiandrosterone (DHEA) (20 to 50y)	↓ 120	130 - 260	31 - 701	ng/dL
DHEA-Sulfate (DHEA-S) (45 to 54y)	↓ 78	150 - 350	71.60 - 375.40	ug/dL
Estradiol (E2) (male only)	42 ↑	20 - 30	7.60 - 42.60	pg/mL
Estrone, Serum (E1) (male only)	68 ↑	15 - 40	0 - 174	pg/mL
Estriol, Serum (E3) (male only)	↓ 0.11	0.20 - 0.40	0 - 0.18	ng/mL

Insulin - Fasting

Insulin is a hormone produced by the pancreas that helps regulate blood sugar levels. When you fast, your body uses stored energy, and insulin levels drop. This is important because low insulin levels allow your body to burn fat for energy. Monitoring fasting insulin can help assess how well your body manages blood sugar and can indicate insulin sensitivity.

BUN (Blood Urea Nitrogen)

Blood Urea Nitrogen (BUN) is a test that measures the amount of urea nitrogen in your blood, which is a waste product formed when your body breaks down protein. The kidneys filter urea from the blood, and high BUN levels can indicate that your kidneys are not functioning properly or that you are dehydrated. Monitoring BUN helps assess kidney health and overall metabolic function.

BUN/Creatinine Ratio

The BUN/Creatinine Ratio is a blood test that measures two substances: blood urea nitrogen (BUN) and creatinine. BUN is a waste product from protein breakdown, while creatinine comes from muscle metabolism. This ratio helps doctors assess kidney function. A high ratio may indicate dehydration or kidney issues, while a low ratio can suggest liver problems or malnutrition.

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eGFR (estimated Glomerular Filtration Rate)

eGFR, or estimated Glomerular Filtration Rate, is a blood test that helps assess how well your kidneys are functioning. It estimates how much blood passes through the tiny filters in your kidneys each minute. A higher eGFR indicates better kidney function, while a lower value may suggest kidney damage or disease. Regular monitoring can help manage your kidney health.

Potassium, Serum

Potassium is a vital mineral in your body that helps regulate heart function, muscle contractions, and nerve signals. The serum potassium test measures the level of potassium in your blood, which is important for maintaining a healthy balance. Too much or too little potassium can lead to serious health issues, so monitoring it helps ensure your body functions properly.

Carbon Dioxide, Total

Carbon Dioxide (CO2) is a gas produced by your body when it breaks down food for energy. It travels in your blood to your lungs, where it is exhaled. Measuring total CO2 levels helps doctors understand how well your body is managing acid-base balance and respiratory function. Abnormal levels can indicate issues with your lungs, kidneys, or metabolism.

Anion Gap

The Anion Gap is a blood test that helps doctors understand the balance of acids and bases in your body. It measures the difference between positively charged ions (cations) and negatively charged ions (anions) in your blood. A normal Anion Gap indicates a healthy balance, while an abnormal level can signal issues like kidney problems or metabolic disorders.

Uric Acid, Serum

Uric acid is a waste product formed when your body breaks down purines, substances found in certain foods and drinks. Normally, uric acid is dissolved in the blood and eliminated through urine. However, high levels can lead to conditions like gout or kidney stones. Monitoring serum uric acid helps assess your risk and manage these health issues.

Protein, Total, Serum

Total protein in serum measures the amount of protein in your blood, which includes albumin and globulins. Proteins are essential for various body functions, such as building tissues, fighting infections, and transporting nutrients. Abnormal levels can indicate health issues like liver disease, kidney problems, or nutritional deficiencies, helping your doctor assess your overall health.

Globulin, Total

Total globulin is a group of proteins in your blood that play important roles in your immune system, blood clotting, and transporting substances. It includes antibodies that help fight infections. Your body produces globulins in response to various needs, such as fighting illness or maintaining fluid balance. A total globulin test helps assess your overall health.

Albumin/Globulin Ratio

The Albumin/Globulin Ratio (A/G Ratio) is a blood test that compares two types of proteins in your blood: albumin and globulin. Albumin helps keep fluid in your blood vessels, while globulin plays a role in your immune system. A normal A/G ratio indicates a healthy balance, while an abnormal ratio can signal liver disease, kidney issues, or immune disorders.

Calcium, Serum

Calcium is a vital mineral in your body, essential for strong bones, teeth, and proper muscle and nerve function. Serum calcium levels indicate how much calcium is in your blood, helping doctors assess your overall health. Your body regulates calcium through hormones, ensuring you have enough for daily needs while preventing excess, which can be harmful.

Magnesium, Serum

Magnesium is an essential mineral in your body that helps keep your muscles and nerves functioning properly, supports a healthy immune system, and helps maintain strong bones. A serum magnesium test measures the level of magnesium in your blood, which can indicate if you have a deficiency or excess. This balance is crucial for overall health.

LDL/HDL Ratio

The LDL/HDL ratio is a measure of two types of cholesterol in your blood: LDL (low-density lipoprotein), often called "bad" cholesterol, and HDL (high-density lipoprotein), known as "good" cholesterol. A higher LDL/HDL ratio can indicate a greater risk of heart disease, as it suggests more bad cholesterol relative to good cholesterol. Maintaining a healthy balance is important for heart health.

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Thyroxine (T4)

Thyroxine (T4) is a hormone produced by your thyroid gland that plays a crucial role in regulating your metabolism, energy levels, and overall growth. It helps your body use energy from food and influences how your organs function. T4 is converted into another hormone, triiodothyronine (T3), which is even more active in controlling these processes.

Triiodothyronine (T3)

Triiodothyronine, or T3, is a vital hormone produced by your thyroid gland that helps regulate your body's metabolism, energy levels, and overall growth. It works by influencing how your cells use energy, affecting everything from your heart rate to your body temperature. Maintaining balanced T3 levels is essential for your health and well-being.

Triiodothyronine (T3), Free, Serum

Triiodothyronine (T3) is a hormone produced by the thyroid gland that plays a crucial role in regulating your body's metabolism, energy levels, and overall growth. The "free" part means this test measures the active form of T3 in your blood, which is available for your body to use. Proper T3 levels are essential for maintaining a healthy balance in your body's functions.

T4, Free (Direct)

T4, Free (Direct) is a blood test that measures the level of free thyroxine, a hormone produced by the thyroid gland. This hormone plays a crucial role in regulating metabolism, energy levels, and overall growth. By checking the free T4 levels, doctors can assess how well your thyroid is functioning and determine if your body is producing the right amount of this important hormone.

Vitamin B12

Vitamin B12 is a vital nutrient that helps keep your nerves and blood cells healthy, and it plays a key role in making DNA. This marker indicates your body's level of Vitamin B12, which is essential for energy production and overall well-being. Low levels can lead to fatigue and neurological issues, so it's important to maintain adequate B12 through diet or supplements.

WBC (White Blood Cells)

A marker is a substance in your body that can indicate certain health conditions. In the case of white blood cells (WBCs), these markers help identify how your immune system is functioning. When your body detects an infection or inflammation, WBCs respond by increasing in number and releasing markers that signal the immune response, helping to protect you from illness.

Hematocrit

Hematocrit is a blood test that measures the percentage of red blood cells in your blood. It helps doctors understand how well your body is carrying oxygen. A higher hematocrit level can indicate dehydration or other conditions, while a lower level may suggest anemia or blood loss. Monitoring hematocrit is important for assessing your overall health.

MCV (Mean Corpuscular Volume)

Mean Corpuscular Volume (MCV) is a measure of the average size of your red blood cells. It helps doctors understand your blood health. If MCV is too low, it may indicate anemia, where your body doesn't have enough healthy red blood cells. If it's too high, it could suggest other conditions. Monitoring MCV helps guide treatment and ensure your body gets enough oxygen.

Pregnenolone

Pregnenolone is a natural hormone produced in your body from cholesterol. It serves as a precursor to many other hormones, including cortisol, progesterone, and testosterone. This means it helps your body produce these important hormones that regulate stress, mood, and energy levels. Maintaining healthy pregnenolone levels can support overall hormonal balance and well-being.

Progesterone (male only)

Progesterone is a hormone that plays a key role in the male body, although it's often associated with females. In men, it helps regulate various functions, including mood, libido, and the production of other hormones. It works by balancing testosterone levels and supporting overall reproductive health, contributing to a healthy hormonal environment.

Dehydroepiandrosterone (DHEA) (20 to 50y)

Dehydroepiandrosterone (DHEA) is a hormone produced by your adrenal glands, playing a key role in the production of other hormones like testosterone and estrogen. In people aged 20 to 50, DHEA helps maintain energy levels, mood, and overall well-being. It naturally declines with age, and some believe that supplementing it may support healthy aging.

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DHEA-Sulfate (DHEA-S) (45 to 54y)

DHEA-Sulfate (DHEA-S) is a hormone produced by your adrenal glands, which are located on top of your kidneys. It plays a role in producing other hormones, including testosterone and estrogen. As you age, DHEA-S levels naturally decline, which can affect energy, mood, and overall health. Measuring DHEA-S can help assess adrenal function and hormonal balance.

Estradiol (E2) (male only)

Estradiol (E2) is a form of estrogen, a hormone that plays a key role in male health, influencing bone density, mood, and sexual function. In men, it is produced mainly from testosterone and helps regulate various bodily functions. Maintaining balanced estradiol levels is important for overall well-being, as too much or too little can lead to health issues.

Estrone, Serum (E1) (male only)

Estrone (E1) is a type of estrogen, a hormone that plays a role in male health, though it's present in lower amounts compared to females. In men, estrone is produced mainly from testosterone and is involved in regulating various bodily functions, including bone health and libido. Monitoring estrone levels can help assess hormonal balance.

Estriol, Serum (E3) (male only)

Estriol (E3) is a hormone produced mainly during pregnancy, playing a key role in fetal development. It is a type of estrogen that helps maintain a healthy pregnancy by supporting the growth of the uterus and placenta. In the body, estriol interacts with estrogen receptors, influencing various functions like mood, metabolism, and reproductive health.

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Summary of Markers Out of Lab Range

Marker	Value	Optimal Range	Lab Range	Unit
Glucose, Serum	112 ↑	80 - 95	65 - 99	mg/dL
Hemoglobin A1c	6 ↑	5 - 5.60	4.80 - 5.60	%
Creatinine, Serum	1.28 ↑	0.49 - 1.19	0.50 - 1	mg/dL
Phosphorus, Serum	4.6 ↑	3.40 - 4	2.50 - 4.50	mg/dL
Calcium/Phosphorus Ratio	1.98 ↓	2 - 3	2 - 3	
Alkaline Phosphatase	134 ↑	85 - 117	44 - 121	IU/L
AST (SGOT) (Aspartate aminotransferase)	48 ↑	10 - 30	0 - 40	IU/L
ALT (SGPT) (Alanine Aminotransferase)	61 ↑	7 - 30	0 - 44	IU/L
LDH (Lactate dehydrogenase)	262 ↑	140 - 220	119 - 226	IU/L
Bilirubin Total	1.4 ↑	0.20 - 1.20	0 - 1.20	mg/dL
GGT (Gamma-Glutamyl Transferase)	88 ↑	9 - 30	0 - 60	IU/L
Ferritin, Serum	22 ↓	20 - 200	30 - 400	ng/mL
UIBC (Unsaturated Iron Binding Capacity)	354 ↑	130 - 300	111 - 343	ug/dL
Iron Saturation	14 ↓	15 - 50	15 - 55	%
Cholesterol, Total	238 ↑	180 - 220	100 - 199	mg/dL
Triglycerides	214 ↑	72 - 110	0 - 149	mg/dL
HDL Cholesterol	34 ↓	55 - 70	40 - 59	mg/dL
VLDL Cholesterol	43 ↑	0 - 35	5 - 40	mg/dL
LDL Cholesterol	161 ↑	0 - 99	0 - 99	mg/dL
T. Chol/HDL Ratio	7 ↑	0 - 3	0 - 5	
C-Reactive Protein - High Sensitivity (hs-CRP)	4.6 ↑	0 - 1	0 - 3	mg/L
Homocyst(e)ine, Plasma	17.2 ↑	0 - 8.50	0 - 15	umol/L
TSH (Thyroid-Stimulating Hormone)	4.8 ↑	0.50 - 2.50	0.45 - 4.50	uIU/mL
T3 Uptake	22 ↓	27 - 37	24 - 39	%
Free Thyroxine Index	1.1 ↓	1.20 - 4.90	1.20 - 4.90	
Reverse T3, Serum	28 ↑	10 - 25	10 - 25	ng/dL
Thyroid Peroxidase (TPO) Ab	86 ↑	0 - 34	0 - 34	IU/mL
Thyroglobulin, Antibody (TGB Ab)	42 ↑	0 - 0.90	0 - 0.90	IU/mL
Vitamin D, 25-Hydroxy	21 ↓	35 - 50	30 - 100	ng/mL
C-Peptide	4.1 ↑	1.10 - 1.60	1.10 - 1.40	ng/mL
D-Dimer	0.62 ↑	0 - 0.49	0 - 0.49	mg/L
Fibrinogen Activity	512 ↑	193 - 415	193 - 507	mg/dL
Hemoglobin	12.9 ↓	13.90 - 15.80	13 - 17.70	g/dL
RDW (Random Distribution of RBC Weight)	15.2 ↑	0 - 13	11 - 15	%
NRBC (Nucleated red blood cells)	0.3 ↑	0 - 0	0 - 0	%
Luteinizing Hormone (LH) (male only)	11.4 ↑	2 - 6	1.70 - 8.60	mIU/mL
Follicle-Stimulating Hormone (FSH) (male only)	14.1 ↑	2 - 10	1.50 - 12.40	mIU/mL
17-Hydroxypregnenolone	39 ↓	53 - 100	53 - 357	ng/dL
Testosterone, Free (40 to 49y)	6.2 ↓	13 - 18	6.80 - 21.50	ng/dL
% Free Testosterone	1.99 ↓	2 - 2	2 - 4	%
Dihydrotestosterone (DHT)	24 ↓	45 - 75	30 - 85	ng/dL

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Summary of Markers Out of Lab Range

Marker	Value	Optimal Range	Lab Range	Unit
Cortisol, AM	22.4 ↑	14 - 18	6.20 - 19.40	ug/dL
Sex Hormone-Binding Globulin (SHBG) (20 to 49	61 ↑	20 - 40	16.50 - 55.90	nmol/L

Glucose, Serum

Glucose is a type of sugar that serves as a primary energy source for your body's cells. When you eat, your body breaks down carbohydrates into glucose, which then enters your bloodstream. Insulin, a hormone produced by the pancreas, helps cells absorb glucose for energy. Monitoring serum glucose levels helps assess your body's ability to manage sugar, which is crucial for overall health.

Hemoglobin A1c

Hemoglobin A1c is a blood marker that reflects your average blood sugar levels over the past 2 to 3 months. It measures how much glucose is attached to hemoglobin, the protein in red blood cells that carries oxygen. Higher A1c levels can indicate diabetes or prediabetes, helping doctors assess your blood sugar control and adjust your treatment if needed.

Creatinine, Serum

Creatinine is a waste product produced by muscles from the breakdown of a substance called creatine, which helps supply energy to your muscles. It is filtered out of your blood by your kidneys. Measuring serum creatinine levels helps assess kidney function; high levels may indicate that your kidneys are not working properly, while normal levels suggest healthy kidney function.

Phosphorus, Serum

Phosphorus is a vital mineral in your body that helps build strong bones and teeth, and is essential for energy production and cell function. It works closely with calcium to maintain bone health and is involved in the formation of DNA and RNA. A serum phosphorus test measures the level of phosphorus in your blood, helping doctors assess your overall health and kidney function.

Calcium/Phosphorus Ratio

The Calcium/Phosphorus Ratio is a measure of the balance between two important minerals in your body. Calcium helps build strong bones and teeth, while phosphorus plays a key role in energy production and cell function. A healthy ratio is crucial for bone health and overall well-being, as it ensures that your body can effectively use these minerals together.

Alkaline Phosphatase

Alkaline Phosphatase (ALP) is an enzyme found in your body, mainly in the liver, bones, kidneys, and bile ducts. It helps break down proteins and plays a key role in processes like digestion and bone health. When your ALP levels are too high or too low, it can indicate issues with your liver, bones, or other health conditions, prompting further investigation.

AST (SGOT) (Aspartate aminotransferase)

AST (SGOT) is an enzyme found in your liver, heart, and muscles. It helps your body process proteins. When your liver is damaged or stressed, AST can leak into your bloodstream, leading to higher levels. Doctors measure AST to assess liver health, as elevated levels may indicate liver disease or other health issues. Monitoring AST helps guide treatment.

ALT (SGPT) (Alanine Aminotransferase)

Alanine Aminotransferase (ALT), also known as SGPT, is an enzyme found mainly in the liver. It helps convert proteins into energy for liver cells. When the liver is damaged or inflamed, ALT levels can rise in the blood, indicating potential liver issues. Monitoring ALT levels can help assess liver health and guide treatment.

LDH (Lactate dehydrogenase)

Lactate dehydrogenase (LDH) is an enzyme found in almost all body tissues. It helps convert sugar into energy, especially during times when oxygen is low. When cells are damaged or diseased, LDH is released into the bloodstream, making it a useful marker for doctors. High levels can indicate conditions like heart attacks, liver disease, or certain cancers.

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Bilirubin Total

Bilirubin Total is a substance produced when your body breaks down red blood cells. It travels through your bloodstream to your liver, where it is processed and eventually excreted in bile. High levels of bilirubin can indicate liver problems, bile duct issues, or hemolysis (rapid breakdown of red blood cells). Monitoring bilirubin helps assess your liver's health.

GGT (Gamma-Glutamyl Transferase)

Gamma-Glutamyl Transferase (GGT) is an enzyme found mainly in the liver. It helps break down and transport amino acids, which are the building blocks of proteins. High levels of GGT in your blood can indicate liver problems, bile duct issues, or excessive alcohol consumption. Monitoring GGT can help your doctor assess your liver health.

Ferritin, Serum

Ferritin is a protein in your body that stores iron, which is essential for making red blood cells and transporting oxygen. When you have a blood test for serum ferritin, it measures the amount of this protein in your blood. High levels can indicate excess iron or inflammation, while low levels may suggest iron deficiency, which can lead to anemia.

UIBC (Unsaturated Iron Binding Capacity)

UIBC, or Unsaturated Iron Binding Capacity, is a blood test that measures how well your blood can bind iron. It reflects the amount of transferrin, a protein that carries iron in your bloodstream. High UIBC levels may indicate low iron stores in your body, while low levels can suggest iron overload. This test helps doctors assess your iron status and overall health.

Iron Saturation

Iron saturation is a blood test that measures how much iron is bound to proteins in your blood. It helps assess your body's iron levels, which are crucial for making red blood cells and transporting oxygen. High iron saturation can indicate excess iron, while low levels may suggest iron deficiency. Monitoring this helps maintain your overall health.

Cholesterol, Total

Total cholesterol is a measure of the fats in your blood, including LDL (bad cholesterol) and HDL (good cholesterol). It plays a crucial role in your body, helping to build cells and produce hormones. However, too much total cholesterol can lead to heart disease and other health issues. Regular check-ups can help you manage your cholesterol levels effectively.

Triglycerides

Triglycerides are a type of fat found in your blood, which your body uses for energy. When you eat, your body converts any calories it doesn't need right away into triglycerides, storing them in fat cells. High levels can increase your risk of heart disease, so it's important to maintain a healthy diet and exercise regularly to keep them in check.

HDL Cholesterol

HDL cholesterol, often called "good" cholesterol, helps remove excess cholesterol from your bloodstream and transport it to the liver for disposal. A higher level of HDL cholesterol is associated with a lower risk of heart disease. It works by picking up cholesterol from the arteries and tissues, helping to keep your heart healthy.

VLDL Cholesterol

VLDL cholesterol, or very low-density lipoprotein cholesterol, is a type of fat found in your blood. It carries triglycerides, a form of fat, from the liver to other parts of the body. High levels of VLDL can lead to plaque buildup in your arteries, increasing the risk of heart disease. Monitoring VLDL levels helps assess your heart health.

LDL Cholesterol

LDL cholesterol, often called "bad" cholesterol, is a type of fat in your blood that can build up in your arteries, leading to heart disease. A specific marker in your blood can help us understand how your body processes LDL cholesterol. By measuring this marker, we can assess your risk for heart problems and tailor your treatment to keep your heart healthy.

T. Chol/HDL Ratio

The T. Chol/HDL Ratio is a measure of your total cholesterol compared to your good cholesterol (HDL). A lower ratio is generally better, as it suggests a lower risk of heart disease. Cholesterol is a fatty substance that your body needs, but too much can lead to blockages in your arteries. Maintaining a healthy balance is key for heart health.

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C-Reactive Protein - High Sensitivity (hs-CRP)

C-Reactive Protein (hs-CRP) is a substance produced by the liver in response to inflammation in the body. High levels of hs-CRP can indicate that there is inflammation, which may be linked to various health issues, including heart disease. By measuring hs-CRP, doctors can assess your risk for these conditions and monitor your overall health.

Homocyst(e)ine, Plasma

Homocyst(e)ine is an amino acid in your blood that plays a role in your body's metabolism. It is produced when your body breaks down protein. Normally, it is converted into other substances with the help of vitamins like B6, B12, and folate. High levels of homocyst(e)ine can be linked to heart disease and other health issues, so monitoring it can help assess your cardiovascular health.

TSH (Thyroid-Stimulating Hormone)

TSH, or Thyroid-Stimulating Hormone, is a hormone produced by the pituitary gland that plays a crucial role in regulating your thyroid gland. It stimulates the thyroid to produce hormones that control your metabolism, energy levels, and overall body functions. When TSH levels are too high or too low, it can indicate thyroid problems, affecting your health.

T3 Uptake

T3 Uptake is a test that measures how well your body can take up a hormone called triiodothyronine (T3), which is important for regulating metabolism and energy levels. This marker helps doctors understand thyroid function. If T3 uptake is abnormal, it may indicate thyroid issues, helping guide treatment decisions.

Free Thyroxine Index

The Free Thyroxine Index (FTI) is a measure of thyroid hormone levels in your blood, specifically focusing on free thyroxine, which is crucial for regulating metabolism, energy, and overall health. It helps doctors assess how well your thyroid is functioning. A balanced FTI indicates your body is producing the right amount of thyroid hormone, supporting your body's energy and metabolic needs.

Reverse T3, Serum

Reverse T3 (rT3) is a hormone produced by the thyroid gland that helps regulate metabolism. Unlike the active form of thyroid hormone, T3, rT3 is considered inactive and can block the effects of T3. When your body is under stress or not getting enough nutrients, it may produce more rT3, which can slow down metabolism and affect energy levels.

Thyroid Peroxidase (TPO) Ab

Thyroid Peroxidase (TPO) antibodies are proteins made by your immune system that can attack the thyroid gland, which helps regulate your metabolism and energy levels. When these antibodies are present, they can interfere with the production of thyroid hormones, potentially leading to conditions like hypothyroidism. Testing for TPO antibodies helps doctors understand thyroid health.

Thyroglobulin, Antibody (TGB Ab)

Thyroglobulin antibodies (TGB Ab) are proteins made by your immune system that can attack thyroglobulin, a substance produced by the thyroid gland. Thyroglobulin is important for making thyroid hormones, which help regulate your metabolism. High levels of TGB Ab may indicate autoimmune thyroid conditions, where your body mistakenly targets its own thyroid tissue.

Vitamin D, 25-Hydroxy

Vitamin D, specifically 25-Hydroxyvitamin D, is a crucial marker that reflects your body's vitamin D levels. It helps regulate calcium and phosphate, essential for healthy bones and immune function. When you get sunlight or consume vitamin D-rich foods, your body converts it into this form, which is then measured in blood tests to assess your overall health.

C-Peptide

C-Peptide is a substance produced by your pancreas when it makes insulin, which helps control your blood sugar levels. Measuring C-Peptide can help doctors understand how much insulin your body is producing. If your levels are low, it may indicate diabetes or other issues with insulin production, while high levels can suggest insulin resistance.

D-Dimer

D-Dimer is a small protein fragment found in the blood after a blood clot dissolves. When your body forms and breaks down clots, D-Dimer levels can rise. Doctors often check D-Dimer levels to help diagnose conditions like deep vein thrombosis or pulmonary embolism. High levels may indicate clotting issues, while normal levels can help rule them out.

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Fibrinogen Activity

Fibrinogen activity refers to the function of fibrinogen, a protein in your blood that helps with clotting. When you get injured, fibrinogen is converted into fibrin, which forms a mesh that stops bleeding. Measuring fibrinogen activity helps doctors understand how well your blood can clot, which is important for preventing excessive bleeding or clotting disorders.

Hemoglobin

Hemoglobin is a protein in your red blood cells that carries oxygen from your lungs to the rest of your body. It gives blood its red color and helps transport carbon dioxide back to the lungs for you to exhale. Healthy hemoglobin levels are crucial for energy and overall health, as they ensure your organs and tissues receive the oxygen they need.

RDW (Random Distribution of RBC Weight)

RDW, or Red Cell Distribution Width, measures the variation in size of your red blood cells (RBCs). A higher RDW means your RBCs vary more in size, which can indicate conditions like anemia or other health issues. By assessing RDW, doctors can gain insights into your blood health and how well your body is producing and managing red blood cells.

NRBC (Nucleated red blood cells)

Nucleated red blood cells (NRBCs) are immature red blood cells that are typically found in the bone marrow. When they appear in the bloodstream, it can indicate that the body is under stress, such as during severe anemia or other medical conditions. NRBCs help transport oxygen, but their presence outside the bone marrow can signal that the body is responding to a problem.

Luteinizing Hormone (LH) (male only)

Luteinizing Hormone (LH) is a key hormone in males that helps regulate testosterone production and supports sperm development. Produced by the pituitary gland, LH signals the testes to produce testosterone, which is essential for male reproductive health, libido, and overall well-being. Proper LH levels are crucial for maintaining fertility.

Follicle-Stimulating Hormone (FSH) (male only)

Follicle-Stimulating Hormone (FSH) is a key hormone in males that helps regulate sperm production and maintain healthy testicular function. It is produced by the pituitary gland and stimulates the Sertoli cells in the testes, which support and nourish developing sperm. Proper FSH levels are essential for fertility and overall reproductive health.

17-Hydroxypregnenolone

17-Hydroxypregnenolone is a hormone made by the adrenal glands that acts as a building block for other important hormones, including DHEA and cortisol. It plays a role in how the body responds to stress and helps regulate energy, mood, and the balance of other hormones.

Testosterone, Free (40 to 49y)

Testosterone is a hormone that plays a key role in many bodily functions, including muscle strength, mood, and energy levels. In men aged 40 to 49, measuring free testosterone helps assess how much of this hormone is available for the body to use. Low levels can affect health, so understanding your testosterone can guide treatment options.

% Free Testosterone

% Free Testosterone is a measure of the testosterone hormone in your blood that is not bound to proteins, making it available for your body to use. This free form of testosterone plays a crucial role in various bodily functions, including muscle growth, mood regulation, and libido. Monitoring % Free Testosterone helps assess hormonal balance and overall health.

Dihydrotestosterone (DHT)

Dihydrotestosterone, or DHT, is a powerful form of testosterone made in the body. It helps with the development of male traits such as facial hair and a deeper voice, and also plays a role in prostate health and hair growth. Having the right balance of DHT is important for energy, libido, and overall hormone health.

Cortisol, AM

Cortisol is a hormone produced by your adrenal glands, often called the "stress hormone" because it helps your body respond to stress. It plays a key role in regulating metabolism, immune response, and blood pressure. Measuring morning cortisol levels can help assess how well your body manages stress and its overall health.

Blood Panel Results

Name: Sample Patient **Evaluation Date:** 03/02/2025
Blood Draw Date: 02/20/2025 **Practitioner:** Sample Practitioner

Sex Hormone-Binding Globulin (SHBG) (20 to 49y)

Sex Hormone Binding Globulin (SHBG) is a protein in your blood that binds to sex hormones like testosterone and estrogen, regulating their availability in the body. In people aged 20 to 49, SHBG levels can influence hormone balance, affecting mood, energy, and sexual health. Higher SHBG can lower free testosterone, impacting various bodily functions.

Blood Panel Results

Name: Sample Patient **Evaluation Date:** 03/02/2025
Blood Draw Date: 02/20/2025 **Practitioner:** Sample Practitioner

Above Optimal | Below Optimal | Above Lab | Below Lab | Optimal | Fasting ☐

Markers that are both Above/Below Optimal Range AND Lab Range are shown in red as Above/Below Lab Range

Full Panel Results By Group

Metabolic and Organ Function

Marker	Value	Optimal Range	Lab Range	Unit
Glucose, Serum	112 ↑	80 - 95	65 - 99	mg/dL
Hemoglobin A1c	6 ↑	5 - 5.60	4.80 - 5.60	%
Insulin - Fasting	18 ↑	3 - 10	2.60 - 24.90	uIU/mL
BUN (Blood Urea Nitrogen)	22 ↑	10 - 15	7 - 25	mg/dL
Creatinine, Serum	1.28 ↑	0.49 - 1.19	0.50 - 1	mg/dL
BUN/Creatinine Ratio	17 ↑	10 - 16	11 - 26	
eGFR (estimated Glomerular Filtration Rate)	↓ 67	90 - 999	59 - 999	ml/min/1.73
Sodium, Serum	141	135 - 142	135 - 145	mmol/L
Potassium, Serum	4.9 ↑	4 - 4.50	3.50 - 5.30	mmol/L
Chloride, Serum	104	100 - 106	96 - 106	mmol/L
Carbon Dioxide, Total	↓ 22	26 - 31	20 - 30	mmol/L
Anion Gap	15 ↑	8 - 12	7 - 16	mmol/L
Uric Acid, Serum	8.2 ↑	3.50 - 5.90	3.70 - 8.60	mg/dL
Protein, Total, Serum	7.8 ↑	6.60 - 7.40	6 - 8.50	g/dL
Albumin, Serum	4.2	4 - 5	3.80 - 4.90	g/dL
Globulin, Total	3.6 ↑	2.40 - 2.70	1.50 - 4.50	g/dL
Albumin/Globulin Ratio	↓ 1.17	1.50 - 2	1.10 - 2.50	
Calcium, Serum	↓ 9.1	9.40 - 10	8.60 - 10.20	mg/dL
Phosphorus, Serum	4.6 ↑	3.40 - 4	2.50 - 4.50	mg/dL
Calcium/Phosphorus Ratio	↓ 1.98	2 - 3	2 - 3	
Magnesium, Serum	↓ 1.7	2.20 - 3	1.60 - 2.30	mg/dL
Alkaline Phosphatase	134 ↑	85 - 117	44 - 121	IU/L
AST (SGOT) (Aspartate aminotransferase)	48 ↑	10 - 30	0 - 40	IU/L
ALT (SGPT) (Alanine Aminotransferase)	61 ↑	7 - 30	0 - 44	IU/L
LDH (Lactate dehydrogenase)	262 ↑	140 - 220	119 - 226	IU/L
Bilirubin Total	1.4 ↑	0.20 - 1.20	0 - 1.20	mg/dL
GGT (Gamma-Glutamyl Transferase)	88 ↑	9 - 30	0 - 60	IU/L

Iron Status and Transport

Marker	Value	Optimal Range	Lab Range	Unit
Iron, Serum	58	50 - 100	38 - 169	ug/dL
Ferritin, Serum	↓ 22	20 - 200	30 - 400	ng/mL
TIBC (Iron Binding Capacity)	412	250 - 450	250 - 450	ug/dL
UIBC (Unsaturated Iron Binding Capacity)	354 ↑	130 - 300	111 - 343	ug/dL
Iron Saturation	↓ 14	15 - 50	15 - 55	%

Blood Panel Results

Name: Sample Patient **Evaluation Date:** 03/02/2025
Blood Draw Date: 02/20/2025 **Practitioner:** Sample Practitioner

Above Optimal | Below Optimal | Above Lab | Below Lab | Optimal | Fasting ☐

Markers that are both Above/Below Optimal Range AND Lab Range are shown in red as Above/Below Lab Range

Full Panel Results By Group

Cardiometabolic Risk

Marker	Value	Optimal Range	Lab Range	Unit
Cholesterol, Total	238 ↑	180 - 220	100 - 199	mg/dL
Triglycerides	214 ↑	72 - 110	0 - 149	mg/dL
HDL Cholesterol	34 ↓	55 - 70	40 - 59	mg/dL
VLDL Cholesterol	43 ↑	0 - 35	5 - 40	mg/dL
LDL Cholesterol	161 ↑	0 - 99	0 - 99	mg/dL
LDL/HDL Ratio	4.7 ↑	0 - 3	0 - 5	Ratio
T. Chol/HDL Ratio	7 ↑	0 - 3	0 - 5	
C-Reactive Protein - High Sensitivity (hs-CRP)	4.6 ↑	0 - 1	0 - 3	mg/L
Homocyst(e)ine, Plasma	17.2 ↑	0 - 8.50	0 - 15	umol/L

Thyroid Function and Autoimmunity

Marker	Value	Optimal Range	Lab Range	Unit
TSH (Thyroid-Stimulating Hormone)	4.8 ↑	0.50 - 2.50	0.45 - 4.50	uIU/mL
Thyroxine (T4)	5.1 ↓	6 - 12.50	4.50 - 12	ug/dL
T3 Uptake	22 ↓	27 - 37	24 - 39	%
Free Thyroxine Index	1.1 ↓	1.20 - 4.90	1.20 - 4.90	
Triiodothyronine (T3)	71 ↓	80 - 90	71 - 180	ng/dL
Triiodothyronine (T3), Free, Serum	2.2 ↓	2.40 - 5.50	2 - 4.40	pg/mL
T4, Free (Direct)	0.82 ↓	1 - 1.95	0.82 - 1.77	ng/dL
Reverse T3, Serum	28 ↑	10 - 25	10 - 25	ng/dL
Thyroid Peroxidase (TPO) Ab	86 ↑	0 - 34	0 - 34	IU/mL
Thyroglobulin, Antibody (TGB Ab)	42 ↑	0 - 0.90	0 - 0.90	IU/mL

Other Metabolic and Hematology

Marker	Value	Optimal Range	Lab Range	Unit
Vitamin D, 25-Hydroxy	21 ↓	35 - 50	30 - 100	ng/mL
Calcitriol (1, 25 di-OH Vit D)	18	10 - 75	10 - 75	pg/mL
Vitamin B12	312 ↓	450 - 800	232 - 1,245	pg/mL
Folate (Folic Aicd), Serum	4.8	3 - 999	3 - 999	ng/mL
Methylmalonic Acid	0.46	0 - 260	0 - 378	nmol/L
C-Peptide	4.1 ↑	1.10 - 1.60	1.10 - 1.40	ng/mL
D-Dimer	0.62 ↑	0 - 0.49	0 - 0.49	mg/L
Fibrinogen Activity	512 ↑	193 - 415	193 - 507	mg/dL
Iodine	41	40 - 92	40 - 92	ug/L

CBC with Differential and Platelets

Marker	Value	Optimal Range	Lab Range	Unit
WBC (White Blood Cells)	8.9 ↑	4.50 - 8	3.40 - 10.80	x10E3/uL
RBC (Red Blood Cells)	4.31	4.20 - 5	4.20 - 5.80	x10E6/uL

Blood Panel Results

Name: Sample Patient **Evaluation Date:** 03/02/2025
Blood Draw Date: 02/20/2025 **Practitioner:** Sample Practitioner

Above Optimal | Below Optimal | Above Lab | Below Lab | Optimal | Fasting ☐

Markers that are both Above/Below Optimal Range AND Lab Range are shown in red as Above/Below Lab Range

Full Panel Results By Group

Hemoglobin	12.9 ↓	13.90 - 15.80	13 - 17.70	g/dL
Hematocrit	38.6 ↓	40 - 48	37 - 51	%
MCV (Mean Corpuscular Volume)	90 ↑	82 - 89.90	79 - 97	fL
MCH (Mean Corpuscular Hemoglobin)	29.9	27 - 31.90	26.60 - 33	pg
MCHC (Mean Corpuscular Hemoglobin Concentration)	33.4	32 - 36	31.50 - 35.70	g/dL
RDW (Random Distribution of RBC Weight)	15.2 ↑	0 - 13	11 - 15	%
Platelets	412	140 - 415	150 - 450	x10E3/uL
NRBC (Nucleated red blood cells)	0.3 ↑	0 - 0	0 - 0	%
Reticulocyte Count	0.6	0.50 - 1.50	0.60 - 2.60	%

Endocrine and Reproductive Hormones

Marker	Value	Optimal Range	Lab Range	Unit
Prolactin (31 to 50y)	21.8	3.90 - 22.70	3.90 - 22.70	ng/mL
Luteinizing Hormone (LH) (male only)	11.4 ↑	2 - 6	1.70 - 8.60	mIU/mL
Follicle-Stimulating Hormone (FSH) (male only)	14.1 ↑	2 - 10	1.50 - 12.40	mIU/mL
Pregnenolone	41 ↓	125 - 237	22 - 237	ng/dL
17-Hydroxypregnenolone	39 ↓	53 - 100	53 - 357	ng/dL
Progesterone (male only)	0.19 ↓	0.30 - 0.80	0 - 0.50	ng/mL
Dehydroepiandrosterone (DHEA) (20 to 50y)	120 ↓	130 - 260	31 - 701	ng/dL
DHEA-Sulfate (DHEA-S) (45 to 54y)	78 ↓	150 - 350	71.60 - 375.40	ug/dL
Testosterone, Total (41 to 60y)	312	264 - 916	264 - 916	ng/dL
Testosterone, Free (40 to 49y)	6.2 ↓	13 - 18	6.80 - 21.50	ng/dL
% Free Testosterone	1.99 ↓	2 - 2	2 - 4	%
Dihydrotestosterone (DHT)	24 ↓	45 - 75	30 - 85	ng/dL
PSA (Prostate Specific Antigen)	3.4	0 - 4	0 - 4	ng/mL
Estradiol (E2) (male only)	42 ↑	20 - 30	7.60 - 42.60	pg/mL
Estrone, Serum (E1) (male only)	68 ↑	15 - 40	0 - 174	pg/mL
Estriol, Serum (E3) (male only)	0.11 ↓	0.20 - 0.40	0 - 0.18	ng/mL
Cortisol, AM	22.4 ↑	14 - 18	6.20 - 19.40	ug/dL
Cortisol, PM	6.1	3 - 8	2.30 - 11.90	ug/dL
Sex Hormone-Binding Globulin (SHBG) (20 to 49y)	61 ↑	20 - 40	16.50 - 55.90	nmol/L