Blueprint for Wellness℠
A Service of Quest Diagnostics

Better Health. Better Future. Better You.

Hussain Jivani, here is your Blueprint For Wellness to build a healthier life.

Quest Diagnostics℠
www.quest4health.com
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Dear Hussain,

- Welcome Letter
- Your Health
- Your Results
- Your Wellness
- Summary Report

Blueprint for Wellness™
A Service of Quest Diagnostics

Better Health Better Future Better You

On behalf of Quest Diagnostics, congratulations on taking this crucial first step in building a healthier future.

The Blueprint for Wellness report you now hold is just that — a blueprint you can use to construct a healthier, more fulfilling life. It is based on both the results of your blood tests and on the biometric data (height, weight, age, etc.) you submitted prior to having your lab tests performed.Using this report, you will be able to better understand your health risks, so that you can construct a personal plan of action for building better health, a better future — and a better you.

Please keep in mind that this report is not a substitute for a physician's examination. It cannot diagnose illness or acute medical problems. However, it can reveal potential health risks — giving you the ability to plan ahead and make lifestyle changes, as well as the incentive to seek a physician's opinion.

At Quest Diagnostics, we encourage you to apprise your doctor of your health and wellness on a continual basis. That's why we enclosed a detachable Physician's Diagnostic Report. This report summarizes your blood test results. Discuss the results with your doctor, especially if you have any concerns or questions. We also encourage you to discuss this entire Blueprint for Wellness report and the recommended action plan and screenings with your doctor. Be sure you have your doctor's approval before starting any new health-related plans, especially exercise or weight-loss programs.

Again, on behalf of Quest Diagnostics, good luck and best wishes on your journey to better health and a better you.

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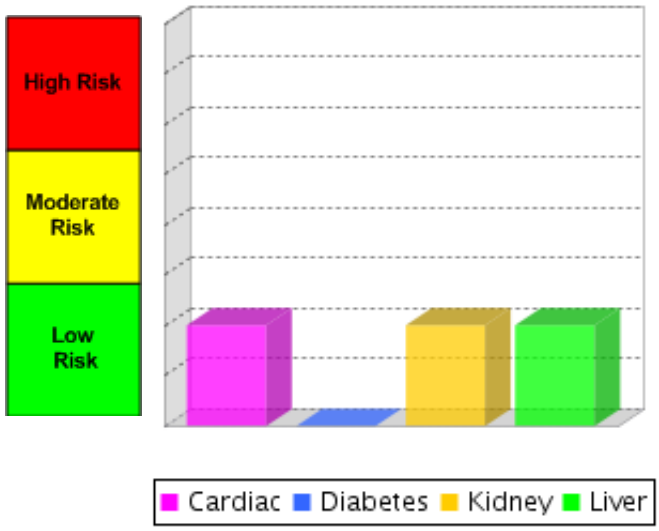
Your Health

Hussain, as you begin your journey to better health, one of the first steps is to know your risks. That information is provided in this report and was generated from your laboratory results and published scientific medical algorithms.The combinations of this data gives you the first glimpse of your overall health risks and helps determine action items for maintaining and improving your health.

You will first see your overall summary of your risk score grouped by system: Heart (Cardiac), Pancreas (Diabetic), Kidney (Renal) and Liver (Hepatic). As you go through your Personal Wellness Report, more information on these results will be provided.

Overall Health Risk

Your overall Health Risks for the following organ systems are displayed below: Heart (Cardiac), Pancreas (Diabetic), Kidney (Renal) and Liver (Hepatic). The personal information that you provided at the time of registration (age, gender, height, weight, etc), has been incorporated with the laboratory results, to give you an overall view of your health risks. The laboratory tests and results for each organ system are explained in more detail throughout the report.



Organ Systems

Heart (Cardiac)

Cardiovascular diseases include coronary heart disease (heart attacks), cerebrovascular disease, raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure. The major causes of cardiovascular disease are tobacco use, physical inactivity, and an unhealthy diet.

Pancreas (Diabetic)

As the glucose goes through our bloodstream, it needs to be kept regulated. This is accomplished by our pancreas which produces insulin. The more glucose, or sugar, that is introduced into our body, the more insulin that is released to regulate the blood glucose level. The problem arises when our body fails to produce the insulin we need, or it doesn't produce enough.

Kidney (Renal)

Renal failure or kidney failure is a situation in which the kidneys fail to function adequately. It is divided in acute and chronic forms; either form may be due to a large number of other medical problems. Biochemically, it is typically detected by an elevated serum creatinine. In the science of physiology, renal failure is described as a decrease in the glomerular filtration rate.

Liver (Hepatic)

Liver disease is a term for a collection of conditions, diseases, and infections that affect the cells, tissues, structures, or functions of the liver. If the liver becomes inflamed or infected, its ability to perform these functions may be impaired. Liver disease and infections are caused by a variety of conditions including viral infections, bacterial invasion, and chemical or physical changes within the body. The most common cause of liver damage is malnutrition, especially that which occurs with alcoholism.

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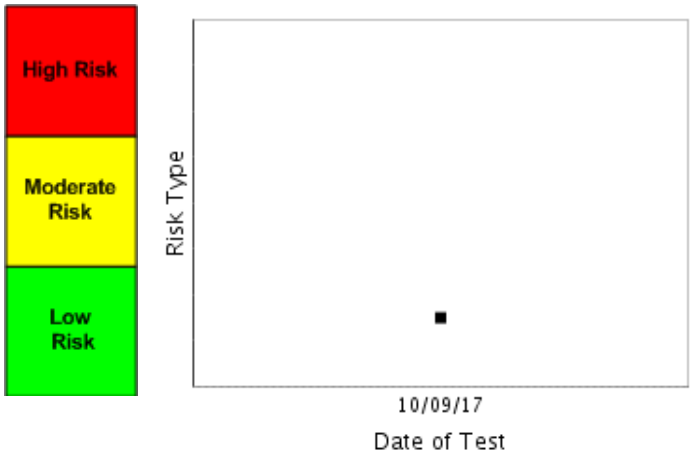
Your Results

Hussain, the goal of the Blueprint for Wellness is to identify health risks and supply you with the information you need to successfully manage your health. Clinical laboratory testing gives you an important insight into what is happening within your body.

In the following pages you will see a summary of your laboratory test results grouped by body system. All of the results are followed by a detailed explanation of each clinical test performed. At the end of the report, there is a summary page that you can give to your physician during your next visit.

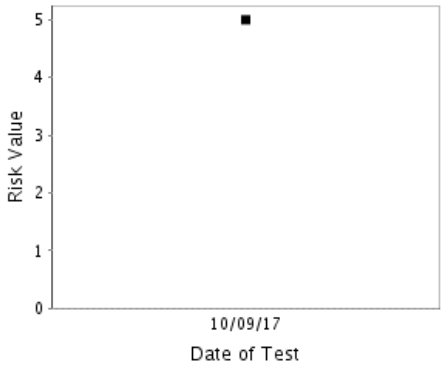
Heart (Cardiac) Blood Tests

The heart is a muscular organ located in the chest. The heart and blood vessels comprise the cardiovascular system. The heart pumps blood throughout the body. In spite of the fact that all of the body's blood flows through it, it needs to be supplied with life-giving blood by its own set of blood vessels. These blood vessels, called coronary arteries, deliver the oxygen that allows the heart to perform its function. When a disease known as atherosclerosis reduces the blood flow from the coronary arteries to the heart, it can cause chest pain, which is called angina. If the blood flow is severely reduced, it can cause death of some of the heart muscle and may lead to a heart attack.



Coronary Disease

Coronary heart disease (CHD) is a narrowing of the small blood vessels that supply blood and oxygen to the heart. CHD is also called coronary artery disease. Coronary heart disease is usually caused by a condition called atherosclerosis, which occurs when fatty material and a substance called plaque builds up on the walls of your arteries. This causes them to get narrow. As the coronary arteries narrow, blood flow to the heart can slow down or stop, causing chest pain (stable angina), shortness of breath, heart attack, and other symptoms.



Your Risk of developing Coronary Heart Disease within the next 10 years is **5%**

Source: The Framingham Study for developing chronic heart disease.

238 mg/dL

Alert

Desirable
< =200 mg/dL

Cholesterol Total

Cholesterol is an essential body fat needed to produce substances such as hormones and bile. High levels of cholesterol are usually associated with a higher risk of heart disease and narrowed blood vessels. Lipids included in total cholesterol are HDL cholesterol, LDL cholesterol, and triglycerides.

Your Result : 238 mg/dL

Laboratory comments:

METHOD : CHOD-POD

SAMPLE TYPE : SERUM

55 mg/dL

Healthy

Desirable
> 40 mg/dL

HDL Cholesterol

HDL cholesterol is commonly called "good" cholesterol because it can aid in the removal of excess cholesterol in body tissues and help prevent the accumulation of LDL cholesterol in the arteries. Higher levels of HDL cholesterol are desirable.

This result is associated with a low risk of coronary heart disease

Your Result : 55 mg/dL

Laboratory comments:

METHOD : ENZYMATIC COLORIMETRIC

SAMPLE TYPE : SERUM

129 mg/dL

Healthy Desirable
< =130 mg/dL

Direct LDL Cholesterol

LDL cholesterol is considered "bad" cholesterol because it can accumulate in the inner walls of your arteries, narrowing them and reducing blood flow. This result is measured directly, and is not influenced by whether you fasted or not or if the triglycerides level is high (greater than 250 mg/dl). Lower levels of LDL cholesterol are desirable. The National Cholesterol Education Program considers LDL cholesterol the most important lipid for assessment of coronary heart disease risk. An LDL cholesterol of less than 130 mg/dl is considered desirable and a result of less than 100 mg/dl is considered optimal. For individuals with diabetes or other evidence of being at high risk of coronary heart disease, a desirable LDL cholesterol level may be less than 70 mg/dl. You should be aware it is also important to consider other factors including smoking, diabetes, blood pressure, family history and the results of other tests in assessing your risk for coronary heart disease.

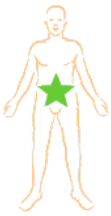
Your Result : 129 mg/dL

Laboratory comments:

METHOD : ENZYMATIC COLORIMETRIC

SAMPLE TYPE : SERUM

Desirable range < 100 mg/dL for patients with CHD or diabetes and < 70 mg/dL for diabetic patients with known heart disease



Pancreas (Diabetic) Blood Tests

The pancreas is an organ that is part of both the digestive and endocrine (controls hormone levels and helps to regulate the body) systems. The pancreas is located beside the stomach and is made up of two major types of tissues. One tissue produces hormones such as insulin (regulates glucose levels), and the other tissue produces enzymes that aid in the digestion of food.

6.0 % of total Hgb

Alert

Reference Range
< 5.7 % of total Hgb

HbA1C

The blood level of glucose is tightly controlled by hormones. One of these hormones, insulin, that is produced in the pancreas is less effective or not produced in sufficient quantity in individuals with diabetes. As a result, the glucose level is higher in individuals with diabetes compared to individuals without diabetes. The excess glucose can bind onto proteins including the most abundant protein in the red blood cells, hemoglobin. The combination is known as hemoglobin A1c. When the hemoglobin A1c level is increased it suggests that the diabetes is not as well controlled as it can be. Hemoglobin A1c has as its key advantage that it reflects the average control for the previous two months, known as long-term control. The American Diabetes Association recommends that individuals with diabetes be tested at least twice each year for those in good control and quarterly if those whose diabetes is not well controlled or whose therapy has changed.

The level of hemoglobin A1c predicts certain complications of diabetes. A level of 7.0% and higher suggests diabetes is not well controlled. A level of 8.0% and higher suggests diabetes is poorly controlled. Changes in lifestyle and therapy may be necessary to achieve desired control of diabetes.

Your Result : 6.0 % of total Hgb

Laboratory comments:

METHOD : HPLC
SAMPLE TYPE : WHOLE BLOOD

Hemoglobin A1c (Glycated hemoglobin) is structurally related to adult hemoglobin (HbA) and has a glucose molecule attached to it. HbA1c is continuously formed during the 120 day life of red blood cell, and a single measurement of HbA1c reflects the average blood glucose level during the preceding 2-3 months. HbA1c of 7% means that 7% of the total hemoglobin has glucose attached to it.
Criteria
For patients not diagnosed with Diabetes:

* Less than 5.7% - Normal
* 5.7 to 6.4% - Pre Diabetes
* 6.5% and above - Diabetes

For patients diagnosed with Diabetes:

* American Diabetic Association (ADA) recommends that for adequate glucose control a reasonable HbA1c goal for a non pregnant adult is less than 7%

Note: ADA recommends that individuals with diabetes be tested at least twice each year for those in good control and quarterly for those whose diabetes is not well controlled or whose therapy has changed.

125.5 mg/dL

Healthy

Reference Range
0 - 140 mg/dL

eAG CALCULATED

Your Result : 125.5 mg/dL

Laboratory comments:

ADA is recommending the use of a new term in diabetes management, estimated Average Glucose, or eAG. The eAG is a value calculated from HbA1c and represents an average of glucose levels over the previous three month period.

93 mg/dL

Healthy

Reference Range
< 140 mg/dL

Glucose, Random (Plasma)

Glucose is the chief source of energy for all cells in the body. This test measures the concentration of glucose in your blood. Elevated levels may indicate pre-diabetes or diabetes itself. For those individuals with diabetes, large studies have demonstrated that maintaining good control reduces the risk of developing complications of diabetes.

Your glucose result does not exceed the normal reference range and suggests that you are not showing any biochemical signs of diabetes, hyperglycemia, hypoglycemia or other conditions that can be associated with glucose levels that are too high or too low.

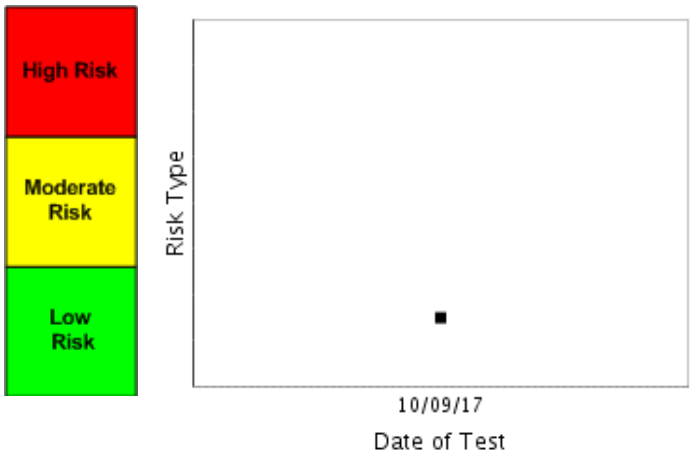
Your Result : 93 mg/dL

Laboratory comments:

Hexokinase

Kidney Tests

The kidney's main function is to eliminate metabolic waste products and to maintain balance of sodium, potassium, chloride, water and many other vital elements in the body. Blood flows into the kidneys where over one million small "filters" serve to remove these waste products and form urine. The kidneys are also important in the maintenance of blood pressure and in the production of a hormone that stimulates production of red blood cells.



About half the time, doctors can fix the problems that cause kidney failure in a few days or weeks. These people's kidneys will work well enough for them to live normal lives.But other people may have permanent kidney damage that leads to chronic kidney disease. Older people and those who are very sick from other health problems may not get better. People who die usually do so because of the health problem that caused their kidneys to fail.

Your Risk of having a Disease associated with your Kidney is: **low**

Source: Quest Diagnostics Clinical Reference Ranges

BUN (Urea Nitrogen)

9 mg/dL

Healthy

Reference Range
7 - 25 mg/dL

Urea Nitrogen is a waste product derived from the natural breakdown of protein in the liver. Urea is excreted in the urine after blood is filtered through the kidneys. The urea nitrogen level reflects both the metabolism of protein and the effectiveness of the kidneys in filtering blood.

Your Result : 9 mg/dL

Laboratory comments:

METHOD : UREASE/GLDH

SAMPLE TYPE : SERUM

0.94 mg/dL

Healthy

Reference Range
0.5 - 1.4 mg/dL

Creatinine

Creatinine is the most common test to assess kidney function. Creatinine levels are converted to reflect kidney function by factoring in age and gender to produce the eGFR (estimated Glomerular Filtration Rate). As the kidney function diminishes, the creatinine level increases; the eGFR will decrease.

Your Result : 0.94 mg/dL

Laboratory comments:

METHOD : JAFFE'S KINETIC

SAMPLE TYPE : SERUM

112 mL/min/1.73m2

Healthy

Reference Range
> 73
mL/min/1.73m2

eGFR

If this result is confirmed with a repeat test three or four months apart, there is evidence of impaired kidney function. Additional testing for anemia (low red blood cell count) and bone disease (called secondary hyperparathyroidism) is recommended.

Generally, a high eGFR is consistent with good kidney function. Results of 60 mL/min/1.73m2 are not reported with a numerical value because testing is not sufficiently discriminatory between health and disease at this level.

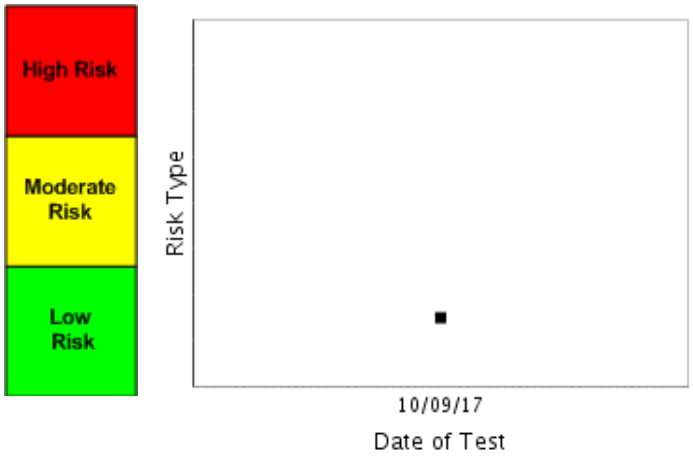
Your Result : 112 mL/min/1.73m2

Laboratory comments:

GFR is usually accepted as the best overall index of kidney function in health and disease. Normal GFR varies according to age, sex and body size. In young adults it is approximately 120-130 ml/min/1.73 m sq and declines with age. A decrease in GFR precedes the onset of kidney failure; therefore a persistently reduced GFR is a specific indication of CKD. Below 60 ml/min/1.73 m sq , the prevalence of complications of CKD increases. Chronic Kidney Disease - Epidemiology Collaboration (CKD-EPI) is a new equation to estimate glomerular filtration rate.The CKD-EPI equation more appropriately categorizes individuals with respect to long-term clinical risk compared with the MDRD Study equation, suggesting improved clinical usefulness in middle-aged population. A key advantage of CKD-EPI is that there is no upper limit for reporting eGFR as there is with the MDRD Study equation. The e GFR calculation is valid for Asians and Caucasions. For people of Africans descent please contact us for modified eGFR values.

Liver

The liver is the body's chief "chemical factory" and performs many varied and complex tasks. The liver produces certain proteins such as albumin and the proteins that are involved in blood clotting. The liver also produces about half of the total cholesterol in the body (the other half comes from food). The liver filters blood from all over the body. Enzymes in the liver neutralize harmful or toxic substances such as alcohol or medications which are then eliminated in either bile or blood. The liver also serves as a storage site for sugars and lipids, which can be released when needed.



A liver (hepatic) function panel is a blood test to check how well the liver is working. High or low levels may mean that liver damage or disease is present.

Your Risk of having a Disease associated with your Liver is: **low**

Source: Quest Diagnostics Clinical Reference Ranges

Healthy

27 U/L

Reference Range
10 - 40 U/L

Aspartate Aminotransferase (AST)

ALT and AST are enzymes produced primarily in the liver, skeletal and heart muscle. ALT is present in the liver in a higher concentration than AST and is more specific for differentiating liver injury from muscle damage.

Your result falls within the normal Reference Range and is not associated with liver disease.

Your Result : 27 U/L

Laboratory comments:

METHOD : KINETIC IFCC

SAMPLE TYPE : SERUM

Alert

57 U/L

Reference Range
9 - 46 U/L

ALT (Alanine Transaminase)

ALT is an enzyme, a type of protein that promotes chemical reactions. ALT is found in the heart, kidneys, pancreas, and muscles with the highest amounts in the liver. Accordingly, it is most often used as a test of liver function. When the liver is damaged, ALT from liver cells leaks into the blood circulation. Increases in ALT are associated with liver damage due to infections, such as the common types of viral hepatitis, and cirrhosis where the liver becomes scarred. ALT is used to detect the side effect of certain drugs that cause liver damage. ALT is often interpreted with other tests of liver function.

Your Result : 57 U/L

Laboratory comments:

METHOD : IFCC WITH NAD

SAMPLE TYPE : SERUM

Healthy

99 U/L

Reference Range
40 - 115 U/L

Alkaline Phosphatase

Into the blood circulation. Increases in alkaline phosphatase are associated with liver damage due to obstruction liver disease (for example, caused by gallstones) fatty liver (for example, caused by excessive chronic alcoholic consumption), and cancer in the liver. Alkaline phosphatase is often increased in bone disease and cancers that spread to the bones. Levels can be increased by some drugs. Alkaline phosphatase is often interpreted with other tests of liver function.

Alkaline phosphatase levels within the reference range usually mean that there is no evidence of liver or bone damage or disease. Results are often interpreted with other tests of liver function.

Your Result : 99 U/L

Laboratory comments:

METHOD : IFCC/PNPP

SAMPLE TYPE : SERUM

0.8 mg/dL

Healthy

Reference Range
< 1.3 mg/dL

Bilirubin Total

Bilirubin is the main pigment in bile and a major product of normal red cell breakdown. It is helpful in evaluating liver function, various anemias and in evaluating jaundice, yellowing of the skin.

Your Result : 0.8 mg/dL

Laboratory comments:

METHOD : DIAZO

SAMPLE TYPE : SERUM

0.2 mg/dL

Healthy

Reference Range
< =0.4 mg/dL

Bilirubin Direct

Bilirubin is the main pigment in bile and a major product of normal red cell breakdown. It is helpful in evaluating liver function, various anemias and in evaluating jaundice, yellowing of the skin.

Your Result : 0.2 mg/dL

Laboratory comments:

METHOD : DIAZO

SAMPLE TYPE : SERUM

0.6 mg/dL (calc)

Healthy

Reference Range
0.2 - 1.2 mg/dL
(calc)

Bilirubin Indirect (Calculated)

Bilirubin is the main pigment in bile and a major product of normal red cell breakdown. It is helpful in evaluating liver function, various anemias and in evaluating jaundice, yellowing of the skin.

Your Result : 0.6 mg/dL (calc)

General

The following tests cover additional organs and functions throughout the body.

Iron

96.3 mcg/dL

Healthy

Reference Range
60 - 170 mcg/dL

Iron plays many important roles in the body. Hemoglobin is the iron-rich protein present in red blood cells. Hemoglobin allows the red blood cells to carry oxygen from the lungs to all of the body tissues, and to carry carbon dioxide from the tissues back to the lungs where carbon dioxide is exhaled. Iron is best interpreted with the Total Iron Binding Capacity (TIBC).

Your Result : 96.3 mcg/dL

Laboratory comments:

METHOD : SPECTROPHOTOMETRY/TPTZ

SAMPLE TYPE : SERUM

TIBC

457 mcg/dL

Alert

Reference Range
200 - 450 mcg/dL

The Total Iron Binding Capacity or TIBC, reflects the total capacity of the blood to carry iron. Although TIBC is not interpreted on its own, it is useful in conjunction with the iron to calculate the % saturation and ferritin. In iron deficiency anemia, the iron level and the % saturation will be low while the TIBC may be elevated.

Your Result : 457 mcg/dL

% Transferrin Saturation

21 % (calc)

Healthy

Reference Range
16 - 50 % (calc)

Iron and TIBC (total iron binding capacity) are best interpretted together and with their ratio that is known as Percent Transferrin Saturation or % Saturation. In simple iron deficiency that is common throughout India, especially among women who are pregnant and growing children, iron levels are low, TIBC is increased, and the % Saturation is low (less than 20%). This can lead to anemia (insufficient number of red blood cells that carry oxygen throughout the body). In anemia of chronic disease, both the iron and TIBC are often low with the % Saturation slightly low or within the reference range. In protein depletion, iron is slightly low or within the reference range, TIBC is low, and % Saturation is slightly increased. In iron overload that may affect organ function (known as hemochromatosis), the iron level is increased, TIBC may be slightly low, and the % Saturation is greatly increased (greater than 50%). Thus by looking at iron, TIBC, and % Saturation together with other medical information, important diagnoses may be made that are often treatable.

Although the % Saturation is within the reference range, the test is best interpreted with the iron and TIBC. If all are within the reference range, there is unlikely to be iron deficiency or iron overload.

Your Result : 21 % (calc)

White Blood Count (WBC)

7.4 Thousand/uL

Healthy

Reference Range
3.8 - 10.8
Thousand/uL

White blood cells (WBCs) or leukocytes are the blood cells whose key function is to fight infections and respond to inflammation. White blood cells circulate throughout the body and also found in the lymphatic system that includes the lymph nodes and spleen. There are five major types of white blood cells that are included in the differential of the complete blood count (CBC).

A white blood cell count within the reference range often suggests the absence of infection or inflammation.

Your Result : 7.4 Thousand/uL

Healthy

3915 cells/uL

Reference Range
1500 - 7800
cells/uL

Neutrophils

Neutrophilic granulocytes ("neutrophils") are the most abundant white blood cell. Neutrophils are an essential component of the immune system. They respond to bacterial infections and other types of inflammation. In an infection, neutrophils seep out of the blood vessels in response to factors released as sites of infection. The predominant cells in pus that we observe in a wound are neutrophils.

There is a low likelihood of an acute infection because the number of neutrophils typically increases in the presence of an acute infection, especially of bacterial origin.

Your Result : 3915 cells/uL

Healthy

2612 cells/uL

Reference Range
850 - 3900
cells/uL

Lymphocytes

Lymphocytes is the second most common white blood cell. Lymphocytes are divided into larger cells that are also known as natural killer lymphocytes and smaller cells known as B and T lymphocytes. Natural killer cells are important in our immune system to defend against tumors and viral infections. They respond to alterations in the surface of tumor cells and infected cells. B and T lymphocytes adapt to infected cells by either a cellular response mediated by T lymphocytes or antibodies mediated by B lymphocytes.

There is a low likelihood of an acute infection because the number of lymphocytes typically increases in the presence of an acute infection, especially of viral origin.

Your Result : 2612 cells/uL

Healthy

607 cells/uL

Reference Range
200 - 950 cells/uL

Monocytes

Monocytes, like the other white blood cells, originate in the bone marrow, the complex spaces within many of our larger bones. Monocytes are responsible for eating (phagocytosis) of foreign intruders and killing infected cells. Monocytes are important in triggering atherosclerosis that affects the arteries and can lead to heart disease and stroke.

Your Result : 607 cells/uL

222 cells/uL

Healthy

Reference Range
15 - 550 cells/uL

Eosinophils

Eosinophilic granulocytes ("eosinophils") are part of our immune system's response to infection including from parasites. Eosinophils, along with basophils and mast cells, are important in allergic responses and in asthma.

A parasitic infection or moderate to severe allergic reaction of asthmatic symptoms are unlikely. In these medical conditions, the eosinophil count is typically increased to greater than 500 cells per microliter with the count somewhat correlated to the severity of disease.

Your Result : 222 cells/uL

44 cells/uL

Healthy

Reference Range
0 - 200 cells/uL

Basophils

Basophilic granulocytes ("basophils") are the least common of the five white blood cell types. When activated, basophils secrete or release many compounds including histamine and interleukin-4. Both compounds are important in the allergic response.

Your Result : 44 cells/uL

52.9 %

Healthy

Reference Range
40 - 75 %

Neutrophil %

Another way to express the neutrophils is as a percent of the total white blood cell count. In an acute infection, especially of bacterial origin, the number and the percent of neutrophils increases. If the white blood cell count is elevated and the percent of neutrophils is within the reference range, there may be non-specific inflammation.

Your Result : 52.9 %

35.3 %

Healthy

Reference Range
16 - 46 %

Lymphocyte %

Another way to express the lymphocytes is as a percent of the total white blood cell count. In an acute infection, especially of viral origin, the number and the percent of lymphocytes increases.

Your Result : 35.3 %

8.2 %

Healthy

Reference Range
0 - 12 %

Monocyte %

Another way to express the monocytes is as a percent of the total white blood cell count.

Your Result : 8.2 %

3.0 %

Healthy

Reference Range
0 - 7 %

Eosinophil %

Another way to express the eosinophils is as a percent of the total white blood cell count.

Your Result : 3.0 %

0.6 %

Healthy

Reference Range
0 - 2 %

Basophil %

Another way to express the basophils is as a percent of the total white blood cell count.

Your Result : 0.6 %

Healthy

0.0 /100 WBC

Reference Range
0 /100 WBC

NRBC %

Another way to express the nucleated red blood cell count is as a percent of the total white blood cell count.

Your Result : 0.0 /100 WBC

Alert

6.13 Million/uL

Reference Range
4.2 - 5.8
Million/uL

Red Blood Count (RBC)

RBC refers to red blood cells. The RBC is directly measured and when multiplied by the average size of the red blood cells (known as the MCV) equals the hematocrit. When the RBC count is out of proportion to the other red blood cell indicies there may be an underlying medical condition. In thalassemia trait, the RBC may be within range or slightly above the upper limit of the reference range. In contrast, with iron deficiency, the RBC tends to be lower.

A high RBC count most often has the same causes as an increase in the hematocrit.

Your Result : 6.13 Million/uL

Healthy

355 Thousand/uL

Reference Range
140 - 400
Thousand/uL

Platelet Count

In the strict sense, platelets are not cells because they do not contain a nucleus. Platelets circulate in the blood and are of key importance in blood clotting. A very low platelet count may lead to spontaneous bleeding or an inability to stop bleeding. A very high platelet count may cause spontaneous blood clots that can lead to heart attacks, strokes, and other adverse medical conditions.

A platelet count within the reference range doesn't guarantee that platelets will act properly. The platelets can display inadequate function (or "dysfunction"). Platelet dysfunction may be due to drugs such as aspirin or to a medical condition.

Your Result : 355 Thousand/uL

15.8 g/dL

Healthy

Reference Range
13.2 - 17.1 g/dL

Hemoglobin

The hemoglobin is a direct measurement of the amount of the most abundant protein found within red blood cells. There is a direct relationship with the hematocrit when the red blood cells are of normal size and shape. Thus when the ratio of hematocrit to hemoglobin is out of range, there may be evidence of an underlying medical condition. Blood banks typically focus on the hemoglobin rather than the hematocrit.

There is no evidence of anemia especially if other red blood cell indices are within range.

Your Result : 15.8 g/dL

81.2 fL

Healthy

Reference Range
80 - 100 fL

MCV

The MCV is the mean corpuscular volume or the average volume of red blood cells. This important red blood cell index is the diagnosis of common causes of anemia.

An MCV in the reference range may be consistent with the absence of iron deficiency and thalassemia (associated with low MCV) and folate or vitamin B12 deficiency (associated with high MCV) however sometimes combined deficiencies and medical conditions may be present that offset the impact of MCV.

Your Result : 81.2 fL

25.7 pg

Alert

Reference Range
27 - 33 pg

MCH

The MCH is the average amount of hemoglobin inside a RBC. The MCH is calculated by dividing the hemoglobin concentration by the RBC count.

A low MCHC indicates that you have a decreased level of hemoglobin in your red blood cells. Decreases can be associated with certain types of anemia, such as iron-deficiency or the hereditary disease, thalassemia

Your Result : 25.7 pg

Alert **31.7 g/dL**

Reference Range
32 - 36 g/dL

MCHC

The MCHC is the mean corpuscular hemoglobin concentration. It is the calculation of the percentage of oxygen-carrying hemoglobin in the individual red blood cells

Your Result : 31.7 g/dL

Healthy **13.6 %**

Reference Range
11 - 15 %

RDW

The RDW is the red blood cell distribution width, reflecting the variation in red blood cell size. For example, after multiple blood transfusions, there is typically increased variation in red blood cell size and high RDW values. The RDW is best interpreted with the MCV.

A RDW within the reference range coupled with a low MCV is consistent with thalassemia trait, absence of a spleen, hereditary spherocytosis, bleeding, and potentially cancer. In contrast, when the MCV is elevated, the combination with a RDW within the reference range may suggest liver disease or disturbances in red blood cell production.

Your Result : 13.6 %

Healthy **8.8 fL**

Reference Range
7.5 - 11.5 fL

MPV

The mean platelet volume (or "MPV") is a parameter that reflects platelet production. When production is high, the MPV is increased. High platelet production can be in response to increased bleeding and loss of platelets or in response to increased destruction.

The average size of the platelets is within the reference range. Platelet function can not be assessed based on the MPV.

Your Result : 8.8 fL

MENTZER INDEX

Your Result : 13.25

Laboratory comments:

METHOD - CALCULATED The Mentzer index is used to differentiate iron deficiency anemia from beta thalassemia trait. If a CBC indicates microcytic anemia, these are two of the most likely causes, making it necessary to distinguish between them. If the quotient of the mean corpuscular volume divided by the red blood cell count is less than 13, thalassemia is more likely. If the result is greater than 13, then iron-deficiency anemia is more likely.

METHOD : CELL COUNTER

Healthy

49.8 %

Reference Range
38.5 - 50 %

Hematocrit

The hematocrit or "packed cell volume" is the fractional volume of a blood specimen that is cells (red blood cells, white blood cells, and platelets). The greatest portion of the hematocrit is red blood cells that carry oxygen from the lungs throughout the body. A low hematocrit is consistent with anemia. There are many causes of anemia including deficiencies of iron, folate, and vitamin B12. Thalassemia is also associated with anemia In thalassemia there is insufficient production of one of the two protein components that form hemoglobin, the primary protein within red blood cells. In contrast, a high hematocrit may be associated with polycythemia vera, a myeloproliferative disorder of the bone marrow.

There is no evidence of anemia especially if other red blood cell indices are within range.

Your Result : 49.8 %

Healthy

8 mm/hr

Reference Range
1 - 10 mm/hr

ERYTHROCYTE SEDIMENTATION RATE

ESR results reflect changes in plasma proteins that accompany most acute and chronic Infections. Although the ESR is not "specific" or diagnostic in nature, the ESR provides screening information to establish systemic inflammation. It is also useful in monitoring the course of an existing disease. ESR results can be an index of disease severity. In many cases it can be an index of the activity of pulmonary tuberculosis. ESR may also be elevated in cases of acute and chronic infections, acute hepatitis, hypothyroidism, and hyperthyroidism. There does not seem to be direct correlation between fever and the ESR.

Your Result : 8 mm/hr

Laboratory comments:

METHOD : MODIFIED WESTERGREN (AUTOMATED)

SAMPLE TYPE : EDTA WHOLE BLOOD

< 4.2 ng/mL

Alert

Reference Range
30 - 100 ng/mL

Vitamin D, 25 Hydroxy (Total)

The sunshine Vitamin as vitamin D is popularly known as is a fact soluble vitamin that can be stored in the body. It is known to promote bone health and reduce the risk of chronic diseases like common cancers, cardiovascular diseases and autoimmune diseases.

Vitamin D occurs in two forms – Vitamin D 2 (ergocalciferol) and Vitamin D 3 (cholecalciferol). Small amounts of Vitamin D 2 are obtained from plant foods and Vitamin D 3 can be obtained from foods of animal origin like dairy and fish. But since very few foods contain Vitamin D, it is difficult to obtain adequate dose of Vitamin D only from foods. Through most of human history, sunlight has been the primary source of vitamin D, which is formed in the skin that is exposed to Ultraviolet B radiation.

Studies from different parts of India over the last decade prove that Vitamin D deficiency is widespread. This cuts across gender, class and age groups. Besides other conditions, a low Vitamin D is a risk factor for osteoporosis. A deficiency of Vitamin D should not be allowed to remain uncorrected for too long even in those who are healthy. The longer the deficiency is allowed to persist, the greater the risk of serious health complications such as chronic illness, debilitation or even early mortality.

Your Result : < 4.2 ng/mL

Laboratory comments:

METHOD : CHEMILUMINESCENCE IMMUNOASSAY

Deficiency: < 20 ng/mL Insufficiency:20-30 ng/mL Sufficiency:30-100 ng/mL Toxicity : > 100 ng/mL

This test measures total Vitamin D (25-OH Vitamin D). In the body Vitamin D occurs in two forms: Vitamin D3 (endogenous, animal origin, cholecalciferol) and Vitamin D2 (exogenous, plant origin, ergocalciferol). 25-OH Vitamin D is a precursor of the active form (1,25 Di-hydroxy Vitamin D) and levels are used to diagnose either vitamin D deficiency or excess, which may cause weakness, bone malformation, or abnormal metabolism of calcium. There is increasing evidence that Vitamin D deficiency may increase the risk of some cancers, diabetes, immune disorders, and cardiovascular disease. High levels of 25-OH Vitamin D usually reflect excess supplementation. Therapy is based on measurement of Total 25-OH Vitamin D, with levels < 20 ng/mL indicative of Vitamin D deficiency, whereas levels between 30 ng/mL to 100 ng/mL are considered normal.

409 pg/mL

Healthy

Reference Range
200 - 1100 pg/mL

Vitamin B12

Vitamin B12, one of the B vitamins, is important for the synthesis or production of DNA, our core genetic material in each cell. Deficiency of vitamin B12 is most easily seen in quickly dividing cells such as our red blood cells. Deficiencies in vitamin B12 are reflected in increased size of the red blood cells as well as decreased production leading to anemia. Folate deficiency has the same effect so it is common to measure both vitamin B12 and folate to determine if one or both may be deficient and causing the changes in the red blood cells. Vitamin B12 is important for maintaining the effective function of the nervous system. Vitamin B12 is found in animal products such as meat, shellfish, milk, cheese, and eggs. Strict vegetarians who do not eat animal products, and young children of mothers who are strict vegetarians are at increased risk for developing vitamin B12 deficiency and the associated anemia. Supplemental vitamin B12 may be advised for such individuals.

Vitamin B12 deficiency is unlikely.

Your Result : 409 pg/mL

Laboratory comments:

METHOD : CHEMILUMINESCENCE

SAMPLE TYPE : SERUM

Better Health | Better Future | Better You

Your Wellness

Hussain, There are many factors that contribute to your overall wellbeing, good health, and a better you. In the first part of this report, you are presented with your diagnostics results. However, on your journey you must also remember the simple, basic steps that add up to a healthier lifestyle, such as:

- Weight Management
- Stress Reduction
- Good Nutrition
- Regular Exercise

Hussain,here are some steps to help improve our health.

Based on your information, the below three issues are important areas that you should focus on. While you may have more than three risk factors, we believe these three are the most important for you to take action upon. We also strongly recommend that you talk to your doctor about these suggestions and steps you can take for better health in future.

Body Mass Index(BMI)

Alert

Your value:25.6

Action Plan

The Body Mass Index [BMI], which is a calculation made by using your height and weight, is generally used define if an individual is overweight. The threshold for being overweight is a BMI greater than or equal to 25 and a BMI greater than or equal to 30 is considered obese. Attempting to lose weight is really an effort to burn more calories than you take in. Even though it is important to take in fewer calories than what you burn, that does not mean that you should not eat when trying to lose weight. Many fad diets promote a very low calorie intake with no exercise, these diets may help achieve short term weight loss, but in most cases this does not lead to long term weight loss success. Healthy weight loss is a loss of 1 to 3 pounds per week and includes a regular exercise routine and a healthy diet.

Blood Pressure

Alert

Your value:150/100

Action Plan

High blood pressure is often called the silent killer because many people have it for years without recognizing that they are ill. Based on your results from the Blueprint for Wellness you have been identified as being at risk for high blood pressure. For many people, blood pressure can be controlled by loosing weight if you are overweight and becoming physically active. There are also, pharmaceutical methods for controlling high blood pressure, it is important to work closely with your physician to build a plan to control your blood pressure.

Waist Circumference(in inches)

Your Value:32.0

Hip Circumference(in inches)

Your Value:37.0

Waist:Hip ratio

Your Value:0.86

Stress

Stress can be the catalyst for high blood pressure and even heart disease. Everyone benefits from learning how to manage stressful times. Some of the signs and symptoms of stress issues are lack of concentration, irritability, anger, overeating, and sleep difficulties. There are some very simple things you can do to help manage the tough situations that cause stress, such as finding the positive side of things or lighten the difficult situation by using humor.

Nutrition

Here a couple great tips to help you practice good nutrition. 1. Keep and eye on your portions: Think about using a snack size zip lock bag when taking food to the office or giving food to children. The snack size is about right for most foods and would be considered a regular portion. 2. Stay away from processed foods: If you cannot say or read all of the ingredients in the product don't buy it.

Exercise

Having trouble fitting exercise in? Here are some tips. 1. Do you make time for your favorite TV shows: How about walking on a treadmill, biking, or lifting weights while watching your shows? 2. Make your chores count: If you mow the yard or mop the floor do your chores at a little faster pace than normal to get your heart rate up. 3. Use time with family wisely: When having family time take a walk together or plan family activities that include physical activity. This is not only good for you, but it will set a great example for the rest of your family.

Hussain, below is your Pyramid Food Intake Pattern Calorie Levels

AGES	SEDENTARY*	MODERATE ACTIVTY*	ACTIVE*
19-20	2600	2600-2800	3000
21-25	2400	2600-2800	3000
26-30	2400	2600-2800	3000
31-35	2400	2400-2600	2800-3000
36-40	2400	2400-2600	2800-3000
41-45	2200	2400-2600	2800-3000
46-50	2200	2400-2600	2800-3000
51-55	2200	2200-2400	2400-2800
56-60	2200	2200-2400	2400-2800
61-65	2000	2200-2400	2400-2800
66-70	2000	2200-2400	2400-2800
71-75	2000	2200-2400	2400-2800
76 and up	2000	2200-2400	2400-2800

Sedentary-

Participating in less than 30 minutes of moderate physical* activity in additional to daily activity.

Moderate Activity-

Participating in at least 30 minutes, up to 60 minutes a day of moderate physical activity* in addition to daily activities.
Moderate Physical Activity: Activities that use large muscle groups such as brisk walking, cycling, or swimming.

Active-

Participating in 60 or more minutes a day of moderate physical activity* in addition to daily activity.

**Calorie levels are based on the Estimated Energy Requirements and activity levels from the Institute of Medicine Dietary Reference Intakes Macronutrients Report, 2002*

Preventive Screenings

Being healthy also requires you to be responsible for taking care of yourself. According to your age and gender, there are several preventive screenings you should consider. Use this information to help you stay on the road to good health. It's also important to schedule regular checkups with your doctor.

SCREENING TESTS	AGES 18-39YR	AGES 40-49YR	AGES 50-64YR	AGES 65YR AND OLDER
Heart Health				
Blood pressure measurement *(U.S. Preventative Services Task Force, 2007)*	Screen every two years if BP < 120/80 mmHg Annually if BP 120-139/80-89 mmHg, and more frequently if warranted*	Screen every two years if BP < 120/80 mmHg Annually if BP 120-139/80-89 mmHg, and more frequently if warranted*	Screen every two years if BP < 120/80 mmHg Annually if BP 120-139/80-89 mmHg, and more frequently if warranted*	Screen every two years if BP < 120/80 mmHg Annually if BP 120-139/80-89 mmHg, and more frequently if warranted*
Lipid panel (cholesterol) test *(U.S. Preventive Services Task Force, 2008)*	USPSTF recommends screening ages 20-45 for lipid disorders if at increased risk for coronary heart disease Starting at age 20-45, if: - Family history of high cholesterol - Premature heart disease in a first-degree relative (such asa parent or sibling)† - Diabetes - Smoker or former smoker - High blood pressure - BMI > 30	USPSTF recommends screening ages 20-45 for lipid disorders if at increased risk for coronary heart disease USPSTF strongly recommends screening ages > 45 At age 45 and older if you have any of the following risk factors*: - Family history of high cholesterol - Premature heart disease in a first-degree relative (such as a parent or sibling)† - Diabetes - Smoker or former smoker - High blood pressure - BMI > 30 Otherwise every five years*	USPSTF strongly recommends screening ages > 45 At age 45 and older if you have any of the following risk factors*: - Family history of high cholesterol - Premature heart disease in a first-degree relative (such as a parent or sibling)† - Diabetes - Smoker or former smoker - High blood pressure - BMI > 30 Otherwise every five years*	USPSTF strongly recommends screening ages > 45 At age 45 and older if you have any of the following risk factors*: - Family history of high cholesterol - Premature heart disease in a first-degree relative (such as a parent or sibling)† - Diabetes - Smoker or former smoker - High blood pressure - BMI > 30 Otherwise every five years*
Diabetes				
Blood glucose test or hemoglobin A1c test *(U.S. Preventive Services Task Force, 2008)*	Screen every three years for type 2 diabetes in adults with sustained blood pressure > 135/80 mmHg In persons with BP < 135/80 mmHg*	Screen every three years for type 2 diabetes in adults with sustained blood pressure > 135/80 mmHg In persons with BP < 135/80 mmHg*	Screen every three years for type 2 diabetes in adults with sustained blood pressure > 135/80 mmHg In persons with BP < 135/80 mmHg*	Screen every three years for type 2 diabetes in adults with sustained blood pressure > 135/80 mmHg In persons with BP < 135/80 mmHg*
Prostate Health				
Digital Rectal Exam *(American Cancer Society, 2007)*	No testing recommended*	No testing recommended*	The American Cancer Society recommends that health care professionals should offer a digital rectal exam every year*	The American Cancer Society recommends that health care professionals should offer a digital rectal exam every year*
Colorectal Health				
Fecal occult blood test/fecal immunochemical test (FOBT/FIT) *(U.S. Preventive Services Task Force, 2006)*	No requirement unless high risk (for example: first-degree relatives who have had colorectal adenomas or cancer; specific inherited syndromes, the Lynch syndrome, history of colorectal polyps; chronic inflammatory bowel disease)	No requirement unless high risk (for example: first-degree relatives who have had colorectal adenomas or cancer; specific inherited syndromes, the Lynch syndrome, history of colorectal polyps; chronic inflammatory bowel disease)	USPSTF recommends screening for colorectal cancer using FOBT/FIT, sigmoidoscopy, or colonoscopy in adults, beginning at age 50 years and continuing until age 75 years FOBT/FIT: Every Year* or Colonoscopy every 10 years* or Sigmoidoscopy every 10 years*	USPSTF recommends screening for colorectal cancer using FOBT/FIT, sigmoidoscopy, or colonoscopy in adults, beginning at age 50 years and continuing until age 75 years FOBT/FIT: Every Year* or Colonoscopy every 10 years* or Sigmoidoscopy every 10 years*
Colonoscopy or sigmoidoscopy *(U.S. Preventive Services Task Force, 2006)*				
Immunization				
Flu Shot *(Centers for Disease Control and Prevention, 2006)*	Every Year*	Every Year*	Every Year*	Every Year*

* Discuss with your doctor or nurse.
USPSTF – United States Preventive Services Task Force
† Before age 55 in men or age 65 in women

Blueprint for Wellness
A Service of Quest Diagnostics

Quest Diagnostics

Your medical summary report is below. Be sure to share this information with your doctor. At Quest Diagnostics, we take our commitment to your good health far beyond the laboratory. That's why we apply our ideals of quality, service and innovation to other aspects of health care such as the Blueprint for Wellness program.

As the leader in laboratory diagnostics, we believe that diagnosis is just one step to wellness. Helping you understand and prevent disease is our priority. If you have any questions please call 1-800-102-8378 or 1-800-180-8378. Representatives are available Monday to Saturday, 8:45 am to 8:30 pm IST & 8:45 am to 7:00 pm IST on Sunday.

Medical Summary Report

Hussain	25 Years 166 Cm.	Male 70 Kg.
Blood Pressure	150.0/100.0	
Result from	Oct 9, 2017	

Heart (Cardiac) Blood Tests

	09-Oct 2017		09-Oct 2017
Alert Cholesterol Total	238	HDL Cholesterol	55
Desirable < =200 mg/dL		Desirable > 40 mg/dL	
Direct LDL Cholesterol	129		
Desirable < =130 mg/dL			

Pancreas (Diabetic) Blood Tests

	09-Oct 2017		09-Oct 2017
Alert HbA1C	6.0	eAG CALCULATED	125.5
Reference Range < 5.7 % of total Hgb		Reference Range 0 - 140 mg/dL	
Glucose, Random (Plasma)	93		
Reference Range < 140 mg/dL			

Kidney Tests

	09-Oct 2017		09-Oct 2017
BUN (Urea Nitrogen)	9	Creatinine	0.94
Reference Range 7 - 25 mg/dL		Reference Range 0.5 - 1.4 mg/dL	
eGFR	112		
Reference Range > 73 mL/min/1.73m2			

Liver

	09-Oct 2017		09-Oct 2017

Aspartate Aminotransferase (AST)	27
Reference Range 10 - 40 U/L	
ALT (Alanine Transaminase)	57
Reference Range 9 - 46 U/L	
Alkaline Phosphatase	99
Reference Range 40 - 115 U/L	
Bilirubin Total	0.8
Reference Range < 1.3 mg/dL	
Bilirubin Direct	0.2
Reference Range < =0.4 mg/dL	
Bilirubin Indirect (Calculated)	0.6
Reference Range 0.2 - 1.2 mg/dL (calc)	

General	09-Oct 2017		09-Oct 2017
Iron	96.3	TIBC	457
Reference Range 60 - 170 mcg/dL		Reference Range 200 - 450 mcg/dL	
% Transferrin Saturation	21	White Blood Count (WBC)	7.4
Reference Range 16 - 50 % (calc)		Reference Range 3.8 - 10.8 Thousand/uL	
Neutrophils	3915	Lymphocytes	2612
Reference Range 1500 - 7800 cells/uL		Reference Range 850 - 3900 cells/uL	
Monocytes	607	Eosinophils	222
Reference Range 200 - 950 cells/uL		Reference Range 15 - 550 cells/uL	
Basophils	44	Neutrophil %	52.9
Reference Range 0 - 200 cells/uL		Reference Range 40 - 75 %	
Lymphocyte %	35.3	Monocyte %	8.2
Reference Range 16 - 46 %		Reference Range 0 - 12 %	
Eosinophil %	3.0	Basophil %	0.6
Reference Range 0 - 7 %		Reference Range 0 - 2 %	
NRBC %	0.0	Red Blood Count (RBC)	6.13
Reference Range 0 - 0 /100 WBC		Reference Range 4.2 - 5.8 Million/uL	
Platelet Count	355	Hemoglobin	15.8
Reference Range 140 - 400 Thousand/uL		Reference Range 13.2 - 17.1 g/dL	
MCV	81.2	MCH	25.7
Reference Range 80 - 100 fL		Reference Range 27 - 33 pg	

Alert MCHC	31.7	RDW	13.6
Reference Range 32 - 36 g/dL		Reference Range 11 - 15 %	
MPV	8.8	MENTZER INDEX	13.25
Reference Range 7.5 - 11.5 fL			
Hematocrit	49.8	ERYTHROCYTE SEDIMENTATION RATE	8
Reference Range 38.5 - 50 %		Reference Range 1 - 10 mm/hr	
Alert Vitamin D, 25 Hydroxy (Total)	< 4.2	Vitamin B12	409
Reference Range 30 - 100 ng/mL		Reference Range 200 - 1100 pg/mL	