LONDON MEDICAL LABORATORY

Your Blood Test Results

Please find the results of your blood test. This report contains your blood test results with London Medical Laboratory doctor's review of your result, including comments on how they compare with standard reference ranges, and highlighting everything that may need further investigation or follow-up with your GP*.

Your details

Name
First name Last name

DOB
01/01/1985

Package
Well Man Profile

Test Code
tgwajmc

Sample Date

UKAS Certification

Please visit the QR code below to check our UKAS certification

21423

*It is important to note that blood tests and health checks of this nature alone are not a substitute for seeing a doctor, particularly if you are feeling unwell. You should not confirm a diagnosis or start any treatment without a consultation with a doctor or a suitably trained healthcare professional. There are many times when blood test and health check results which are out of range are insignificant but there are other times when they are not. They always need to be interpreted in the context of the rest of your health and this can only really be determined with a full clinical history and examination with a doctor.

An introduction to your blood test

Congratulations on having made the decision to invest in your wellbeing. London Medical Laboratory is pleased to provide you with this report on everything that we found in your blood test.

A blood test is an excellent way to screen for underlying health risks. The goal is to detect potential problems as soon as possible; giving you the information you need to make lifestyle changes, commit to further investigations, or start treatments so you have the best chance of living a longer, healthier, and happier life.

Your results

If your blood tests come back in the normal range, it means you are at a low risk of having the conditions you were testing for. This does not mean you will never develop these conditions in the future, just that you are at low risk at this moment in time. This is why regular checks are recommended.

If your results show you have a higher risk, it means that you may have the condition that you've been tested for. You will always need to see your doctor who will consider further tests to confirm any suspected diagnosis, or give you more information about how to directly address your risk factors. You can then be offered the necessary treatment, advice and support which can only be provided by a doctor who is able to take a fuller and more targeted history and examination than is possible with a screening health check.

Finding out about a problem or a health risk early can save lives. However, blood tests are often not conclusive in themselves. Some serious health problems will not be uncovered in blood tests and suspicions about conditions may be raised that with further investigation may turn out not to be a problem at all. There is the risk of unnecessary anxiety with any screening test but we believe it is always better to know about potential health problems as soon as possible, and a blood test has been proven to be very good at identifying a wide range of potential health problems that you may not otherwise be aware of.

If you have any questions about your laboratory tests or need more information about what your results mean, please talk to your doctor who will be able to consider your results within the context of the rest of your health and lifestyle.

Our doctors at London Medical Laboratory review the results of your blood test in this report and have provided a general explanation of what each result may mean and some advice about what you can do to improve your health. We also encourage you to discuss your results with your GP, particularly if you have any concerns or are feeling unwell in any way.

Understanding your results

Laboratory results are provided with reference ranges which are based on the normal test results of a large group of healthy people from the same age group and gender as yourself.

Sometimes, healthy people get results outside the reference range, while people with health problems can have results in the normal range. If your results fall outside the reference range, or if you have symptoms despite a normal result, you may require more testing or wish to discuss the result with your GP.

For simplicity, we have provided your results graphically, so they are easy to understand. Any result flagged amber is outside of the standard range. Normal results are in green. Please see the figure below.
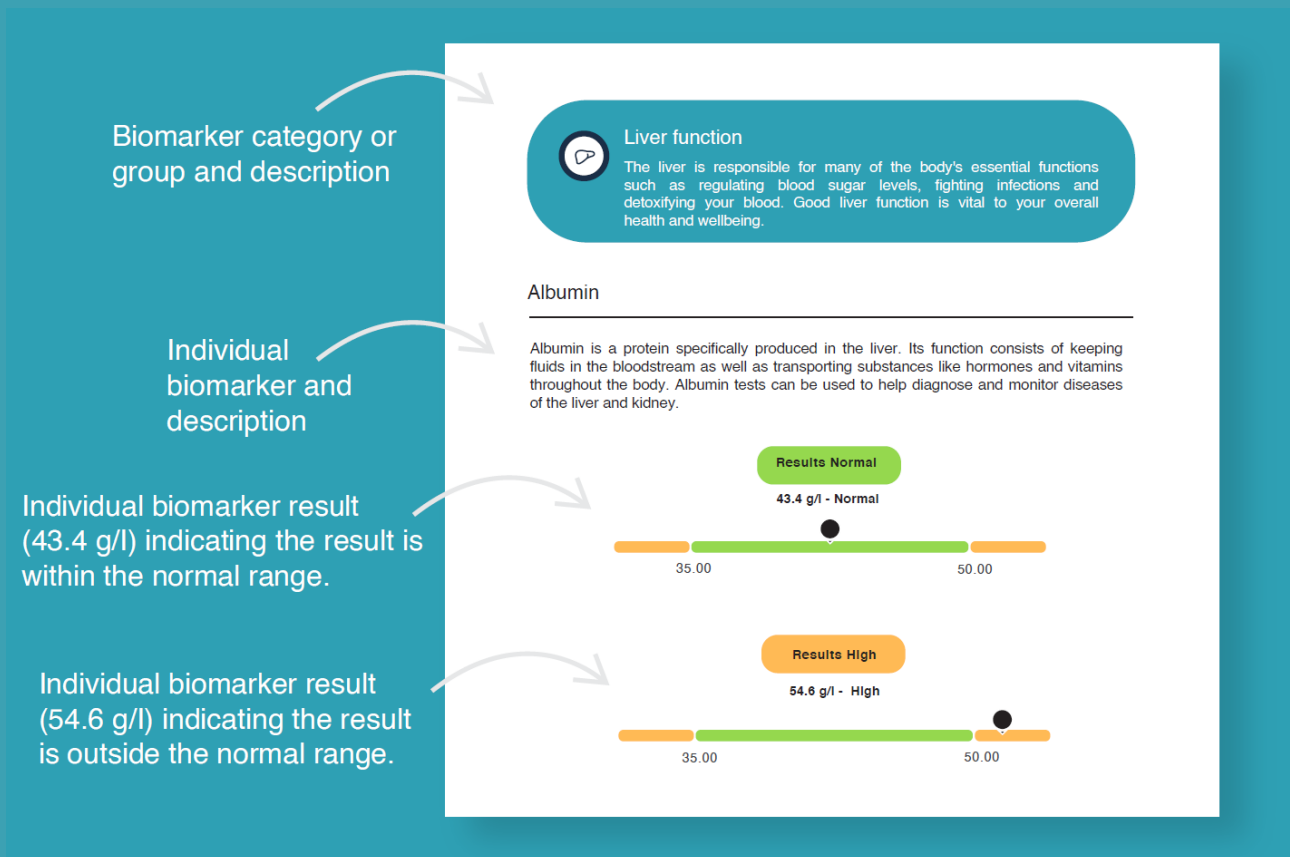
If you see 'invalid result' on any of your report pages, it's nothing to worry about. Please call our Customer Service team on 020 7183 3718 and if required we will be able to arrange another blood test appointment free of charge or post you a home testing kit which you can post back to our laboratory.

Doctor's Report

Dear Name,

Thank you for coming to us for your testing needs.

Please find your blood test results enclosed.

I've reviewed your blood test results today and some of the blood test results lie outside the normal range and one requires your immediate attention. I've summarised the main findings here, but please be aware that I am unable to be more specific as I don't necessarily have details of your medical history and all medications or supplements that you may be taking. Please do read the complete report as there is more detail about the tests and what they indicate below.

Your total protein level is slightly high, and it is not possible to know what may be causing this from a blood test alone, but in isolation, it may not be significant. There are several possible reasons for this result. For example, an infection or inflammation, a problem with your liver or auto-immune disease. If you have symptoms, please discuss this result with your GP. If not, I would advise you to repeat this test in 2 months to make sure it has normalised.

Your alanine transaminase (ALT) and aspartate aminotransferase (AST) liver enzymes are high and your gamma glutamyl transferase (gamma-GT) is very high. This could be due to hepatitis, cirrhosis (scarring) of the liver, a blocked bile duct, medications (e.g., paracetamol, anti-inflammatory drugs, antibiotics, cholesterol medications) or alcohol, amongst others. If you're not feeling well, you must reach out to your nearest A&E service right away. In case you are feeling well otherwise, I advise you to visit your GP as soon as possible to assess these findings and explore potential options for further testing and treatment.

Your iron and ferritin (a marker of iron stores) studies suggest higher than normal blood iron levels. The recent intake of iron-rich foods and/or an iron supplement commonly causes this. However, increased ferritin levels can also be due to iron overload (haemochromatosis), excess alcohol intake, liver problems, kidney problems, infection and/or inflammation. I would advise you to discuss these results with your GP in the context of your overall health.

Your total iron binding capacity and unsaturated iron binding capacity studies are high. This can occur due to not getting enough iron from your diet, blood loss and infection. I would advise you to discuss this result with your GP in the context of your overall health.

Your calcium level is slightly high. You might have no symptoms at all or might suffer from symptoms like nausea, abdominal pain, constipation, bone pains or depression. Most cases of high calcium are commonly caused by problems with your parathyroid gland, vitamin D overdosing or medications. I would advise you to discuss this result with your GP. Additionally, it would be prudent to consider a repeat test in 3 weeks to make sure it has normalised.

Your creatine kinase is high. This is most likely due to recent exercise but could also be a side-effect of certain medications amongst others. If you have not engaged in any physical activity recently, I would advise you to discuss this result with your GP.

Your urea level is lower than normal. Urea is a breakdown product of proteins. It is removed by the kidneys and leaves the body in the urine. The most likely reasons for a decreased urea level are a low protein diet, poor absorption from your gut or drinking too much water. If you are not feeling well I would advise you to see your GP to discuss this result. If you have no symptoms I would recommend you to have this test repeated in 3 weeks time to make sure it has normalised.

Your creatinine is in the lower range. This is often linked with muscle mass or the amount of muscle in your body which goes down with age or due to illness. Certain medications can also lower creatinine. I would advise you to discuss this result with your GP.

Your triglyceride level is high. This can be caused by obesity, eating too much unhealthy food, genetics, kidney issues, diabetes or an underactive thyroid (hypothyroidism), amongst others. Persistently raised levels can lead to pancreatitis and heart disease. I would advise making changes to your lifestyle in order to bring this down and have the level rechecked in 4-6 weeks (ideally when fasted).

Your overall cholesterol profile is high across most tests. If you are not already aware of this it may be sensible to see a doctor to consider ways to treat this. Lifestyle changes such as a healthy diet and exercise should be considered but there are times when you need more help and this can take the form of medication, especially if you also have other health concerns such as high blood pressure or if you're overweight.

Your total cholesterol over HDL ratio (= cardiovascular risk calculation) is still normal because your HDL (considered "good cholesterol") is high, which is good. Even though HDL cholesterol is considered cardio-protective we would still advise lifestyle changes for elevated lipid levels in general.

Below are a few lifestyle changes that might lower your lipid levels:
- Eat heart-healthy foods like foods rich in omega-3 fatty acids, increase soluble fibre into your diet, eliminate trans fats and reduce saturated fats
- Increase your daily physical activity
- lose weight if you are overweight
- Drink alcohol in moderation if you drink
- If you are a smoker: consider stopping smoking

Your vitamin B9 (folate) level is low. While it falls within the laboratory reference range, it's crucial to highlight that values below 7.9 nmol/L are generally indicative of low body vitamin B9 stores, according to UK clinical guidelines. This result suggests potential folate deficiency, which could be because you are not getting enough in your diet, which is the most common reason. It could also be because you are not absorbing it well from your gut (e.g. due to an inflamed bowel), because of medications (e.g. aspirin or oral contraceptives) or because your needs have increased. High coffee consumption (= more than 4 cups a day) can also decrease your folate levels. Therefore, I advise you to discuss this result with your GP for further evaluation and consideration of treatment. You also might consider incorporating foods rich in vitamin B9 into your diet, such as asparagus, broccoli, brown rice, brussels sprouts, chickpeas and peas. Additionally, consider rechecking your vitamin B9 level in three months with a blood test to ensure it is improving.

Your vitamin D level is deficient. This is most likely due to a lack of sunshine and/or a lack of vitamin D in your diet. Low levels can cause fatigue/tiredness, low mood, a weakened immune system and can reduce fitness. I would advise you to discuss this further with your GP as you may need a prescription-strength Vitamin D supplement.

Your vitamin B12 level is low. This could be due to many reasons but may be because you're not getting enough in your diet, or not absorbing it well from your gut or because you need more vitamin B12 than you did in the past. Animal products such as meat, eggs, and shellfish are high in vitamin B12, as well as some processed foods like cereals. Vegans, and to a lesser degree vegetarians, are at risk for low levels of vitamin B12 if they do not eat foods with added vitamins (e.g. cereals) or take a vitamin supplement. I advise you to discuss this result with your GP for further evaluation and treatment. Additionally, consider incorporating vitamin B12-rich foods in your diet and B12-fortified foods (e.g., certain soy products and select breakfast cereals) or yeast extract. Booking a follow-up blood test in three months can assist in monitoring improvements in your vitamin B12 levels.

Your testosterone level is lower than normal. It is difficult to draw any absolute conclusion after a single test result and serial testing may be required, preferably at the same time of the day and optimally around 9-10 am when testosterone is generally at its highest level. If you have symptoms (e.g., mood changes and irritability, decreased ability to exercise, fat redistribution, trouble sleeping or increased tiredness, poor concentration and short-term memory loss, amongst others), please discuss this result with your GP. If not, I would advise you to repeat the test in 3 weeks to make sure it has normalised.

It is important to note that blood tests alone are not a substitute for seeing a doctor, particularly if you are feeling unwell. You should not make a diagnosis or start any treatment without a consultation with a doctor or a suitably trained healthcare professional. They always need to be interpreted in the context of the rest of your health, and this can only really be determined with a full clinical history and examination.

I hope this has been helpful. Please let us know if there is anything else we can assist with.

Wishing you the best of health.

Dr Doctor

Dr Doctor, MBBS
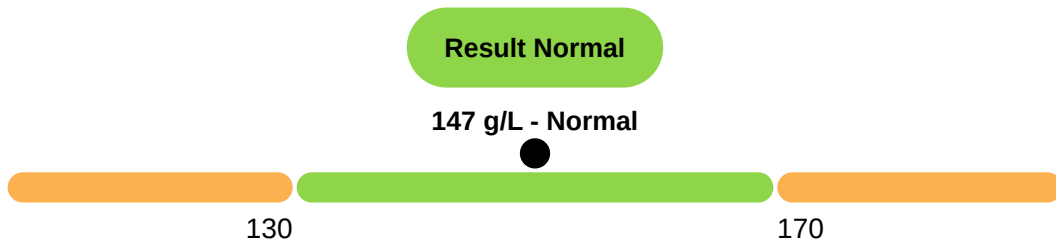London Medical Laboratory
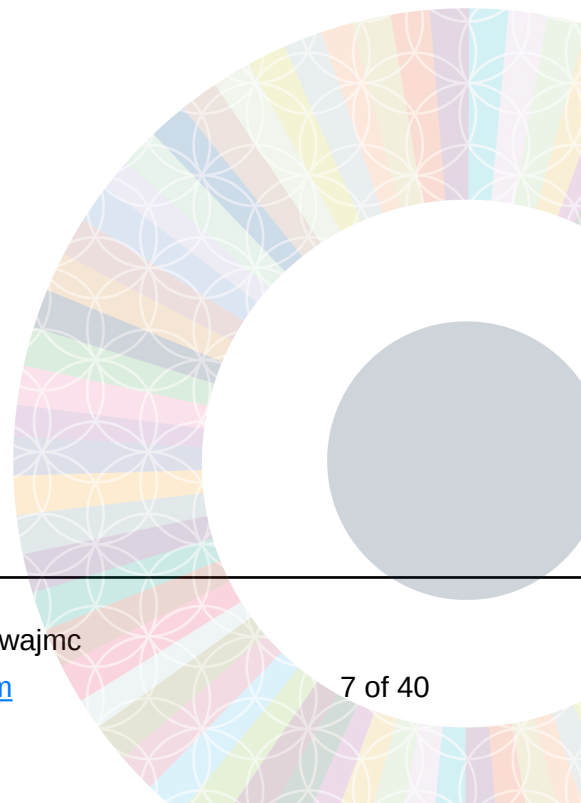
Blood test results

Full Blood Count

A full blood count can be used to check your overall health and may help detect a wide range of issues such as infection, anaemia and leukaemia.
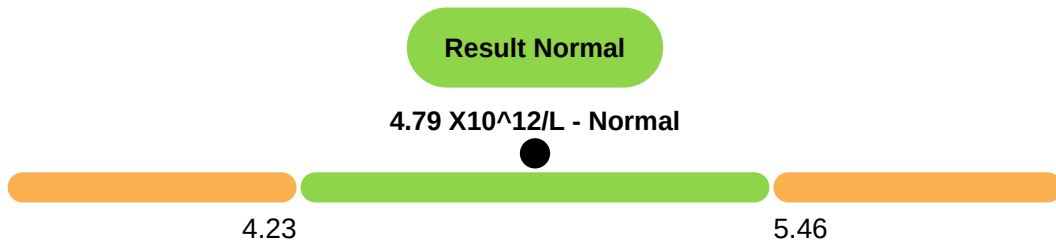
Haemoglobin

This is the protein in your blood that holds oxygen.

Result Normal

147 g/L - Normal

130   170

Comment: No comment

Red Cell Count

A red blood cell (RBC) count is a blood test that tells you how many red blood cells you have.

Result Normal

4.79 X10^12/L - Normal

4.23   5.46

Comment: No comment

Haematocrit

This test tells how much of your blood is made up of red blood cells. A low score may be a sign that you don't have enough iron, the mineral that helps your body make red blood cells. A high score could mean you're dehydrated or have another condition.

Result Normal

0.40 L/L - Normal

0.39   0.50

Comment: No comment

Mean Corpuscular Volume

Mean Cell Volume (MCV) measures the average size of your red blood cells.

Result Normal

90 % - Normal

80   100
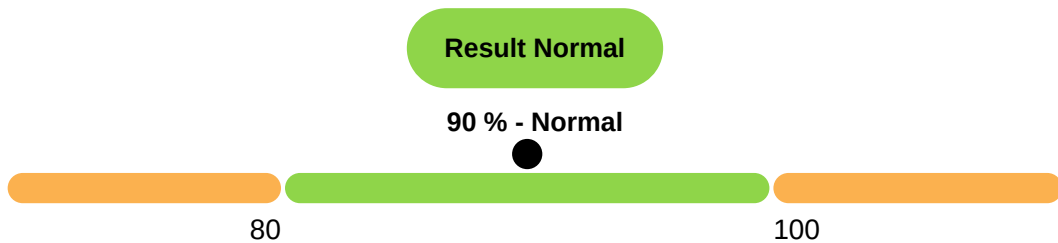
Comment: No comment

Mean Cell Haemoglobin

Mean Cell Haemoglobin is the average mass of hemoglobin (Hb) per red blood cell (RBC) in a sample of blood.

Result Normal

30.7 pg - Normal

27.0   33.5
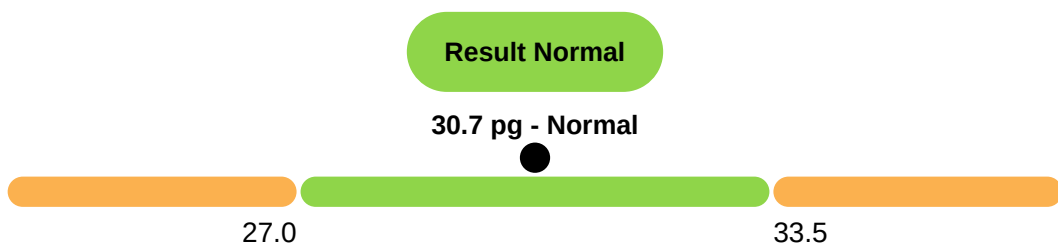
Comment: No comment

Mean Cell Haemoglobin Concentration

Mean Cell Haemoglobin Concentration is the average concentration of hemoglobin in your red blood cells.

Result Normal

341 g/L - Normal

310   365
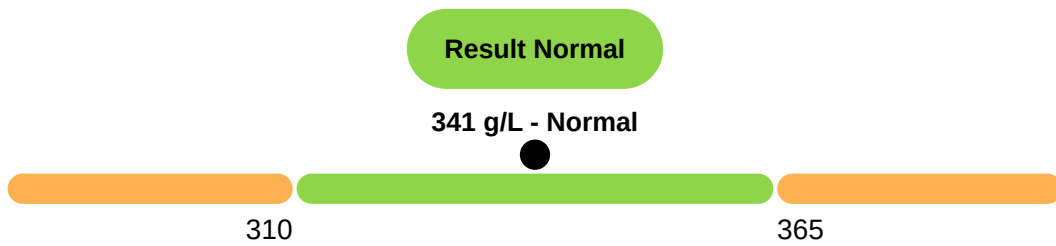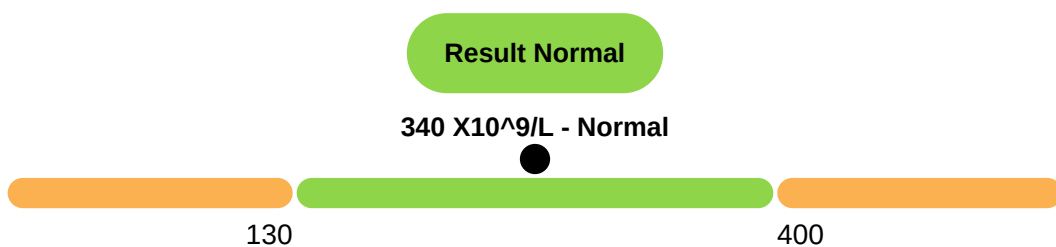
Comment: No comment

Red Cell Distribution Width

A red cell distribution width (RDW) test measures the differences in the volume and size of your red blood cells (erythrocytes)

Result Normal

12.0 % - Normal

10.0   16.0
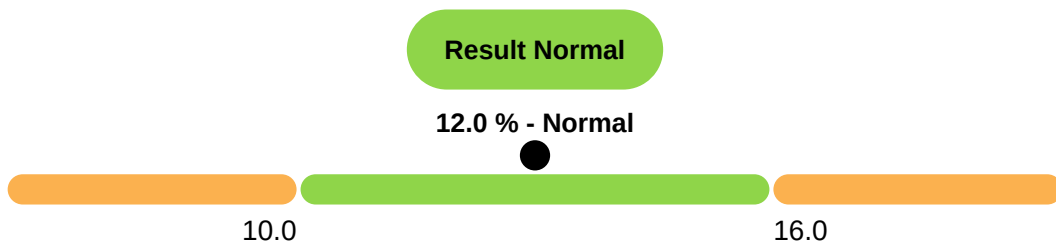
Comment: No comment

Platelet Count

A platelet count is a lab test to measure how many platelets you have in your blood. Platelets are parts of the blood that help the blood clot.
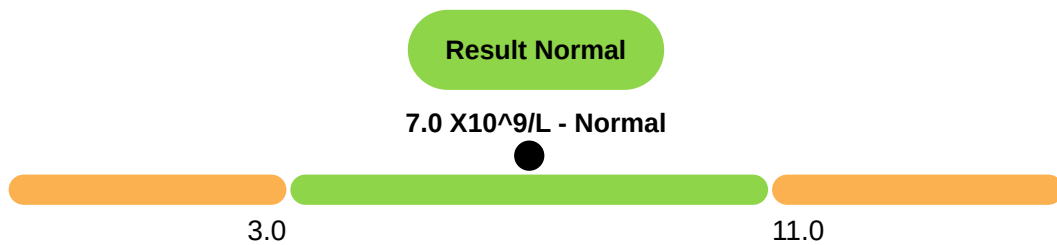
Result Normal

340 X10^9/L - Normal

130   400

Comment: No comment

Mean Platelet Volume

Mean Platelet Volume (MPV) tests show the mean number of platelets you have in your blood.

Result Normal

10.6 FL - Normal

8.0　　　　　　　13.3
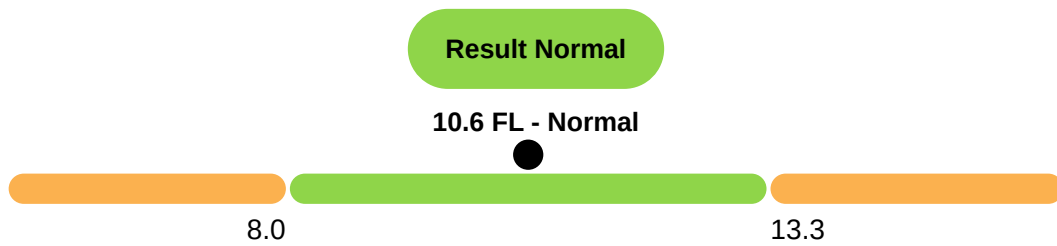
Comment: No comment

White Cell Count

White Cell Count measures the number of white cells in your blood.

Result Normal

7.0 X10^9/L - Normal

3.0　　　　　　　11.0

Comment: No comment

Neutrophils

Neutrophils are a type of white blood cell. They make up the biggest number of all kinds of white blood cells. They kill and digest bacteria and fungi to help your body fight infections and heal wounds.

Result Normal

3.4 X10^9/L - Normal

2.0　　　　　　　7.0
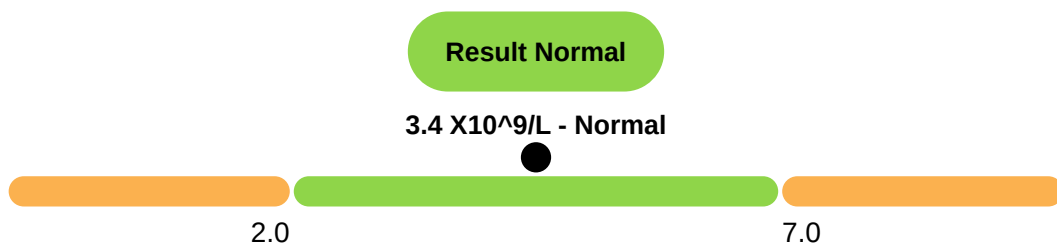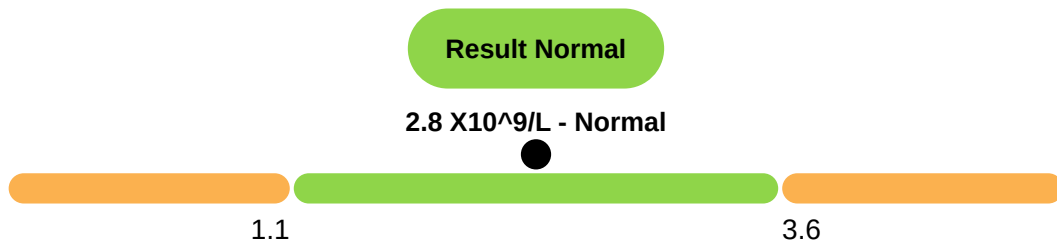
Comment: No comment

Neutrophils percent

This is a laboratory calculation based on the number of neutrophils.

49 %

Comment: No comment

Lymphocytes

Lymphocytes are a type of white blood cell. They're an important part of your immune system.

Result Normal

2.8 X10^9/L - Normal

1.1   3.6

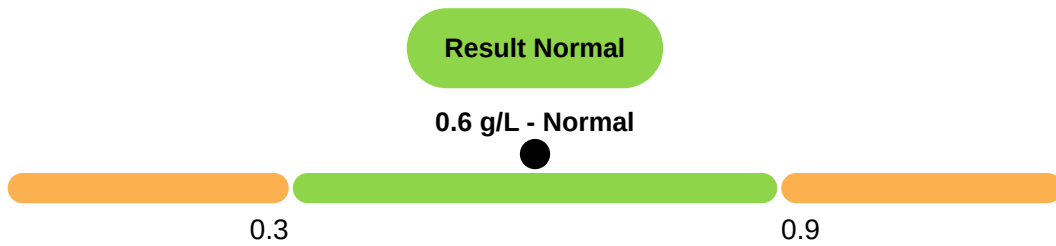**Comment:** No comment

Lymphocytes percent

This is a laboratory calculation based on the number of Lymphocytes.

40 %

Comment: No comment

Monocytes

Monocytes are a type of white blood cell in your immune system. Monocytes turn into macrophage or dendritic cells when an invading germ or bacteria enters your body. The cells either kill the invader or alert other blood cells to help destroy it and prevent infection.

Result Normal

0.6 g/L - Normal

0.3   0.9
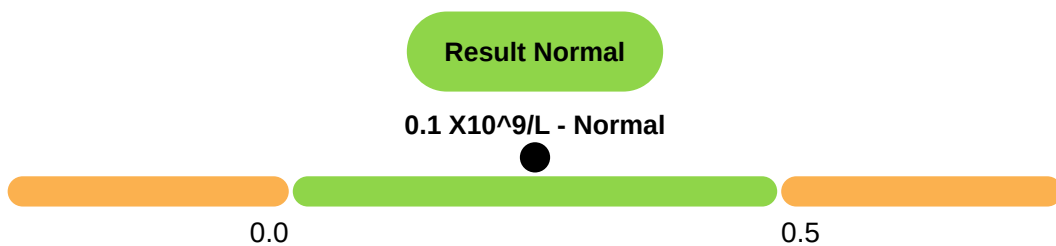
Comment: No comment

Monocytes percent

This is a laboratory calculation based on the number of monocytes as described in the section above.

9 %

Comment: No comment

Eosinophils

Eosinophils are a kind of white blood cell that helps fight disease. Eosinophils do two important things in your immune system: curb infections and boost inflammation, which can help you fight off a disease.

Result Normal

0.1 X10^9/L - Normal

0.0   0.5
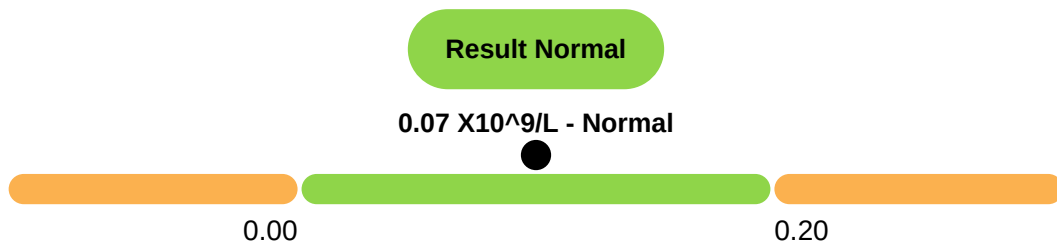
Comment: No comment

Eosinophils percent

This is a laboratory calculation based on the number of Eosinophils.

2 %

Comment: No comment

Basophils

Basophils are one of the several kinds of white blood cells you have in your body. Basophils are a part of your immune system and are created inside of your bone marrow.

Result Normal

0.07 X10^9/L - Normal

0.00   0.20

Comment: No comment

Basophils percent

This is a laboratory calculation based on the number of Basolphils.

1 %

Comment: No comment

Liver Function

The liver is responsible for many of the body's essential functions such as regulating blood sugar levels, fighting infections and detoxifying your blood. Good liver function is vital to your overall health and wellbeing.
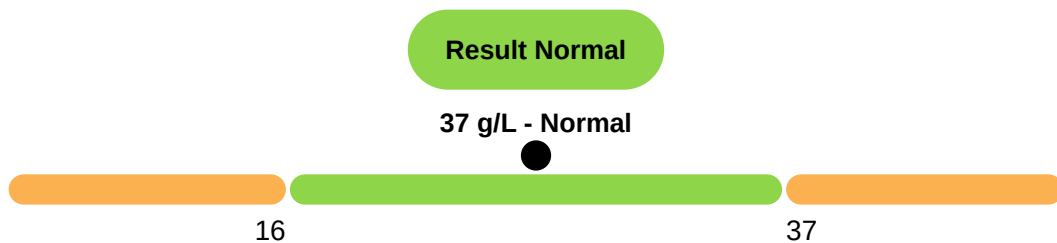
Albumin

Albumin is a protein specifically produced in the liver. Its function consists of keeping fluids in the bloodstream as well as transporting substances like hormones and vitamins throughout the body. Albumin tests can be used to help diagnose and monitor diseases of the liver and kidney.

Result Normal

48 g/L - Normal

35   50
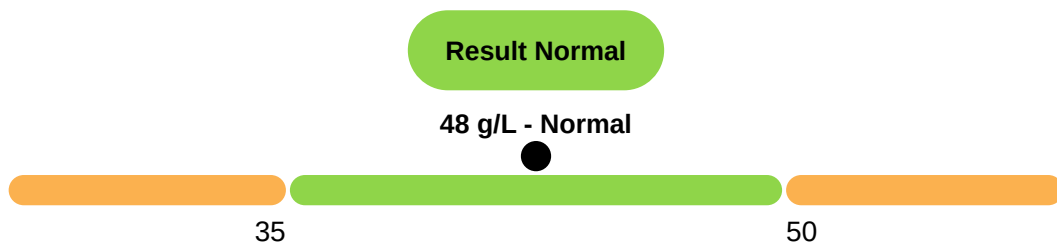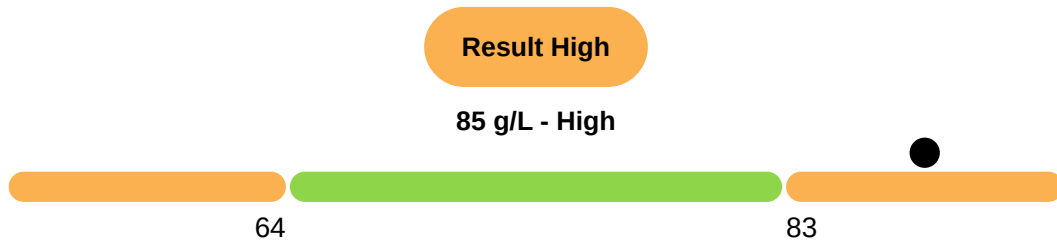
Comment: No comment

Globulin

Globulin is a protein produced in the liver by the immune system. It is important in liver function, blood clotting and fighting infections. Globulin tests can be used to diagnose conditions including liver damage or disease, kidney disease and autoimmune disorders.

Result Normal

37 g/L - Normal

16   37

Comment: No comment

Total Protein

Total Protein is the total amount of two proteins found in the serum of the blood, these are albumin and globulin. Albumin is needed to keep fluid in the bloodstream whereas globulin is an essential part of the immune system. Total protein tests are used as an indicator to there being a problem with albumin or globulin levels.

Result High

85 g/L - High

64   83

Comment: No comment

Alkaline Phosphatase

Alkaline Phosphate (ALP) is an enzyme found mostly in the liver and bone. ALP tests can be used to diagnose liver or bone disease.

Result Normal

104 u/L - Normal

40   150
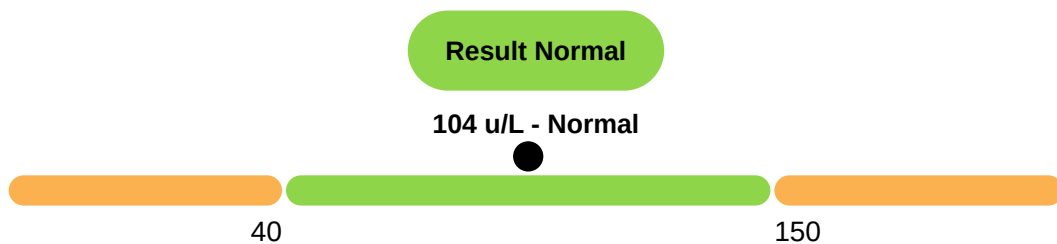
Comment: No comment

Alanine Transaminase

Alanine Transaminase (ALT) is an enzyme which can be found mostly in the liver and in small amounts in the heart, kidneys and the skeletal muscle. It is released into the bloodstream during an injury to the heart, liver, kidney and skeletal muscle. ALT tests can be used to diagnose liver disease.

Result High

120 u/L - High

56
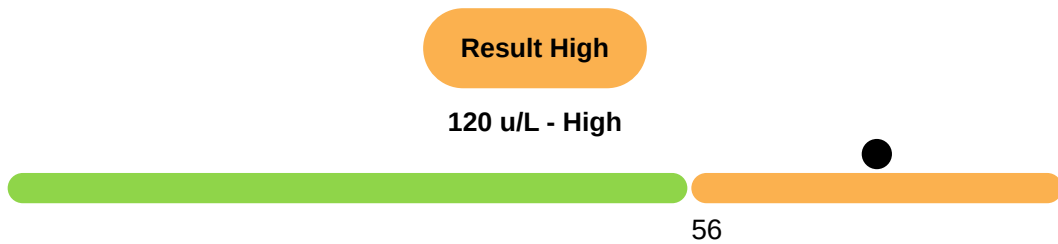
Comment: No comment

Aspartate Aminotransferase

Aspartate Aminotransferase (AST) is an enzyme produced by the liver. It is released into the bloodstream during an injury of the heart, liver and skeletal muscle. AST tests can be used to detect liver disease.

Result High

139 u/L - High

5   34
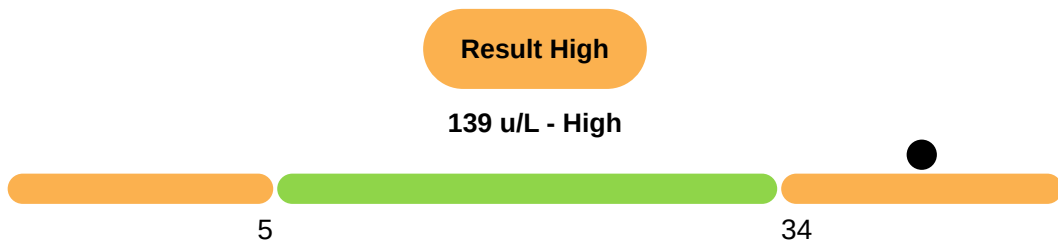
Comment: No comment

Gamma Glutamyl Transferase

Gamma Glutamyl Transferase (GGT) is an enzyme mostly found in the liver and is also present in the gallbladder, spleen, pancreas and kidney. It is a significant enzyme used in the liver metabolism of drugs and other toxins. GGT tests can be used to detect liver disease and bile duct injury.

Result High

1924 u/L - High

12   64
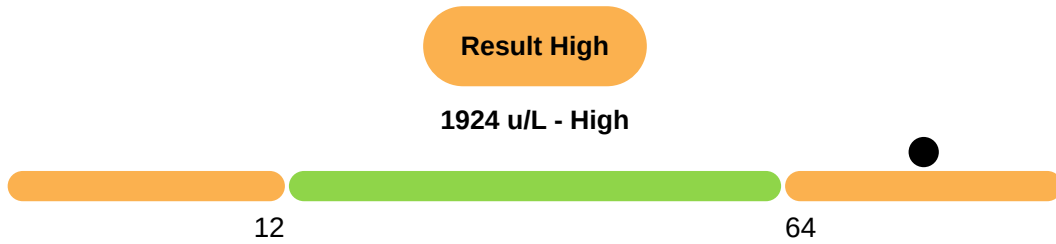
Comment: No comment

Total Bilirubin

Total Bilirubin is a test which measures the amount of bilirubin in the blood. Bilirubin can be found in bile to help digest food. It is also produced from broken down haem, which is old red blood cells that used to carry oxygen around the body. Total bilirubin tests can be used to diagnose and monitor liver diseases and certain types of anaemia.

Result Normal

10.0 umol/L - Normal

3.3   20.4
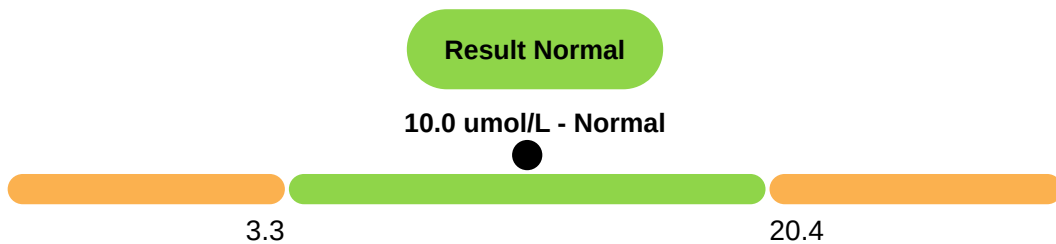
Comment: No comment

Iron Studies

Iron studies are a set of blood tests used to measure the amount of iron carried in the blood and stored in the bodies tissues. Iron deficiency can be the cause of a wide range of symptoms such as fatigue, chest pains and a shortness of breath.

Iron

Iron is an important mineral that is involved in red blood cell metabolism and oxygen transport. Iron studies are used to identify iron deficiency or overload states.

Result High

33 umol/L - High

12   31
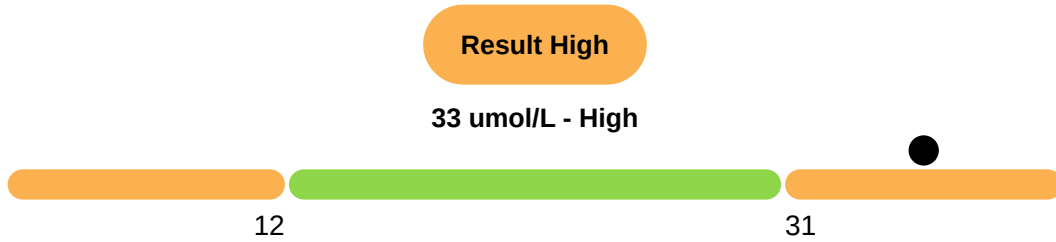
Comment: No comment

Total Iron-Binding Capacity

Total iron binding concentration measures the blood's ability to attach itself to iron and transport it around the body. If you have iron deficiency (a lack of iron in your blood), your total iron binding capacity may be high.

Result High

78 umol/L - High

41   77
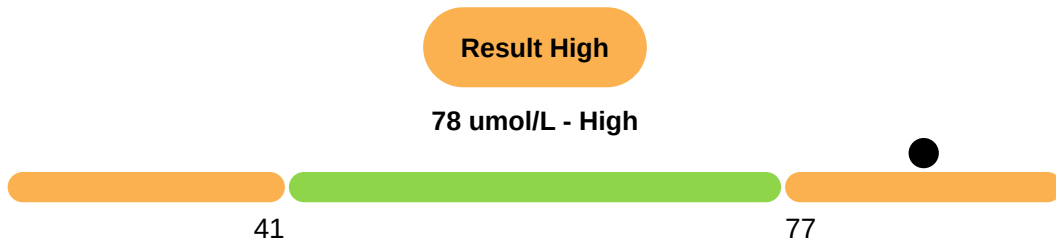
Comment: No comment

Unsaturated Iron-Binding Capacity

Unsaturated Iron Binding Concentration (UIBC) is the amount of transferrin that is reserved for the iron transportation. Iron is used for the transportation of oxygen in the blood. A high unsaturated iron binding concentration may indicate iron deficiency but it can also be increased in pregnancy and with the use of oral contraceptives. A low unsaturated iron binding capacity may occur if someone has malnutrition, inflammation, kidney or liver disease.

Result High

45 umol/L - High

12   43
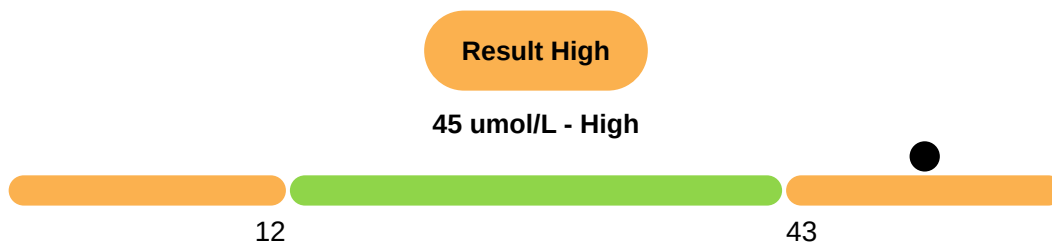
Comment: No comment

Ferritin

Ferritin is a blood protein that contains iron and it is an important measure of levels of iron storage in the body because it can provide an early sign of iron deficiency. It If your level is low, it may mean you have iron deficiency. High ferritin levels can indicate iron overload but also things like inflammation, liver disease, rheumatoid arthritis or thyroid disease.

Result High

860 ng/mL - High

30   275
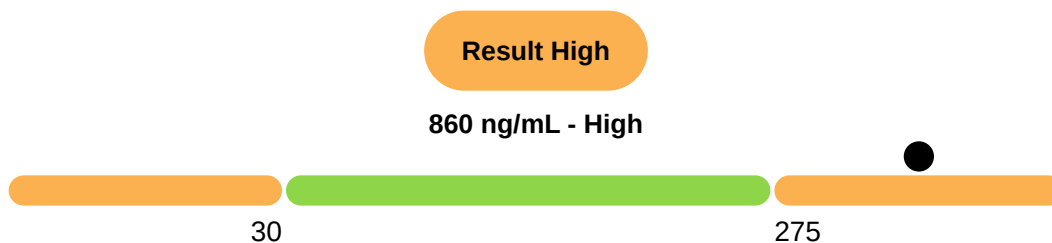
Comment: Ferritin levels below 30 ng/mL have been reported as indicative of iron deficiency anaemia.

Transferrin Saturation

Transferrin is a protein found in the blood that transports iron through the blood to various tissues such as the liver, spleen, and bone marrow. When your body's stores of iron run low, your liver produces more transferrin to get more iron into your blood. The result of this is that your transferrin becomes less saturated with iron and this is why a low level of transferrin saturation can mean that you are suffering from iron deficiency.

Result Normal

42 % - Normal

20   55
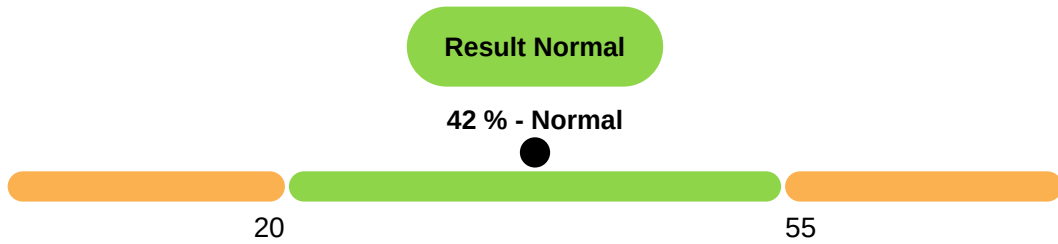
Comment: No comment

Calcium

Calcium is an important mineral which is found in the bones as well as circulating in the blood. It has a range of functions and is essential in bone formation and blood clotting. Calcium tests are used to diagnose and monitor conditions relating to the bone, heart and kidneys.

Result High

2.56 mmol/L - High

2.10   2.55

Comment: No comment

Adjusted Calcium

The adjusted calcium blood test measures the amount of free, metabolically active calcium in your blood. This is essential for healthy teeth, bones and other tissues.

Result Normal

2.40 mmol/L - Normal

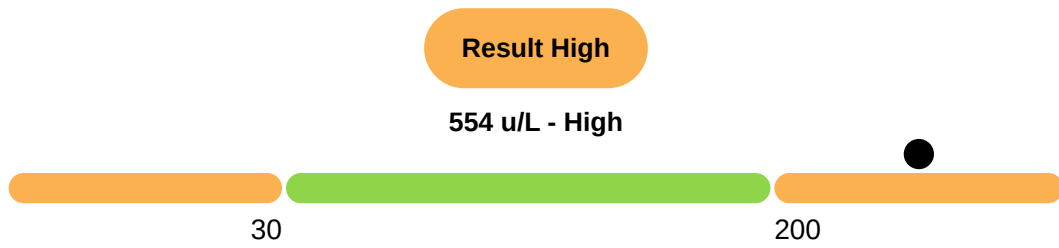2.20   2.60

Comment: No comment

Creatine Kinase

A small amount of creatine kinase in the blood is normal. Higher amounts can mean a health problem. Depending on the type and level of creatine kinase found it can be a sign of damage to the muscles, heart or brain.

Result High

554 u/L - High

30   200

Comment: No comment

Kidney Function

Your kidneys play a vital role in keeping your body functioning including the removal of waste products, releasing hormones to regulate blood pressure and controlling the production of red blood cells. A healthy kidney function is vital to your overall health and wellbeing.

Urea

Urea is a waste product of the amino acids found in proteins. It is released into the bloodstream and the kidney filters urea out of the blood and excretes it in the urine. Urea tests are used to show how well the kidneys are working as well as an indicator for diseases affecting the kidneys and liver.

Result Low

2.9 mmol/L - Low

3.0   9.2
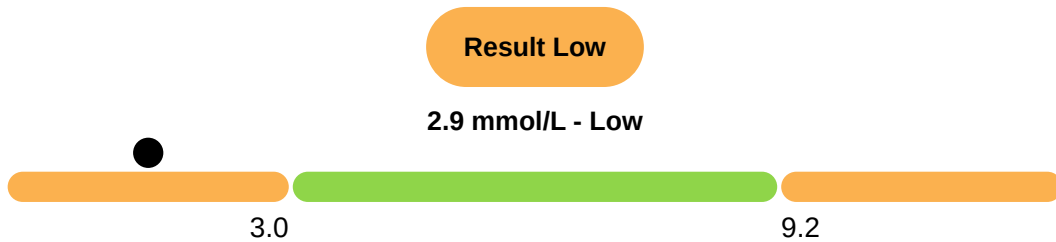
Comment: No comment

Creatinine

Creatinine is a waste product produced by the muscles during contraction. It can be found in the blood and urine as it is excreted by the kidneys. Creatinine tests are used as an indicator of whether the kidneys are working normally.

Result Low

55 umol/L - Low

64   111
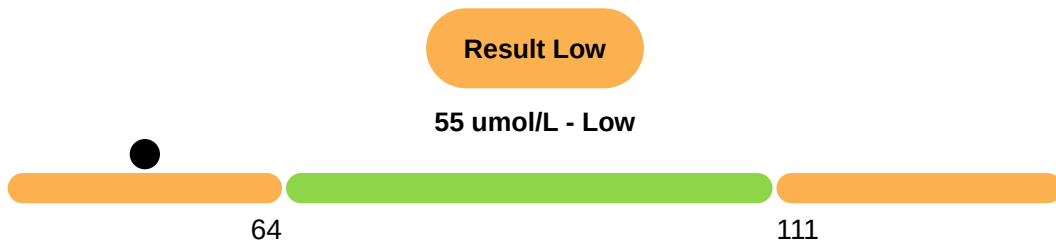
Comment: No comment

estimated Glomerular Filtration Rate

Glomerular Filtration Rate (GFR) is a measurement of glomerular function. Glomeruli are the filters in the kidney used to filter waste products from the blood. GFR tests are used to detect and monitor changes in the kidney status.

Result Normal

> 90 mL/min/1.73m2 - Normal

90
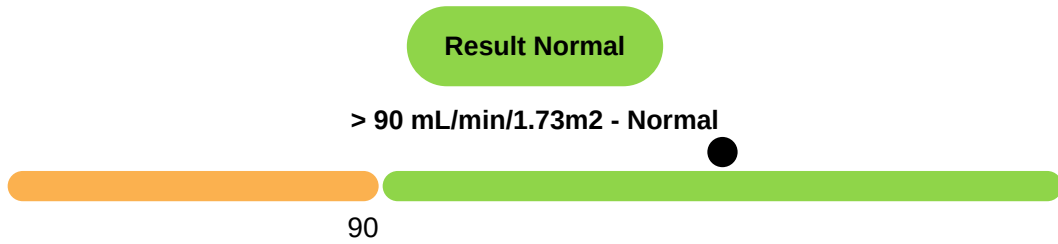
Comment: No comment

Thyroid

Thyroid disorders are common but often remain undiagnosed. If your thyroid isn't functioning properly, it can cause tiredness, mood problems and weight issues.

Free T4 (thyroxine)

Free T4 (free thyroxine) is a hormone produced by the thyroid gland. This hormone is involved in several body functions including metabolism and growth. It can be used for the diagnosis of thyroid diseases such as hypothyroidism or hyperthyroidism as well as aiding the diagnosis of female infertility problems. Free T4 is commonly tested with TSH.

Result Normal

12 pmol/L - Normal

9   19
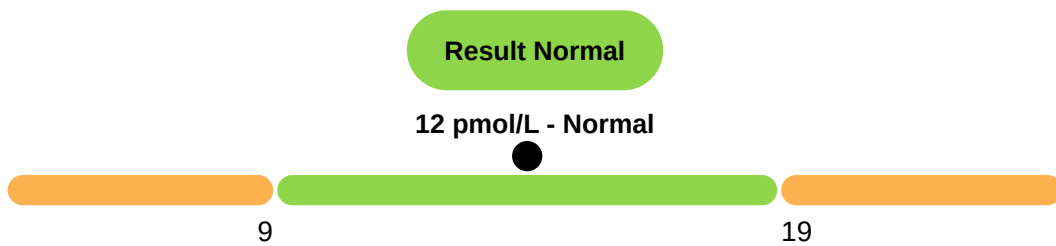
Comment: No comment

Thyroid Stimulating Hormone

Thyroid Stimulating Hormone (TSH) are made by the pituitary gland in the brain to stimulate the thyroid gland (located by the throat). The hormones that are produced are used to regulate weight, body temperature and muscle strength. Levels of TSH are measured as it is an indicator of thyroid disease and is commonly tested with Free T4 and Free T3. It will give you a very good indication of whether your thyroid is functioning normally or not which can lead to tiredness, mood problems and weight issues.

Result Normal

1.00 uIU/ML - Normal

0.35   4.94
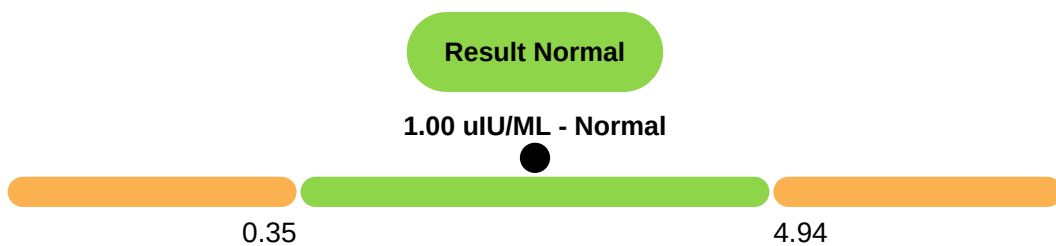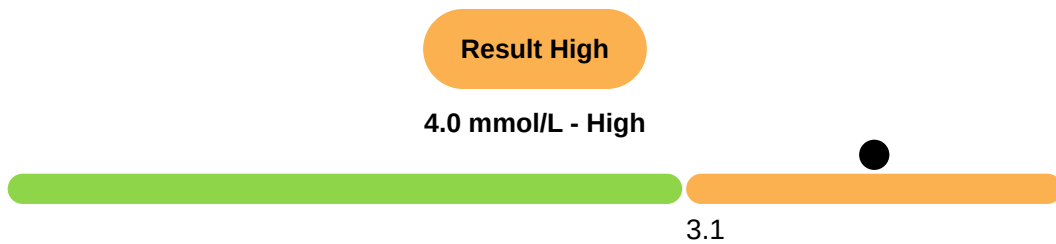
Comment: No comment

Cholesterol

High cholesterol levels can cause your arteries to become blocked - leading to coronary heart disease, heart attack or stroke. Finding out about high levels of cholesterol can help you to make the positive lifestyle and dietary changes needed to improve your chances of a long and healthy life.

Low Density Lipoprotein

Low Density Lipoprotein (LDL) is classified as the 'bad' cholesterol, this causes cholesterol build-up and blockage in the arteries. LDL tests are used to estimate the risk of developing circulatory diseases such as heart attacks and strokes.

Result High

4.0 mmol/L - High

3.1

Comment: No comment

Triglyceride

Triglyceride is a type of fat stored in the body's tissues and can derive from foods such as butter and oil. Triglyceride tests are used to investigate the lipid profile during the estimation of the risk of developing circulatory diseases such as heart attacks and strokes.

Result High

3.0 mmol/L - High

1.8
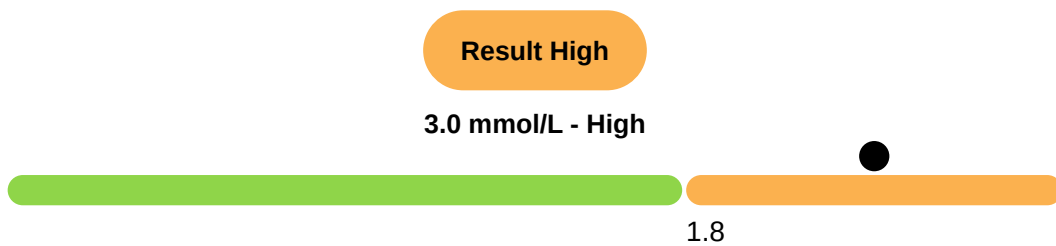
Comment: No comment

Total Cholesterol

Total Cholesterol is a measurement of the total amount of cholesterol in the blood, this includes low-density and high-density lipoprotein cholesterols. It is used to produce hormones for development, growth and reproduction. Total cholesterol tests are used to estimate the risk of developing circulatory diseases such as heart attacks and strokes.

Result High

7.18 mmol/L - High

5.20

Comment: No comment
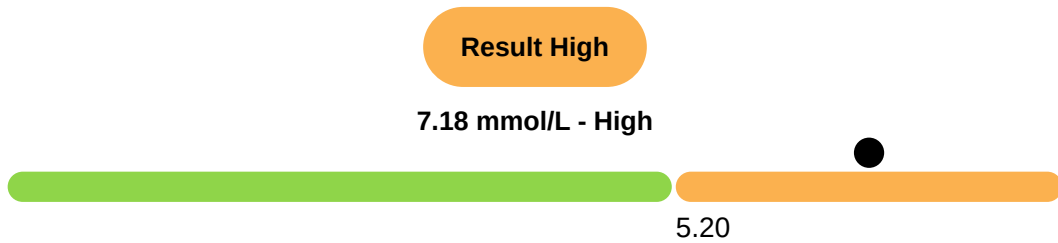
Non-HDL-Cholesterol

Non-HDL Cholesterol is the number of total cholesterols without the high-density lipoprotein (HDL), the 'good' cholesterol. Non-HDL cholesterol tests are used to investigate the lipid profile during the estimation of the risk of developing circulatory diseases such as heart attacks and strokes.
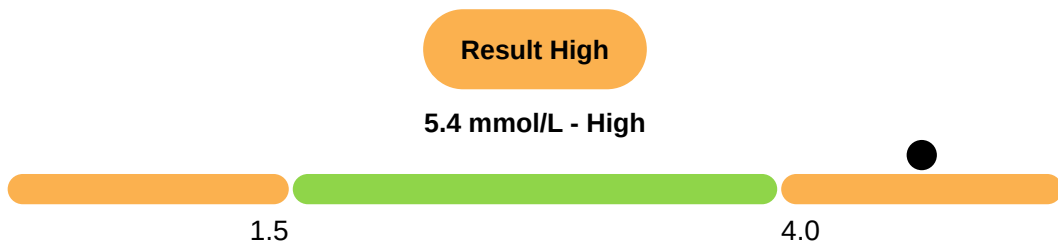
Result High

5.4 mmol/L - High

1.5   4.0

Comment: No comment

Total Cholesterol: HDL Ratio

Total Cholesterol: HDL Ratio is a calculation which indicates the ratio of 'good' cholesterol in terms of the total cholesterol in the body. HDL helps to remove cholesterol from the heart's arteries. Total cholesterol: HDL ratio tests are used to estimate the risk of developing circulatory diseases such as heart attacks and strokes.

Result Normal

4.0 mmol/L - Normal

4.1
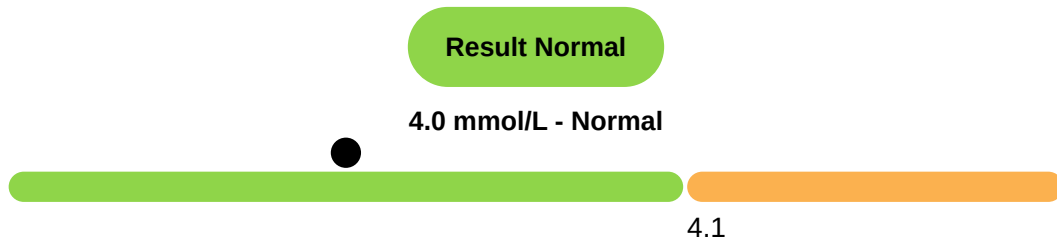
Comment: No comment

High Density Lipoprotein

High Density Lipoprotein (HDL) is a form of cholesterol which is classified as the 'good' cholesterol. Its main function is to help remove cholesterol from the heart's arteries. HDL tests are used to estimate the risk of developing circulatory diseases such as heart attacks and strokes.

Result High

1.80 mmol/L - High

1.00   1.42
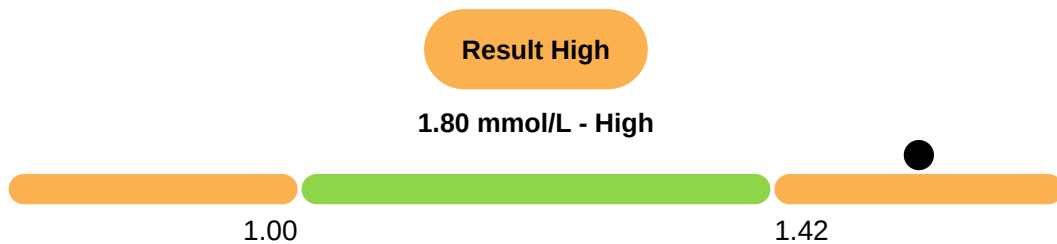
Comment: No comment

HDL percentage

This is the percentage of Total Cholesterol that consists of 'good' (HDL) cholesterol.

Result Normal

25 % - Normal

19
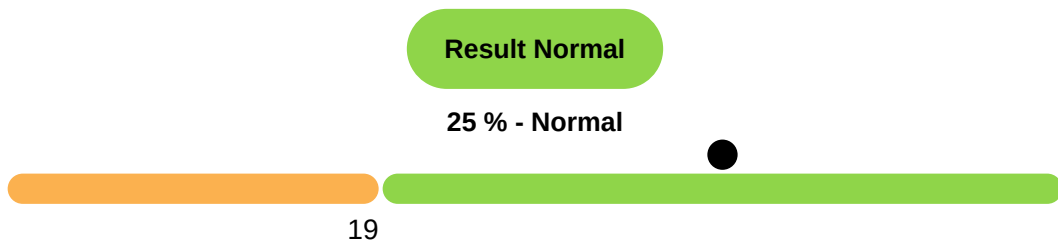
Comment: No comment

Diabetes

Checking your levels of HbA1c is a way of confirming if you have (or are at risk of developing) diabetes. Unmanaged or undiagnosed diabetes is one of the leading causes of mortality. For anyone who already knows they have diabetes, regular HbA1c checks are essential to monitor progress.

Haemoglobin A1c

Haemoglobin A1c (HbA1c) test is used to measure the average level of blood sugar over the past two to three months and is commonly used to diagnose and monitor diabetes. The sugar is called glucose which builds up in the blood and binds to the haemoglobin in the red blood cells.

Result Normal

37.4 mmol/mol - Normal

20.0   42.0
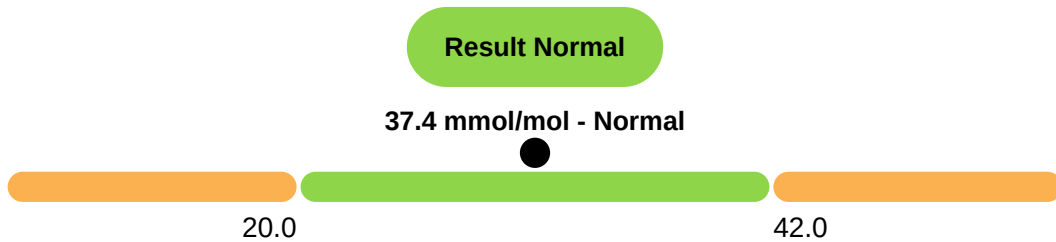
Comment: HbA1c is accepted for the diagnosis of type 2 diabetes in the UK. However it should not be used in the following context: haemoglobinopathy trait, anaemia, pregnancy and childhood. Method: Abbott Architect (Enzymatic)

Gout

Gout is a common and complex form of arthritis that can affect anyone and is caused by high levels of uric acid. Once diagnosed there are ways to manage symptoms and prevent recurrence.

Urate

Uric acid is a chemical created when the body breaks down substances called purines. Purines are normally produced in the body and are also found in some foods and drinks. Most of the time, a high uric acid level occurs when your kidneys don't eliminate uric acid efficiently. Things that may cause this slow-down in the removal of uric acid include being overweight, having diabetes, taking certain diuretics (sometimes called water pills) and alcohol.

Result Normal

0.34 mmol/L - Normal

0.21   0.42

Comment: No comment

Vitamins

Vitamins are a group of substances that our bodies need for normal cell function, growth and development. Vitamin deficiencies can be the cause of a wide range of common symptoms and conditions.

Folate

Vitamin B9 (also known as folate) is essential for DNA production and the development of red blood cells. A lack of folate can cause anaemia, increase your risk of heart disease and bowel cancer. It can increase your risk of infertility.

Result Normal

7.7 nmol/L - Normal

7.0   46.4
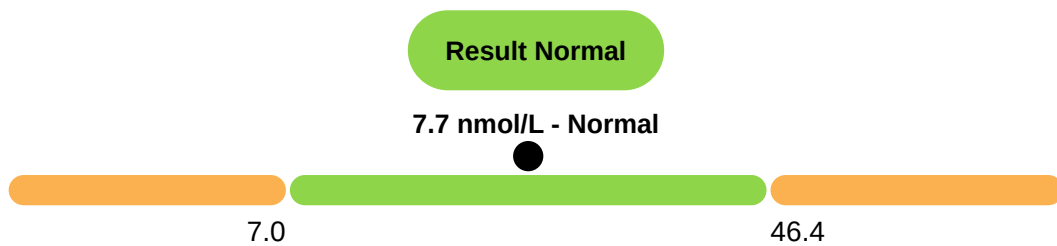
Comment: Folate deficiency is typically associated with serum levels less than 7.9 nmol/L.

Vitamin D

Vitamin D is a vitamin which is used in the regulation of calcium and magnesium absorption from the gut, it is also important for the growth and health of bones. Vitamin D comes from two sources; it can be ingested from foods and supplements or be produced in the skin once it is exposed to sunlight. Vitamin D tests are used to identify vitamin D deficiency and to monitor disease that interfere with fat absorption like Crohn's disease.

Result Low

7 nmol/L - Low

50   200
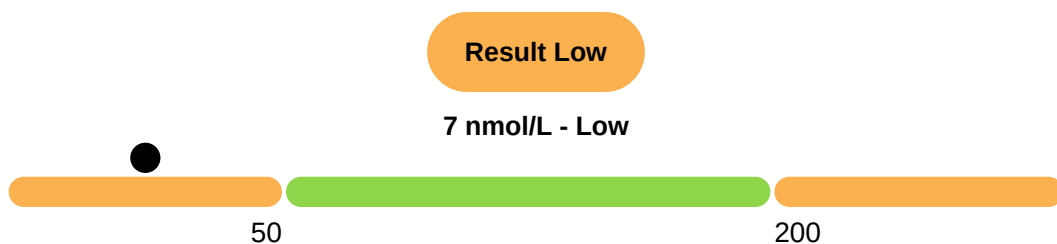
Comment: Interpretation of results: Deficient 200 nmol/L

Vitamin B12

Vitamin B12 is a vitamin which is necessary for the formation of red blood cells, tissue and cellular repairs and nerve health. It can be found in animal products such as poultry, milk and eggs. Vitamin B12 tests are used to help diagnose the cause of anaemia.

Result Low

137 pmol/L - Low

138   652
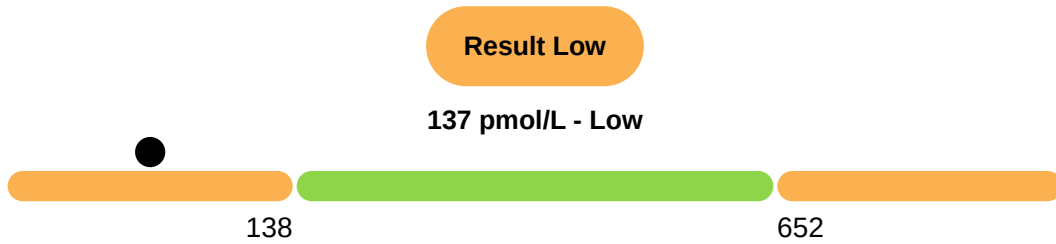
Comment: Levels above 295 pmol/L are rarely associated with B12 deficiency induced haematological or neurological disease respectively.

Hormones

Hormones are biochemical substances produced by various glands in the body, forming a part of the endocrine system. They are secreted directly into the bloodstream and travel to specific organs or tissues where they exert their effects.

Hormones act as chemical messengers and play a crucial role in regulating many physiological processes in the body.

Testosterone

Testosterone is an important sex hormone for both men and women. In men, it is made in the testicles. In women, it is made in small amounts in the ovaries. It is important for normal male sexual development. During puberty (in the teen years), testosterone helps boys develop male features like body and facial hair, a deeper voice, and muscle strength. Too much testosterone in men can cause shrinking of the testicles, impotence, an increased risk of heart attack and prostate enlargement with difficulty urinating. Too little can cause fatigue, irritability, depression, erectile dysfunction and reduced muscle mass. Combined with oestrogen, testosterone helps with the growth, maintenance, and repair of a woman's reproductive tissues and bone mass. Too much can cause acne, excess hair on the face and body, irregular periods and mood changes. Too little can cause low libido and weight gain.

Result Low

6.60 nmol/L - Low

8.33   30.18

Comment: No comment

Inflammation

Inflammation is a process by which your body's white blood cells protect you from infection from external bacteria and viruses. Checking for inflammation can help diagnose a wide range of conditions.

High Sensitivity C-Reactive Protein

C-reactive protein is a protein made by your liver. A high C-reactive protein result can be a sign of acute inflammation. It may be due to infection, injury or chronic disease.

Result Normal

4.00 mg/L - Normal

5.00
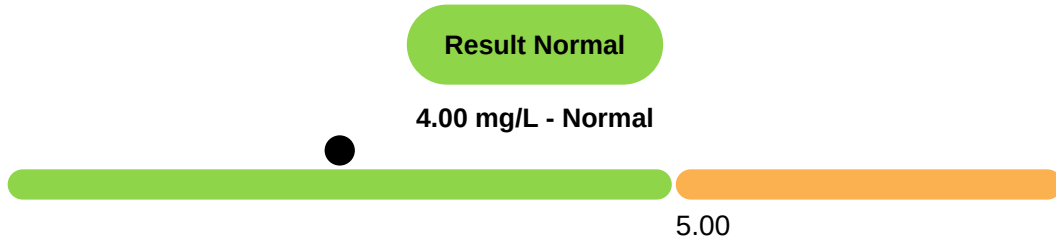
Comment: No comment

Minerals

Minerals are essential elements that our bodies need to develop and function properly. Mineral deficiency is very common and can lead to a wide range of symptoms and conditions.

Magnesium

Magnesium is a mineral found mainly in the bone, but it can also be seen in the blood. It is used for energy production, muscle contraction and for maintaining strong bones. The body regulates the magnesium levels by regulating the amount being absorbed from the intestines and the amount being excreted in the urine. Magnesium tests are used to investigate the severity of kidney problems as well as diagnosing and monitoring gastrointestinal disorders.

Result Normal

0.84 mmol/L - Normal

0.66   1.07

Comment: No comment

Results for your Doctor

This section contains all your clinical and blood test results. Your GP may prefer to see your test results in this format. The results that fall outside the standard reference ranges are highlighted in red.

Test	Result	Units	Reference Range
Full Blood Count			
Haemoglobin	**147**	g/L	130 - 170
Red Cell Count	**4.79**	X10^12/L	4.23 - 5.46
Haematocrit	**0.40**	L/L	0.39 - 0.50
Mean Corpuscular Volume	**90**	%	80 - 100
Mean Cell Haemoglobin	**30.7**	pg	27.0 - 33.5
Mean Cell Haemoglobin Concentration	**341**	g/L	310 - 365
Red Cell Distribution Width	**12.0**	%	10.0 - 16.0
Platelet Count	**340**	X10^9/L	130 - 400
Mean Platelet Volume	**10.6**	FL	8.0 - 13.3
White Cell Count	**7.0**	X10^9/L	3.0 - 11.0
Neutrophils	**3.4**	X10^9/L	2.0 - 7.0
Neutrophils percent	**49**	%	
Lymphocytes	**2.8**	X10^9/L	1.1 - 3.6
Lymphocytes percent	**40**	%	
Monocytes	**0.6**	g/L	0.3 - 0.9
Monocytes percent	**9**	%	
Eosinophils	**0.1**	X10^9/L	0.0 - 0.5
Eosinophils percent	**2**	%	
Basophils	**0.07**	X10^9/L	0.00 - 0.20
Basophils percent	**1**	%	
Liver Function			
Albumin	**48**	g/L	35 - 50
Globulin	**37**	g/L	16 - 37
Total Protein	**85**	g/L	64 - 83
Alkaline Phosphatase	**104**	u/L	40 - 150
Alanine Transaminase	**120**	u/L	< 56
Aspartate Aminotransferase	**139**	u/L	5 - 34
Gamma Glutamyl Transferase	**1924**	u/L	12 - 64
Total Bilirubin	**10.0**	umol/L	3.3 - 20.4
Iron Studies			
Iron	**33**	umol/L	12 - 31
Total Iron-Binding Capacity	**78**	umol/L	41 - 77
Unsaturated Iron-Binding Capacity	**45**	umol/L	12 - 43

Test	Result	Units	Reference Range
Ferritin	**860**	ng/mL	30 - 275

Note: Ferritin levels below 30 ng/mL have been reported as indicative of iron deficiency anaemia.

Transferrin Saturation	**42**	%	20 - 55

Muscle & Bone

Calcium	**2.56**	mmol/L	2.10 - 2.55
Adjusted Calcium	**2.40**	mmol/L	2.20 - 2.60
Creatine Kinase	**554**	u/L	30 - 200

Kidney Function

Urea	**2.9**	mmol/L	3.0 - 9.2
Creatinine	**55**	umol/L	64 - 111
estimated Glomerular Filtration Rate	**> 90**	mL/min/1.73m2	> 90

Thyroid

Free T4 (thyroxine)	**12**	pmol/L	9 - 19
Thyroid Stimulating Hormone	**1.00**	uIU/ML	0.35 - 4.94

Cholesterol

Low Density Lipoprotein	**4.0**	mmol/L	< 3.1
Triglyceride	**3.0**	mmol/L	< 1.8
Total Cholesterol	**7.18**	mmol/L	< 5.20
Non-HDL-Cholesterol	**5.4**	mmol/L	1.5 - 4.0
Total Cholesterol: HDL Ratio	**4.0**	mmol/L	< 4.1
High Density Lipoprotein	**1.80**	mmol/L	1.00 - 1.42
HDL percentage	**25**	%	> 19

Diabetes

Haemoglobin A1c	**37.4**	mmol/mol	20.0 - 42.0

Note: HbA1c is accepted for the diagnosis of type 2 diabetes in the UK. However it should not be used in the following context: haemoglobinopathy trait, anaemia, pregnancy and childhood. Method: Abbott Architect (Enzymatic)

Gout

Urate	**0.34**	mmol/L	0.21 - 0.42

Vitamins

Folate	**7.7**	nmol/L	7.0 - 46.4

Note: Folate deficiency is typically associated with serum levels less than 7.9 nmol/L.

Vitamin D	**7**	nmol/L	50 - 200

Test	Result	Units	Reference Range

Note: Interpretation of results: Deficient <25 nmol/L Insufficient 25 - 49 nmol/L Normal Range 50 - 200 nmol/L Consider reducing dose >200 nmol/L

Vitamin B12	**137**	pmol/L	138 - 652

Note: Levels above 295 pmol/L are rarely associated with B12 deficiency induced haematological or neurological disease respectively.

Hormones

Testosterone	**6.60**	nmol/L	8.33 - 30.18

Inflammation

High Sensitivity C-Reactive Protein	**4.00**	mg/L	< 5.00

Minerals

Magnesium	**0.84**	mmol/L	0.66 - 1.07