



Your Unique Health
Signature



Your Partner in Health





CID

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Name

DOB

Date of Report

Programme

Signature Platinum (Male)

Sample Collection Date

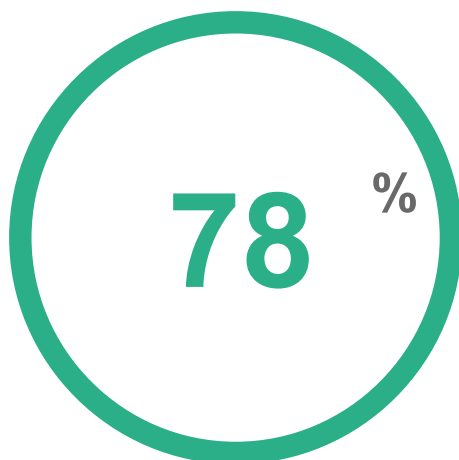
CONTENTS

	Key Findings	06
	Understanding your results	07
	Your Results of Interest	13
	Personal Health Measurements	28
	Personal Health Measurements	
	Full Blood Count	31
	Iron Status	33
	Heart Health	34
	Diabetes Health	37
	Metabolic Syndrome	38
	Kidney Health	40
	Urinalysis	43
	Liver Health	44
	Pancreatic Health	46
	Digestive Health	47
	Nutritional Health	48
	Muscle & Joint Health	50
	Bone Health	51
	Neurological Markers	52
	Allergy Evaluation	53
	Infection & Inflammation	54

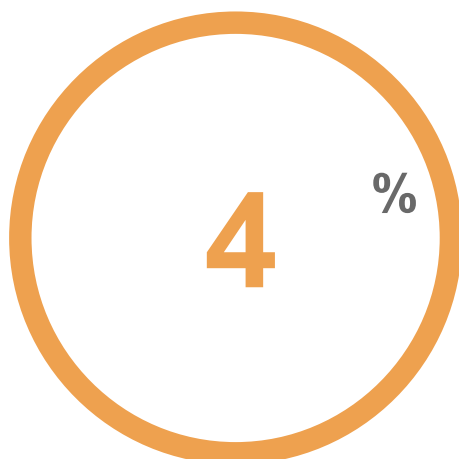
	Epstein-Barr Antibodies	58
	Autoimmune Profile	59
	Tumour Associated Markers	60
	Pituitary & Adrenal Health	61
	Thyroid Health	62
	Stress Health	63
	Prostate Health	64
	Hormonal Health	65
	Tissue Damage Markers	67
	Other	68
	Results for your Doctor	69

Health Status

Track and improve your Health Status each time you visit Randox Health.



 Green - In Range



 Amber - In Between



 Red - Out of Range



KEY FINDINGS



Your cardiovascular risk score indicates low risk of cardiovascular disease over the next ten years

Understanding Your Results



Pulse

Your pulse (heart rate) is higher than normal. This can occur with anxiety, increased physical activity or the presence of an abnormal heart rhythm. If you have any concerns or are experiencing symptoms, such as palpitations or shortness of breath, we recommend that you discuss this with a doctor.



Full Blood Count - Red Blood Cells

Within Full Blood Count, your mean cell haemoglobin concentration is low. This result can occur with iron-deficiency anaemia; however, we are pleased to report that your normal haemoglobin, haematocrit and red blood cell count results indicate that anaemia is unlikely. Please see the 'Iron Status' section of your report for more information on your iron levels.



Iron Status

Iron Status includes tests for iron, ferritin and transferrin saturation. These tests reflect iron stores and iron availability within the body. Your results show that your iron stores are normal, with no evidence of iron overload or iron deficiency.



Cardiovascular Risk Score

The cardiovascular risk score estimates your risk of developing cardiovascular disease (CVD) over the next ten years and is obtained from an algorithm incorporating various CVD risk factors, including blood pressure, cholesterol and smoking status. We are pleased to report that your overall cardiovascular risk score is less than 10% indicating low risk of developing CVD (e.g. heart disease and stroke) over the next ten years.



Heart Health - Apolipoproteins

Apolipoproteins are proteins that bind and transport fats and cholesterol through the bloodstream. They play important roles in cholesterol metabolism and are valuable tests for identifying risk of cardiovascular disease. Increased risk of heart disease is associated with deficiency of apolipoprotein A-I (apo A-I, a key component of 'good' HDL cholesterol) and excess apolipoprotein B (apo B, a key component of 'bad' LDL cholesterol). Your results show high apo A-I and optimal apo B. Furthermore, we are pleased to report that your apo B/A-I ratio, considered a stronger risk marker for heart disease than either apo A-I or apo B alone, is optimal.



Heart Health - Apolipoproteins

Your Heart Health results show high apolipoprotein CIII (apo CIII). Apo CIII is a key regulator of triglyceride metabolism. It inhibits the activity of lipoprotein lipase, an enzyme that helps break down triglycerides. Having too much apo CIII can lead to high triglycerides and is associated with insulin resistance (a risk factor for diabetes) and increased risk of heart disease. A diet high in saturated fat may increase apo CIII levels.



Heart Health - Apolipoproteins

Your Heart Health results show high apolipoprotein E (apo E). Apo E is involved in the transport and clearance of triglyceride-rich lipoproteins from the bloodstream. High levels may therefore reflect high levels of triglycerides in the blood. Studies have shown that high levels of apo E may be associated with increased risk of heart disease.



Heart Health - Cholesterol

Within Heart Health, while your total cholesterol and total cholesterol/HDL cholesterol ratio are desirable, your LDL (bad) cholesterol is high and your protective HDL cholesterol is low. Maintaining a healthy balance between good and bad cholesterol is important for preventing heart disease; therefore, you should aim to improve your LDL and HDL cholesterol levels.



Heart Health - Triglycerides

Your results show you have normal triglycerides. Triglycerides are a type of fat found in the blood. The body uses triglycerides for energy and stores unused triglycerides in fat cells for use when energy supplies are low. Regular consumption of excessive calories can lead to high triglycerides, which increases risk of developing heart disease, metabolic syndrome and fatty liver disease; therefore, it is important to keep triglycerides at a healthy level.



Diabetes Health

Your blood glucose (sugar) result is low. Usually, low blood sugar levels occur in diabetic individuals in situations where intake of carbohydrates is low or when too much diabetes medication is taken. Low blood glucose is uncommon in those without diabetes and can be associated with malnutrition, hypothyroidism (an underactive thyroid) and prolonged fasting. We recommend that you discuss your low glucose result with a doctor.



Diabetes Health - Insulin

Your Diabetes Health results show that you have a higher than normal insulin level. Insulin, a hormone produced by the pancreas, is essential for the regulation of blood glucose levels. An increased insulin level is associated with a phenomenon known as “insulin resistance”, where the body produces excess insulin but is unable to utilise it effectively. This often occurs in conjunction with obesity and metabolic syndrome and is an important risk factor for the development of type 2 diabetes. However, as noted, it is encouraging that your glucose and HbA1c levels are both optimal.



Metabolic Syndrome

Metabolic syndrome describes a cluster of risk factors that, when occurring simultaneously, substantially increase the risk of developing diabetes and heart disease. The presence of three or more of the following five factors defines metabolic syndrome: obesity, high blood pressure, high blood sugar, low HDL cholesterol and high triglycerides. Previous diagnosis of type 2 diabetes and treatment for high blood pressure, or specific treatments for low HDL cholesterol and high triglycerides also count as factors in the definition of metabolic syndrome. We are pleased to report that your results indicate that you do not have metabolic syndrome. Maintaining a healthy weight, exercising regularly and eating a healthy, balanced diet will help to prevent you from developing metabolic syndrome in the future.



Kidney Health

Within Kidney Health, your results show high cystatin C. While this can be an indication of kidney impairment, your estimated glomerular filtration rate, which is a measure of how well the kidneys are functioning, is reassuringly normal. Raised cystatin C levels can be associated with metabolic syndrome and, less commonly, may reflect increased activity of the thyroid gland. Repeat testing would be beneficial.



Kidney Health - NGAL

Your Kidney Health results show raised neutrophil gelatinase-associated lipocalin (NGAL). NGAL is a protein produced by inflammatory cells and by kidney cells. Studies show that NGAL levels rise rapidly in the blood when kidney function falls, particularly with acute kidney injury. Additionally, inflammation and chronic kidney disease can increase NGAL. Reassuringly, your estimated glomerular filtration rate (eGFR) is satisfactory; however, repeat testing would be beneficial.



Liver Health

Your Liver Health results show moderately raised aspartate aminotransferase (AST) activity; however, your alanine aminotransferase (ALT) activity is normal. Aminotransferase levels reflect liver cell injury and inflammation, which can occur with viral hepatitis (infection of the liver), non-alcoholic fatty liver disease, alcohol-related liver disease and drug-induced liver injury. Mild elevations are often due to fatty liver disease, a common finding associated with mild liver dysfunction, obesity and increased risk of diabetes. Repeat testing would be beneficial. In addition, we recommend that you discuss these results with a doctor.



Liver Health

Within Liver Health, your results show raised bile acids. Raised bile acids can indicate liver disease, particularly conditions that block the flow of bile in the liver. However, as your total and direct bilirubin levels are optimal, this is less likely.



Nutritional Health - Albumin

Your results show your albumin level is high. High albumin is unlikely to have clinical significance and typically reflects dehydration.



Nutritional Health - Minerals

Your Nutritional Health results show high magnesium, while your calcium and iron levels are normal. The body requires these minerals for a range of functions, including enzyme function, energy metabolism, red blood cell function and bone health. High magnesium can occur with hyperparathyroidism (a condition where the parathyroid glands produce excess parathyroid hormone). Parathyroid gland function also affects calcium levels; however, your calcium level is normal. Kidney disease, hypothyroidism (an underactive thyroid gland) and dehydration can also raise magnesium levels, as can intake of magnesium-containing antacid medications.



Nutritional Health - Vitamin B12 & Folic Acid

We are pleased to report that your Nutritional Health results show optimal vitamin B12 and folic acid levels. Maintaining an adequate level of both vitamins is essential for the normal development and function of red blood cells; deficiency of either can lead to anaemia and excessive tiredness.



Neurological Markers

Your Neurological Markers results show your NDKA level is high. NDKA is an enzyme found in cells throughout the body. High levels are observed in stroke patients and may reflect damage to brain tissue resulting from injury or lack of oxygen. However, your results show that other stroke and brain injury-related markers, such as GSTPi and PARK7 are normal. In addition, your GFAP result, which is a highly brain-specific protein, is normal.



Allergy Evaluation

Your Allergy Evaluation shows you have high immunoglobulin E (IgE). IgE is a type of antibody produced by the immune system following allergen exposure and is a key mediator of the allergic response. During an allergic reaction, the immune system produces allergen-specific IgE, which triggers special immune system cells to release histamine, the main cause of allergy-type symptoms, such as itching and sneezing. Measurement of total IgE does not detect specific allergies but a high level strongly indicates that an allergic response is present.



Infection & Inflammation - ASO

Antistreptolysin O (ASO) is an antibody produced by the immune system in response to infection with group A Streptococcus (strep) bacteria. Group A strep infections commonly affect the skin and throat and typically cause mild illness. Levels of ASO rise within 1-3 weeks of infection, reach a peak at around 3-5 weeks post-infection and fall to insignificance after a period of around 6-12 months. Your ASO level is high, signifying a current or recent strep infection.



Infection & Inflammation - Complement

Complement components C3 and C4 are two members of a group of proteins that together form the complement system. The complement system enhances immune responses to bacteria and viruses, helping to eliminate infectious agents and damaged cells from the body. Your Infection & Inflammation results show that you have a low level of C4, which can occur with liver disease, kidney disease and in situations where there is increased consumption of complement proteins, such as with severe infection or autoimmune disease (where the immune system mistakenly reacts against the body's own cells and tissues). However, your C3 level, which would typically be low in these situations, is normal.



Infection & Inflammation - Cytokines

Your results show raised IL-1 α and IL-1 β . These proteins are members of the interleukin-1 family of cytokines with pro-inflammatory functions such as induction of fever (a high temperature often observed with infection) and activation of the acute phase response (a mechanism whereby the immune system defends the body from infection, injury and other causes of inflammation). Your results suggest recent activation of the immune system, possibly associated with infection or underlying inflammation within the body. Repeat testing would be beneficial.



Infection & Inflammation - Growth Factors

Your Infection & Inflammation results show a high vascular endothelial growth factor (VEGF) level. VEGF is one of a family of growth factors that helps to promote the growth of new blood vessels, which helps to restore blood supply in situations affecting blood flow, such as injury or blood vessel blockage. High VEGF levels have been observed in a range of inflammatory conditions, such as inflammatory bowel disease and rheumatoid arthritis, obesity, vascular disease and in diabetes. Repeat testing would be beneficial.



Infection & Inflammation - Haptoglobin

Your Infection & Inflammation results show low haptoglobin. Haptoglobin is an acute phase protein, which means levels in the blood rise with inflammation. Liver disease and regular strenuous exercise can cause low haptoglobin, as can the use of certain medications. Another cause of low haptoglobin is haemolytic anaemia, where anaemia develops due to excessive destruction of red blood cells. Please see your Full Blood Count results for more information on anaemia.



Infection & Inflammation - MMP-9

Within Infection & Inflammation, your results show high matrix metalloproteinase-9 (MMP-9). MMP-9 is an enzyme with important roles in tissue remodelling and inflammation. Raised MMP-9 levels have been observed in a range of inflammatory states, including cardiovascular disease, diabetes and high blood pressure.

EBV

Epstein-Barr Antibodies

Your Epstein-Barr Antibodies indicate the presence of Epstein-Barr nuclear antigen (EBNA) IgG and viral capsid antigen (VCA) IgG antibodies. VCA IgG antibodies appear during Epstein-Barr infection, while EBNA IgG antibodies typically appear once infection with Epstein-Barr virus has cleared, often months after infection. Both types then remain in the bloodstream; therefore, your results indicate previous exposure to Epstein-Barr virus. Epstein-Barr virus is common and can cause glandular fever, an illness often characterised by tiredness, sore throat and a general feeling of being unwell; however, many cases occur without causing any symptoms.



Thyroid Health

Your Thyroid Health results show that your thyroid stimulating hormone (TSH), free tri-iodothyronine (FT3) and free thyroxine (FT4), all important tests of thyroid function, are optimal. Furthermore, your results indicate that you do not have anti-thyroglobulin and anti-thyroid peroxidase antibodies, which are a common cause of thyroid disease.



Prostate Health

Within Prostate Health, we measure the level of total prostate specific antigen (TPSA) present in your blood. The prostate gland produces PSA, which is usually found in small amounts in the blood. Detecting a higher than normal TPSA level can be an indication of an underlying issue with the prostate gland; however, your TPSA level is normal.



Hormonal Health

Testosterone is a key male sex hormone. It is essential for the development of male reproductive organs and helps to maintain sexual function, reproductive function and muscle mass. Testosterone circulates in the bloodstream bound to sex hormone binding globulin (SHBG) and albumin; however, only free testosterone is used by the body. A low free testosterone can lead to loss of libido, erectile dysfunction and problems with fertility. Your results show your testosterone, SHBG and free testosterone levels are optimal. These results indicate normal testosterone production and availability.



Hormonal Health - FSH & LH

Your results show low follicle stimulating hormone (FSH) and luteinising hormone (LH) levels, two hormones produced by the pituitary gland. In men, FSH promotes testicular growth and production of mature sperm, and LH stimulates testosterone production. Low levels of these hormones can occur with damage to the pituitary gland and can be associated with erectile dysfunction, loss of libido and low energy levels. We recommend that you discuss these results with a doctor.

Your Results of Interest

The results presented in this section are a summary of all the tests that are either positive or fall outside the reference ranges. What does this mean? A reference range is a term used to determine if your results are within what is considered to be the 'normal' range of the population. If your results are outside the range for a test, it does not automatically mean the result is abnormal. Depending on each person's individual medical history, current medications and ongoing conditions or diseases, the results must be interpreted in this context to fully understand what these results mean to you. Therefore, in this section those results that are either positive or fall outside the reference range are highlighted so that they can be reviewed by a GP / Consultant to understand the relevance to your health. These results will also appear again throughout the report alongside the other results for that profile.



Personal Health Measurements

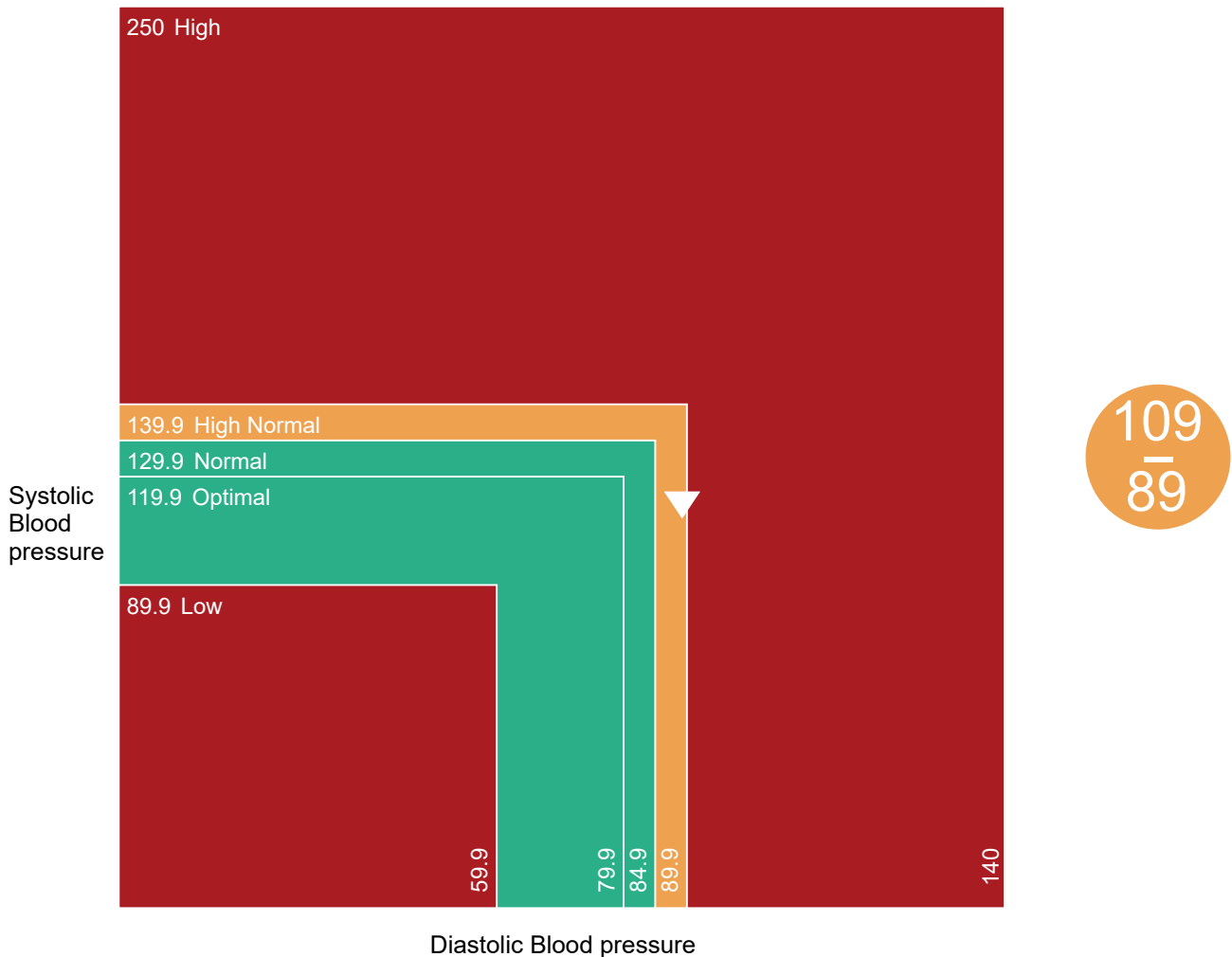
Pulse

Pulse is a measurement of the heart rate, or the number of times the heart beats per minute. Increased pulse can be associated with anxiety, intense exercise, pregnancy or an abnormal heart rhythm due to an underlying cardiac condition. Trained athletes or individuals who are physically fit can have low pulse rates. However, a low pulse rate can also be associated with an underlying cardiac condition or certain prescribed medications.



Blood pressure

Blood Pressure is a measurement of the force applied to the walls of the arteries as the heart pumps blood through the body. Systolic blood pressure refers to the pressure of blood as your heart contracts. Diastolic blood pressure refers to the pressure of blood as your heart rests between beats. High blood pressure is a significant risk factor for the development of heart disease, stroke, kidney disease and metabolic syndrome. Dehydration, bleeding, inflammation, infection, heart disease, pregnancy and various medications can cause low blood pressure. Physically fit individuals may have low blood pressure and in some individuals, blood pressure is naturally low.



Personal Health Measurements

HDL Cholesterol

HDL Cholesterol describes cholesterol that is bound to high-density lipoprotein (HDL). Lipoproteins are responsible for transporting cholesterol in the blood. HDL cholesterol is 'protective' as it removes cholesterol from the peripheral tissues and transports it back to the liver for removal from the body. A low HDL cholesterol level is undesirable and is associated with increased risk of atherosclerosis (accumulation of cholesterol and fatty material within blood vessel walls) and cardiovascular disease. Obesity, metabolic syndrome (a set of risk factors for diabetes and cardiovascular disease occurring simultaneously), uncontrolled diabetes, smoking, malnutrition and lack of exercise are associated with low HDL cholesterol levels.

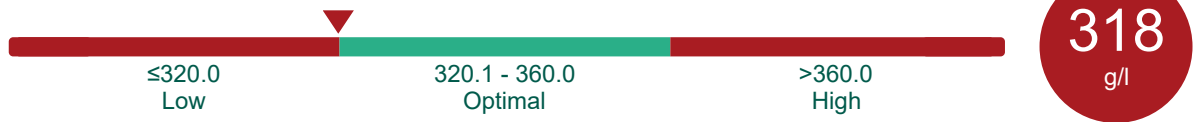




Full Blood Count

Mean Cell Haemoglobin Concentration (MCHC)

Mean Cell Haemoglobin Concentration (MCHC) is the average concentration of haemoglobin present in red blood cells. Low MCHC is a feature of conditions such as iron-deficiency anaemia, anaemia of chronic disease and thalassaemia (a group of hereditary blood disorders that impair haemoglobin production). Red blood cells that contain high concentrations of haemoglobin (increased MCHC) are observed in conditions such as hereditary spherocytosis (a rare hereditary condition in which red blood cells are ball-shaped and more fragile than usual).



Heart Health

LDL Cholesterol

LDL Cholesterol describes cholesterol that is bound to low-density lipoprotein (LDL). Lipoproteins are responsible for transporting cholesterol in the blood. LDL cholesterol deposits excess cholesterol in the walls of blood vessels, which can narrow blood vessels or lead to blockage of blood flow to organs such as the heart and brain (a process known as atherosclerosis). Increased LDL cholesterol levels are associated with increased risk of atherosclerosis, cardiovascular disease, stroke and liver disease.



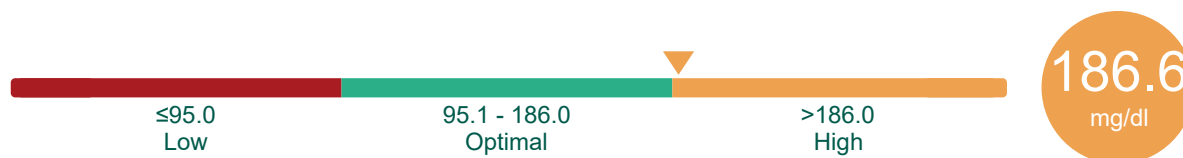
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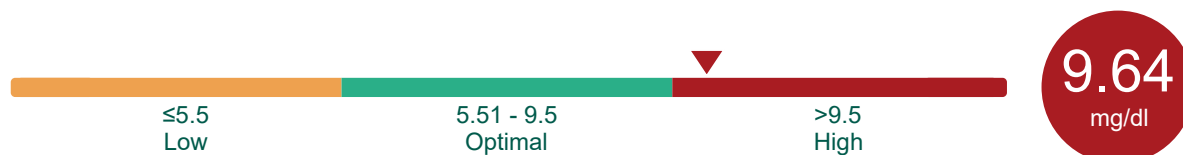
Apolipoprotein A-I

Apolipoprotein A-I is the main protein component of HDL cholesterol ('good' cholesterol). Apolipoprotein A-I (apo A-I) and HDL cholesterol transport cholesterol to the liver where it is processed and subsequently removed from the body. For this reason, a higher apo A-I level is desirable and deficiency is associated with increased risk of developing cardiovascular disease. Low apo A-I levels may be associated with uncontrolled diabetes, kidney or liver disease, obesity, smoking, high triglyceride levels or certain medications (e.g. beta-blockers). Increased levels of apo A-I may not be clinically significant but can be associated with familial hyperalphalipoproteinaemia (a rare genetic disorder), alcohol consumption, physical exercise, pregnancy, weight loss and certain prescribed drugs (such as oestrogens, oral contraceptives and statins).



Apolipoprotein CIII

Apolipoprotein CIII is a protein made by the liver and found on the surface of various lipoprotein particles (particles containing both fat and protein). Increased apolipoprotein CIII (apo CIII) levels inhibit the activity of lipoprotein lipase (an enzyme that is crucial for processing of fat) and can lead to high triglyceride levels. Apo CIII may promote atherosclerosis (accumulation of cholesterol and fatty material in blood vessel walls) and consequently increase risk of cardiovascular disease. Equally, apo CIII deficiency may be associated with increased risk of cardiovascular disease.



Apolipoprotein E

Apolipoprotein E is a protein produced by the liver that is essential for breaking down triglyceride-rich lipoproteins (particles containing both fat and protein). Apolipoprotein E (apo E) is involved in the transport of cholesterol and other lipids to the liver for removal from the body. Reduced availability of apo E impairs clearance of triglycerides from the blood and may be associated with increased risk of atherosclerosis (accumulation of cholesterol and fatty material in blood vessel walls).



High Sensitivity C-Reactive Protein (hsCRP)

High Sensitivity C-Reactive Protein (hs-CRP) is an extra sensitive test that can detect very low levels of CRP, an acute phase protein produced primarily by the liver. Acute phase proteins are proteins that increase or decrease in the blood in response to inflammation. Elevated hs-CRP indicates the presence of inflammation, which many research studies have identified as a contributing factor to the development of atherosclerosis (accumulation of cholesterol in the blood vessels), a major feature of heart disease. Therefore, increased levels of hs-CRP are associated with greater risk of developing heart disease. However, before evaluating hs-CRP in this context, consideration of infection or inflammation is essential, as many conditions can raise hs-CRP, including infection, arthritis and inflammatory bowel disease. Obesity, pregnancy and oral contraceptives may also increase hs-CRP.

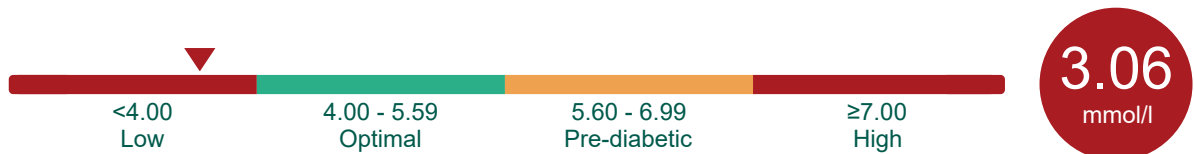




Diabetes Health

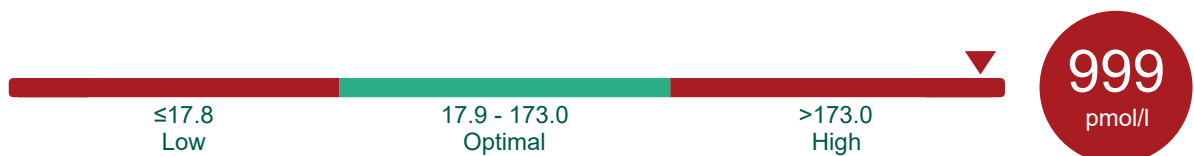
Glucose

Glucose is a simple sugar that provides energy for the body; however, having too much glucose in the blood can be damaging. High fasting blood glucose can indicate diabetes or increased risk of developing diabetes, and levels are often higher than normal in people with metabolic syndrome (where multiple risk factors for heart disease and type 2 diabetes occur simultaneously). High levels can also occur with kidney disease, hyperthyroidism (an overactive thyroid) and with some medications. Low blood glucose can occur in people with diabetes when they take too much diabetes medication. In those without diabetes, low blood glucose can occur with hypothyroidism (an underactive thyroid), liver disease and starvation. Other causes can include insulinoma (a rare tumour of the pancreas that produces excessive insulin) and dysfunction of the pituitary or adrenal glands; however, these conditions are rare.



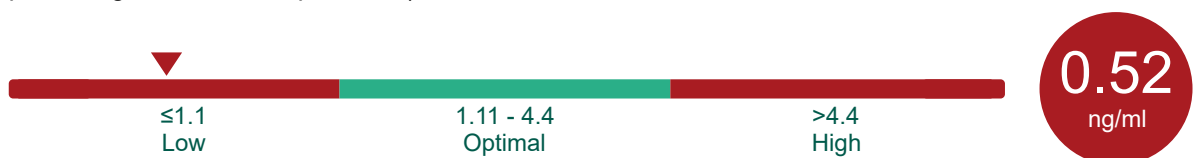
Insulin

Insulin is a hormone produced by the pancreas that is essential for regulation of blood glucose levels. Increased insulin levels are associated with insulin resistance, which is a feature of type 2 diabetes and metabolic syndrome. An elevated insulin level may also be associated with obesity, hypoglycaemia (low blood glucose), insulinoma (a rare insulin-producing tumour of the pancreas) or Cushing's syndrome (a rare condition in which the adrenal glands are overactive). Decreased insulin levels may be associated with hypopituitarism (a rare condition in which the pituitary gland is underactive), chronic pancreatitis (inflammation of the pancreas) and type 1 diabetes.



C-peptide

C-peptide is released from the pancreas to the bloodstream during production of insulin. C-peptide is a useful marker of insulin production and may aid the evaluation of individuals with hypoglycaemia (low blood sugar) or metabolic syndrome (a set of risk factors for diabetes and cardiovascular disease occurring simultaneously). Elevated C-peptide levels may be associated with insulin resistance (a key feature of type 2 diabetes), pregnancy, low potassium levels, kidney failure and rare conditions such as Cushing's syndrome (overactive adrenal glands) and insulinoma (an insulin-producing tumour of the pancreas).





Metabolic Syndrome

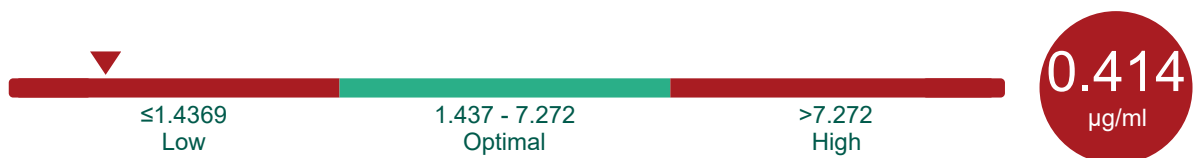
Diastolic Blood pressure

Diastolic Blood Pressure {Metabolic Syndrome} is a measure of the pressure in the blood vessels when the heart rests between contractions and refills with blood. According to the National Cholesterol Educational Program (NCEP) Adult Treatment Panel III (ATP III), diastolic blood pressure measurements equal to or greater than 85 mmHg are associated with metabolic syndrome. Additionally, individuals currently receiving treatment for high blood pressure are at risk of metabolic syndrome irrespective of blood pressure measurement.



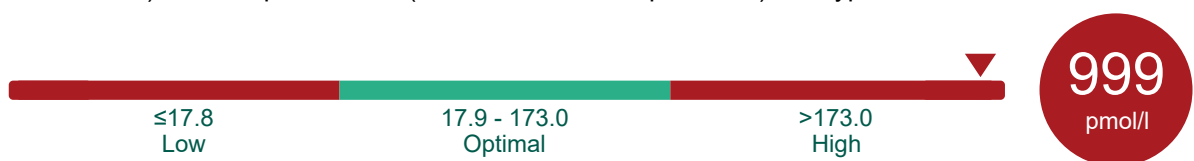
Adiponectin

Adiponectin is a hormone produced exclusively by adipose (fat) tissue and is involved in the regulation of glucose levels and fat metabolism. Decreased adiponectin levels may be associated with obesity, type 2 diabetes and increased risk of cardiovascular disease or metabolic syndrome (a set of risk factors for cardiovascular disease and type 2 diabetes occurring simultaneously). Increased adiponectin levels may provide protection against obesity-related cardiovascular diseases and metabolic syndrome. Elevated levels of adiponectin may also be associated with inflammation, as evidence suggests adiponectin has both pro and anti-inflammatory properties.



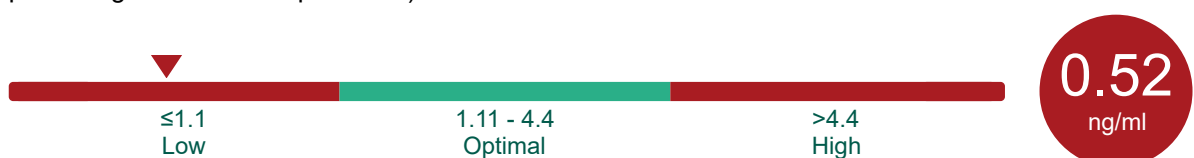
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C-peptide

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High Sensitivity C-Reactive Protein (hsCRP)

High Sensitivity C-Reactive Protein (hs-CRP) is an extra sensitive test that can detect very low levels of CRP, an acute phase protein produced primarily by the liver. Acute phase proteins are proteins that increase or decrease in the blood in response to inflammation. Elevated hs-CRP indicates the presence of inflammation, which many research studies have identified as a contributing factor to the development of atherosclerosis (accumulation of cholesterol in the blood vessels), a major feature of heart disease. Therefore, increased levels of hs-CRP are associated with greater risk of developing heart disease. However, before evaluating hs-CRP in this context, consideration of infection or inflammation is essential, as many conditions can raise hs-CRP, including infection, arthritis and inflammatory bowel disease. Obesity, pregnancy and oral contraceptives may also increase hs-CRP.



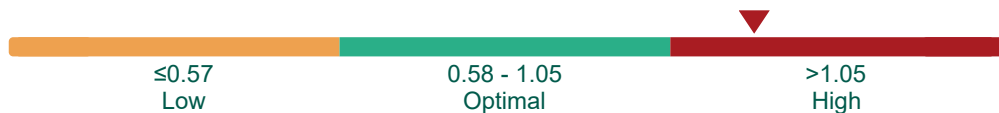
2.42
mg/l



Kidney Health

Cystatin C

Cystatin C is a relatively small protein, produced by many cell types of the body. The glomeruli of the kidneys filter cystatin C from the blood at a rate referred to as the glomerular filtration rate (GFR). Cystatin C levels in the blood should remain relatively constant if the kidneys are working efficiently and GFR is normal. If the kidneys are damaged or diseased, the GFR will decrease and cystatin C levels can rise. Elevated cystatin C levels may also be associated with an increased risk of metabolic syndrome (a set of risk factors for diabetes and cardiovascular disease occurring simultaneously), heart disease, heart failure and stroke. Cystatin C levels are sensitive to changes in thyroid function. Levels may be lower in hypothyroidism (an underactive thyroid gland) and greater in hyperthyroidism (an overactive thyroid gland). Therefore, when interpreting a cystatin C result, it is important to evaluate any underlying thyroid dysfunction.



1.09
mg/l

Magnesium

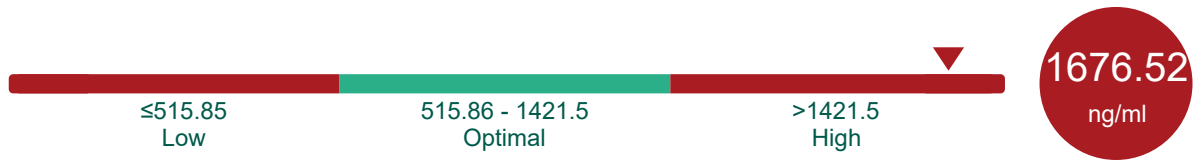
Magnesium is a mineral that is essential for energy and protein production, muscle contraction and nerve function, and is important for the activity of many enzymes. Magnesium levels are regulated by how much is absorbed from food by the intestine and how much is removed by the kidneys. Increased magnesium levels may be associated with kidney failure, hypothyroidism (an underactive thyroid gland), hyperparathyroidism (an overactive parathyroid gland), dehydration, Addison's disease (a rare disorder in which the adrenal glands are underactive) and ingestion of magnesium-containing antacids or laxatives. Decreased magnesium levels (hypomagnesaemia) may be associated with chronic kidney disease, malnutrition, malabsorption disorders (conditions that affect the ability of the intestine to absorb nutrients) hypoparathyroidism (an underactive parathyroid gland), uncontrolled diabetes or alcoholism.



1.764
mmol/l

Neutrophil Gelatinase-Associated Lipocalin (NGAL)

Neutrophil Gelatinase-Associated Lipocalin (NGAL) is a protein found in many cells and tissues, including neutrophils (a type of white blood cell) and kidney tubules. In healthy individuals, NGAL is present at very low levels in blood and urine. However, during acute kidney injury, NGAL levels rise rapidly. Acute kidney injury, defined by a rapid decline in kidney function, can result from damage caused by inflammation, obstruction of urine or ischaemia (a lack of blood and oxygen supply to tissues).



Fatty Acid Binding Protein – 1 (FABP-1)

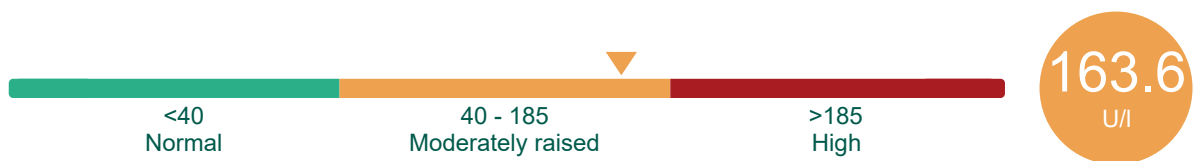
Liver-type Fatty Acid Binding Protein (FABP-1) {Kidney Health}, is a protein involved in the transport of fatty acids. FABPs help to provide energy to cells and may have antioxidant properties, helping to prevent damage to cells caused by oxidative stress. Despite being named liver-type FABP, FABP-1 is not limited to liver tissue and is also present in tubule cells of the kidneys. Evidence indicates that levels of FABP-1 in the blood rise through the early stages of chronic kidney disease (CKD), a condition characterised by the gradual loss of kidney function, commonly associated with prolonged high blood pressure and diabetes. Therefore, testing for FABP-1 can help with the early identification of CKD.



Liver Health

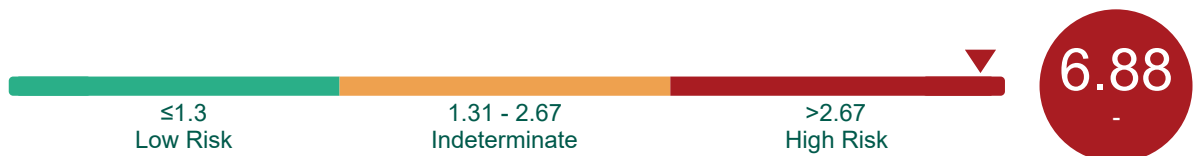
Aspartate Aminotransferase (AST)

Aspartate aminotransferase (AST) is an enzyme found mainly in the liver and heart but is also present in muscle cells. Disease or injury to these tissues causes release of AST into the bloodstream. Increased AST levels may be associated with hepatitis (inflammation of the liver), cirrhosis (scarring of the liver), drug-induced liver injury, heart disease and muscle damage. Mild elevations are often due to fatty liver disease, a common finding associated with mild liver dysfunction, obesity and increased risk of diabetes.



Fibrosis-4 Score (FIB-4)

Fibrosis-4 (FIB-4) is a scoring system that can help predict the likelihood of an individual having liver fibrosis. Liver fibrosis describes scarring of the liver, which develops when the liver is repeatedly damaged and can occur in more advanced cases of fatty liver disease and in those with viral hepatitis (infection of the liver). A low FIB-4 score (<1.3) indicates that advanced fibrosis is unlikely, whilst a high FIB-4 score (>2.67) suggests significant fibrosis is likely to be present.



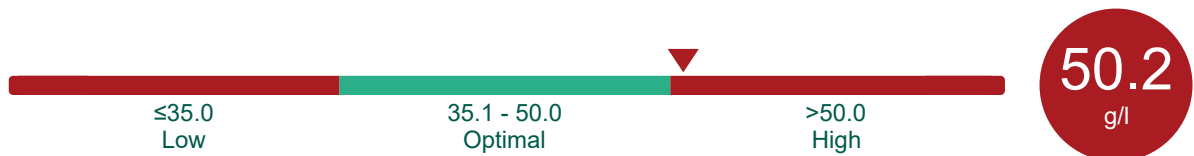
Bile Acids

Bile Acids are produced by the liver and stored in the gallbladder until required. When required, bile acids travel from the gallbladder to the small intestine where they aid in the digestion of fats. Increased bile acid levels may be associated with cholestasis (blockage of the flow of bile). Various situations can cause cholestasis, including tumours of the bile duct, inflammation and gallstones.



Albumin

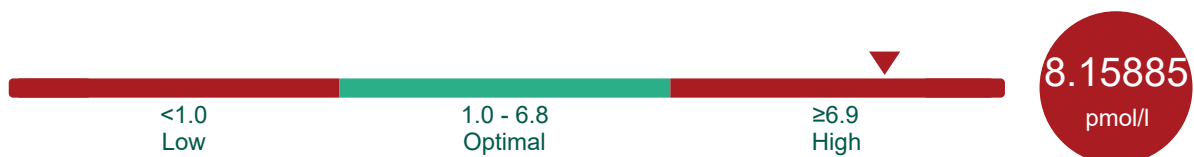
Albumin, produced by the liver, is the most abundant protein found in the blood. Albumin plays an important role in maintaining plasma pressure (preventing fluid leaking from blood vessels) and transporting a wide variety of small molecules, such as hormones, vitamins and drugs, throughout the body. Various conditions are associated with decreased albumin levels, including kidney and liver diseases, inflammation, malabsorption disorders (conditions that affect the ability of the intestine to absorb nutrients, e.g. Crohn's disease and coeliac disease), prolonged diarrhoea and malnutrition. Low albumin levels are also associated with pregnancy. In individuals suffering from dehydration, albumin levels may be elevated.



Digestive Health

Gastrin-17

Gastrin-17 is a hormone that regulates stomach acid production and is produced by specialised cells found in the lower portion of the stomach (antrum). As food enters the stomach, it becomes less acidic and triggers the production of gastrin. Gastrin then instructs the stomach to release more acid. As acidity increases, gastrin production falls. When fasting, a low gastrin-17 result can indicate atrophic gastritis within the lower portion of the stomach or excessive production of stomach acid. Atrophic gastritis occurs when inflammation of the stomach (gastritis) causes the stomach lining to wear away (atrophy). If after stimulating the stomach, gastrin-17 levels remain low, this supports a diagnosis of atrophic gastritis. High gastrin-17 can indicate that the stomach is producing too little stomach acid or can occur with prolonged use of medications to reduce stomach acid production.





Nutritional Health

Albumin

Albumin, produced by the liver, is the most abundant protein found in the blood. Albumin plays an important role in maintaining plasma pressure (preventing fluid leaking from blood vessels) and transporting a wide variety of small molecules, such as hormones, vitamins and drugs, throughout the body. Various conditions are associated with decreased albumin levels, including kidney and liver diseases, inflammation, malabsorption disorders (conditions that affect the ability of the intestine to absorb nutrients, e.g. Crohn's disease and coeliac disease), prolonged diarrhoea and malnutrition. Low albumin levels are also associated with pregnancy. In individuals suffering from dehydration, albumin levels may be elevated.



Magnesium

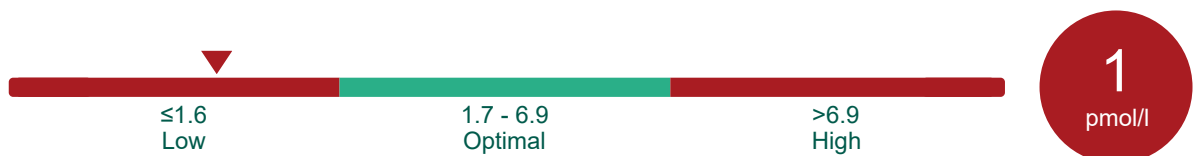
Magnesium is a mineral that is essential for energy and protein production, muscle contraction and nerve function, and is important for the activity of many enzymes. Magnesium levels are regulated by how much is absorbed from food by the intestine and how much is removed by the kidneys. Increased magnesium levels may be associated with kidney failure, hypothyroidism (an underactive thyroid gland), hyperparathyroidism (an overactive parathyroid gland), dehydration, Addison's disease (a rare disorder in which the adrenal glands are underactive) and ingestion of magnesium-containing antacids or laxatives. Decreased magnesium levels (hypomagnesaemia) may be associated with chronic kidney disease, malnutrition, malabsorption disorders (conditions that affect the ability of the intestine to absorb nutrients) hypoparathyroidism (an underactive parathyroid gland), uncontrolled diabetes or alcoholism.



Bone Health

Parathyroid Hormone (PTH)

Parathyroid Hormone (PTH), produced by the parathyroid glands, is responsible for regulating calcium and phosphate levels in the body. Low blood calcium triggers the release of PTH, which stimulates release of calcium from the bones and retention of calcium by the kidneys and intestines. Elevated PTH levels are associated with hyperparathyroidism (an overactive parathyroid gland), parathyroid tumours, kidney disease and conditions that lower calcium levels, e.g. malabsorption disorders (conditions that affect the ability of the intestine to absorb nutrients) or vitamin D deficiency. Low PTH levels are associated with hypoparathyroidism (an underactive parathyroid gland) and hypercalcaemia (increased blood calcium).





Neurological Markers

Nucleoside Diphosphate Kinase A (NDKA)

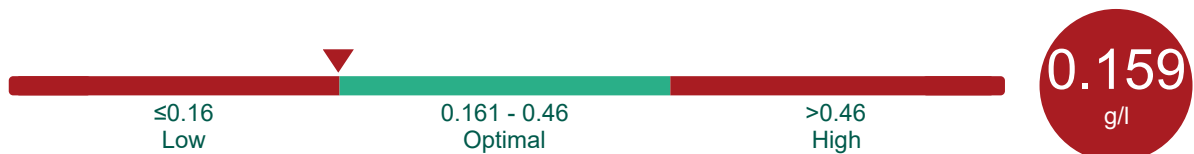
Nucleoside diphosphate kinase A (NDKA) is an enzyme found in cells throughout the body, including the brain. It plays an important role in cell metabolism, helping to provide the energy needed for cell reactions. High levels of NDKA are found in the bloodstream of stroke patients, particularly during the first few hours from stroke onset.



Infection & Inflammation

Complement Component 4 (C4)

Complement Component 4 (C4) is a protein that is part of the complement system. The complement system is an essential part of the immune system that helps to promote inflammatory and immune responses and eradicate infectious agents. Therefore, C4 levels rise during episodes of acute (short-lived) or chronic (long-lasting) inflammation. Low C4 levels may be associated with autoimmune diseases, e.g. systemic lupus erythematosus (a connective tissue disorder that affects many organs), kidney disease, recurrent bacterial infections, malnutrition and angio-oedema (an allergic reaction in the skin causing patches of swelling).



Haptoglobin

Haptoglobin is a protein produced by the liver that collects haemoglobin (the oxygen-carrying component of blood) following its release from red blood cells (RBCs). Haptoglobin is an acute phase protein, meaning that its levels rise in response to inflammation. Elevated haptoglobin levels may also be associated with infection, diabetes mellitus, smoking or nephrotic syndrome (disease of the kidneys in which protein is lost through the urine). Decreased or absent haptoglobin can be associated with liver disease or pregnancy and conditions featuring haemolysis (destruction of RBCs), e.g. thalassaemia or haemolytic anaemia.



Antistreptolysin O (ASO)

Antistreptolysin O (ASO) is a blood test that detects antibodies to the streptolysin O toxin produced by streptococcal bacteria. The presence of ASO antibodies is indicative of a recent or current streptococcal infection. Streptococcal bacteria are commonly associated with throat and skin infections and in the long-term may cause complications including glomerulonephritis (inflammation of the kidney) and endocarditis (inflammation of the lining of the heart).



Interleukin1a

Interleukin-1a (IL-1a) is a pro-inflammatory substance that helps regulate immune and inflammatory responses and contributes to the onset of fever (high temperature associated with illnesses such as the flu). Elevated IL-1a levels may be associated with type 2 diabetes and obesity, and may contribute to risk of metabolic syndrome (a set of risk factors for cardiovascular disease and type 2 diabetes occurring simultaneously).



Interleukin-1β (IL-1β)

Interleukin-1β (IL-1β) is a protein produced by adipose tissue (fat cells) and macrophages (specialised white blood cells that ingest and destroy foreign material and help protect the body from infection). IL-1β is a pro-inflammatory substance and studies have shown associations between IL-1β and conditions such as hepatitis (inflammation of the liver), arthritis, gout and diabetes. In addition, due to its production from adipose tissue, IL-1β levels are elevated in obesity.



Interleukin-15 (IL-15)

Interleukin-15 (IL-15) is a pro-inflammatory protein produced many different cell types. IL-15 acts on a variety of immune and non-immune cells and is critical for the generation of cytotoxic T-cells (specific white blood cells that destroy cancer cells and infected cells). Elevated IL-15 levels may be associated with rheumatoid arthritis, systemic lupus erythematosus (a connective tissue disorder that affects many organs) and inflammatory bowel disease.



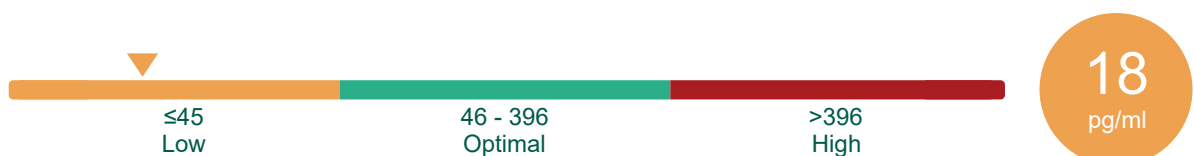
Vascular Endothelial Growth Factor (VEGF)

Vascular Endothelial Growth Factor (VEGF) is a chemical substance that promotes the development of new blood vessels in areas where blood circulation is inadequate. Various cell types produce VEGF at sites of inflammation. Elevated levels of VEGF may be associated with inflammatory disorders (e.g. rheumatoid arthritis), cancer, diabetic retinopathy (damage to the retina of the eye caused by diabetes), autoimmune diseases (conditions caused by the generation of an immune response against the body's own tissues) and stress.



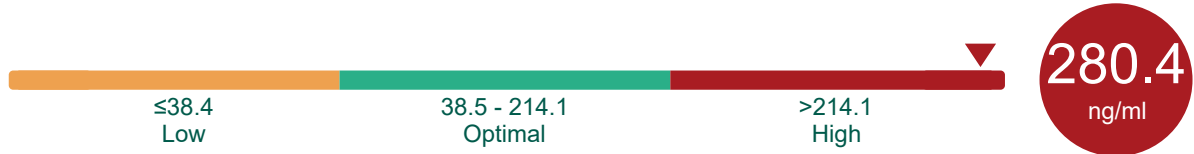
Monocyte Chemotactic Protein-1 (MCP-1)

Monocyte Chemotactic Protein-1 (MCP-1) is a pro-inflammatory substance that helps to regulate the inflammatory response by recruiting and activating immune system cells at sites of injury, infection or inflammation. Elevated MCP-1 levels may be associated with arthritis, inflammatory bowel disease, diabetes, cardiovascular disease and stress.



Matrix Metalloproteinase-9 (MMP-9)

Matrix Metalloproteinase-9 (MMP-9) regulates the degradation of collagen and other proteins that provide structural support to cells within the tissues of the body. Typically, MMP-9 levels correlate with the inflammatory status of the body, and therefore may be elevated with various inflammatory states, including cardiovascular disease. Elevated MMP-9 levels may also be associated with high blood pressure, atrial fibrillation (an abnormal heart rhythm) and infection.



EBV

Epstein-Barr Antibodies

Epstein-Barr Nuclear Antigen (EBNA) IgG Antibody

Epstein-Barr Viral Capsid Antigen (VCA) IgG is an antibody produced in response to infection with Epstein-Barr virus. Epstein-Barr virus is common and causes glandular fever, typically in young adults. Once infected, the virus remains dormant in the body and antibodies remain in the bloodstream. Anti-VCA IgG antibodies appear during the acute phase of infection and then remain in the bloodstream; therefore, a positive VCA IgG indicates current or previous infection with Epstein-Barr virus.



Epstein-Barr Viral Capsid Antigen (VCA) IgG

Epstein-Barr Virus Capsid Antigen (VCA) Antibody (IgG) is an antibody produced in response to infection with Epstein-Barr virus. Epstein-Barr virus is common and causes glandular fever, typically in young adults. Once infected, the virus remains dormant in the body and antibodies remain in the bloodstream. A positive IgG-type antibody test is indicative of a recent or current Epstein-Barr virus infection.



Pituitary & Adrenal Health

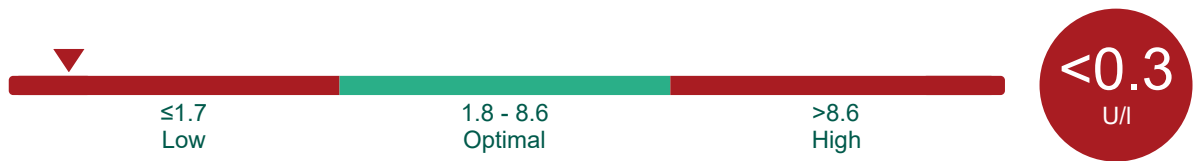
Follicle Stimulating Hormone

Follicle Stimulating Hormone (Male), produced by the pituitary gland in the brain, interacts with receptors in the testes to help regulate reproductive function. In men, follicle stimulating hormone (FSH) stimulates testicular growth and supports the production of sperm. Measurement of FSH is useful for the evaluation of pituitary function and fertility.



Luteinising Hormone

Luteinising Hormone (Male), produced by the pituitary gland in the brain, promotes production of male and female sex hormones. In men, luteinising hormone (LH) stimulates testosterone production by the testes. Measurement of LH is useful for the evaluation of pituitary function and reproductive function.



Stress Health

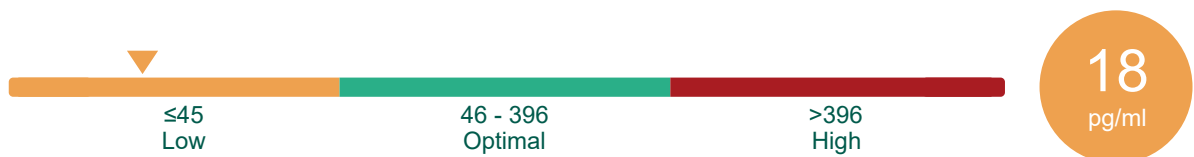
Vascular Endothelial Growth Factor (VEGF)

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Hormonal Health

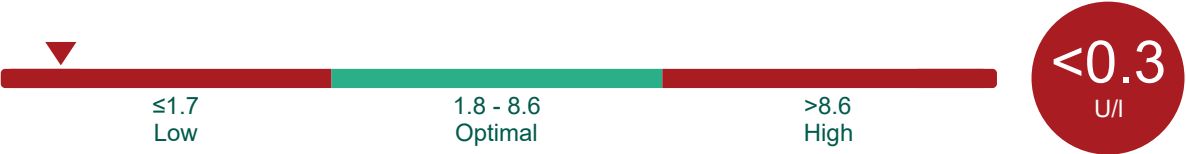
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Luteinising Hormone

Luteinising Hormone (Male), produced by the pituitary gland in the brain, promotes production of male and female sex hormones. In men, luteinising hormone (LH) stimulates testosterone production by the testes. Measurement of LH is useful for the evaluation of pituitary function and reproductive function.



Tissue Damage Markers

Fatty Acid Binding Protein-5 (FABP-5)

Fatty acid-binding protein-5 (FABP-5) is primarily found in skin cells; however, it is also found in other cell types, including fat cells, liver cells and macrophages (involved in the immune system). Evidence suggests that FABP5 plays important roles in obesity-related diseases and high levels have been observed with obesity, insulin resistance and metabolic syndrome. In addition, FABP-5 may be high in skin diseases, such as psoriasis.





Personal Health Measurements

Measurements include pulse, blood pressure and waist circumference. Various lifestyle and hereditary factors can influence these parameters, which are useful in the overall assessment of an individual's risk of developing conditions such as cardiovascular disease or diabetes. The measurement of oxygen saturation by pulse oximetry is also included. A low blood oxygen level, or hypoxaemia, may be associated with airway obstruction, which occurs in conditions such as asthma, emphysema and chronic obstructive pulmonary disease.

Waist Circumference



33
cm

Waist / Hip Ratio



0.943
Ratio

Pulse



119
BPM

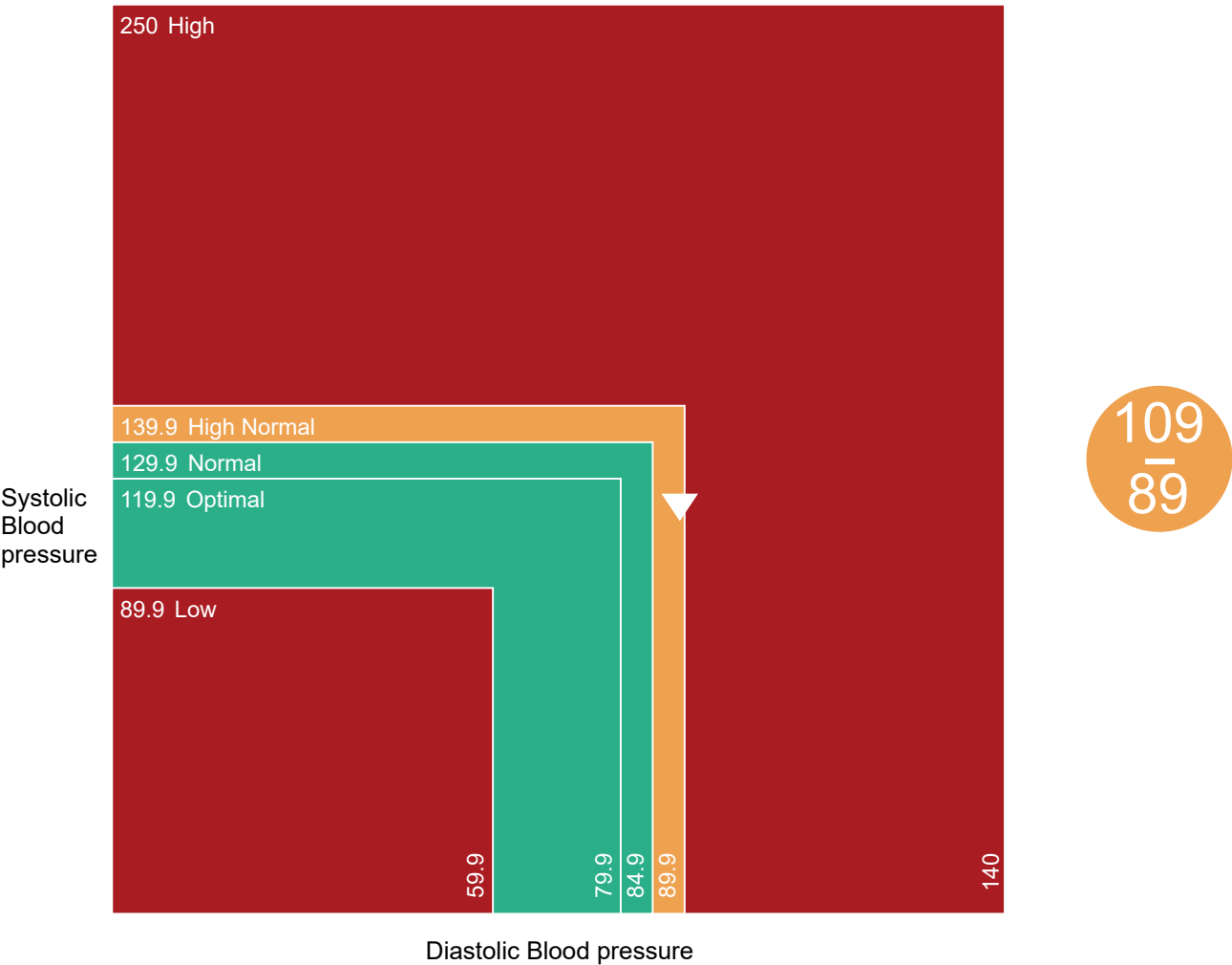
Oxygen Saturation



100
%

Blood pressure

Blood Pressure is a measurement of the force applied to the walls of the arteries as the heart pumps blood through the body. Systolic blood pressure refers to the pressure of blood as your heart contracts. Diastolic blood pressure refers to the pressure of blood as your heart rests between beats. High blood pressure is a significant risk factor for the development of heart disease, stroke, kidney disease and metabolic syndrome. Dehydration, bleeding, inflammation, infection, heart disease, pregnancy and various medications can cause low blood pressure. Physically fit individuals may have low blood pressure and in some individuals, blood pressure is naturally low.



Height

1.778 m

Weight

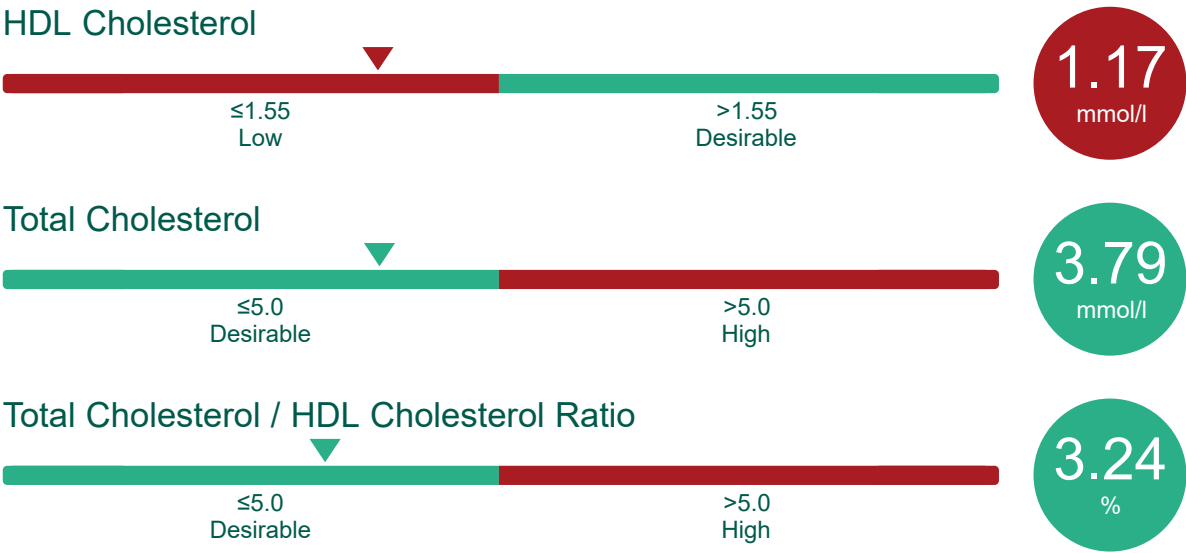
74 kg

Hip Circumference

35 cm



Personal Health Measurements





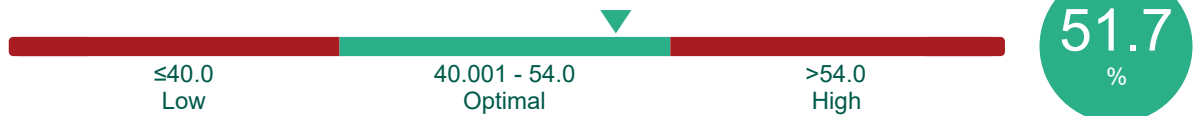
Full Blood Count

This panel provides information about the type and number of cells in the blood, including red blood cells, white blood cells and platelets. Red blood cells contain haemoglobin, a protein that carries oxygen from the lungs to all the tissues of the body and carbon dioxide back to the lungs. White blood cells form part of the immune system and help to defend the body against infection from foreign substances such as bacteria, fungi and viruses. The major types of white blood cells are neutrophils, lymphocytes, monocytes, eosinophils and basophils, with each having their own role in protecting the body from infection. Platelets are important for blood clotting. Their sticky surface enables them, along with other substances, to help wounds heal by forming clots to stop bleeding. The Full Blood Count is useful for evaluating general health status and as a screening tool for a variety of conditions, such as anaemia, infection, inflammation and other blood disorders.

Haemoglobin



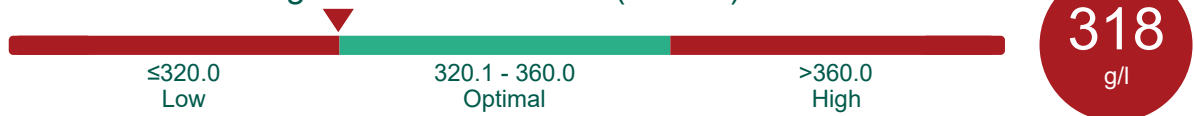
Haematocrit



Mean Cell Haemoglobin (MCH)



Mean Cell Haemoglobin Concentration (MCHC)



Red Blood Cell Mean Cell Volume (MCV)



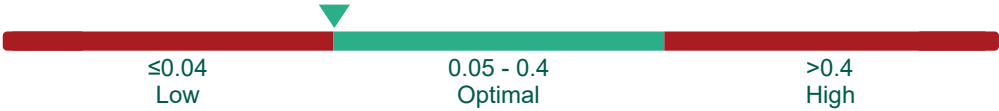
Red Blood Cell Count



Basophil Count



Eosinophil Count



0.05
10⁹/L

Lymphocyte Count



1.9
10⁹/L

Monocyte Count



0.74
10⁹/L

Neutrophil Count



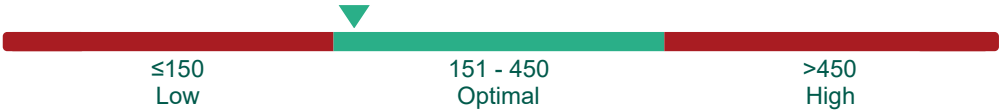
2.99
10⁹/L

White Blood Cell Count



5.97
10⁹/L

Platelet Count



169
10⁹/L



Iron Status

Iron is essential for red blood cell formation. Most of the body's iron, approximately 70%, is present in red blood cells, where its primary role is to carry oxygen from the lungs to all the tissues of the body. Additionally, iron facilitates energy production and release from cells and participates in the functioning of the immune and central nervous systems. Iron Status is useful for evaluating conditions such as iron-deficiency, which can cause anaemia, and iron overload, which can cause organ damage, particularly to the liver.





Heart Health

A major contributing factor to heart disease is the gradual accumulation of fat and cholesterol within blood vessel walls, a process known as atherosclerosis. Cholesterol is a fatty substance that is vital for the normal functioning of the body. However, too much cholesterol is damaging and the risk of developing heart disease is greater in individuals with high cholesterol levels. Heart Health helps assess an individual's risk of developing cardiovascular diseases such as heart disease and stroke.

Total Cholesterol



LDL Cholesterol



HDL Cholesterol



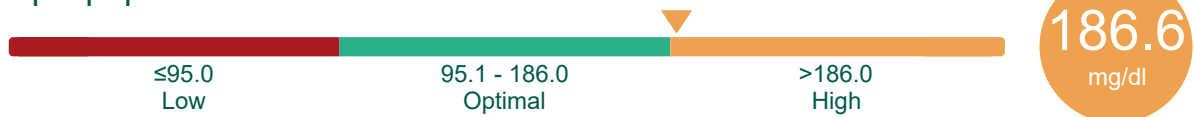
Total Cholesterol / HDL Cholesterol Ratio



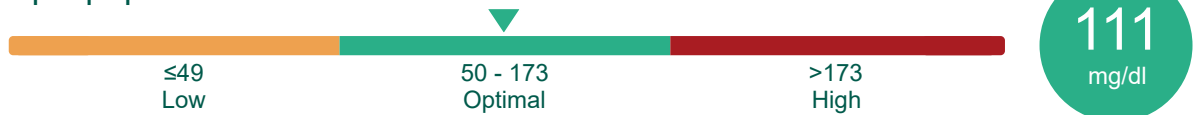
Triglycerides



Apolipoprotein A-I



Apolipoprotein B



Apolipoprotein B / A-I Ratio



Apolipoprotein CII



2.59
mg/dl

Apolipoprotein CIII



9.64
mg/dl

Apolipoprotein E



178
mg/dl

Small LDL Cholesterol



43.79
mg/dl

Lipoprotein (a)



5.4
nmol/l

Homocysteine



12.1
μmol/l

High Sensitivity C-Reactive Protein (hsCRP)



2.42
mg/l

Creatine Kinase-MB (CK-MB)



1.261
μg/l

Creatine Kinase



122
U/l

Myoglobin



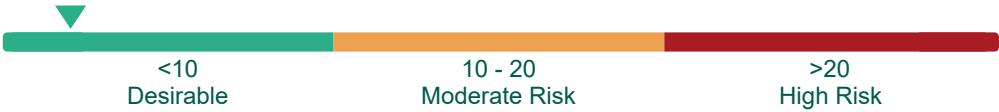
40.6
μg/l

Troponin T



8.83
ng/l

Cardiovascular Risk Score



2
%



Diabetes Health

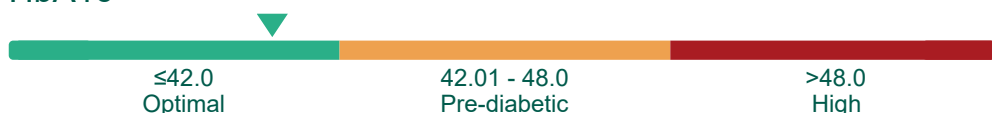
Diabetes mellitus is a chronic condition that is characterised by a high blood glucose level. Normally, insulin (a hormone produced by the pancreas) regulates blood glucose levels. Type 1 diabetes is a condition in which the insulin producing cells of the pancreas are destroyed resulting in very little or no insulin production. Type 2 diabetes is a condition in which the pancreas continues to produce insulin but blood sugar levels remain high due to an insufficient amount of insulin or insulin resistance. Although glucose provides an essential fuel for the body, long-term high levels of glucose are destructive, causing damage to blood vessels, nerves and organs. This damage can increase the risk of developing high blood pressure, heart disease, kidney disease and loss of vision. The Diabetes Health panel includes measurement of glucose and HbA1c levels in the blood, which is useful for the diagnosis and monitoring of diabetes. Higher than normal levels can be associated with a greater risk of developing diabetes in the future ('high risk' or 'pre-diabetes').

Glucose



3.06
mmol/l

HbA1c



33.33
mmol/mol

Insulin



999
pmol/l

Microalbumin / Creatinine Ratio



8.3
mg/mmol creatinine

Non-Esterified Fatty Acids



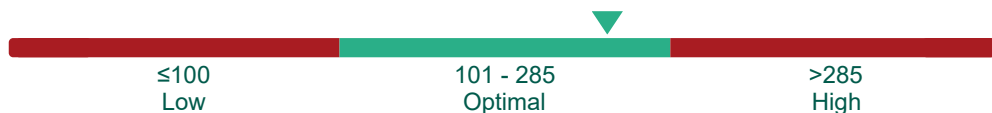
0.77
mmol/l

C-peptide



0.52
ng/ml

Fructosamine



250
μmol/l



Metabolic Syndrome

Metabolic syndrome refers to a collection of risk factors occurring simultaneously that together increase the risk of developing cardiovascular disease, type 2 diabetes and stroke. The National Cholesterol Educational Program (NCEP) Adult Treatment Panel III (ATP III) has defined metabolic syndrome as the presence of three or more of the following five factors: central obesity (increased waist circumference), high blood pressure, high fasting blood glucose, low HDL cholesterol, and elevated triglycerides. Previous diagnosis of type-2 diabetes, treatment for high blood pressure, or specific treatments for low HDL cholesterol and high triglycerides also count as factors. The risk of future heart disease, stroke or diabetes increases with the number of risk factors acquired. The Metabolic Syndrome panel includes the measurement of the five factors mentioned above and is indicative of an individual's risk of future cardiovascular disease and type-2 diabetes.

Waist Circumference



33
cm

Systolic Blood pressure



109
mmHg

Diastolic Blood pressure



89
mmHg

Adiponectin



0.414
µg/ml

Glucose



3.06
mmol/l

HDL Cholesterol

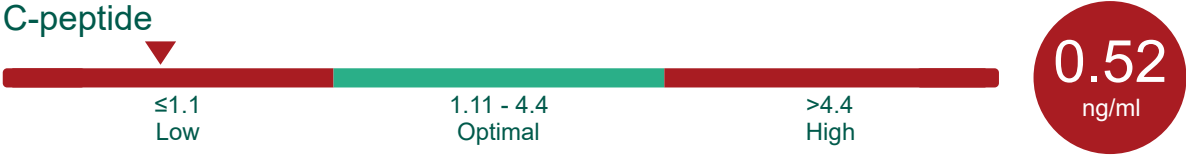
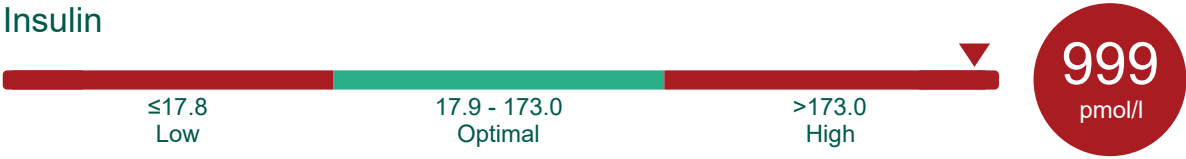
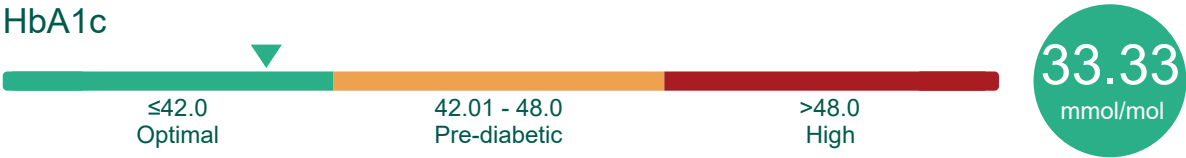


1.17
mmol/l

Triglycerides



1.26
mmol/l



Height
1.778 m

Weight
74 kg



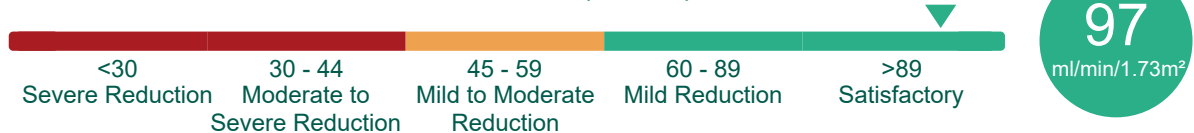
Kidney Health

The kidneys are responsible for the production of urine and regulation of water and salt levels in the blood. The kidneys filter blood to remove waste products, water and salts. The fluid containing these waste products travels through kidney tubules where re-absorption of water and salts takes place. This absorption process is crucial to the maintenance of fluid balance in the body, which is also important for blood pressure regulation. Many conditions can impair the filtering ability of the kidney or lead to destruction of kidney tissue, including urinary tract obstruction, glomerulonephritis and acute kidney injury. Kidney Health helps evaluate the filtering ability of the kidneys and can indicate how well the kidneys are functioning.

Creatinine



Estimated Glomerular Filtration Rate (eGFR)



Cystatin C {Urine}



Cystatin C



Beta-2-Microglobulin



Microalbumin / Creatinine Ratio



Total Protein



Calcium (adjusted)



Chloride



97
mmol/l

Magnesium



1.764
mmol/l

Phosphate



1.27
mmol/l

Potassium



4.49
mmol/l

Sodium



141.1
mmol/l

Urea



4.58
mmol/l

Uric Acid



235.9
μmol/l

Neutrophil Gelatinase-Associated Lipocalin (NGAL)



1676.52
ng/ml

Neutrophil Gelatinase-Associated Lipocalin (NGAL) {Urine}



17.9
ng/mg Cre

Bicarbonate



24
mmol/l

Fatty Acid Binding Protein – 1 (FABP-1)



8.36
ng/ml

Kidney Injury Molecule-1 (KIM-1)



0.89
ng/mg Cre



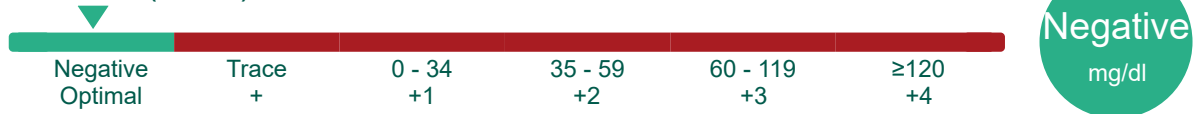
Urinalysis

Urinalysis is part of routine diagnostic and screening evaluations. It can reveal a significant amount of preliminary information about the kidneys and other metabolic processes. Urinalysis tests for substances that are normally not present or are present at low concentrations in the urine. In addition, pH measurement helps determine the acidity of urine and is indicative of acid-base balance in the body.

Bilirubin (Urine)



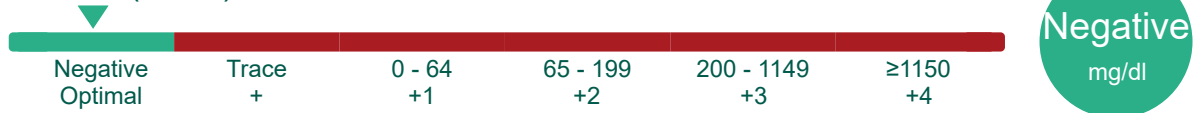
Ketones (Urine)



Nitrite (Urine)



Protein (Urine)



Red Blood Cells (Urine)



Urobilinogen (Urine)





Liver Health

The liver is a vital organ that plays a major role in the regulation of metabolism. The liver performs many complex functions, which include processing of carbohydrates, proteins and fats, breakdown of harmful or toxic substances, decomposition of red blood cells, removal of waste products from the blood and the production and secretion of bile. Bile is a fluid, which aids in the digestion of fats. Once secreted from the liver, bile travels through a series of ducts to the small intestine or to the gallbladder for storage. Liver disease encompasses many conditions that can cause damage to the liver, such as cirrhosis (irreversible scarring of liver tissue), hepatitis (inflammation of the liver), fatty liver disease, gallbladder disease and bile duct obstruction. The Liver Health panel consists of tests that evaluate the function of the liver.

Alanine Aminotransferase (ALT)



Alkaline Phosphatase (ALP)



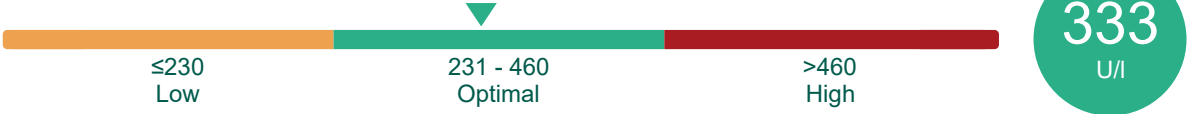
Aspartate Aminotransferase (AST)



Gamma-Glutamyltransferase (GGT)



Lactate Dehydrogenase (LDH)



Glutamate Dehydrogenase (GLDH)



Total Bilirubin



Direct Bilirubin



4.08
μmol/l

Fibrosis-4 Score (FIB-4)



6.88
-

Bile Acids



15
μmol/l

Albumin



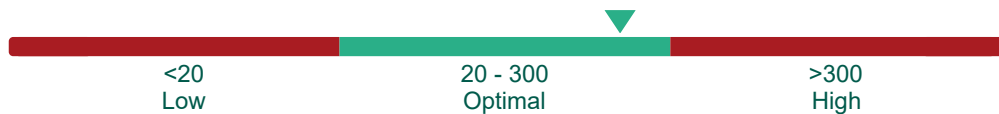
50.2
g/l

Globulin



23.5
g/l

Ferritin



257.61
μg/l

Aldolase



6.48
U/l

Copper



19
μmol/l



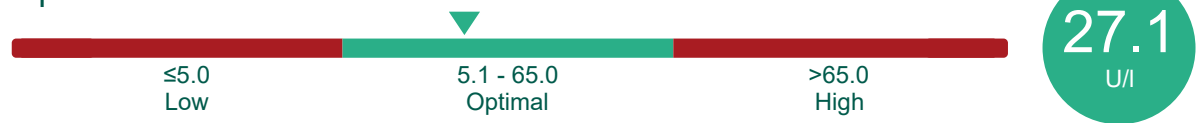
Pancreatic Health

The pancreas is a gland that produces hormones, pancreatic juice and digestive enzymes. Digestive enzymes (e.g. amylase) pass from the pancreas into the small intestine where they contribute to digestion. These enzymes help to further breakdown carbohydrates, proteins and fats in chyme (the partially digested mass of food). Pancreatic Health is useful for evaluating pancreatitis (inflammation of the pancreas) and other disorders that can affect the function of the pancreas.

Pancreatic Amylase



Lipase





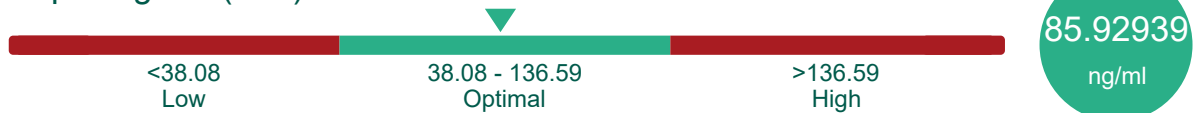
Digestive Health

The process of digestion occurs in the gastrointestinal tract, which encompasses the stomach and intestine. The stomach is responsible for the storage and breakdown of ingested food. Food and fluids enter the stomach via the oesophagus and mix with stomach acids and digestive enzymes to begin the process of digestion. Partially digested food then enters the intestine where digestion continues and absorption of nutrients occurs. A protective layer of mucus coats the lining of the stomach to prevent damage by digestive acids and enzymes. Anti-inflammatory drug use (such as aspirin) and infection with *H. pylori* bacteria can disrupt this protective layer and lead to gastritis (inflammation of the stomach) and stomach ulcers. Damage to the intestine impairs the ability of the body to digest food and absorb nutrients. Coeliac disease is an autoimmune disorder in which the body's immune system reacts to gluten in the diet causing inflammation of the intestine. Anti-tissue Transglutaminase (Anti-tTG) Antibody is a sensitive marker for coeliac disease; however, testing is only appropriate in individuals who continue to consume gluten. The Digestive Health panel contains markers that are useful for the evaluation of health issues such as heartburn, acid reflux and coeliac disease.

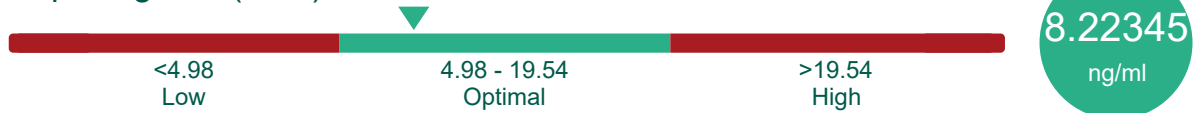
Anti-Tissue Transglutaminase Antibodies (Coeliac Disease)



Pepsinogen I (PGI)



Pepsinogen II (PGII)



Pepsinogen I/Pepsinogen II ratio (PGI/II ratio)



Gastrin-17





Nutritional Health

Nutrition is the supply of materials (in the form of food), which are necessary to allow the body to function normally. Vitamins and minerals support normal growth, and help organs and cells to function. Therefore, good nutrition is vital for health and wellbeing. A poor diet or malabsorption disorders (conditions caused by an impaired ability to digest and/or absorb nutrients from food) may lead to nutritional deficiency. The Nutritional Health panel evaluates the levels of various nutrients and can help identify whether an individual's nutritional status is adequate.

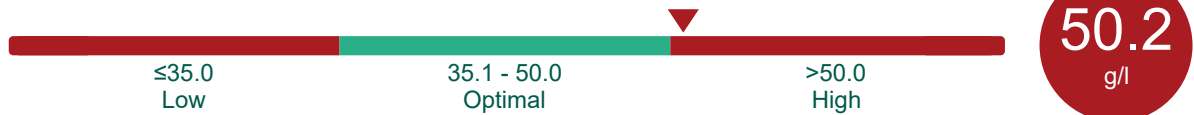
Total Antioxidant Status (TAS)



Glutathione Reductase



Albumin



Calcium (adjusted)



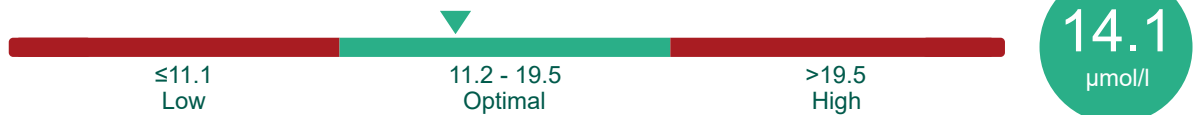
Copper



Magnesium



Zinc



Iron



Folic acid



4.1
μg/l

Vitamin B12



734
ng/l



Muscle & Joint Health

Muscles, which are composed of bundles of contractile fibres, are responsible for the movement of various parts of the body. When muscle fibres contract, movement occurs. Damage to muscles occurs in conditions such as myopathies (muscle disorders that cause muscle weakness) and myositis (inflammation of the skeletal muscles). In addition, muscle damage can arise from injury and excessive use of muscles during exercise. Joints form the connections between bones and permit movement and flexibility in various parts of the body. Arthritis is a condition characterised by inflammation, pain and stiffness of the joints and many types exist, including rheumatoid arthritis and gout. The Muscle & Joint Health panel includes markers associated with muscle damage and joint problems such as arthritis and gout.

Creatine Kinase



122
U/l

Creatine Kinase-MB (CK-MB)



1.261
μg/l

Aldolase



6.48
U/l

Myoglobin



40.6
μg/l

Uric Acid



235.9
μmol/l

Rheumatoid Factor (RF)



8
kU/l

Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibodies



2
U/ml



Bone Health

Bones provide structural support for the body and offer protection to delicate organs and tissues (e.g. the ribs protect the heart and lungs and the skull protects the brain). Bones are subject to a continuous remodelling process where old bone tissue is replaced with new tissue. For bones to remain strong and healthy, various factors are required, including calcium and vitamin D. Osteoporosis is a condition in which bones lose density and become weak. Risk factors for osteoporosis include oestrogen deficiency (post-menopause), vitamin D deficiency, calcium deficiency and an inactive lifestyle. Bone Health helps evaluate the levels of these important bone-strength factors, which can be useful for identifying individuals at risk of future bone-related health problems.

Alkaline Phosphatase (ALP)



83
U/l

Calcium (adjusted)



2.54
mmol/l

Phosphate



1.27
mmol/l

Parathyroid Hormone (PTH)

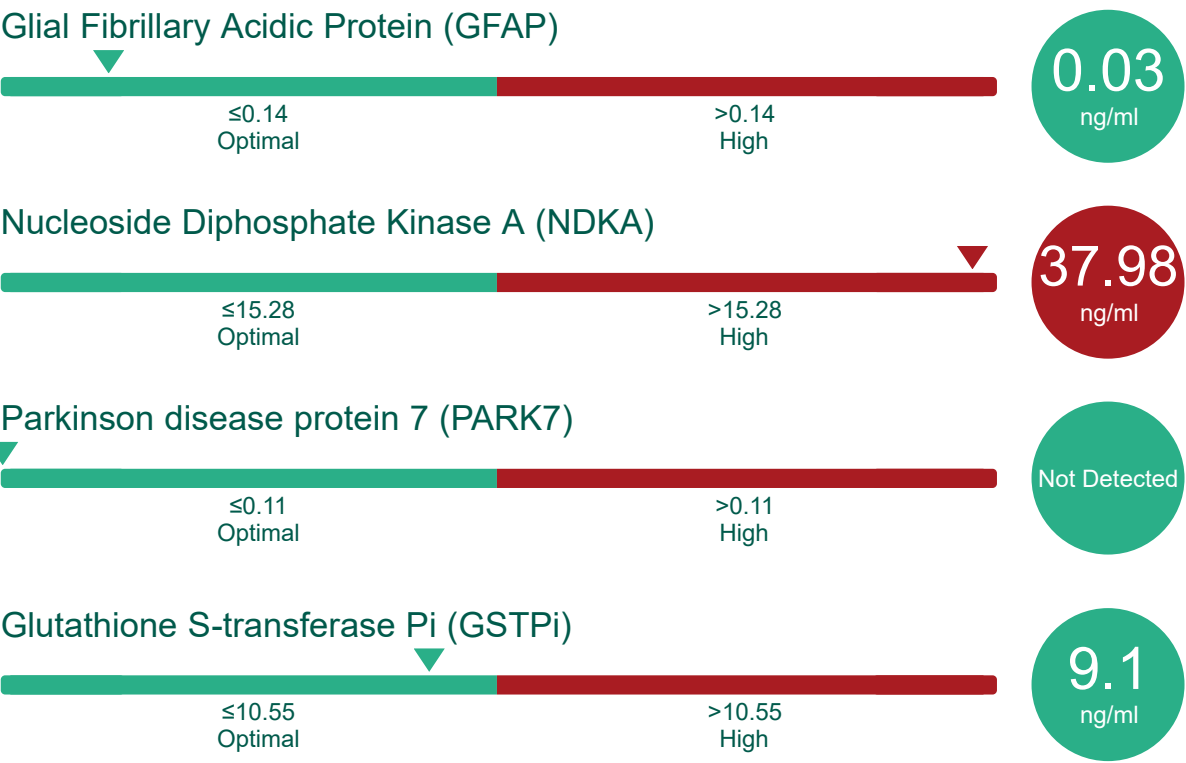


1
pmol/l



Neurological Markers

The Neurological Markers panel includes measurement of proteins that have roles in inflammation, oxidative stress, blood clotting and the nervous system. Research suggests that these markers may be present in the bloodstream of individuals who have incurred injury to brain tissue or nerve cells, or who have inappropriate clot formation, which can increase risk of stroke.





Allergy Evaluation

Allergies are increasingly common, with estimates suggesting that allergies will affect 25% of the population at some stage in life. An allergy is the immune system's response to a particular food or environmental substance (allergen). This response occurs in predisposed individuals and results in the production of a particular type of immune system protein (antibody) called immunoglobulin E (IgE). Subsequent exposure to the allergen generates IgE, which in turn causes the release of chemicals into the body. This chemical release causes the characteristic symptoms of allergies such as coughing, sneezing and itching. The Allergy Evaluation measures the total IgE level in the blood. However, generation of IgE is dependent on recent exposure to an allergen. The Allergy Evaluation may prove inconclusive in individuals who have limited their exposure to suspected allergens (e.g. removal of wheat from diet or avoidance of pets).

Immunoglobulin E (IgE)





Infection & Inflammation

Inflammation is the body's natural response to infection, irritation or injury and is characterised by pain, swelling, warmth and redness of the affected area. Inflammation is a protective mechanism that occurs in an attempt to remove the cause of the injury or irritation and to initiate healing and repair. The Infection & Inflammation panel can indicate the presence of infection or inflammation in the body.

C-Reactive Protein (CRP)



2.42
mg/l

Rheumatoid Factor (RF)



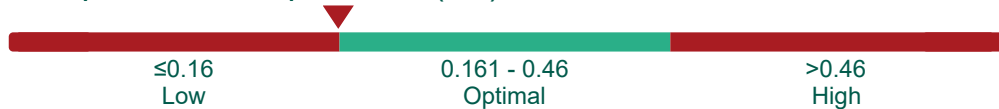
8
kU/l

Complement Component 3 (C3)



1.13
g/l

Complement Component 4 (C4)



0.159
g/l

Haptoglobin



0.337
g/l

Immunoglobulin A (IgA)



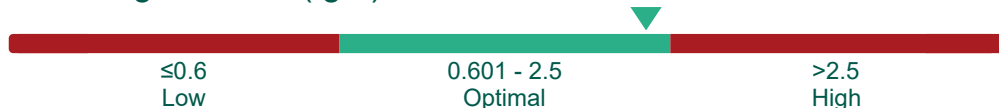
1.86
g/l

Immunoglobulin G (IgG)



8.19
g/l

Immunoglobulin M (IgM)



2.362
g/l

Antistreptolysin O (ASO)



505.4
IU/ml

Interleukin1a



0.52
pg/ml

Interleukin-1 β (IL-1 β)



10
pg/ml

Interleukin-2 (IL-2)



2.36
pg/ml

Interleukin-3 (IL-3)



11.77
pg/ml

Interleukin-4 (IL-4)



1.58
pg/ml

Interleukin-5 (IL-5)



Not Detected

Interleukin-7 (IL-7)



42.36
pg/ml

Interleukin-8 (IL-8)



14.31
pg/ml

Interleukin-10 (IL-10)



0.22
pg/ml



Granulocyte Macrophage Colony Stimulating Factor (GM-CSF)



1.17
pg/ml

Matrix Metalloproteinase-9 (MMP-9)



280.4
ng/ml

E-Selectin



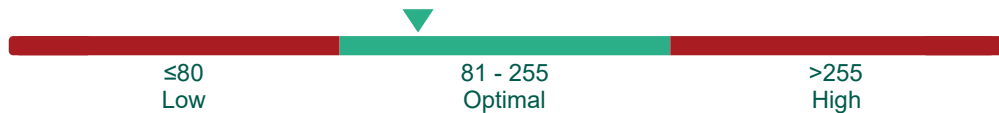
17.4
ng/ml

L-Selectin



1464
ng/ml

P-Selectin



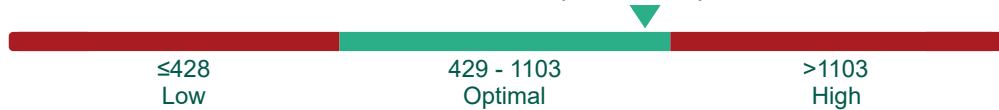
122
ng/ml

Intercellular Cell Adhesion Molecule-1 (ICAM-1)



256
ng/ml

Vascular Cell Adhesion Molecule-1 (VCAM-1)



1052
ng/ml

Interleukin 17A



0.36
pg/ml

Interleukin 17F



Not Detected

Interleukin 22

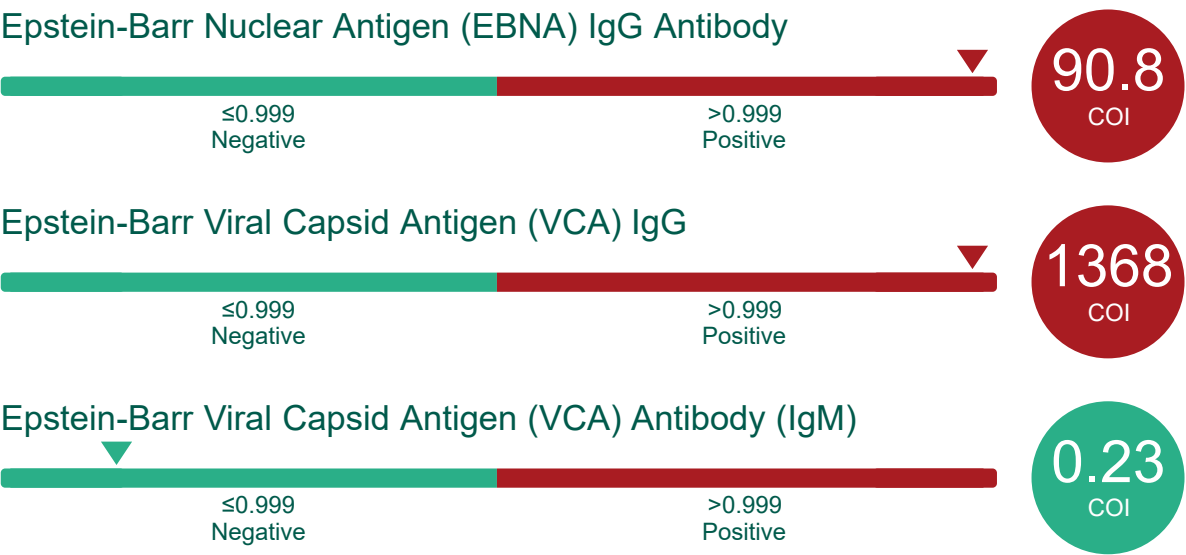


3.73
pg/ml



Epstein-Barr Antibodies

Epstein-Barr virus infection is common and causes glandular fever. Most EBV infections produce only mild symptoms; however, glandular fever, which typically affects young adults, can cause fatigue, fever, swollen glands and a sore throat. When the immune system detects a viral infection, such as EBV, it produces antibodies that bind to the virus surface and mark it for destruction. Immunoglobulin M (IgM) is the first type of antibody produced by the immune system in response to infection. Immunoglobulin G (IgG) follows IgM and persists in the bloodstream long after an infection has cleared. IgG type antibodies provide a form of immunological memory, in which the immune system is able to recognise organisms that have previously infected the body and can mount a quick response. Once infected with EBV, the virus remains dormant in the body and antibodies remain in the bloodstream. Detecting these antibodies can indicate previous or current EBV infection.





Autoimmune Profile

The immune system employs many mechanisms to protect the body from attack by infectious organisms. One such mechanism is the production of antibodies by B-cells (a special type of white blood cell). Antibodies are able to recognise and bind to specific proteins (antigens) on cells that are foreign to the body, e.g. viral or bacterial cells, and target them for destruction. The immune system provides the body with a sophisticated means of defence, but occasionally the immune system malfunctions and can damage the body's own tissues. Autoimmune disorders encompass a vast range of conditions in which the body produces antibodies that attack an individual's own cells when the immune system incorrectly identifies them as foreign. These autoantibodies are detectable in blood and measurement may help identify if an individual is suffering from an autoimmune condition. However, a negative autoantibody test cannot definitively rule out the presence of autoimmune disease. Many autoantibody tests are highly specific but may not identify every individual with an autoimmune disease. In addition, some conditions may only generate antibodies during an active autoimmune process. This is particularly relevant to coeliac disease testing, where gluten sensitivity results in the production of antibodies. Gluten-sensitive individuals who have removed gluten from their diet may not generate an autoimmune response. Therefore, autoimmune testing requires careful interpretation. The Autoimmune Profile tests for the presence of various autoantibodies in the bloodstream, including antibodies associated with connective tissue disorders (e.g. rheumatoid arthritis and systemic lupus erythematosus), gastrointestinal disorders (e.g. coeliac disease) and thyroid gland dysfunction.

Rheumatoid Factor (RF)



8

kU/l

Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibodies



2

U/ml

Anti-Tissue Transglutaminase Antibodies (Coeliac Disease)



0.3

AU/mL

Anti-Thyroglobulin Antibody (Anti-Tg)



14

IU/ml

Anti-Thyroid Peroxidase Antibody (Anti-TPO)



14.1

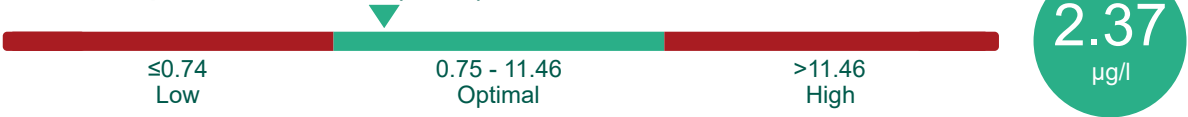
kU/l



Tumour Associated Markers

Tumour associated markers are substances that circulate in the bloodstream and can indicate the presence of cancer in the body. Tumour markers are not diagnostic of cancer but can be helpful when staging cancer, monitoring response to therapy or detecting cancer recurrence. The Tumour Associated Markers profile measures the levels of a range of markers that evidence suggests are associated with various cancer types. However, no marker is diagnostic of a particular cancer and elevated tumour marker levels can occur in many benign (non-cancerous) conditions and in healthy individuals with no evidence of disease. Equally, a negative result does not exclude the possibility of cancer being present, as not every individual with cancer will produce these substances. Therefore, test results indicating the function of other areas of the body in conjunction with any symptoms or relevant medical history are important to consider when interpreting tumour associated marker results.

Neuron Specific Enolase (NSE)



Alpha-Fetoprotein (AFP)



Carcinoembryonic Antigen (CEA)



Cancer Antigen 19-9 (CA 19-9)



Cancer Antigen 125 (CA 125)



Human Chorionic Gonadotrophin (hCG)

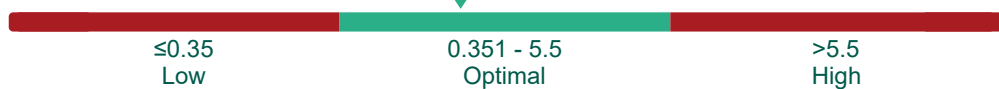




Pituitary & Adrenal Health

The pituitary and adrenal glands are responsible for the production and release of hormones. Hormones are chemical messengers that travel through the bloodstream and enable communication between different tissues. The pituitary gland, located in the brain, regulates the hormone producing activity of other glands such as the adrenals, thyroid and ovaries, and helps to control various body processes, such as blood pressure, metabolism, growth, temperature and ovulation. The adrenal glands, located just above each kidney, produce hormones that help to regulate blood pressure and the body's response to stress. The Pituitary & Adrenal Health panel comprises the measurement of various hormones produced by each gland and can be useful for evaluating whether the pituitary or adrenal glands are overactive or underactive.

Thyroid Stimulating Hormone (TSH)



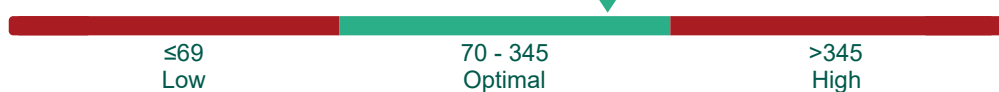
2.23
mIU/l

Insulin-like Growth Factor-1 (IGF-1)



15.5
nmol/l

Cortisol



293
nmol/l

Follicle Stimulating Hormone



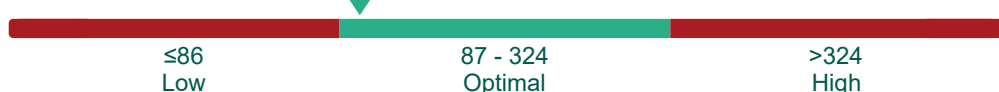
<0.3
U/l

Luteinising Hormone



<0.3
U/l

Prolactin



101
mIU/l

Dehydroepiandrosterone Sulphate (DHEAs)



5.9
μmol/l



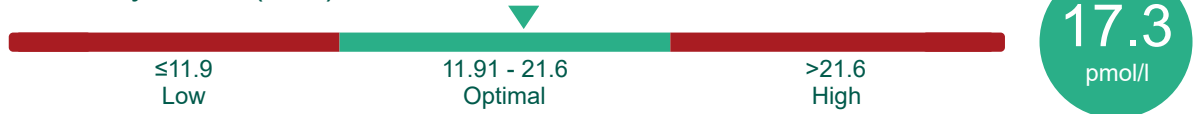
Thyroid Health

The thyroid gland plays an important role in controlling the body's metabolism by producing hormones. The thyroid hormones help the body to use energy, stay warm and keep the heart, brain, muscle and other organs functioning properly. Thyroid Health consists of tests that can be used to help diagnose an 'underactive thyroid' (hypothyroidism) or an 'overactive thyroid' (hyperthyroidism), or to monitor the treatment of these conditions.

Thyroid Stimulating Hormone (TSH)



Free Thyroxine (FT4)



Free Tri-iodothyronine (FT3)



Anti-Thyroglobulin Antibody (Anti-Tg)



Anti-Thyroid Peroxidase Antibody (Anti-TPO)



Calcitonin



Thyroxine-binding globulin (TBG)





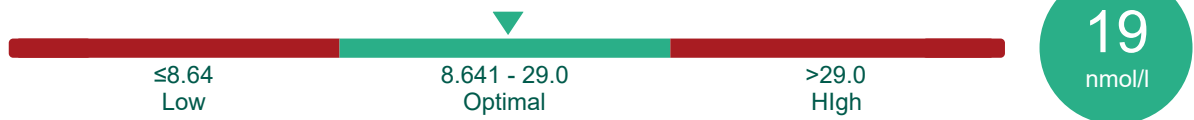
Stress Health

Stress is the body's natural response to the daily demands and pressures put upon it. Every individual responds to stress differently but long-term excessive stress can be detrimental to health. Signs that an individual may be suffering from stress include difficulty sleeping, irritability, lack of appetite and anxiety. The Stress Health panel includes tests that are associated with stress, such as measurement of cortisol, a hormone released by the body in response to stress.

Cortisol



Testosterone



Epidermal Growth Factor (EGF)



Vascular Endothelial Growth Factor (VEGF)



Monocyte Chemotactic Protein-1 (MCP-1)



Interleukin-8 (IL-8)





Prostate Health

Prostate specific antigen (PSA) is a protein produced by cells of the prostate gland. Prostate specific antigen is detectable in the serum of almost all men and levels tend to increase with age and size of the prostate. Although PSA is highly specific for prostate disease, it is not specific for prostate cancer. Two forms of PSA are found in the blood; PSA that is 'free' and PSA that is 'bound' to protein. The combination of these two forms comprises the Total PSA (TPSA). In most cases, this panel consists of the measurement of TPSA alone. However, if TPSA is elevated, Free PSA (FPSA) is also measured and the percentage of FPSA to TPSA is calculated. FPSA is only applicable when TPSA is elevated. It should be noted that in men under the age of 50, no specific reference range exists for TPSA and the ranges provided are for guidance only.

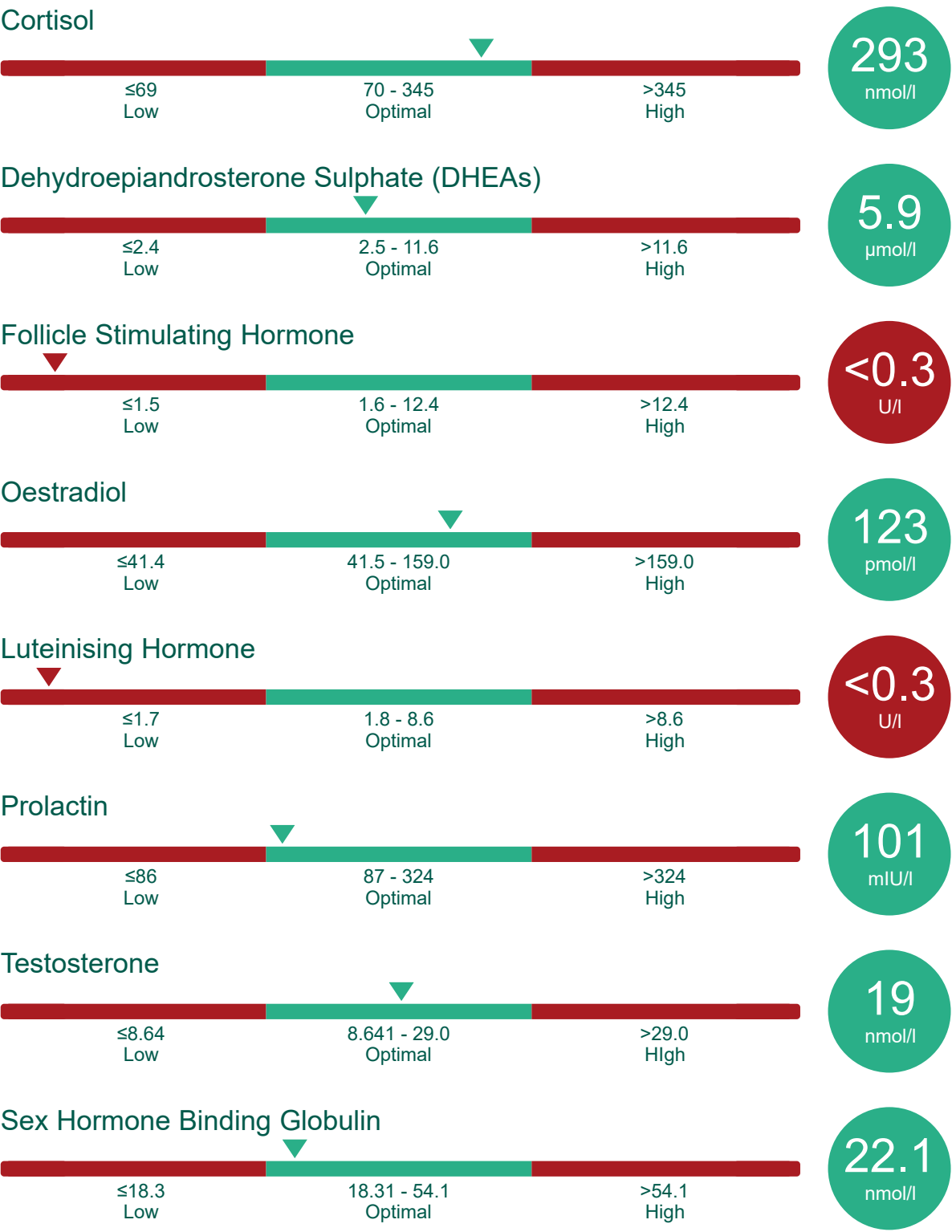
Total Prostate Specific Antigen (TPSA)





Hormonal Health

A hormone is a chemical substance that is produced in response to certain changes in the physiological processes that occur in the body. Hormones carry information between cells and help regulate metabolism, growth, reproduction and mood alteration.



Free Testosterone

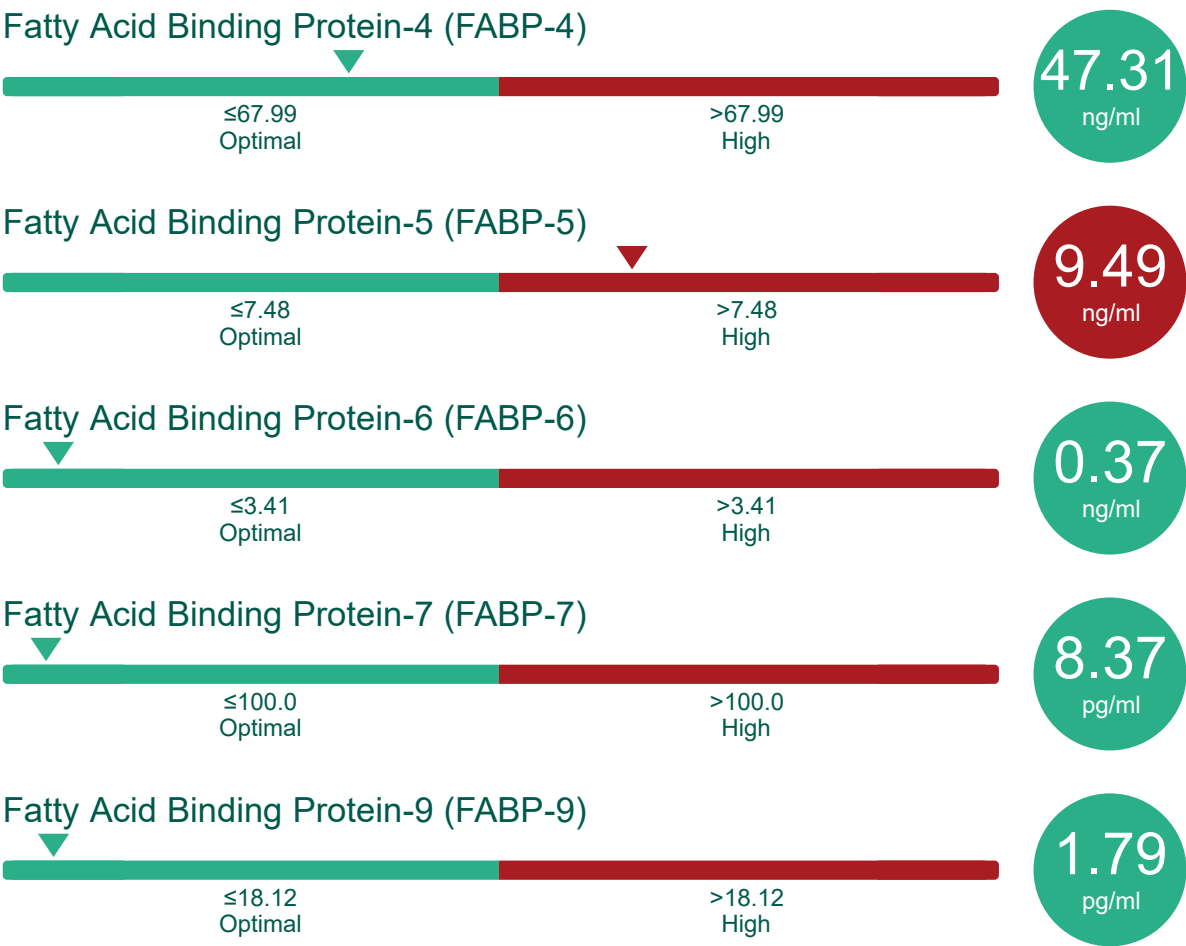


0.447
nmol/l



Tissue Damage Markers

Fatty acid-binding proteins (FABPs) are small proteins that play important roles in the transport and metabolism of fatty acids. These proteins are found in many tissue types throughout the body, including the liver, heart, kidneys and intestine. When detected at high levels in the blood, FABPs may signify tissue damage due to underlying disease or injury.





Other

Additional tests.

Chlamydia Trachomatis Urine



Not Detected

-

HSV1 Urine



Detected

-

HSV2 Urine



Not Detected

-

Mycoplasma Genitalium Urine



Not Detected

-

Mycoplasma Hominis Lesion Swab



Not Detected

-

Neisseria Gonorrhoeae Urine



Detected

-

Treponema pallidum Urine



Not Detected

-

Trichomonas Vaginalis Urine



Not Detected

-

Ureaplasma Urealyticum Urine



Not Detected

-

Results for your Doctor

This section contains all your test results. Your doctor may prefer to see your test results in this format. The results that are either positive or fall outside the reference range are highlighted in red.

Test	Result	Units	Reference Range
Personal Health Measurements			
Height	1.778	m	N/A
Weight	74	kg	N/A
Oxygen Saturation	100	%	≥95 Optimal
Waist Circumference	33	cm	<94 Optimal
Hip Circumference	35	cm	N/A
Waist / Hip Ratio	0.943	Ratio	<0.95 Low risk
Pulse	119	BPM	≤49 Very Low 50 - 59 Low 60 - 100 Optimal >100 High
Systolic Blood pressure	109	mmHg	90 - 119.9 Optimal
Diastolic Blood pressure	89	mmHg	0 - 59.9 Low 59.9 - 79.9 Optimal 79.9 - 84.9 Normal 84.9 - 89.9 High Normal 90 - 140 High
HDL Cholesterol	1.17	mmol/l	≤1.55 Low >1.55 Desirable
Total Cholesterol	3.79	mmol/l	≤5.0 Desirable
Total Cholesterol / HDL Cholesterol Ratio	3.24	%	≤5.0 Desirable
Full Blood Count			
Haemoglobin	166	g/l	130.1 - 180.0 Optimal
Haematocrit	51.7	%	40.001 - 54.0 Optimal
Mean Cell Haemoglobin (MCH)	31.2	pg	27.1 - 32.0 Optimal
Mean Cell Haemoglobin Concentration (MCHC)	318	g/l	≤320.0 Low 320.1 - 360.0 Optimal >360.0 High
Red Blood Cell Mean Cell Volume (MCV)	95.6	fl	76.1 - 100.0 Optimal
Red Blood Cell Count	5.1	10 ¹² /L	4.51 - 6.5 Optimal
Basophil Count	0.06	10 ⁹ /L	0.02 - 0.1 Optimal
Eosinophil Count	0.05	10 ⁹ /L	0.05 - 0.4 Optimal
Lymphocyte Count	1.9	10 ⁹ /L	1.01 - 3.5 Optimal

Test	Result	Units	Reference Range
Full Blood Count			
Monocyte Count	0.74	10 ⁹ /L	0.21 - 0.8 Optimal
Neutrophil Count	2.99	10 ⁹ /L	2.01 - 7.5 Optimal
White Blood Cell Count	5.97	10 ⁹ /L	4.01 - 10.0 Optimal
Platelet Count	169	10 ⁹ /L	151 - 450 Optimal
Iron Status			
Iron	21.5	µmol/l	5.9 - 34.5 Optimal
Ferritin	257.61	µg/l	20 - 300 Optimal
Total Iron Binding Capacity (TIBC)	58.6	µmol/l	44.9 - 80.6 Optimal
Transferrin	2.32	g/l	2.01 - 3.8 Optimal
Transferrin Saturation	36.7	%	20.1 - 50.0 Optimal
Heart Health			
Total Cholesterol	3.79	mmol/l	≤5.0 Desirable
LDL Cholesterol	4.57	mmol/l	≤3.0 Desirable >3.0 High
HDL Cholesterol	1.17	mmol/l	≤1.55 Low >1.55 Desirable
Total Cholesterol / HDL Cholesterol Ratio	3.24	%	≤5.0 Desirable
Triglycerides	1.26	mmol/l	≤2.3 Desirable
Apolipoprotein A-I	186.6	mg/dl	≤95.0 Low 95.1 - 186.0 Optimal >186.0 High
Apolipoprotein B	111	mg/dl	50 - 173 Optimal
Apolipoprotein B / A-I Ratio	0.59	-	≤1.00 Optimal
Apolipoprotein CII	2.59	mg/dl	1.61 - 4.2 Optimal
Apolipoprotein CIII	9.64	mg/dl	≤5.5 Low 5.51 - 9.5 Optimal >9.5 High
Apolipoprotein E	178	mg/dl	≤2.7 Low 2.71 - 4.5 Optimal >4.5 High
Small LDL Cholesterol	43.79	mg/dl	≤60.8 Optimal
Lipoprotein (a)	5.4	nmol/l	≤75.0 Optimal
Homocysteine	12.1	µmol/l	3.8 - 13.9 Optimal

Test	Result	Units	Reference Range
Heart Health			
High Sensitivity C-Reactive Protein (hsCRP)	2.42	mg/l	<1 Low Risk 1 - 3 Average Risk >3 High Risk
Creatine Kinase-MB (CK-MB)	1.261	µg/l	≤6.13 Optimal
Creatine Kinase	122	U/l	41 - 320 Optimal
Myoglobin	40.6	µg/l	≤72.0 Optimal
Troponin T	8.83	ng/l	≤14.0 Optimal
Cardiovascular Risk Score	2	%	<10 Desirable
Diabetes Health			
Glucose	3.06	mmol/l	<4.00 Low 4.00 - 5.59 Optimal 5.60 - 6.99 Pre-diabetic ≥7.00 High
HbA1c	33.33	mmol/mol	≤42.0 Optimal
Insulin	999	pmol/l	≤17.8 Low 17.9 - 173.0 Optimal >173.0 High
Microalbumin / Creatinine Ratio	8.3	mg/mmol creatinine	<30 Normal
Non-Esterified Fatty Acids	0.77	mmol/l	≤0.9 Optimal
C-peptide	0.52	ng/ml	≤1.1 Low 1.11 - 4.4 Optimal >4.4 High
Fructosamine	250	µmol/l	101 - 285 Optimal
Metabolic Syndrome			
Height	1.778	m	N/A
Weight	74	kg	N/A
Waist Circumference	33	cm	<94 Optimal
Systolic Blood pressure	109	mmHg	<130 Optimal
Diastolic Blood pressure	89	mmHg	<85 Optimal ≥85 Risk
Adiponectin	0.414	µg/ml	≤1.4369 Low 1.437 - 7.272 Optimal >7.272 High
Glucose	3.06	mmol/l	≤5.6 Optimal
HDL Cholesterol	1.17	mmol/l	>1.03 Optimal
Triglycerides	1.26	mmol/l	≤1.7 Optimal
HbA1c	33.33	mmol/mol	≤42.0 Optimal

Test	Result	Units	Reference Range
Metabolic Syndrome			
Insulin	999	pmol/l	≤17.8 Low 17.9 - 173.0 Optimal >173.0 High
C-peptide	0.52	ng/ml	≤1.1 Low 1.11 - 4.4 Optimal >4.4 High
Tumour Necrosis Factor-α (TNFα)	7.11	pg/ml	≤9.62 Optimal
High Sensitivity C-Reactive Protein (hsCRP)	2.42	mg/l	<1 Low Risk 1 - 3 Average Risk >3 High Risk
Kidney Health			
Creatinine	89.5	μmol/l	53.1 - 97.0 Optimal
Estimated Glomerular Filtration Rate (eGFR)	97	ml/min/1.73m ²	>89 Satisfactory
Cystatin C {Urine}	2.74	ng/mg Cre	≤58.8 Normal
Cystatin C	1.09	mg/l	≤0.57 Low 0.58 - 1.05 Optimal >1.05 High
Beta-2-Microglobulin	2.06	mg/l	0.91 - 3.0 Optimal
Microalbumin / Creatinine Ratio	8.3	mg/mmol creatinine	<30 Normal
Total Protein	73.7	g/l	64.1 - 83.0 Optimal
Calcium (adjusted)	2.54	mmol/l	2.21 - 2.6 Optimal
Chloride	97	mmol/l	96 - 108 Optimal
Magnesium	1.764	mmol/l	≤0.7 Low 0.701 - 1.1 Optimal >1.1 High
Phosphate	1.27	mmol/l	0.801 - 1.5 Optimal
Potassium	4.49	mmol/l	3.51 - 5.3 Optimal
Sodium	141.1	mmol/l	133.1 - 146.0 Optimal
Urea	4.58	mmol/l	2.51 - 7.8 Optimal
Uric Acid	235.9	μmol/l	200.1 - 430.0 Optimal
Neutrophil Gelatinase-Associated Lipocalin (NGAL)	1676.52	ng/ml	≤515.85 Low 515.86 - 1421.5 Optimal >1421.5 High
Neutrophil Gelatinase-Associated Lipocalin (NGAL) {Urine}	17.9	ng/mg Cre	≤155.0 Normal

Test	Result	Units	Reference Range
Kidney Health			
Bicarbonate	24	mmol/l	23 - 29 Optimal
Fatty Acid Binding Protein – 1 (FABP-1)	8.36	ng/ml	≤7.04 Optimal >7.04 High
Kidney Injury Molecule-1 (KIM-1)	0.89	ng/mg Cre	≤2.0 Normal
Urinalysis			
Bilirubin (Urine)	Negative	mg/dl	Negative Optimal
Ketones (Urine)	Negative	mg/dl	Negative Optimal
Nitrite (Urine)	Negative	mg/dl	Negative Optimal
Protein (Urine)	Negative	mg/dl	Negative Optimal
Red Blood Cells (Urine)	Negative	RBC/μl	Negative Optimal
Urobilinogen (Urine)	0.2	mg/dl	≤0.4 Optimal
Liver Health			
Alanine Aminotransferase (ALT)	28.6	U/l	<40 Normal
Alkaline Phosphatase (ALP)	83	U/l	31 - 120 Optimal
Aspartate Aminotransferase (AST)	163.6	U/l	<40 Normal 40 - 185 Moderately raised >185 High
Gamma-Glutamyltransferase (GGT)	31.7	U/l	10.1 - 71.0 Optimal
Lactate Dehydrogenase (LDH)	333	U/l	231 - 460 Optimal
Glutamate Dehydrogenase (GLDH)	<3.0	U/l	≤7.0 Optimal
Total Bilirubin	7.32	μmol/l	≤21.0 Optimal
Direct Bilirubin	4.08	μmol/l	≤6.0 Optimal
Fibrosis-4 Score (FIB-4)	6.88	-	≤1.3 Low Risk 1.31 - 2.67 Indeterminate >2.67 High Risk
Bile Acids	15	μmol/l	≤10.0 Optimal >10.0 High
Albumin	50.2	g/l	≤35.0 Low 35.1 - 50.0 Optimal >50.0 High
Globulin	23.5	g/l	23.1 - 35.0 Optimal
Ferritin	257.61	μg/l	20 - 300 Optimal
Aldolase	6.48	U/l	≤7.6 Optimal

Test	Result	Units	Reference Range
Liver Health			
Copper	19	µmol/l	12 - 24 Optimal
Pancreatic Health			
Pancreatic Amylase	25	U/l	14 - 53 Optimal
Lipase	27.1	U/l	5.1 - 65.0 Optimal
Digestive Health			
Anti-Tissue Transglutaminase Antibodies (Coeliac Disease)	0.3	AU/mL	<7.0 Optimal
Pepsinogen I (PGI)	85.92939	ng/ml	38.08 - 136.59 Optimal
Pepsinogen II (PGII)	8.22345	ng/ml	4.98 - 19.54 Optimal
Pepsinogen I/Pepsinogen II ratio (PGI/II ratio)	10.449311 42	-	3.37 - 12.27 Optimal
Gastrin-17	8.15885	pmol/l	<1.0 Low 1.0 - 6.8 Optimal ≥6.9 High
Nutritional Health			
Total Antioxidant Status (TAS)	1.92	mmol/l	>1.3 Optimal
Glutathione Reductase	62.4	U/l	>33.0 Optimal
Albumin	50.2	g/l	≤35.0 Low 35.1 - 50.0 Optimal >50.0 High
Calcium (adjusted)	2.54	mmol/l	2.21 - 2.6 Optimal
Copper	19	µmol/l	12 - 24 Optimal
Magnesium	1.764	mmol/l	≤0.7 Low 0.701 - 1.1 Optimal >1.1 High
Zinc	14.1	µmol/l	11.2 - 19.5 Optimal
Iron	21.5	µmol/l	5.9 - 34.5 Optimal
Folic acid	4.1	µg/l	3.9 - 26.8 Optimal
Vitamin B12	734	ng/l	198 - 771 Optimal
Muscle & Joint Health			
Creatine Kinase	122	U/l	41 - 320 Optimal
Creatine Kinase-MB (CK-MB)	1.261	µg/l	≤6.13 Optimal
Aldolase	6.48	U/l	≤7.6 Optimal
Myoglobin	40.6	µg/l	≤72.0 Optimal
Uric Acid	235.9	µmol/l	200.1 - 430.0 Optimal

Test	Result	Units	Reference Range
Muscle & Joint Health			
Rheumatoid Factor (RF)	8	kU/l	<20.0 Optimal
Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibodies	2	U/ml	≤17.0 Negative
Bone Health			
Alkaline Phosphatase (ALP)	83	U/l	31 - 120 Optimal
Calcium (adjusted)	2.54	mmol/l	2.21 - 2.6 Optimal
Phosphate	1.27	mmol/l	0.801 - 1.5 Optimal
Parathyroid Hormone (PTH)	1	pmol/l	≤1.6 Low 1.7 - 6.9 Optimal >6.9 High
Neurological Markers			
Glial Fibrillary Acidic Protein (GFAP)	0.03	ng/ml	≤0.14 Optimal
Nucleoside Diphosphate Kinase A (NDKA)	37.98	ng/ml	≤15.28 Optimal >15.28 High
Parkinson disease protein 7 (PARK7)	<0.00	ng/ml	≤0.11 Optimal
Glutathione S-transferase Pi (GSTPi)	9.1	ng/ml	≤10.55 Optimal
Allergy Evaluation			
Immunoglobulin E (IgE)	<19.6	kU/l	≤100.0 Optimal
Infection & Inflammation			
C-Reactive Protein (CRP)	2.42	mg/l	≤5.0 Optimal
Rheumatoid Factor (RF)	8	kU/l	<20.0 Optimal
Complement Component 3 (C3)	1.13	g/l	0.801 - 1.6 Optimal
Complement Component 4 (C4)	0.159	g/l	≤0.16 Low 0.161 - 0.46 Optimal >0.46 High
Haptoglobin	0.337	g/l	≤0.4 Low 0.401 - 2.4 Optimal >2.4 High
Immunoglobulin A (IgA)	1.86	g/l	0.901 - 4.5 Optimal
Immunoglobulin G (IgG)	8.19	g/l	6.01 - 16.0 Optimal
Immunoglobulin M (IgM)	2.362	g/l	0.601 - 2.5 Optimal
Antistreptolysin O (ASO)	505.4	IU/ml	≤200.0 Optimal >200.0 High

Test	Result	Units	Reference Range
Infection & Inflammation			
Interleukin1a	0.52	pg/ml	≤0.27 Optimal >0.27 High
Interleukin-1β (IL-1β)	10	pg/ml	≤2.34 Optimal >2.34 High
Interleukin-2 (IL-2)	2.36	pg/ml	≤2.42 Optimal
Interleukin-3 (IL-3)	11.77	pg/ml	≤23.18 Optimal
Interleukin-4 (IL-4)	1.58	pg/ml	≤2.63 Optimal
Interleukin-5 (IL-5)	<0.00	pg/ml	≤1.49 Optimal
Interleukin-7 (IL-7)	42.36	pg/ml	≤63.67 Optimal
Interleukin-8 (IL-8)	14.31	pg/ml	4.0 - 34.53 Optimal
Interleukin-10 (IL-10)	0.22	pg/ml	≤1.05 Optimal
Interleukin-12p70 subunit (IL-12p70)	3.47	pg/ml	≤13.17 Optimal
Interleukin-13 (IL-13)	<0.00	pg/ml	≤12.57 Optimal
Interleukin-15 (IL-15)	0.82	pg/ml	≤0.89 Low 0.9 - 2.02 Optimal >2.02 High
Interleukin-23 (IL-23)	0.013	ng/ml	≤0.05 Optimal
Soluble IL-2 Receptor α (sIL-2Ra)	<0.00	ng/ml	≤0.19 Optimal
Soluble IL-6 Receptor (sIL-6R)	1.05	ng/ml	≤3.53 Optimal
Tumour Necrosis Factor-α (TNFα)	7.11	pg/ml	≤9.62 Optimal
Epidermal Growth Factor (EGF)	63	pg/ml	4 - 109 Optimal
Vascular Endothelial Growth Factor (VEGF)	252	pg/ml	≤212 Optimal >212 High
Monocyte Chemotactic Protein-1 (MCP-1)	18	pg/ml	≤45 Low 46 - 396 Optimal >396 High
Granulocyte Macrophage Colony Stimulating Factor (GM-CSF)	1.17	pg/ml	≤1.46 Optimal
Matrix Metalloproteinase-9 (MMP-9)	280.4	ng/ml	≤38.4 Low 38.5 - 214.1 Optimal >214.1 High
E-Selectin	17.4	ng/ml	5.9 - 33.5 Optimal
L-Selectin	1464	ng/ml	695 - 1939 Optimal

Test	Result	Units	Reference Range
Infection & Inflammation			
P-Selectin	122	ng/ml	81 - 255 Optimal
Intercellular Cell Adhesion Molecule-1 (ICAM-1)	256	ng/ml	185 - 377 Optimal
Vascular Cell Adhesion Molecule-1 (VCAM-1)	1052	ng/ml	429 - 1103 Optimal
Interleukin 17A	0.36	pg/ml	≤1.13 Optimal
Interleukin 17F	<0.00	pg/ml	≤0.44 Optimal
Interleukin 22	3.73	pg/ml	≤6.51 Optimal
Epstein-Barr Antibodies			
Epstein-Barr Nuclear Antigen (EBNA) IgG Antibody	90.8	COI	≤0.999 Negative >0.999 Positive
Epstein-Barr Viral Capsid Antigen (VCA) IgG	1368	COI	≤0.999 Negative >0.999 Positive
Epstein-Barr Viral Capsid Antigen (VCA) Antibody (IgM)	0.23	COI	≤0.999 Negative
Autoimmune Profile			
Rheumatoid Factor (RF)	8	kU/l	<20.0 Optimal
Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibodies	2	U/ml	≤17.0 Negative
Anti-Tissue Transglutaminase Antibodies (Coeliac Disease)	0.3	AU/mL	<7.0 Optimal
Anti-Thyroglobulin Antibody (Anti-Tg)	14	IU/ml	≤115.0 Optimal
Anti-Thyroid Peroxidase Antibody (Anti-TPO)	14.1	kU/l	≤34.0 Optimal
Tumour Associated Markers			
Neuron Specific Enolase (NSE)	2.37	µg/l	0.75 - 11.46 Optimal
Alpha-Fetoprotein (AFP)	1.8	kU/l	≤5.8 Optimal
Carcinoembryonic Antigen (CEA)	1.4	µg/l	≤4.7 Optimal
Cancer Antigen 19-9 (CA 19-9)	7.7	kU/l	≤34.0 Optimal
Cancer Antigen 125 (CA 125)	9	kU/l	≤35 Optimal
Human Chorionic Gonadotrophin (hCG)	<0.2	mIU/ml	≤2.6 Optimal
Pituitary & Adrenal Health			

Test	Result	Units	Reference Range
Pituitary & Adrenal Health			
Thyroid Stimulating Hormone (TSH)	2.23	mIU/l	0.351 - 5.5 Optimal
Insulin-like Growth Factor-1 (IGF-1)	15.5	nmol/l	13.6 - 30.7 Optimal
Cortisol	293	nmol/l	70 - 345 Optimal
Follicle Stimulating Hormone	<0.3	U/l	≤1.5 Low 1.6 - 12.4 Optimal >12.4 High
Luteinising Hormone	<0.3	U/l	≤1.7 Low 1.8 - 8.6 Optimal >8.6 High
Prolactin	101	mIU/l	87 - 324 Optimal
Dehydroepiandrosterone Sulphate (DHEAs)	5.9	μmol/l	2.5 - 11.6 Optimal
Thyroid Health			
Thyroid Stimulating Hormone (TSH)	2.23	mIU/l	0.351 - 5.5 Optimal
Free Thyroxine (FT4)	17.3	pmol/l	11.91 - 21.6 Optimal
Free Tri-iodothyronine (FT3)	6.68	pmol/l	3.11 - 6.8 Optimal
Anti-Thyroglobulin Antibody (Anti-Tg)	14	IU/ml	≤115.0 Optimal
Anti-Thyroid Peroxidase Antibody (Anti-TPO)	14.1	kU/l	≤34.0 Optimal
Calcitonin	<0.50	ng/l	≤9.52 Optimal
Thyroxine-binding globulin (TBG)	16	μg/ml	6.4 - 22.7 Optimal
Stress Health			
Cortisol	293	nmol/l	70 - 345 Optimal
Testosterone	19	nmol/l	8.641 - 29.0 Optimal
Epidermal Growth Factor (EGF)	63	pg/ml	4 - 109 Optimal
Vascular Endothelial Growth Factor (VEGF)	252	pg/ml	≤212 Optimal >212 High
Monocyte Chemotactic Protein-1 (MCP-1)	18	pg/ml	≤45 Low 46 - 396 Optimal >396 High
Interleukin-8 (IL-8)	14.31	pg/ml	4.0 - 34.53 Optimal
Prostate Health			

Test	Result	Units	Reference Range
Prostate Health			
Total Prostate Specific Antigen (TPSA)	0.55	µg/l	≤1.4 Optimal
Hormonal Health			
Cortisol	293	nmol/l	70 - 345 Optimal
Dehydroepiandrosterone Sulphate (DHEAs)	5.9	µmol/l	2.5 - 11.6 Optimal
Follicle Stimulating Hormone	<0.3	U/l	≤1.5 Low 1.6 - 12.4 Optimal >12.4 High
Oestradiol	123	pmol/l	41.5 - 159.0 Optimal
Luteinising Hormone	<0.3	U/l	≤1.7 Low 1.8 - 8.6 Optimal >8.6 High
Prolactin	101	mIU/l	87 - 324 Optimal
Testosterone	19	nmol/l	8.641 - 29.0 Optimal
Sex Hormone Binding Globulin	22.1	nmol/l	18.31 - 54.1 Optimal
Free Testosterone	0.447	nmol/l	0.162 - 0.628 Optimal
Tissue Damage Markers			
Fatty Acid Binding Protein-4 (FABP-4)	47.31	ng/ml	≤67.99 Optimal
Fatty Acid Binding Protein-5 (FABP-5)	9.49	ng/ml	≤7.48 Optimal >7.48 High
Fatty Acid Binding Protein-6 (FABP-6)	0.37	ng/ml	≤3.41 Optimal
Fatty Acid Binding Protein-7 (FABP-7)	8.37	pg/ml	≤100.0 Optimal
Fatty Acid Binding Protein-9 (FABP-9)	1.79	pg/ml	≤18.12 Optimal
Other			
Chlamydia Trachomatis Urine	Not Detected	-	Not Detected Not Detected
HSV1 Urine	Detected	-	Not Detected Not Detected Detected Detected
HSV2 Urine	Not Detected	-	Not Detected Not Detected
Mycoplasma Genitalium Urine	Not Detected	-	Not Detected Not Detected

Test	Result	Units	Reference Range
Other			
Mycoplasma Hominis Lesion Swab	Not Detected	-	Not Detected Not Detected
Neisseria Gonorrhoeae Urine	Detected	-	Not Detected Not Detected Detected Detected
Treponema pallidum Urine	Not Detected	-	Not Detected Not Detected
Trichomonas Vaginalis Urine	Not Detected	-	Not Detected Not Detected
Ureaplasma Urealyticum Urine	Not Detected	-	Not Detected Not Detected

Nutrition Guide

Following your results from your Preventive Health Programme, please find enclosed your personalised nutrition guide to help you make adjustments to your diet and lifestyle.

Choosing a Healthy, Balanced Diet

Current guidelines recommend a daily calorie intake of 2,500kcal for males and 2,000kcal for females (from all food and drinks). To start, we suggest you opt for a healthy, balanced diet by following the 'Eatwell Guide'. This includes the five main food groups in the correct proportions:

1. **Fruit and vegetables** should make up just over a third of your overall diet. You should aim for at least 5 portions of a variety of fruit and vegetables each day. A portion is 80g or any of the following: 1 apple, 1 banana, 3 heaped tablespoons of vegetables, a dessert bowl of salad, 30g of dried fruit or a 150ml glass of fruit juice or smoothie. Fresh, frozen, dried and canned all count towards your total 5-a-day.
2. **Potatoes, bread, rice and other starchy carbohydrates (e.g. wholegrain cereal, oats)** should make up just over a third of your overall diet. You should opt for higher fibre, wholegrain versions of these foods, where possible.
3. **Dairy and alternatives (i.e. soya)** e.g. milk, cheese, yogurts. Some of these should be included in your diet each day. Try to choose lower fat, lower sugar options.
4. **Beans, pulses, fish, eggs, meat and other proteins**, including at least 2 portions (a portion is approximately 140g) of fish (1 oily) per week and reduce your intake of red and processed meat (e.g. sausages, bacon, cured meats and reformed meat products).
5. **Oil and spreads**, e.g. olive oil, butter, margarine. Try to limit the amount used and choose unsaturated varieties (e.g. vegetable oil, rapeseed oil and olive oil).

Reduce the frequency and portions of chocolate, crisps, cakes, buns etc. that you consume. Aim to drink 6-8 glasses of fluids each day. Good sources of fluids include plain drinking water, tea or coffee (be aware of the amount of caffeine you are consuming) and fruit juices. Try to limit the amount of fizzy drinks in your diet, as they contain large amounts of sugar. In addition, excessive alcohol consumption can cause dehydration.

**These guidelines do not apply to infants under the age of 2 years, or to anyone with special dietary requirements / medical needs, who should seek advice from a dietitian.*

Nutrition Guide

Cholesterol

There are two main types of cholesterol within our diet – LDL ('bad') and HDL ('good'). One of the main causes of raised cholesterol in the UK is a diet rich in saturated fat (LDL cholesterol), found primarily in full fat dairy foods, meat and meat products, biscuits, cakes and savoury snacks. UK guidelines recommend that the average man should consume no more than 30g of saturated fat per day and the average woman should consume no more than 20g of saturated fat per day. To help reduce total and LDL cholesterol levels, it is recommended that you should replace foods high in saturated fat with foods high in unsaturated fat. HDL ('good') cholesterol is found in unsaturated fat and is important to help remove LDL ('bad') cholesterol from the arteries. Examples of foods containing unsaturated fat include; oily fish (e.g. mackerel and salmon), nuts and seeds (e.g. almonds, sunflower seeds), avocados, vegetable oils and spreads (e.g. rapeseed or vegetable oil). Oats, oat bran, linseeds (e.g. flaxseeds), barley, fruit, vegetables and vegetable proteins (e.g. nuts, beans, and pulses) contain soluble fibre, which helps to soak up cholesterol. Try to include these foods regularly within your diet.

Omega 3

Omega 3 is a family of fats that are useful for regulating 'bad cholesterol' and maintaining healthy joints, as well as having anti-inflammatory properties. Good sources of Omega 3 include oily fish, such as mackerel, salmon, sardines and fresh tuna. It is recommended that you should eat two portions of fish per week; however, in the UK there is no specific recommendation for how much Omega 3 we should consume. If you do not eat fish, other dietary sources of Omega 3 include nuts and seeds (e.g. walnuts and pumpkin seeds), vegetable oils (e.g. rapeseed and linseed oils), soya and soya products (e.g. beans, milk and tofu) and green leafy vegetables.

Hydration

Our bodies are approximately two thirds water; therefore, it is important that you keep your body hydrated. Recommendations state that you should consume 2-2.5 litres of fluids per day and you may require more in hot climates or during/following intense exercise. Good sources of fluids include plain drinking water, tea or coffee (be aware of the amount of caffeine you are consuming) and fruit juices. Try to limit the amount of fizzy drinks in your diet, as they contain large amounts of sugar. In addition, excessive alcohol consumption can cause dehydration.



Your Health, Our Passion

