













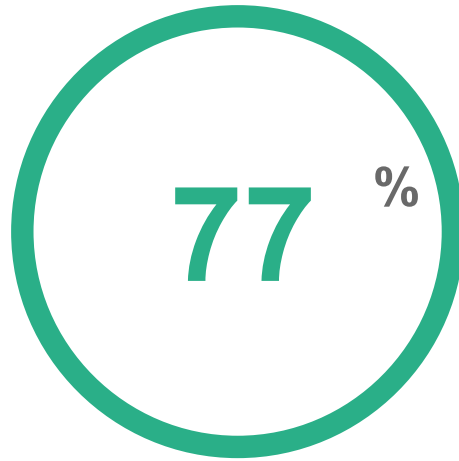
Order	Example Report
Name	FirstName LastName
Date of Birth	DD-Mmm-YYYY
Fasted For	XX hours and XX minutes
Date of Sample Collection	DD-Mmm-YYYY
Date of Report	DD-Mmm-YYYY
Programme	Tired All The Time

# CONTENTS

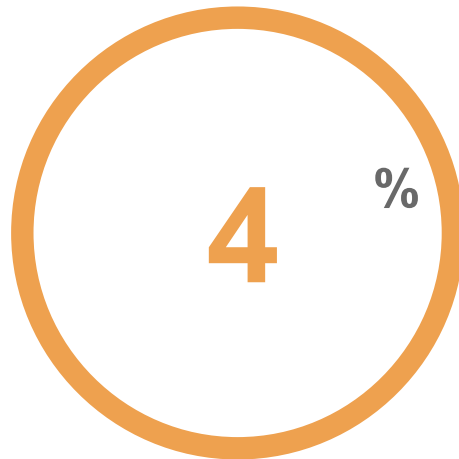
	Your Results of Interest	04
	Personal Health Measurements	09
	Full Blood Count	11
	Iron Status	13
	Diabetes Health	14
	Kidney Health	15
	Liver Health	17
	Nutritional Health	18
	Bone Health	19
	Infection & Inflammation	20
	Thyroid Health	21
	Results for your Doctor	22

# Health Status

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



 Green - In Range



 Amber - In Between



 Red - Out of Range

# 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

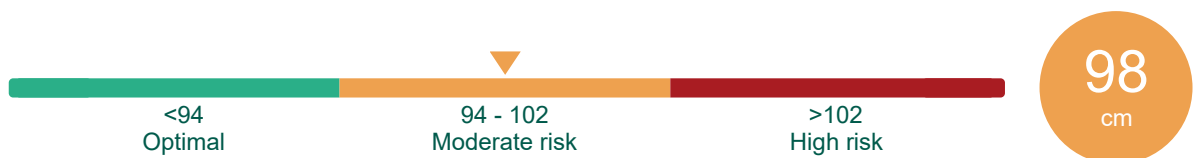
### Body Mass Index (BMI)

Body Mass Index (BMI) calculated from an individual's weight and height, is an indicator of body fat and can identify weight problems, in terms of whether an individual is underweight, overweight or obese. Such weight problems are risk factors for conditions such as heart disease, high blood pressure, metabolic syndrome, diabetes, cancer and respiratory problems.



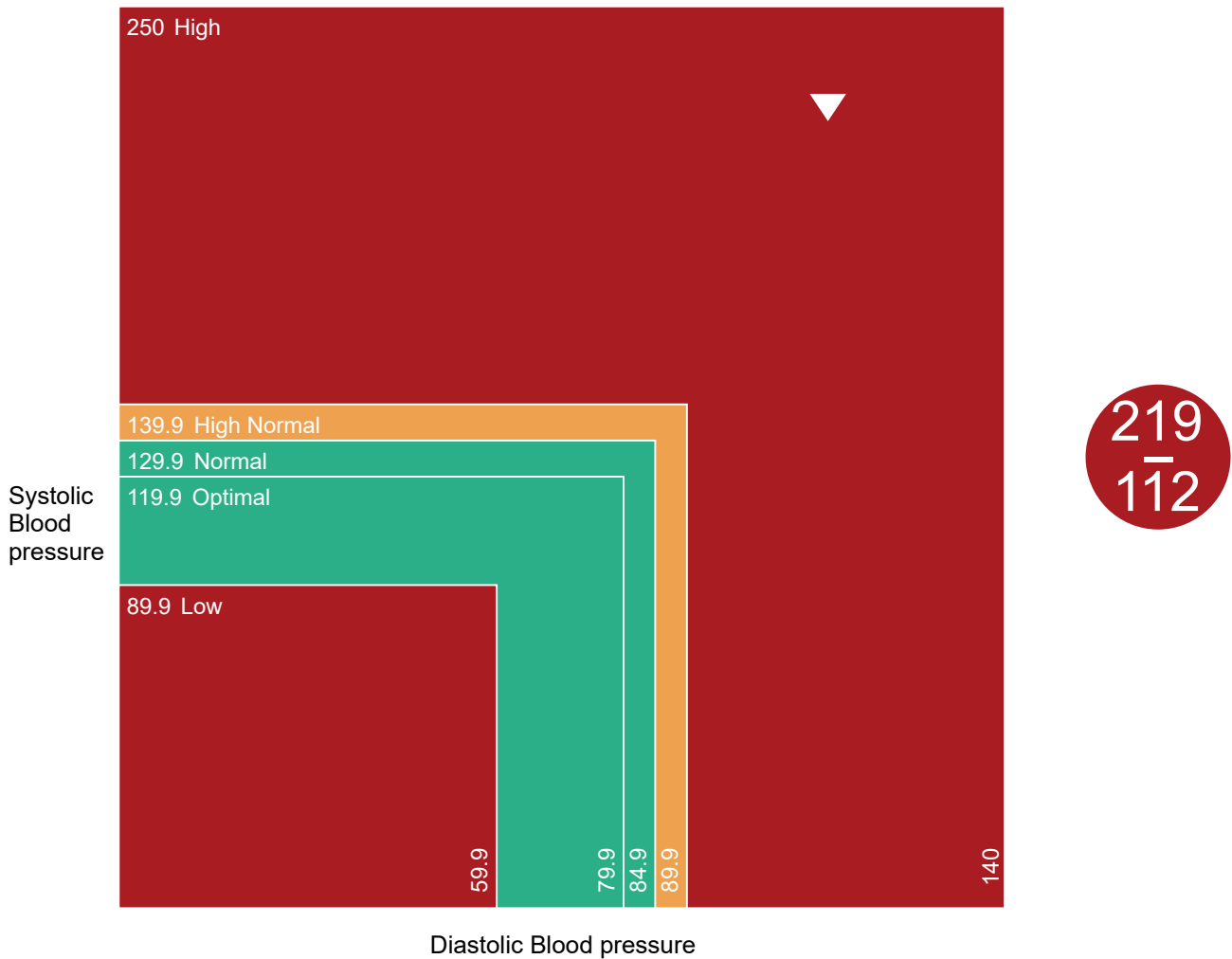
### Waist Circumference

Waist Circumference relates closely to body mass index (BMI) and is part of the waist to hip ratio measurement. Waist circumference is a measure of central or abdominal fat and provides additional information on disease risk and other long-term health problems. Increased weight around the abdomen can increase the risk of developing conditions such as type 2 diabetes, metabolic syndrome, coronary heart disease and high blood pressure.



## Blood pressure

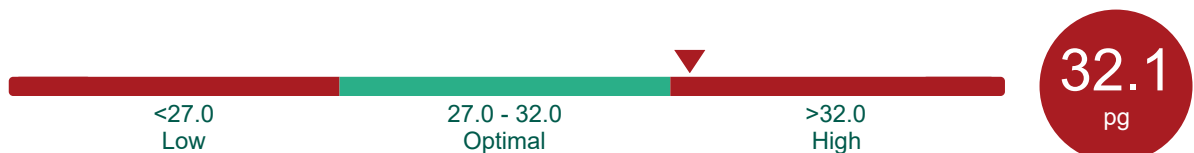
Blood Pressure is a measurement of the force applied to the walls of the arteries as the heart pumps blood through the body. Systolic blood pressure refers to the pressure of blood as your heart contracts. Diastolic blood pressure refers to the pressure of blood as your heart rests between beats. High 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.



## Full Blood Count

### Mean Cell Haemoglobin (MCH)

Mean Cell Haemoglobin (MCH) is a measure of the average amount (weight) of haemoglobin within a red blood cell. Large red blood cells generally have more haemoglobin (greater MCH) and small red blood cells generally have less haemoglobin (lower MCH). A decreased MCH can occur with iron-deficiency anaemia, which is associated with production of smaller than normal red blood cells. An increased MCH can occur with anaemia due to vitamin B12 or folic acid deficiency, which is associated with production of larger than normal red blood cells.

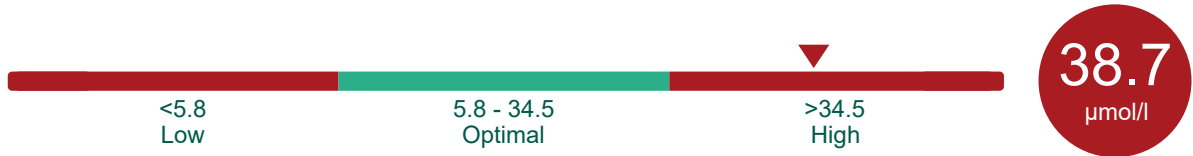




# Iron Status

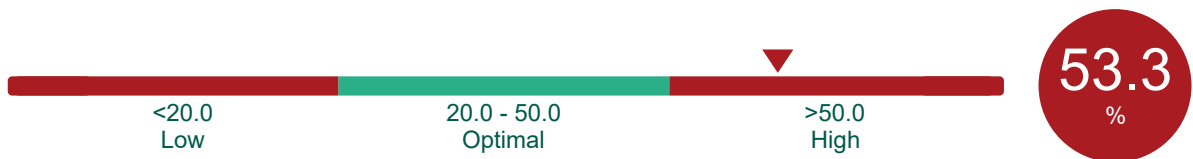
## Iron

Iron is an essential trace element supplied by the diet, which is necessary for the formation of red blood cells (RBCs). This test measures the quantity of iron bound to the transport protein transferrin in the blood. Low iron levels are associated with iron-deficiency anaemia, which may be caused by poor dietary iron intake, inadequate absorption, increased requirement (e.g. in growing children and during late pregnancy) or blood loss (e.g. heavy menstrual or digestive tract bleeding). Increased iron levels may be associated with disorders of excessive iron storage (e.g. haemochromatosis), excessive use of iron supplements, blood transfusions, haemolytic anaemia (anaemia caused by premature destruction of RBCs), lead toxicity, and liver or kidney disease.



## Transferrin Saturation

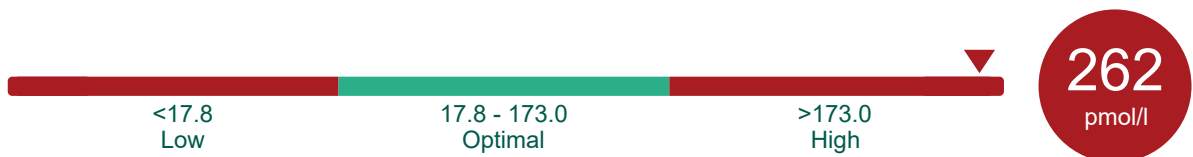
Transferrin Saturation represents the percentage of transferrin saturated with iron and is determined by dividing the iron level by the total iron binding capacity (TIBC). Calculation of transferrin saturation is helpful in determining the cause of abnormal iron and TIBC levels. A decrease in transferrin saturation can be associated with iron-deficiency anaemia and chronic illnesses. An increase in transferrin saturation can be associated with disorders of excessive iron storage (e.g. haemochromatosis), increased iron intake or other types of anaemia, such as haemolytic anaemia (anaemia caused by premature destruction of red blood cells) and megaloblastic anaemia (anaemia due to vitamin B12 or folic acid deficiency).



# Diabetes Health

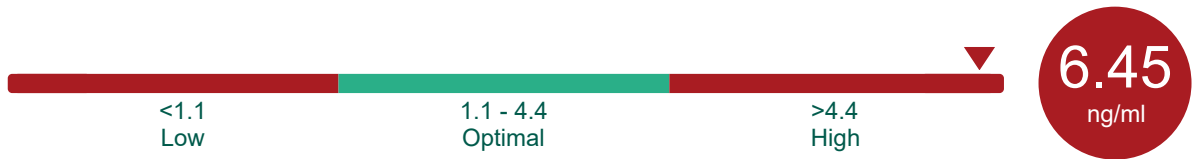
## Insulin

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

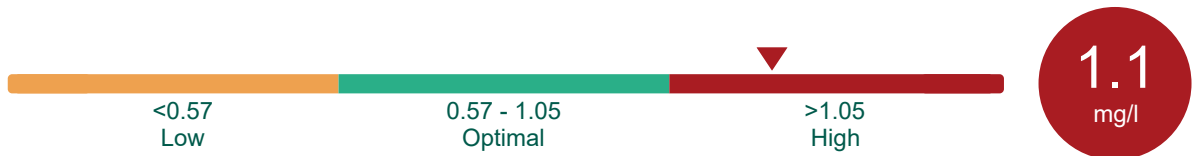
C-peptide is released from the pancreas to the bloodstream during production of insulin. C-peptide is a useful marker of insulin production and may aid the evaluation of individuals with hypoglycaemia (low blood sugar) or metabolic syndrome (a set of risk factors for diabetes and cardiovascular disease 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).



## Kidney Health

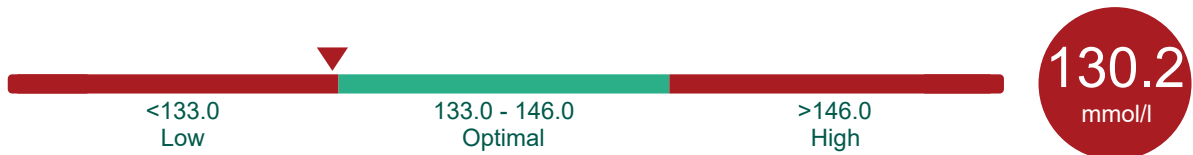
### Cystatin C

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.



### Sodium

Sodium is an essential mineral that regulates water balance and blood pressure in the body. Various hormones contribute to regulation of sodium levels in the blood including aldosterone (stimulates the kidneys to reabsorb sodium), natriuretic hormone (stimulates the kidneys to excrete excess sodium in the urine) and antidiuretic hormone (stimulates the kidneys to reabsorb water). Hypernatraemia, or elevated sodium levels, may be due to dehydration, hyperaldosteronism (increased aldosterone production), diabetes insipidus (a rare disorder in which urine is produced excessively), and Cushing's syndrome (a rare disorder in which the adrenal glands are overactive). Hyponatraemia, or decreased sodium levels, may be due to diarrhoea, vomiting, excessive sweating, hypothyroidism (an underactive thyroid gland), Addison's disease (a rare disorder in which the adrenal glands are underactive), kidney disease or from drinking too much water.

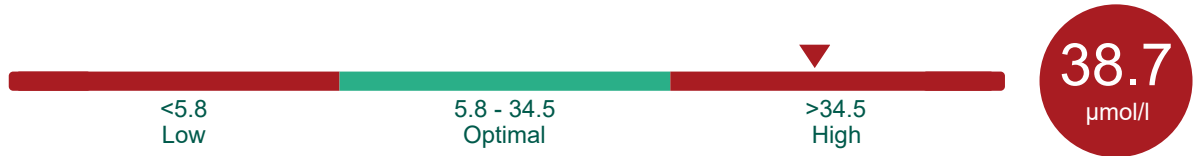




# Nutritional Health

## Iron

Iron is an essential trace element supplied by the diet, which is necessary for the formation of red blood cells (RBCs). This test measures the quantity of iron bound to the transport protein transferrin in the blood. Low iron levels are associated with iron-deficiency anaemia, which may be caused by poor dietary iron intake, inadequate absorption, increased requirement (e.g. in growing children and during late pregnancy) or blood loss (e.g. heavy menstrual or digestive tract bleeding). Increased iron levels may be associated with disorders of excessive iron storage (e.g. haemochromatosis), excessive use of iron supplements, blood transfusions, haemolytic anaemia (anaemia caused by premature destruction of RBCs), lead toxicity, and liver or kidney disease.







# Personal Health Measurements

Measurements include pulse, blood pressure, waist circumference and calculation of body mass index (BMI). 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.

## Body Mass Index (BMI)



## Waist Circumference



## Waist / Hip Ratio

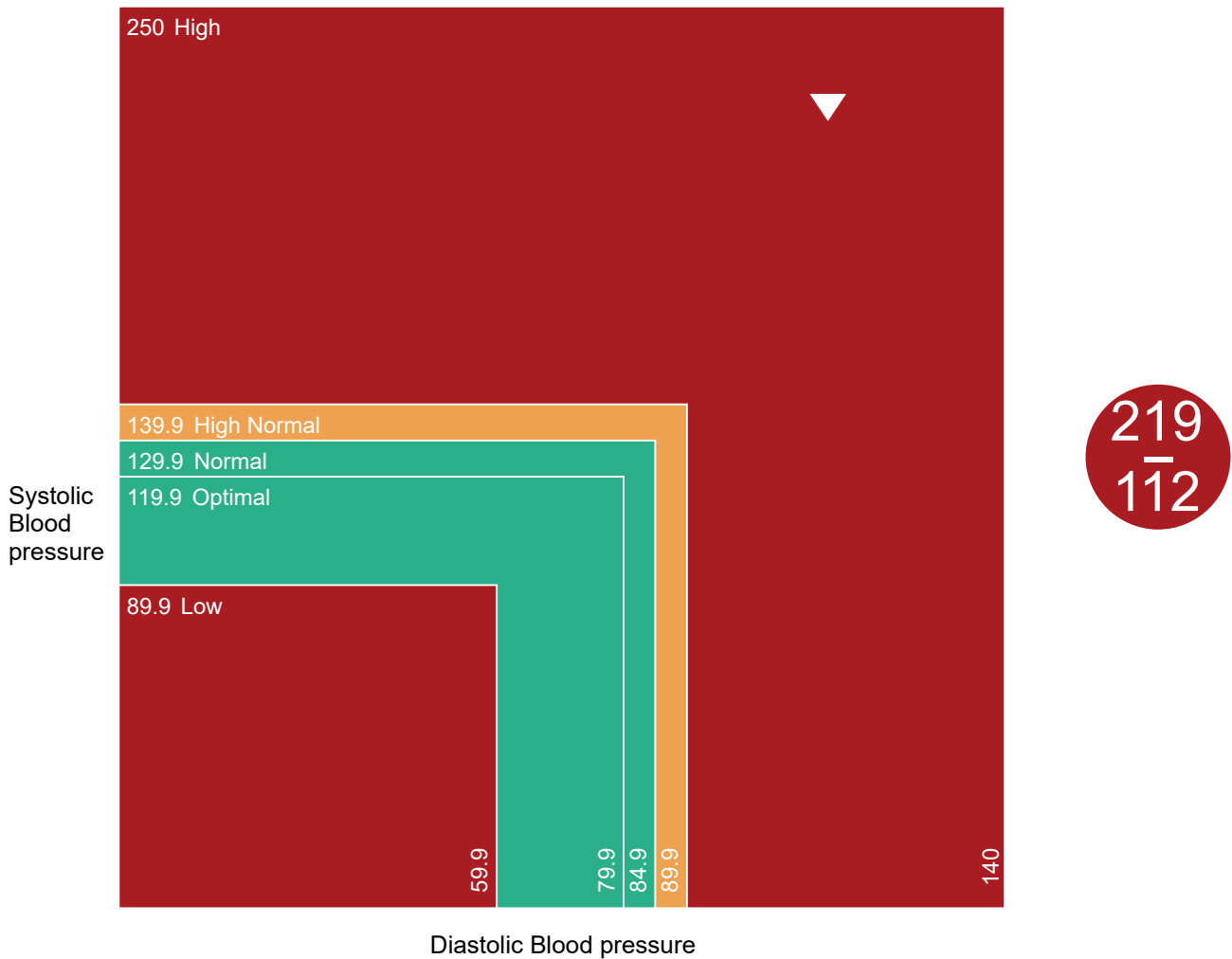


## Pulse



## 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.





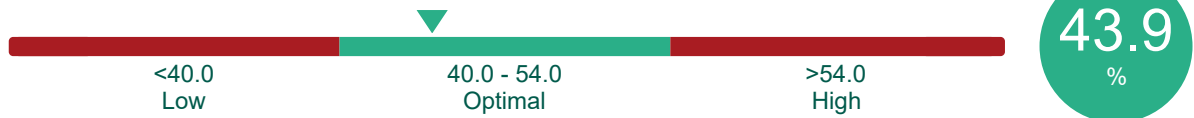
# Full Blood Count

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



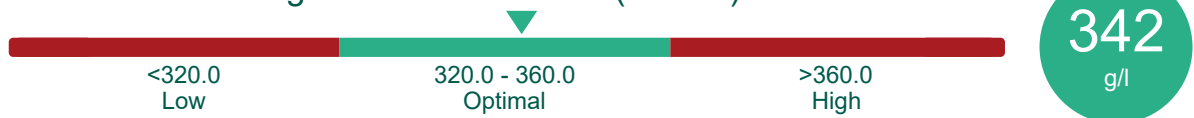
## Haematocrit



## Mean Cell Haemoglobin (MCH)



## Mean Cell Haemoglobin Concentration (MCHC)



## Red Blood Cell Mean Cell Volume (MCV)



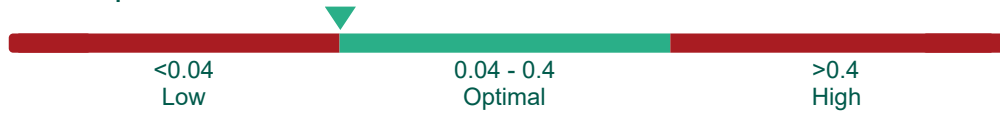
## Red Blood Cell Count



## Basophil Count



### Eosinophil Count



0.04  
10<sup>9</sup>/L

### Lymphocyte Count



1.22  
10<sup>9</sup>/L

### Monocyte Count



0.43  
10<sup>9</sup>/L

### Neutrophil Count



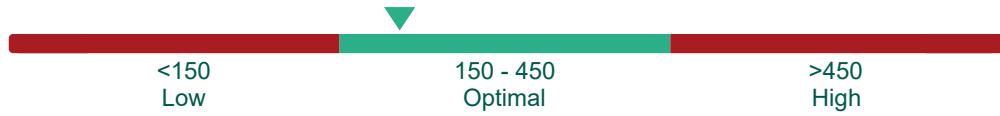
3.94  
10<sup>9</sup>/L

### White Blood Cell Count



5.7  
10<sup>9</sup>/L

### Platelet Count



204  
10<sup>9</sup>/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.

## Iron



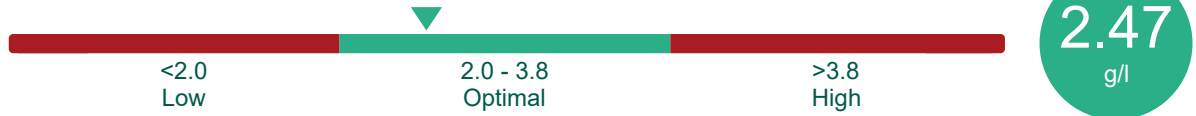
## Ferritin



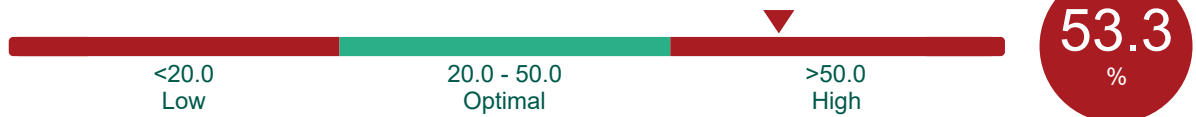
## Total Iron Binding Capacity (TIBC)



## Transferrin



## Transferrin Saturation





## 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').

### HbA1c



### Insulin



### C-peptide





# 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



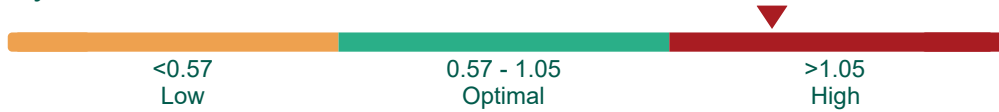
79  
μmol/l

## Estimated Glomerular Filtration Rate (eGFR)



92  
ml/min/1.73m<sup>2</sup>

## Cystatin C



1.1  
mg/l

## Calcium (adjusted)



2.37  
mmol/l

## Chloride



99  
mmol/l

## Magnesium



0.86  
mmol/l

## Phosphate



0.86  
mmol/l

## Sodium



130.2  
mmol/l

# Urea



3.89  
mmol/l





## 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.

### Alkaline Phosphatase (ALP)



61  
U/l

### Albumin



44.6  
g/l

### Ferritin



243.42  
µg/l



## 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.

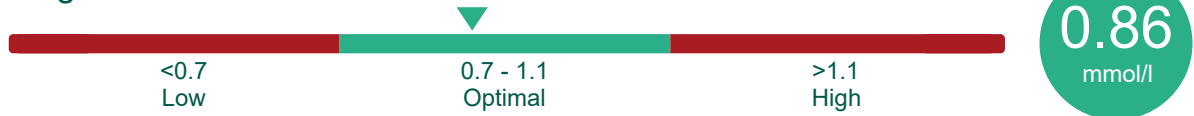
### Albumin



### Calcium (adjusted)



### Magnesium



### Iron



### Folic acid



### Vitamin B12



### Vitamin D





## 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)



61  
U/l

### Calcium (adjusted)



2.37  
mmol/l

### Phosphate



0.86  
mmol/l

### Vitamin D



60  
nmol/l



## 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)



0.83  
mg/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)



# 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
<b>Personal Health Measurements</b>			
Height	<b>1.75</b>	m	N/A
Weight	<b>87</b>	kg	N/A
Body Mass Index (BMI)	<b>28.4</b>	kg/m <sup>2</sup>	<18.5 Underweight 18.5 - 24.9 Optimal 25 - 29.9 Overweight ≥30 Obese
Waist Circumference	<b>98</b>	cm	<94 Optimal 94 - 102 Moderate risk >102 High risk
Hip Circumference	<b>107</b>	cm	N/A
Waist / Hip Ratio	<b>0.916</b>	Ratio	<0.95 Low risk
Pulse	<b>78</b>	BPM	60 - 100 Optimal
Systolic Blood pressure	<b>219</b>	mmHg	0 - 89.9 Low 90 - 119.9 Optimal 120 - 129.9 Normal 130 - 139.9 High Normal 140 - 250 High
Diastolic Blood pressure	<b>112</b>	mmHg	0 - 59.9 Low 59.9 - 79.9 Optimal 79.9 - 84.9 Normal 84.9 - 89.9 High Normal 90 - 140 High
<b>Full Blood Count</b>			
Haemoglobin	<b>150</b>	g/l	130.0 - 180.0 Optimal
Haematocrit	<b>43.9</b>	%	40.0 - 54.0 Optimal
Mean Cell Haemoglobin (MCH)	<b>32.1</b>	pg	<27.0 Low 27.0 - 32.0 Optimal >32.0 High
Mean Cell Haemoglobin Concentration (MCHC)	<b>342</b>	g/l	320.0 - 360.0 Optimal
Red Blood Cell Mean Cell Volume (MCV)	<b>93.8</b>	fl	76.0 - 100.0 Optimal
Red Blood Cell Count	<b>4.68</b>	10 <sup>12</sup> /L	4.5 - 6.5 Optimal
Basophil Count	<b>0.07</b>	10 <sup>9</sup> /L	0.01 - 0.1 Optimal
Eosinophil Count	<b>0.04</b>	10 <sup>9</sup> /L	0.04 - 0.4 Optimal
Lymphocyte Count	<b>1.22</b>	10 <sup>9</sup> /L	1.0 - 3.5 Optimal
Monocyte Count	<b>0.43</b>	10 <sup>9</sup> /L	0.2 - 0.8 Optimal

Test	Result	Units	Reference Range
<b>Full Blood Count</b>			
Neutrophil Count	<b>3.94</b>	10 <sup>9</sup> /L	2.0 - 7.5 Optimal
White Blood Cell Count	<b>5.7</b>	10 <sup>9</sup> /L	4.0 - 10.0 Optimal
Platelet Count	<b>204</b>	10 <sup>9</sup> /L	150 - 450 Optimal
<b>Iron Status</b>			
Iron	<b>38.7</b>	µmol/l	<5.8 Low 5.8 - 34.5 Optimal >34.5 High
Ferritin	<b>243.42</b>	µg/l	20 - 300 Optimal
Total Iron Binding Capacity (TIBC)	<b>72.6</b>	µmol/l	44.8 - 80.6 Optimal
Transferrin	<b>2.47</b>	g/l	2.0 - 3.8 Optimal
Transferrin Saturation	<b>53.3</b>	%	<20.0 Low 20.0 - 50.0 Optimal >50.0 High
<b>Diabetes Health</b>			
HbA1c	<b>35.9</b>	mmol/mol	<42.0 Optimal
Insulin	<b>262</b>	pmol/l	<17.8 Low 17.8 - 173.0 Optimal >173.0 High
C-peptide	<b>6.45</b>	ng/ml	<1.1 Low 1.1 - 4.4 Optimal >4.4 High
<b>Kidney Health</b>			
Creatinine	<b>79</b>	µmol/l	64.0 - 104.0 Optimal
Estimated Glomerular Filtration Rate (eGFR)	<b>92</b>	ml/min/1.73m <sup>2</sup>	≥60 Satisfactory
Cystatin C	<b>1.1</b>	mg/l	<0.57 Low 0.57 - 1.05 Optimal >1.05 High
Calcium (adjusted)	<b>2.37</b>	mmol/l	2.2 - 2.6 Optimal
Chloride	<b>99</b>	mmol/l	95 - 108 Optimal
Magnesium	<b>0.86</b>	mmol/l	0.7 - 1.1 Optimal
Phosphate	<b>0.86</b>	mmol/l	0.8 - 1.5 Optimal
Sodium	<b>130.2</b>	mmol/l	<133.0 Low 133.0 - 146.0 Optimal >146.0 High
Urea	<b>3.89</b>	mmol/l	2.5 - 7.8 Optimal
<b>Liver Health</b>			

Test	Result	Units	Reference Range
<b>Liver Health</b>			
Alkaline Phosphatase (ALP)	61	U/l	30 - 120 Optimal
Albumin	44.6	g/l	35.0 - 50.0 Optimal
Ferritin	243.42	µg/l	20 - 300 Optimal
<b>Nutritional Health</b>			
Albumin	44.6	g/l	35.0 - 50.0 Optimal
Calcium (adjusted)	2.37	mmol/l	2.2 - 2.6 Optimal
Magnesium	0.86	mmol/l	0.7 - 1.1 Optimal
Iron	38.7	µmol/l	<5.8 Low 5.8 - 34.5 Optimal >34.5 High
Folic acid	6.4	µg/l	3.8 - 26.8 Optimal
Vitamin B12	639	ng/l	197 - 771 Optimal
Vitamin D	60	nmol/l	50 - 375 Sufficiency
<b>Bone Health</b>			
Alkaline Phosphatase (ALP)	61	U/l	30 - 120 Optimal
Calcium (adjusted)	2.37	mmol/l	2.2 - 2.6 Optimal
Phosphate	0.86	mmol/l	0.8 - 1.5 Optimal
Vitamin D	60	nmol/l	50 - 375 Sufficiency
<b>Infection &amp; Inflammation</b>			
C-Reactive Protein (CRP)	0.83	mg/l	≤5.0 Optimal
<b>Thyroid Health</b>			
Thyroid Stimulating Hormone (TSH)	1.66	mIU/l	0.35 - 5.5 Optimal
Free Thyroxine (FT4)	21	pmol/l	11.9 - 21.6 Optimal
Free Tri-iodothyronine (FT3)	5.85	pmol/l	3.1 - 6.8 Optimal
Anti-Thyroglobulin Antibody (Anti-Tg)	15.1	IU/ml	≤115.0 Optimal
Anti-Thyroid Peroxidase Antibody (Anti-TPO)	12.4	kU/l	≤34.0 Optimal