

Detailed blood measurements

Firstname Lastname

email@email.com

Blood sample collection at: Nov 27, 2018

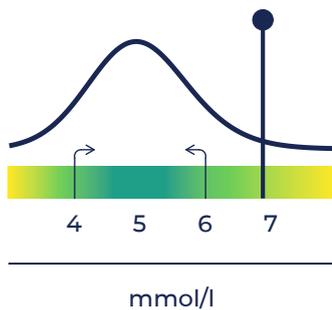
-  Your measured value
-  Population distribution
-  Clinical reference level
-  Lower risk
-  Higher risk

Here are your detailed blood measurements. These markers measured from your blood include important molecules used to summarise your physical health, such as cholesterol and blood sugar. Nine of the markers presented here have reference ranges based on clinical guidelines (i.e. what is commonly used in hospitals and medical centres), with your results showing the concentration of the marker in your blood sample. If your result is outside the reference range, we strongly advise you to contact a medical professional for further evaluation. The rest of the markers are presented as relative levels only and do not have a reference level. This is because they are not routinely used in clinics but are studied in public health research. All results are shown in comparison to the Finnish general population - the curved lines represent the distributions of each measurement.

The coloured bar illustrates associations with risk of developing diabetes or cardiovascular disease, as indicated by scientific studies (with the exception of glucose and creatinine, where the colour indicates clinical guidelines). Yellow indicates levels associated with higher risk and green indicates lower risk. These results should not be used for diagnostics but having several irregular values may suggest an increased risk level. The levels of a number of your blood measurements can be affected by a recent meal enjoyed within one to a few hours before taking the blood sample. This is indicated in the description of these markers. For this reason, we recommend fasting for a minimum of one hour before your blood sample is taken from you.

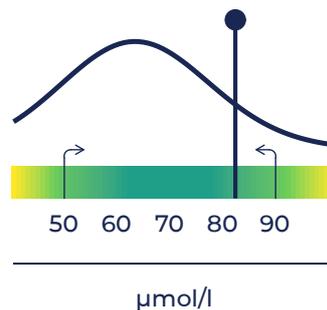
Glucose and creatinine

Glucose : 6.9 mmol/l



The normal range for fasting glucose (or blood sugar) is 4.0 - 6.0 mmol/l. Values in the range 6.1 - 6.9 mmol/l may indicate impaired fasting glucose, and values higher than 7.0 mmol/l may indicate diabetes. It is possible to have glucose levels above 6.0 when the sample was not taken in a fasted state and below 4.0 when fasting. Certain medications may also affect glucose levels. When a blood sample is not handled appropriately before being analysed, glucose levels might be affected and can be artificially low. For this reason, values below 3.9 mmol/l are not shown.

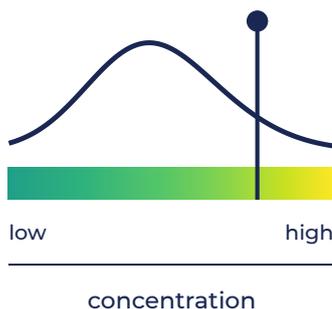
Creatinine : 82 µmol/l



Creatinine measurements are used to evaluate kidney function. Creatinine levels may be elevated due to kidney disease, circulatory problems or kidney stones. Other possible causes of high creatinine (even in healthy individuals) include large muscle mass, heavy physical exercise, and dehydration.

Chronic inflammation

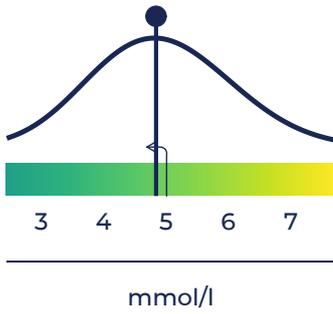
GlycA



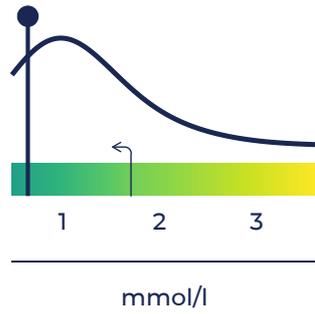
Glycoprotein acetyls (GlycA) increase in the blood in response to chronic low-grade inflammation. Chronic inflammation and high GlycA levels have been associated with an elevated risk of future cardiovascular disease, type 2 diabetes, and other chronic diseases.

Conventional lipid measurements

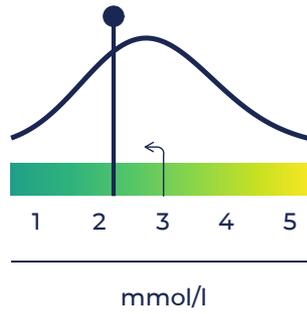
Cholesterol : 4.8 mmol/l



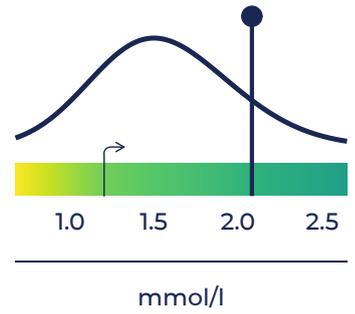
Triglycerides : 0.6 mmol/l



LDL-C : 2.2 mmol/l



HDL-C : 2.1 mmol/l

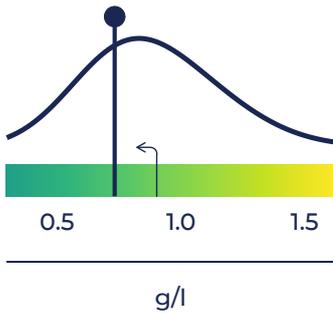


Lipids including cholesterol and triglycerides (fats) are typically measured in traditional healthcare. Lipids are transported in the blood inside different lipoprotein particles. Total cholesterol (Total-C), total triglycerides (Total-TG) and cholesterol in low-density lipoprotein particles (LDL-C) are associated with increased risk for cardiovascular disease.

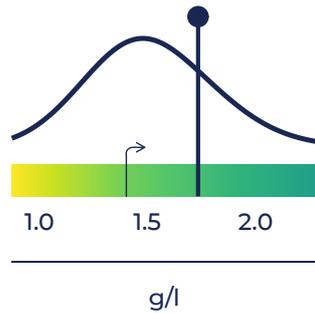
Cholesterol in high-density lipoproteins particles (HDL-C) is associated with lower risk of cardiovascular disease and type 2 diabetes.

Apolipoprotein measurements

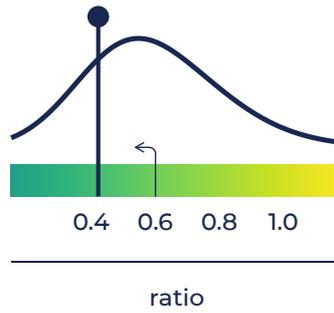
ApoB : 0.73 g/l



ApoA1 : 1.73 g/l



ApoB/ApoA1 : 0.42

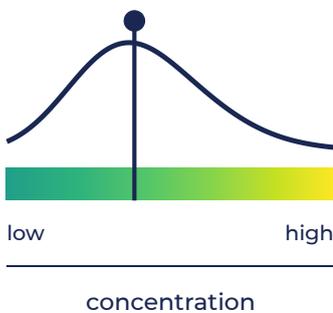


Apolipoprotein B (ApoB) is the main structural protein of lipoprotein particles linked to risk of cardiovascular disease. Apolipoprotein A1 (ApoA1) is the main structural protein of high-density lipoprotein (HDL) particles.

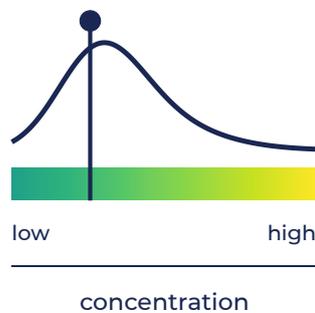
The levels of these apolipoproteins reflect the amount of lipoprotein particles in the blood. Scientific studies suggest that apolipoproteins B and A1 (and their ratio) are better at indicating cardiovascular disease risk than standard cholesterol measures.

Detailed lipid measurements

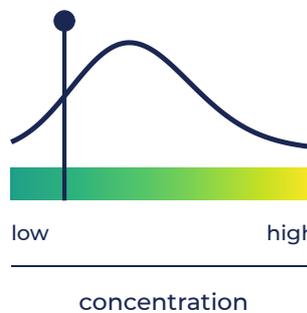
VLDL cholesterol



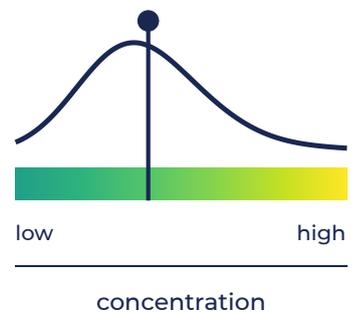
VLDL triglycerides



LDL triglycerides



HDL triglycerides

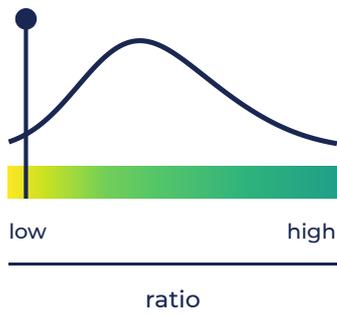


Measuring additional lipids can provide more detailed information about disease risk. Higher triglycerides in all lipoprotein particles, particularly VLDL particles, indicate increased risk for type 2 diabetes and cardiovascular disease.

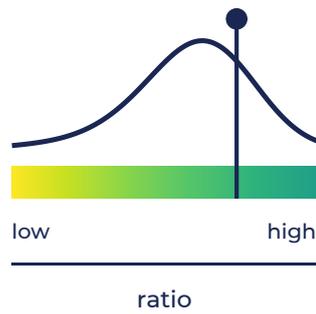
High concentration of very low-density lipoprotein (VLDL) cholesterol is also an indicator of increased cardiovascular and type 2 diabetes risk. Common causes of elevated triglyceride levels include obesity, insulin resistance and heavy alcohol use. Triglyceride levels can be elevated after a recent fat-heavy meal.

Fatty acids

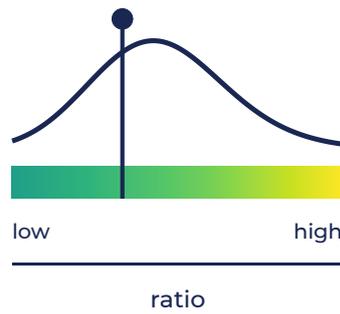
Omega-3 %



Omega-6 %



Monounsaturated %

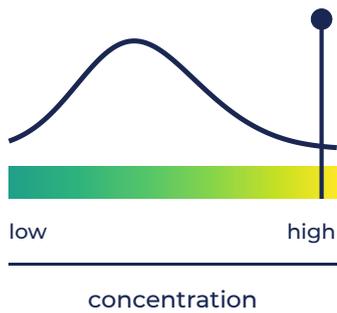


Triglycerides consist of fatty acids. Different fatty acids have different properties and effects on health. Higher blood concentrations of polyunsaturated fatty acids, such as omega-3 and omega-6 fatty acids, are associated with lower risk of cardiovascular disease and type 2 diabetes. High concentration of monounsaturated fatty acids (MUFAs) in the blood (but not in diet) are associated with increased risk of cardiovascular disease and type 2 diabetes.

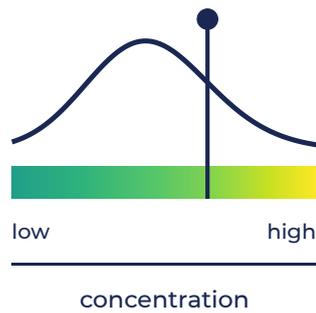
Increasing the dietary proportion of unsaturated fats has been shown to decrease the levels of circulating MUFAs and increase the levels of circulating omega-3 and omega-6 fatty acids. Fatty acid levels can be modestly affected by a recent fat-heavy meal.

Amino acids

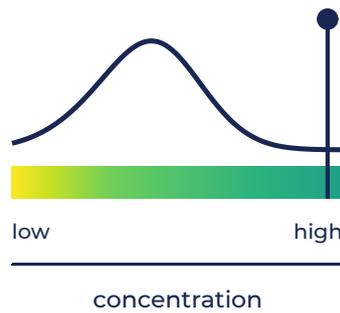
Branched-chained



Phenylalanine



Glutamine



Scientific studies have indicated that high levels of branched-chain amino acids (leucine, isoleucine, and valine) and phenylalanine are associated with insulin resistance and obesity. They indicate an increased risk of developing type 2 diabetes and cardiovascular disease.

For glutamine, low levels indicate increased risk. Amino acids levels in the blood can be temporarily elevated after a recent meal.