



Assessment Information Sheet

Waist Circumference

A large waist circumference and excess abdominal fat increases the risk of diabetes and cardiovascular disease. The normal values for the European and the South Asian, Chinese and Japanese populations are provided in the table. Normal values for other ethnicities are currently not available.

Normal values		
	Male	Female
European	<102 cm	<90 cm
South Asian, Chinese and Japanese	<90 cm	<80 cm

Body Mass Index

Body Mass Index (BMI) is a measure that uses your height and weight to assess if your body composition is healthy. The BMI calculation divides an adult's weight in kilograms by their height in meters squared. This value is only one risk factor and does not suggest a heightened risk on its own. Individuals with high muscle mass may not be accurately represented with this measure.

Blood analysis results from this screening were generated by finger-prick method.

Values outside of these ranges should be reconfirmed with a full blood analysis from your family doctor.

Total Cholesterol (TC)

Total Cholesterol is the total amount of good and bad cholesterol in your blood. Excess cholesterol can be deposited into the walls of blood vessels. Approximately 70% of total cholesterol is synthesized by the liver and approximately 30% comes from food intake.

Risk	TC
Normal	<5.2 mmol/L
High	>6.2 mmol/L

High cholesterol may lead to atherosclerosis where excess cholesterol is deposited on the inner walls of arteries, causing hardening and narrowing. While cholesterol is mainly dependant on genetics and diet, cardiovascular activity can prevent high blood pressure, myocardial infarction (heart attack) and cerebrovascular disease (stroke).

HDL Cholesterol

Good cholesterol (HDL – high density lipoproteins) are molecules that can remove the excess cholesterol deposited on the inside walls of the arteries and return it to the liver. HDL cholesterol is also an important part of your cell membranes and is necessary for hormone synthesis. High levels of HDL protects us against atherosclerosis. Regular aerobic activities, weight loss, smoking cessation as well as certain medications can increase the level of HDL in our body.

Risk	HDL
Normal	>1.0 mmol/L
High	<0.85 mmol/L

Triglycerides

Triglycerides are molecules produced by the liver from fats and sugars. They are then transported by LDL. High levels of triglycerides can increase blood viscosity and promotes cholesterol deposits on arterial walls and lead to atherosclerosis. Triglyceride levels are influenced by diet (sugary and processed foods), alcohol consumption, physical activity and the presence of diabetes.

Normal value	<1.6 mmol/L
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LDL Cholesterol

Bad cholesterol (LDL – low density lipoproteins) are molecules that carry cholesterol and triglycerides from the liver to the blood vessels; the cholesterol is released along the way, and can be deposited on the inner walls of the arteries. When LDL exceeds normal levels, the risk of atherosclerosis (hardening of the arteries) increases proportionately. There are several ways to reduce the level of LDL cholesterol including a strict diet low in animal fat, high glycemic foods and a diet high in vegetables and fiber, exercise and/or medications.



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TC/HDL ratio

This ratio is calculated by dividing your measured total cholesterol by your HDL ('good cholesterol'). High ratios indicate a higher risk for heart disease and heart attack. As cholesterol levels fluctuate depending on the time of day and an individual's last meal, a fasting blood analysis may be needed to confirm results.

	Men	Women
Average	<5.0	<4.4
Optimal	3.5	3.3

Random Blood Sugar

Most cells in your body function on oxygen and glucose (sugar). Maintaining adequate levels of blood sugar is essential although the system of regulation can be complex. It involves absorption of certain types of food (carbohydrates, alcohol, etc.) in the intestine which are then transformed into glucose by the liver. Diabetes (high blood sugar) may occur if your body's production of insulin is insufficient and/or your cells have a reduced capacity to use it.

Normal value	3.6-5.6 mmol/L
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Blood Pressure

Chronically high blood pressure (hypertension) can be dangerous to your health. Overtime, it can cause pathological thickening of the heart muscles, causing damage to the coronary and cerebral arteries and increasing your risk of cardiovascular disease and stroke. Studies suggest that untreated mild to moderate hypertension can decrease life expectancy by three to six years while severe hypertension can cut average life expectancy by eight years or more. Hypertension is the number one risk factor for stroke and heart disease. Fortunately, once detected hypertension is usually controllable with diet, exercise and medication.

	Systolic	Diastolic
Normal Blood Pressure	<120	<80
Elevated Blood Pressure	120-129	>80
Stage I Hypertension	130-139	80-89
Stage II Hypertension	>140	>90

Framingham Risk Score (FRS)

The Framingham Risk Score (FRS) is a gender-specific algorithm that combines cardiovascular risk factors (cholesterol levels, blood pressure, the presence or absence of diabetes, smoking and family history of coronary artery disease) to estimate an individual's 10-year risk of having a cardiovascular event.

Risk	FRS
Low	<10 %
Intermediate	10-19 %
High	≥20 %

Electrocardiogram (ECG)

An electrocardiogram (ECG) records the electrical activity of your heart at rest. It provides information about your heart rate, rhythm, and presence of prior heart attacks.

Exercise Stress Test (EST)

An exercise stress test (EST) is a test that measures the heart's ability to respond to external stress in a controlled environment. Exercise allows doctors to detect abnormal heart rhythms and diagnose the presence or absence of coronary artery disease. The results show how well your heart responds to the stress of exercising at different intensities.

You may not have been cleared for an EST for a variety of reasons. Commonly it is because you have a physical injury, are taking medication or have a condition that prevents you from exercising at a high intensity at this facility. If you were not cleared for an EST and have not received an explanation, please contact a member of our team.

The result of your ECG and stress test are reviewed by a Cardiologist at SportsCardiologyBC.