

# Diabetes and Your Heart

Diabetes or high blood sugar is a major risk for heart disease and stroke. Sugar is needed by the cells of your body to make energy, but they need a hormone called insulin to do so.

Type 1 diabetes happens when the pancreas stops producing insulin altogether. More commonly, the body first stops responding to insulin (insulin resistance), and then the pancreas burns out” trying to produce enough, resulting in type 2 diabetes. Elevated blood sugar and the inability of the cells to use this sugar starts damaging blood vessels and organs.

Your doctor might have told you that you have borderline type 2 diabetes or prediabetes. This means that you do not yet have diabetes, but your body is not responding to insulin the way it should (insulin resistance). Prediabetes also increases your risk of heart disease and is an opportunity for you to make early lifestyle changes. Lifestyle changes like losing weight, being more active, and reducing fat and simple sugars in your diet can get you out of the prediabetic range and back into the normal range. If left unmanaged, prediabetes can progress to full-blown diabetes.

Diabetes can make you more prone to developing plaque in your arteries. People with diabetes are also more likely to have high blood pressure (hypertension), high cholesterol, and be overweight. This further increases the risk of having a heart attack or stroke.

Good control of your blood sugar lowers your risk of future heart problems. Diabetes is managed with medications, dietary changes, and a healthy lifestyle. If you have diabetes, it becomes even more critical to control your other risk factors for heart disease (see other handouts – for example, diabetes and smoking together put you at very high risk for a heart attack or stroke).

A low-fat, heart-healthy diet works for diabetes by helping your body respond better to insulin, i.e., improve insulin resistance. Cutting out simple sugars and eating smaller, more frequent meals throughout the day rather than fewer, bigger meals helps prevent swings in your blood sugar. It is the carbohydrates or starches in a meal that can make a difference.

In diabetics who are overweight, lifestyle changes like losing weight and increasing physical activity can help control your blood sugar. Harder to do than taking a pill – but it can work!

You may have already been prescribed medications for diabetes. Some medicines are used for diabetes and have additional protection for the heart. Talk to your doctor to see if your diabetes medication has extra protective effects on the heart.

You may have been asked to check your blood sugars at home. In addition to checking home blood sugars, we can check your average blood sugar control by measuring your average sugar (HbA1C) every 3-6 months. We aim for an HbA1C less than 7% if you have heart disease.

## Action Plan

- Know your HbA1C level and write it down on a piece of paper.
- If you are overweight, set a weight loss goal of around 5-10% of your body weight; aim to lose about 0.5 – 1 lb per week. (See Diet and Losing Weight)
- Exercise for at least 30 minutes a day (See activity)
- Quit smoking. Smoking and diabetes together significantly increase your risk of having a heart attack (See Quit Smoking)
- If you monitor your blood glucose at home, write down your fasting, pre-meal, and 1 hour post-meal blood sugars for a week. This can help us see where we need to make changes to your diet.
- Challenge yourself and learn how to count carbs from food labels! Write down how many carbs you've consumed during each meal on a piece of paper.
- Set a blood pressure goal of lower than 130/80. If your readings are higher than this, then talk to your doctor. (See Hypertension)
- If you've had a heart attack, talk to your doctor about additional medications to protect your heart.

## Links

Diabetes - <https://www.heartandstroke.ca/heart-disease/risk-and-prevention/condition-risk-factors/diabetes>

Sugars - <https://www.canada.ca/en/health-canada/services/nutrients/sugars.html>

Carbohydrate Counting - <http://guidelines.diabetes.ca/docs/patient-resources/basic-carbohydrate-counting.pdf>

Canadian Diabetes Prevention Program - <https://www.lmc.ca/diabetes-prevention/>