



# Diabetes and the Heart: Don't Sugar Coat It

## What is Diabetes?

- ▶ Diabetes mellitus is a chronic (long-lasting) health condition that affects how your body turns food into energy.<sup>1</sup> Simply put, Diabetes or “sugar”, as Jamaicans call it, is a condition that causes high glucose (sugar) levels in the blood.
- ▶ It affects approximately 1 in 8 adult Jamaicans and statistics show that it is most prevalent amongst Jamaicans aged 75 and over (42%).<sup>2</sup>
- ▶ Diabetes occurs when there is a problem with a hormone called insulin. This hormone is produced by the pancreas and moves glucose from the bloodstream into the body's cells, where it can be used for energy.

## Types of diabetes

- ▶ In **Type I diabetes**, the pancreas fails to produce insulin. This form of diabetes is diagnosed more among children.<sup>3</sup>
- ▶ In **Type II diabetes**, the more common form of diabetes, the pancreas produces insulin, but the body is resistant to its effect. Initially insulin levels are high, but over time, the pancreas “burns out” and insulin levels fall. Without enough insulin or its effect, glucose stays in the bloodstream and cannot move into your cells to give them energy to work properly.
- ▶ **Gestational diabetes** develops during pregnancy in women who do not have diabetes. This usually goes away after the baby is born however these women and their children have a greater chance of developing diabetes later on in life.

## How is Diabetes Diagnosed and What are the Symptoms?

- ▶ Diabetes mellitus is diagnosed if you have, on two occasions, a fasting blood sugar level  $\geq 7.0$  mmol/L, or a random blood sugar level  $\geq 11.1$  mmol/L as well

as evident symptoms.<sup>4,5</sup>

Symptoms include:

- frequent urination
- excess thirst
- unexplained weight loss
- tingling or numbness in hands or feet
- sores and wounds that are slow to heal
- glycated haemoglobin A1 C (HbA1C) level (a measure of the average blood sugar level over the previous three months)  $\geq 6.5\%$ , or a sufficiently abnormal oral glucose tolerance test.<sup>5</sup>

## How does Diabetes Affect your Heart?

- ▶ Diabetes mellitus harms the human heart in a myriad of ways. Persons living with diabetes mellitus are 2 times more likely to have a heart attack and 1.5 times more likely to have a stroke, than persons without diabetes.<sup>6</sup>
- ▶ High blood sugar levels can damage blood vessels and nerves throughout the body, including the ones that supply your heart.
- ▶ Diabetes triggers chronic inflammation (an activation of the immune system). Both conditions injure the walls of the arteries, making them more susceptible to developing atherosclerosis. This build-up of fats, cholesterol and other substances on the blood vessel wall, causes plaque formation which can restrict blood flow.<sup>6,7</sup>
- ▶ This build-up of plaque within your coronary arteries (the arteries that supply oxygen-rich blood to your heart), leads to coronary heart disease and can cause a heart attack. Plaque formation in the arteries that carry blood to your brain increases your risk of having a stroke.

- ▶ Persons living with diabetes mellitus, particularly those with type II diabetes, are more likely to have other conditions such as hypertension (high blood pressure), abnormal cholesterol levels and overweight or obesity that also raise the risk of heart disease

## Managing your Diabetes and Maintaining a Healthy Lifestyle

There is no cure for Diabetes. The good news is that you can manage your diabetes and reduce your risk of developing heart disease or of having a heart attack with the following lifestyle changes:

- ▶ **Follow a healthy diet.** Eat more fresh fruits and vegetables, lean protein, and whole grains. Eat fewer processed, pre-packaged foods (such as chips, sweets, fast food), and avoid foods high in salt, sugar and unhealthy fats such as saturated and trans-fat. Drink more water, fewer sugary drinks, and less alcohol. You may consult a Nutritionist to help with meal planning which is important for persons living with diabetes.
- ▶ **Aim for a healthy weight.** If you are overweight, losing even a modest amount of weight can lower your triglycerides (fat in the blood) and blood sugar.
- ▶ **Get regular screening for heart disease and manage your ABCs:**
  - A:** Get a regular HbA1C test to measure your average blood sugar over the preceding 3 months; aim to stay in your target range as much as possible.
  - B:** Try to keep your blood pressure below 130/80 mm Hg (or the target your doctor sets).

C: Manage your cholesterol levels.

s: Stop smoking or even better, do not start.

- ▶ **Get active.** Being physically active makes your body more sensitive to insulin which helps to manage your diabetes, control your blood sugar levels and lowers your risk of heart disease. Try to get at least 150 minutes per week of moderate-intensity physical activity, such as brisk walking.
- ▶ **Manage stress.** Stress can raise your blood pressure and can also lead to unhealthy behaviours, such as drinking too much alcohol or overeating. Try meditation or deep breathing, get some physical activity, support from friends and family or visit a mental health counsellor.
- ▶ **Maintain regular visits to your doctor/physician and take your medication as prescribed.** Your doctor may prescribe medications to treat diabetes or heart disease if you have diabetes. Some medicines help to protect your heart by reducing high blood pressure.



<sup>1</sup> Center for Disease Control and Prevention. (2020). *What is Diabetes?* Retrieved from <https://www.cdc.gov/diabetes/basics/diabetes.html>

<sup>2</sup> Ministry of Health & Wellness, Jamaica. (2018). *Jamaica Health and Lifestyle Survey III (2016-2017)*. Retrieved from <https://www.moh.gov.jm/wp-content/uploads/2018/09/Jamaica-Health-and-Lifestyle-Survey-III-2016-2017.pdf>

<sup>3</sup> National Health Fund. (n.d.). *Diabetes*. Retrieved from <https://www.nhf.org.jm/diabetes>

<sup>4</sup> American Diabetes Association. (2021). *Diabetes*. Retrieved from <https://www.diabetes.org/diabetes>

<sup>5</sup> British Diabetes Association. (2021). *Diagnostic Criteria for Diabetes*. Retrieved from [https://www.diabetes.org.uk/professionals/position-statements-reports/diagnosis-ongoing-management-monitoring/new\\_diagnostic\\_criteria\\_for\\_diabetes](https://www.diabetes.org.uk/professionals/position-statements-reports/diagnosis-ongoing-management-monitoring/new_diagnostic_criteria_for_diabetes)

<sup>6</sup> American Diabetes Association. (2020). *Diabetes Can Affect Your Heart*. Retrieved from <https://www.diabetes.org/diabetes/type-2/diabetes-and-your-heart/diabetes-affect-your-heart>

<sup>7</sup> Centers for Disease Control and Prevention. (2021). *Diabetes and Your Heart*. Retrieved from <https://www.cdc.gov/diabetes/library/features/diabetes-and-heart.html>