

## **World Diabetes Day**

Theme: Family and Diabetes

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### **DIABETES – FACT SHEET**

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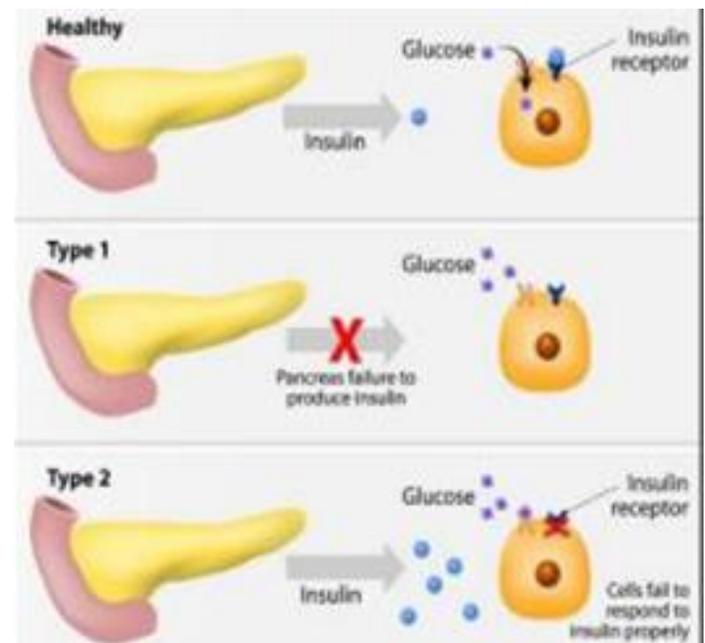
#### **Diabetes Explained**

- **Digestion** is the process by which food is physically and chemically broken down (metabolised). Glucose (sugar) is extracted from this process from the fruit and starches we consume. In turn, this glucose fuels cell functions.
- **Insulin** is a hormone secreted from Beta cells ( $\beta$  cells) in the pancreas which allows cells to actively transfer glucose from the blood to the cell for its use in energy production.
- **Diabetes** occurs when there is a dysfunction with this system resulting in a relative deficiency of insulin and abnormally high glucose levels in the blood stream. This is due to the inadequate transfer of glucose from the blood into the cells. Hence, despite having excess glucose in the blood, the cells cannot utilize it. Thus, diabetes is often described as ‘starvation in the midst of plenty’.
- Most common forms of **Diabetes = Diabetes Mellitus – Type 1 & Type 2** (T2 = ~90% of all cases), and **Gestational Diabetes**

☐ **Type 1 Diabetes** = autoimmune condition where the body's immune system attacks its own pancreatic Beta cells, resulting in non-production of insulin. Persons living with type 1 diabetes manage their condition with supplemental insulin, either by injections or a continuous infusion using an insulin pump.

☐ **Type 2 Diabetes** = cells become unresponsive to the insulin being produced (insulin resistance) or there is an inadequate production of insulin. Type 2 diabetes, though transmitted genetically, is often induced or unmasked by lifestyle related factors such as excess body mass and physical inactivity. Type 2 Diabetes is strongly associated with hypertension, abnormal cholesterol profiles (Dyslipidaemia) and a high risk of cardiovascular disease.

☐ **Gestational Diabetes** can develop during pregnancy and can cause several complications if uncontrolled, including premature delivery and delivery of an overweight baby. It is diagnosed in the 2<sup>nd</sup> or 3<sup>rd</sup> trimester and is related to the effects of progesterone (a hormone high in pregnancy) on the mother's body and insulin action. Though it may go away after the pregnancy, some women may remain diabetic (Type 2). Persons with a family history of type 2 diabetes are at a higher risk of developing gestational diabetes. This also places both the mother and child at a much higher risk of developing type 2 diabetes. Follow-up routine screening is thus strongly advised for mothers and children (from early adolescence). World Diabetes Day, November 14, 2019 Theme: Family and Diabetes Prepared by: Christopher Laurie (Heart & Stroke Foundation of Barbados)



### Common Signs & Symptoms

Most commonly, persons with type 2 diabetes will present **Asymptotically** (no signs or symptoms). It is thus incredibly important to be screening if you are at risk of diabetes. In contrast, persons with type 1 diabetes may present very abruptly and unwell with a condition called **Diabetic Ketoacidosis**.

However, in persons with symptoms, the following may occur:

- The body attempts to reduce the high glucose levels by excreting it in the urine. The glucose pulls water with it, forcing the body and cells to become dehydrated. Consequently, the person feels the need to drink more fluids. This continuous cycle of intake and loss of fluid and energy leads to **increased frequency of urination, increased thirst, a feeling of weakness and lethargy and dry, itchy skin.**
- Because the body cannot utilise the high levels of glucose present in the bloodstream due to insulin deficiency or insulin resistance, the person also experiences **increased hunger and unexplained weight loss.**
- Later signs may include **slow wound healing, impaired vision, pain or numbness in the feet and legs, sexual dysfunction and yeast infections in both men and women.**

### **Risk Factors**

Notably, obesity doubles one's risk of premature mortality (death) and increases the chances of developing type 2 diabetes by a factor of seven.

#### **Risk Factors can be Modifiable or Non-Modifiable:**

All persons should work on minimizing their modifiable risk factors to reduce the risk of developing diabetes. If they already have diabetes, reducing modifiable risk factors still equates to better control of the condition and a reduced risk of complications.

☒ **Modifiable risk factors:** overweight/obese status, physical inactivity, poor nutrition & excessive consumption of unhealthy foods & beverages, alcohol consumption, smoking.

☒ **Non-modifiable risk factors:** increasing age, sex, genetics, race & ethnicity (statistically higher in black and Latino populations)

### **Complications**

**Uncontrolled diabetes can lead to severe complications:** heart disease & stroke, nerve damage, kidney disease, eye disease, gum disease, sexual and urologic problems, limb amputation, depression and some cancers (liver, pancreas, uterus, colon, breast, bladder).

## Diabetes in Context

- Globally (2017):

☒ 425 mil living with diabetes (1 in 11; 8.8% global adult population)

☒ \$727 bil USD spent on healthcare to treat diabetes and its complications

☒ Diabetes & its associated complications estimated to be 7th leading cause of death in 2016 (WHO)

- Barbados (HoTN study, 2015):

☒ Approximately 1 in 5 adults have been diagnosed with diabetes (18.7% of population)

☒ A further 1 in 5 are estimated to be undiagnosed

☒ In persons 65 years+ , almost 1 in 2 (46%) has diabetes

## Additional Resources

### **General Information**

- [What is diabetes? | Diabetes UK](#) (2:22)
- [What is Type 1 diabetes? | Diabetes UK](#) (2:27)
- [What is Type 2 diabetes? | Diabetes UK](#) (2:36)
- [Diabetes and blood pressure | Diabetes UK](#) (1:42)
- [Diabetes and Cholesterol](#) (1:59)
- [Body image and stigma | Emotional support | Diabetes UK](#) (1:50)
- [Diabetes Myths](#) (2:30)

### **Caribbean Focused**

- [More Children Developing Type 2 Diabetes](#) (0:47)
- [Barbados: Healthy food fun for kids with diabetes](#) (2:40)
- [I chose to live: Krystal Boyea at TEDxBridgetown](#) (10:51)
- [Diabetes Mellitus in the Caribbean – The untold story | UDOP 2018](#) (1:27:59)