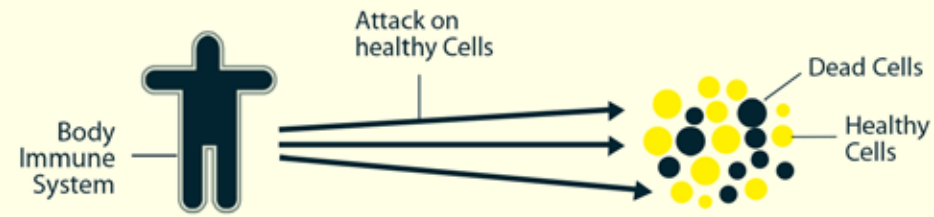


# ABCs OF DIABETES

## DIABETES YOUTHCARE - GHANA

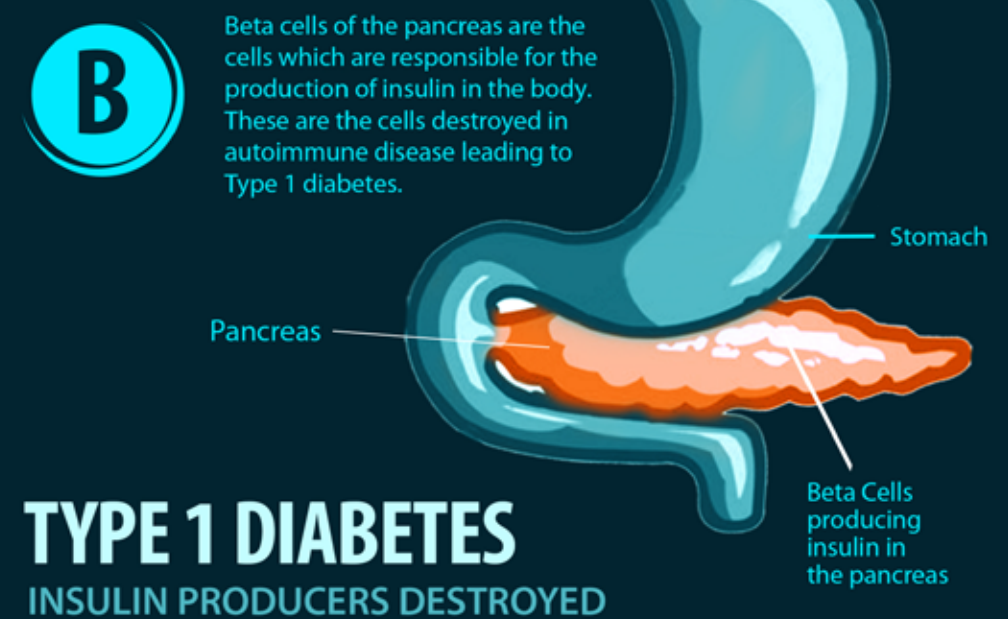
**A** **Autoimmune disease** occurs when the body's immune system mistakenly attacks and destroys healthy cells. In Type 1 diabetes the body destroys the cells which produce insulin.

**AUTOIMMUNE DISEASE**  
The Destruction of Healthy Cells



### Beta Cells

are Destroyed in autoimmune disease



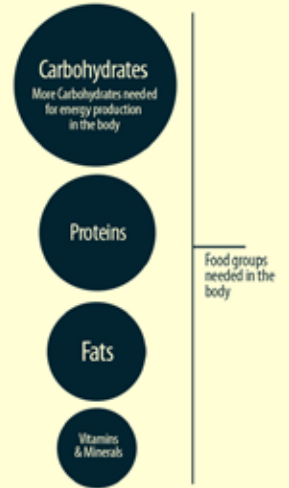
## TYPE 1 DIABETES

### INSULIN PRODUCERS DESTROYED

## Carbohydrates

Major Energy producing food group in the body

**C** Carbohydrates are the major food group which provides energy to the body. Breakdown of the carbohydrates are responsible for blood glucose levels

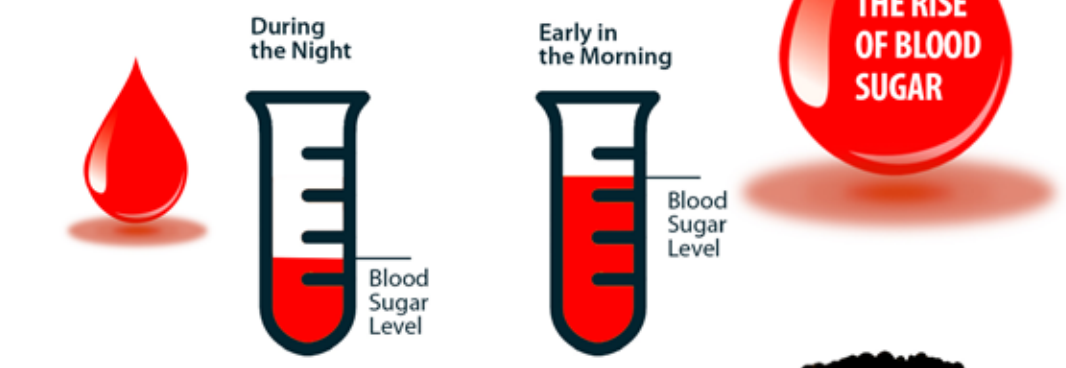


### BREAKDOWN OF CARBOHYDRATES

# ABCs OF DIABETES

## DIABETES YOUTHCARE - GHANA

**D** **Dawn Phenomenon** blood sugar levels rise early in the morning, this is caused by the body releasing a hormone called Growth Hormone during the night.



**E** I AM AN ENDOCRINE SYSTEM SPECIALIST AND I KNOW HOW TO TAKE CARE OF PEOPLE LIVING WITH DIABETES

**Endocrinologist**  
this is a doctor specialised in the care of problems related to the endocrine system ie hormones in the body. This doctor is specialised to take care of people living with diabetes, insulin is a hormone.

## Fructosamine

Test of previous blood sugar level

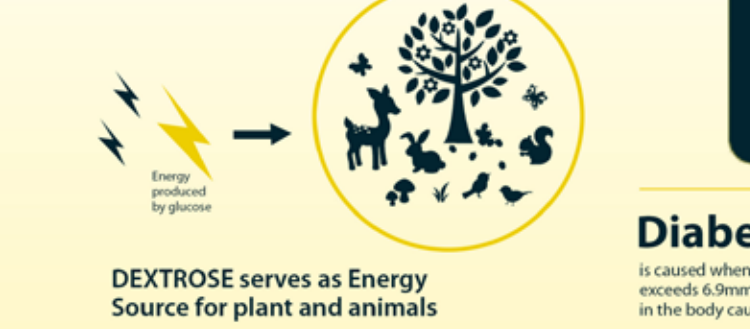
**F** this is a blood test which gives an average blood sugar level of the previous 2-3 weeks. It is similar to the HbA1C which gives an average of the previous blood sugar over 120 days.

### AVERAGE BLOOD SUGAR LEVEL

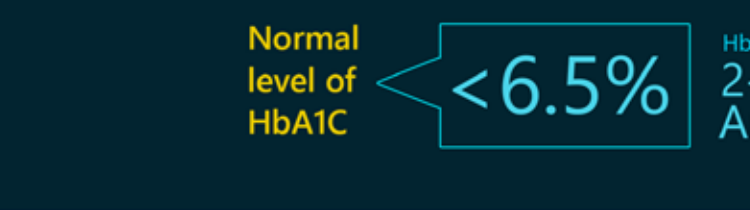
# ABCs OF DIABETES

## DIABETES YOUTHCARE - GHANA

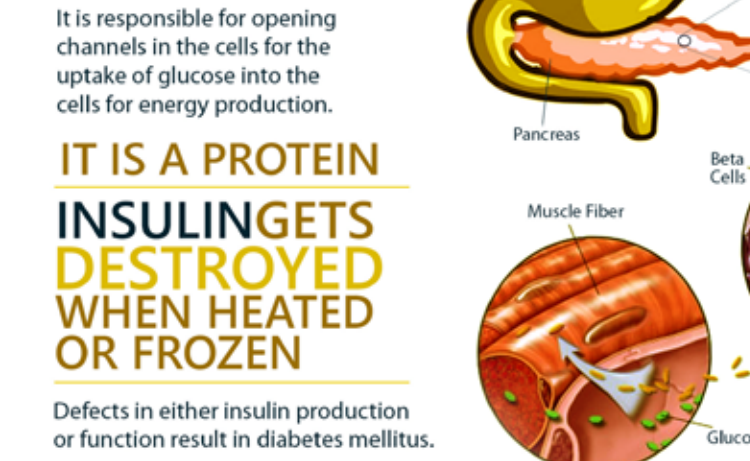
**G** **Glucose**  
This is the basic unit of carbohydrates. It is also sometimes called dextrose. Glucose is one of the primary molecules which serve as energy sources for plants and animals. Normal levels of glucose in the blood range from 3.9 to 6.9mmol/L. Abnormally high levels of glucose in the body result in the disease known as Diabetes Mellitus



**H** **HbA1C (Glycated Haemoglobin)**  
This shows the average blood glucose of a person over the previous 2-3 months. It uses the principle of sugar molecules which bind to red blood cells in the blood. A normal HbA1C should be <6.5%. Levels above this are diagnostic of diabetes or indicate poor control of blood glucose levels in a person with diabetes. HbA1C should be done 2 to 3 times a year in a person living with diabetes.



**I** **Insulin**  
this is a hormone produced by the beta cells of the pancreas.



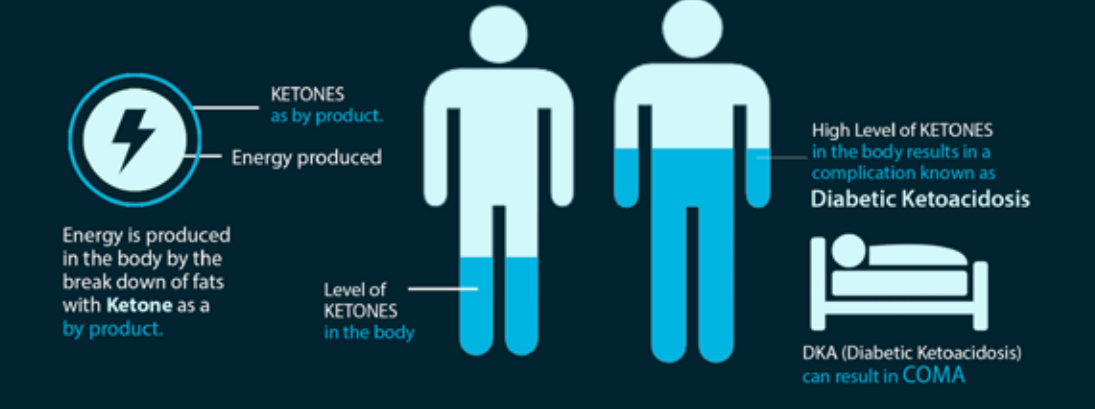
# ABCs OF DIABETES

## DIABETES YOUTHCARE - GHANA

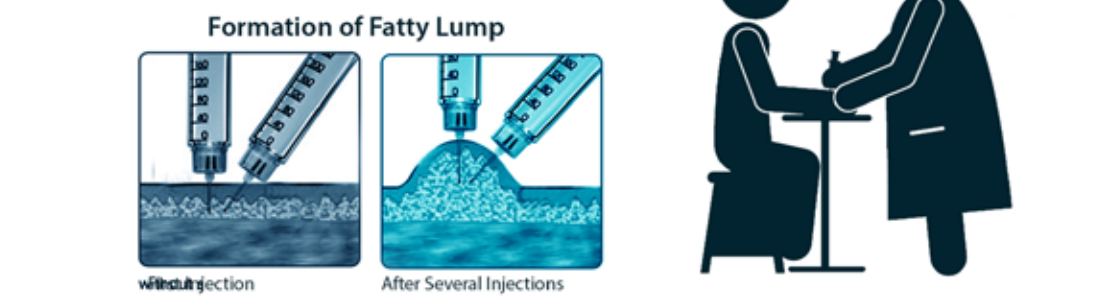
**J** **Juvenile Diabetes**  
Diabetes which is seen in children and adolescents.



**K** **Ketones**  
The body breaks down carbohydrates for energy production. In diabetes, with the absence of insulin, glucose can not be taken into the cells to produce energy. Therefore fats are broken down to produce energy with the by product being ketones. High levels of ketones result in a complication known as Diabetic Ketoacidosis (DKA) which can result in a coma.



**L** **Lipohypertrophy**  
A fatty lump which develops in an area of the body where insulin is injected several times.



# ARE YOU LIVING WITH DIABETES?

ARE YOU IN YOUR TEENS...20s or 30s living with Diabetes or do you know any young one living with Diabetes? Do you want to meet other people living with Diabetes? THEN JOIN DIABETES YOUTH CARE FOR SUPPORT AND NETWORK.

**YOU ARE NOT ALONE! THERE'S HELP FOR YOU.**

DIABETES YOUTHCARE - GHANA  
0503979411 / 0266664846  
DiabetesYouthCare @dyc\_Ghana  
www.diabesityouthcare.org  
info@diabesityouthcare.org

# ABCs OF DIABETES

DIABETESYOUTHCARE - GHANA

**M** **Maturity Onset Diabetes of the Young (MODY)**  
Maturity-Onset Diabetes of the Young or MODY affects 1-2% of people with diabetes, although it often goes unrecognised.

The 3 main features of MODY are

**1** Diabetes often develops before the age of 25

**2** Diabetes runs in families from one generation to the next

**3** Diabetes may be treated by diet or tablets and does not always need insulin treatment

## **N** Non Insulin Dependent Diabetes

Non insulin dependent diabetes- former name given to type 2 diabetes. It is caused by the combination of resistance to insulin action, inadequate insulin secretion, and excessive or inappropriate glucagon secretion. In this type of diabetes, the person is managed on diet and oral medication to control the blood sugars.

Blood Sugar Controlled By

Former name for **TYPE 2 DIABETES**

Oral Medication

Diet

## **O** Oral Glucose Tolerance Test (OGTT)

This is the gold standard in diagnoses of diabetes. Person fasts overnight (at least 8 but not more than 16 hours). Blood is first taken for **fasting plasma glucose (FPG/FBS)**. After FBS sample is taken, the person takes in 75 grams of glucose orally (**100 grams for pregnant women**).

Blood samples are taken to measure the blood glucose.  
Results: 2 hours after oral glucose

Blood Sample Taken

$< 7.8\text{mmol/l}$  of Glucose in the Blood Normal

7.8-11.1mmol/l of Glucose in the Blood Impaired glucose tolerance

$> 11.8\text{mmol/l}$  of Glucose in the Blood Diabetes Mellitus

# ABCs OF DIABETES

DIABETESYOUTHCARE - GHANA

**P** **Polyuria, Polydipsia & Polyphagia**  
Polyuria: excessive urination. Polydipsia: excessive thirst  
Polyphagia: excessive hunger. **Combination of these 3 is one of the major symptoms of Diabetes Mellitus**

Excessive Urination

Excessive Thirst

Excessive Hunger

## **R** Rapidly acting Insulin

Type of insulin with onset of action in 15 minutes, peak in 30-90 minutes with a duration of action between 3-5 hours.  
Examples: aspartate, glulisine, lispro

Aspartate

Glulisine

Lispro

Insulin with onset of action in 15 minutes

## **S** Saccharin

Saccharin is an artificial sweetener with effectively no calories and is about 300 times as sweet as table sugar, but has a bitter or metallic taste. It is therefore used as replacement sugars in people living with diabetes as it does not increase ones blood sugar level. Examples include Aspartame & Sucralose

Artificial Sweetner 300 times as sweet as table sugar,

Saccharin

Table Sugar

Blood Sugar Level in the body

Saccharin Does not Increase Blood Sugar Level

Saccharin is used as a replacement sugars in people living with Diabetes

# ABCs OF DIABETES

DIABETESYOUTHCARE - GHANA

**T** **Target Range**  
Personalized values for blood glucose levels that a patient together with their health professional establish as reasonable to aim for. These targets are individualized for specific medical conditions. Blood Glucose targets should be in a range that would prevent life-threatening diabetes complications such as diabetic ketoacidosis, but also keep the patient safe from severe hypoglycemia (low blood sugar)

My Personalized Blood Glucose Level Values For Specific Medical Conditions  
It is in a range such that it will prevent Diabetes Complications

4.0  
6.0  
mmol/l

My Target Range

I agree with you Doctor

6.0  
mmol/l

## **U** Units of measurement of blood glucose (sugar)

In Africa & Europe, units is in millimoles per litre (mmol/l) normal levels-3.9 to 6.9. In the United States of America measured in milligrams per decilitre (mg/dl) normal-70 to 125  
[1mmol/l=18mg/dl]

mmol/l 3.9 - 6.9

mmol/l 3.9 - 6.9

mg/dl 70 - 125

1mmol/l = 18mg/dl

## **V** Very Low Density Lipoprotein (VLDL) Cholesterol

There are several types of cholesterol, each made up of lipoproteins and fats. Each type of lipoprotein contains a mixture of cholesterol, protein and a type of fat (triglyceride), but in varying amounts. **VLDL contains the highest amount of triglyceride**. Because it contains a high level of triglyceride, having a high VLDL level means you may have an increased risk of heart diseases. Higher amounts and large VLDL particles are also associated with an increased risk of high blood pressure and stroke.

High VLDL

An increased risk of heart diseases.  
An increased risk of high blood pressure and stroke.

People living with diabetes must check their cholesterol levels every year.

# ABCs OF DIABETES

DIABETESYOUTHCARE - GHANA

**W** **Wound Care**  
Reporting of wounds to the health centre for proper care is important in people living with diabetes. Wounds must be washed immediately and bleeding secured as much as possible and then sent to a health facility for proper care. Improper care of wounds especially of the foot in people living with diabetes result in amputations all over the world.

Wash Wounds Immediately  
Secure bleeding as much as possible and send to a health facility for proper care.

Report to the Health Centre  
For Proper Care. This is very important for people living with Diabetes.

Amputation  
Improper care of wounds especially of the foot result in amputations. Give proper care to foot wounds.

## **X** Xylitol

Xylitol is a carbohydrate found in the birch tree and several kinds of fruit. Xylitol is a sugar-free sweetener added to some foods. It's nearly as sweet as sucrose, but has fewer calories. **People living with diabetes sometimes use xylitol as a sugar substitute**. Blood sugar levels stay at a more constant level with xylitol than with sucrose or regular sugar. This is because it is absorbed more slowly by the body.

Carbohydrate  
found in the birch tree and several kinds of fruits.

Sugar-free  
Sweetener added to some foods. Xylitol has fewer calories.

Constant Blood Sugar Levels  
with Xylitol than with Sucrose and regular sugar.

## **Y** Yeast Infection

A jargon phrase used to describe a vulvovaginal infection usually caused by a fungus. Women who have this infection may feel itching, burning when urinating, and pain, and some women have a vaginal discharge. Yeast infections can occur more frequently in women with uncontrolled diabetes.

Vulvovagina Infection Caused by a Fungus

Occurs more in women with uncontrolled Diabetes.

Some vaginal discharge is normal, however unusual discharge might be the result of an infection

Vaginal yeast infection

Cervical infection

Women with this infection may feel Itching, Pain, Burning when urinating

A

b

C

OF  
DIABETES  
DIABETESYOUTHCARE - GHANA