

## Diabetes Factsheet No: I

### ABC of Diabetes

#### What Is Diabetes?

Diabetes means you have too much sugar in your blood. High blood sugar problems start when your body no longer makes enough of a hormone, called **insulin**. Your body changes much of the food you eat into a type of sugar called glucose. This sugar travels in blood to all the cells in your body. Your body cells need the sugar to give you energy.

Insulin helps sugar move from your blood into your cells. Without insulin, your cells can't get the sugar they need to keep you healthy.

By moving sugar from your blood to your body's cells, insulin helps keep your blood sugar level normal. When you don't have enough insulin to lower high blood sugar levels, you have "**diabetes**".

#### What Is Prediabetes?

Prediabetes is a condition that can lead to diabetes and heart disease. When you have prediabetes, your blood sugar levels are higher than normal but are not high enough to be called diabetes. Diabetes can lead to many health problems, so it's better to prevent it in the first place. You can take steps to prevent or delay diabetes and heart disease.

#### What Are The Symptoms Of Diabetes?



Thirsty all the time



Blurry vision



Need to urinate often



Weak or tired



Dry skin



Often hungry

#### Why Should You Worry About Diabetes?

High blood sugar levels can cause serious health problems such as bleeding in the eye, foot complications due to neuropathy, kidney dysfunction and increased chances of a stroke. Diabetes can, and must, be treated.

#### How To Know If You Have Diabetes?

Simple Blood tests as random blood sugar (RBS) or fasting blood sugar (FBS) and glycosylated haemoglobin (HbA<sub>1c</sub>) can help to detect Prediabetes and Diabetes.

#### For Reliable And Ethical Diagnostic Laboratory Tests:

##### Dr Jain's Diagnostics

S.C.O 257, First Floor, Adjacent Canara Bank, Sector 44C, Chandigarh, 160047

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## Diabetes Factsheet No: II

### Diagnosing Diabetes



#### How is diabetes diagnosed?

There are several ways to diagnose diabetes. Each way usually needs to be repeated to confirm the diagnosis of diabetes. Testing should be carried out in a clinical diagnostic laboratory. If your blood glucose level is very high, or if you have classic symptoms of high blood glucose, in addition to one positive test, then a second test may not be required to diagnose diabetes.

#### HbA<sub>1c</sub>

The HbA<sub>1c</sub> test measures your average blood glucose for the past 2 to 3 months. Diabetes is diagnosed at: HbA<sub>1c</sub>  $\geq$  6.5%

#### Fasting Blood Sugar (FBS) Test

This test is usually done first thing in the morning, before breakfast and checks your fasting blood glucose levels. Fasting means after not having anything to eat or drink (except water) for 8–10 hours before the test. Diabetes is diagnosed at: Fasting blood glucose  $\geq$  126 mg/dl

#### Oral Glucose Tolerance Test (OGTT)

The OGTT is a two-hour test that checks your blood glucose levels after fasting and 2 hours after you drink a special sweet drink. It tells the doctor how your body processes glucose. Diabetes is diagnosed at: 2-h blood glucose  $\geq$  200 mg/dl. In an approximation, Post prandial blood sugar [(PPBS), i.e, 2 hrs after breakfast] gives a rough idea of OGTT.

#### Random Blood Sugar (RBS) Test

If you are showing severe diabetes symptoms, your doctor may use a random glucose test. Diabetes is diagnosed at: Blood glucose  $\geq$  200 mg/dl. To diagnose diabetes, FBS and PPBS (or OGTT) must be done twice (on different days) and the values should fall in the range for Diabetes.

#### What is Prediabetes?

Prediabetes is a condition when your blood glucose is higher than normal but not high enough to be diabetes. This condition puts you at risk for developing type 2 diabetes.

Results indicating prediabetes:

HbA<sub>1c</sub> of 5.7%-6.4%, and

As per American Diabetes Association: Fasting blood glucose: 100- 125 mg/dl ; 2-h blood glucose: 140 mg/dl - 199 mg/dl.

As per World Health Organisation: FBS: 110-125 mg/dl.; 2-h blood glucose: 140-199 mg/dl.

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## Diabetes Factsheet No: III

### “Know more about HbA<sub>1c</sub>”

#### What is HbA<sub>1c</sub>?

The HbA<sub>1c</sub> or glycosylated haemoglobin is a blood glucose test that may also be reported as estimated average blood glucose (eAG). It tells you what your average blood glucose levels have been for the past 2 to 3 months. It does this by measuring how much glucose gets attached to red blood cells. Because new red blood cells are always being made to replace old ones, your HbA<sub>1c</sub> can change over time as blood glucose levels change.

#### How often should I get an HbA<sub>1c</sub>?

HbA<sub>1c</sub> must be done at least twice a year. If you're currently changing your medication or making other changes in how you take care of yourself, you may have the test more often.

#### What is the suggested target for HbA<sub>1c</sub>?

The general target in a diabetic on treatment for HbA<sub>1c</sub> is 7% (eAG of 154 mg/dl). Your doctor may recommend a higher or lower level depending on your age and other factors. No matter what your number is, the closer you get to a result of less than 7%, the better your chances of preventing or delaying long-term problems such as blindness.

#### What does my HbA<sub>1c</sub> result mean?

HbA<sub>1c</sub> result will reflect the general trends you see with your day-to-day blood glucose checks. Sometimes, however, your HbA<sub>1c</sub> result may seem higher or lower than you expected. That may be because you aren't checking your blood glucose at times when it's very high or very low.



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## Diabetes Factsheet No: IV

### The Rise and Fall of “Blood Glucose”

Keeping your blood glucose (sugar) in your target range can prevent or delay the health problems caused by diabetes.

- Use a healthy diet plan.
- Be physically active.
- Take the prescribed medicines.
- Try to achieve your blood glucose targets.
- Keep track of your blood glucose.



#### What Makes My Blood Glucose Levels Rise Or Fall?

Blood glucose levels rise and fall throughout the day. One key to taking care of your diabetes is understanding why it rises and falls. If you know the reasons, you can take steps to help keep your blood glucose on target.

#### What Can Make Blood Glucose Rise?

- A meal or snack with more food or more carbohydrates than usual
- Physical inactivity
- Not enough diabetes medicine (Less dose)
- Side effects of certain other medicines
- Infection or other illness
- Changes in hormone levels, such as during menstrual periods
- Stress
- Smoking

#### What Can Make Blood Glucose Fall?

- Missing a meal or snack, or having a meal or snack with less food or fewer carbohydrates
- Alcoholic drinks, especially on an empty stomach
- More physical activity than planned
- Too much diabetes medicine (More dose)
- Side effects of certain other medicines

#### What If My Blood Glucose Is Often Too High Or Too Low?

See your doctor if your blood glucose numbers are often higher or lower than your goals. Talk with your doctor and dietician about changes in your meal plan, physical activity, or diabetes medicines.

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