



## Parenthood Awareness before Conception to Enhance Offspring Health – E-learning Addressing Lifestyle to Transform Habits



# DIABETES

## What is diabetes?

Diabetes is a serious condition where your blood glucose level is too high. It can happen when your body doesn't produce enough insulin or the insulin it produces isn't effective (type 2). Or, when your body can't produce any insulin at all (type 1). Gestational diabetes may develop during pregnancy. We all need the hormone insulin as it helps take the glucose from our blood into our body's cells. We then use this glucose for energy.

Type 1 and type 2 diabetes share the following common symptoms:

- going to the toilet a lot, especially at night
- being really thirsty
- feeling more tired than usual
- losing weight without trying to
- genital itching or thrush
- cuts and wounds take longer to heal
- blurred vision.



## Type 1 and type 2 differences

	Type 1	Type 2
What is happening?	You have an autoimmune condition. Your body attacks and destroys the cells in your pancreas which does not make the hormone insulin anymore.	You have insulin resistance. Your body is unable to make enough insulin or the insulin you do make doesn't work properly.
Risk factors	We don't currently know the cause but we know that it isn't affected by your lifestyle or your weight	We know some things can put you at risk of having it like weight, family history and ethnicity background, age
Range age	More likely up to the age of 40, especially children	More likely over 40 (25 in South Asian) but more and more children and young people get it in the UK each year.
Symptoms	The symptoms appear more quickly. That makes them harder to ignore. This is important because symptoms that are ignored can lead to diabetic ketoacidosis (DKA).	Easier to miss because they appear more slowly, especially in the early stages. So it is important to know your risk. Some people have it for up to 10 years and don't know it.
Management	Take insulin to control blood sugar and test blood glucose levels regularly. Also count the carbohydrates intake in meals to know how much insulin to inject with meals.	Easier to manage through regular physical activity and a healthy balanced diet, medication such as tablets and insulin or other treatments. Sometimes test blood glucose level depending on treatment.
Cure and Prevention	Currently there is no cure for type 1 but research continues. Lifestyle changes can not help.	Can't be cured but eating healthily, being active and maintaining a healthy weight can prevent it and put into remission.



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### How to Use a Blood Sugar Meter

Below are tips for how to use a glucose monitor to calculate your blood glucose level,

- Wash your hands with soap and warm water and dry well. Make sure there are no food particles or other substances on your hand as these can affect the reading.
- Massage your hand to get blood into your finger.
- Use a lancet to prick your finger.
- Squeezing from the base of the finger, gently place a small amount of blood onto the test strip.
- Place the strip in the meter.
- After a few seconds, the reading will appear.
- Track and record your results. Include details on food, activity, and medication where relevant.
- Properly dispose the lancet and strip in a trash container.
- Do not share blood sugar monitoring equipment, such as lancets, with anyone, even other family members.

### Why test my blood sugar level?

It's important to keep your blood sugar levels in your target range as much as possible to help prevent or delay long-term, serious health problems, such as heart disease, vision loss, and kidney disease. Staying in your target range can also help improve your energy and mood. Also blood sugar testing provides useful information for diabetes management. It can help you:

- Monitor the effect of diabetes medications on blood sugar levels
- Identify blood sugar levels that are high or low
- Track your progress in reaching your overall treatment goals
- Learn how diet and exercise affect blood sugar levels
- Understand how other factors, such as illness or stress, affect blood sugar levels

### When and how often should I check my blood sugar level?

The frequency of testing differs from person to person and is dependent on the type of diabetes, the medication taken as well as how well the condition is controlled. Frequency of monitoring is part of the treatment plan made up with the healthcare provider.

In general, if you have type 1 or type 2 diabetes and are on insulin (with multiple injections) or have gestational diabetes, you may test your blood sugars four to ten times a day:



1. When you wake up, before eating or drinking
2. Before and after each meal (typically two hours after the meal)
3. Before bed
4. Before and after exercise (typically in type 1 diabetes)

In other cases, you may monitor your blood sugar on a daily “rotational” basis. For example, before and after breakfast on 1 day, before and after lunch on another day, before and after dinner on yet another day, so on and so forth. This decreases the frequency of testing, but still provides insight into your blood sugar levels.

### What are blood sugar targets?

A blood sugar target is the range that you should aim for as much as possible. It is individualized with the doctor depending on your goals. Factors that could affect the targets include:

- Type and severity of diabetes
- Age
- Duration of diabetes
- Pregnancy status
- The presence of diabetes complications
- Overall health and the presence of other medical conditions

### What is causing my blood sugars to be out of range?

- Forgetting to take medication
- Having a chocolate bar on the way home, or a sweet drink before dinner
- Refined carbohydrates: white rice or noodles, pastries or any other sugary foods which are digested quickly and can cause your glucose levels to spike rapidly
- Large portion sizes
- Carbohydrates in liquid form (such as soft or sweet drinks with added sugar) are absorbed more quickly than those in solid form, as your body does not need to break them down. Sweetened drinks can therefore also cause your glucose levels to spike.

### What to do to avoid blood sugar getting high:

- Choose healthy complex carbs, such as whole vegetables, whole grains, beans and lentils, to prevent glucose levels from swinging as they are less processed and your body needs more time to break them down. They also contain fibre which doesn't convert into sugar.
- Eating soluble fibre can slow the absorption of sugar and improve your blood sugar levels. For example, drinking a glass of orange juice can increase your blood sugar rapidly as the orange has already been broken down. If you eat a whole orange instead, it will be broken down more slowly by the digestive system as it is high in fibre.
- Make sure you also have sufficient protein (e.g. lean meats, beans, pulses) and healthy fats (e.g. salmon and tuna) in your meal, as these help to lower glucose spikes and keep you feeling full for longer.

Note that rapid glucose spikes and subsequent sharp drops can often leave people feeling lethargic, tired or have trouble concentrating – yet another reason to avoid foods which spike your blood sugar!

If you have any glucose levels below 4 mmol/L (Hypoglycemia) and you are on medication that lowers glucose levels, such as insulin or sulphonylureas (e.g. gliclazide or glipizide), speak to your healthcare team.

References: <https://www.diabetes.org.uk/>