

Patient information

Diabetes: What is it?

What is diabetes?

Diabetes Mellitus, commonly referred to as 'diabetes' is a condition where the body has difficulty dealing with glucose or 'sugar'. The word mellitus is Latin for 'sweet'. Glucose is constantly produced by the body by breaking down carbohydrates in your food as well as from stores within the body. As a result of this, levels of glucose in the blood are high. Over many years this high blood sugar leads to the symptoms and complications of diabetes.

Diabetes is a common condition and affects as many as 2% of the population; this is 2 people in every 100. In some groups such as the elderly, as many as 5 –10 in every 100 may have diabetes. It is estimated that over a million people in the United Kingdom suffer from this condition. It is highly unlikely that you do not know someone who has diabetes or has a family member with diabetes.

What are the main types of diabetes?

There are two main types of diabetes:

- **Type 1 diabetes** previously known as 'insulin dependent diabetes'.
- **Type 2 diabetes** previously known as 'non-insulin dependent diabetes'.

Type 1 diabetes develops because the pancreas produces little or no insulin. It is commonly seen in patients under the age of 40 years and always requires insulin.

Patients with Type 2 diabetes on the other hand are able to make insulin. The amounts produced, however are insufficient for their requirements as they are often less sensitive to insulin (known as insulin resistance). These people may be treated with diet and exercise initially but often require tablets and insulin later in their lives.

Diabetes is a chronic medical condition requiring close monitoring and treatment to maintain normal levels of blood sugar. Treatment is effective in controlling blood glucose levels and greatly reduces a person's risk of developing complications. Diet and lifestyle changes are an essential part of this treatment.

What does diabetes have to do with the pancreas?

The pancreas is an important organ situated in your upper abdomen behind your stomach. It produces insulin which is a chemical messenger which in turn instructs the liver, muscle and fat.

What are the symptoms of diabetes?

The main symptoms of untreated diabetes are increased thirst, passing water frequently (especially at night), extreme tiredness, weight loss despite a good appetite, genital itching or frequent episodes of thrush and blurred vision. These symptoms may be gradual in onset and therefore pass unnoticed for months or even years.

Many patients with undiagnosed diabetes have no symptoms whatsoever and are picked up during a routine health check where a sample of urine is tested or a blood sample is drawn for glucose estimation. Type 2 diabetes typically develops slowly and the symptoms of tiredness and weight loss are often dismissed as 'growing old' or overwork. It is thought that as many as one million people in the UK may have undiagnosed diabetes. Type 1 diabetes in contrast develops rapidly with weight loss and marked symptoms of thirst.

How is the diagnosis confirmed?

The most simple test, which will reveal this condition, is a urine 'dipstick' examination to detect glucose in the urine. High blood glucose levels result in a spill-over of glucose into the urine. However, this does not confirm the diagnosis, which requires a fasting blood sample or oral glucose tolerance test.

What is the normal blood glucose level?

Blood glucose concentrations fluctuate throughout the day. Typically, levels rise after a meal and fall during fasting. Fasting blood glucose levels are relatively constant in individuals and provide a useful baseline for diagnosis. Measurement of a fasting blood glucose level after fasting overnight is the most accurate test for diagnosing diabetes. A level of less than 6 mmol/l is considered to be normal and a level of 7 mmol/l or higher diagnoses diabetes.

What is glycated haemoglobin?

Haemoglobin is the 'protein-iron' complex in the blood which is responsible for carrying Oxygen. Glycated or glycosylated haemoglobin measures a minor component of this haemoglobin compound which is formed by the addition of glucose. The amount of this compound reflects your overall levels of blood glucose. Since the lifespan of the red blood cells which carry haemoglobin is 3 months, the test gives an indication of blood sugar levels over the preceding three month period.

Should I test my urine for sugar?

The testing of urine for the presence or absence of sugar can be very misleading for several reasons:

- Urine sugar does not give a reliable indication of current blood sugar levels
- Glucose spills over into the urine at various levels of blood glucose; this depends on the 'kidney threshold' for glucose.
- Urine glucose gives no indication of hypoglycaemia (low blood sugar).

For further information go to: www.diabetesuffolk.com

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