A.MENARINI diagnostics

Diabetes and its symptoms

Diabetes

Diabetes is a common condition in which the amount of glucose (sugar) in the blood is too high. Glucose comes from the digestion of starchy or sugary food and is normally controlled by insulin, a hormone produced by the pancreas.

If insulin is missing or is not being used by the body effectively, glucose absorbed from food cannot be used as an energy source. Its concentration then increases in the blood.

Diabetes is a very common condition

In the UK there are 3.9 million people who have been diagnosed with diabetes. However, there are many people who are unaware they have the condition so this brings the figure up to roughly 4.7 million. It is believed that by 2030, this number will increase to 5.5 million. Around 90% of those living with diabetes in the UK have type 2 diabetes, 8% with type 1 and 2% with rarer types of diabetes.

Causes of diabetes

Type 1 diabetes

It is unclear what causes type 1 diabetes to develop exactly however, it is believed to be caused by an autoimmune reaction. This is where the body attacks its own beta cells in the pancreas which make insulin. Genetics can increase the likeliness of developing type 1 diabetes. Environmental factors may also play a part in developing type 1 diabetes, such as a virus or stress.

Type 2 diabetes

Type 2 diabetes is primarily caused when the cells in the muscle, fat and the liver start to become resistant to insulin and the pancreas is not producing enough insulin to manage blood sugar levels. Some risk factors of type 2 diabetes are: weight and fat distribution, genetics (such as family history and race/ethnicity) and increasing age.

Symptoms

It is important to remember that diabetes can occur without any symptoms. Diabetes is a complex condition and not everyone has the same symptoms. In general, excess sugar in blood is removed by the kidneys, using up large amounts of water in the process: so, one of the most common symptoms is polyuria and polydipsia in order to compensate for the loss of liquid.

In type 1 diabetes the onset of diabetes can be rapid, with symptoms which are more clear-cut and striking. These include:

- Tiredness
- Weight Loss
- Blurred Vision
- Frequent Urination
- Excessive Thirst

Diabetes can occur without any symptoms

In type 2, the onset of diabetes is more gradual, with symptoms which are not as clear. Some people show only one or two symptoms but more than half of people with diabetes have no symptoms at all. Therefore, there are many people with diabetes who, because their symptoms are mild, do not notice any particular problem.

The most common symptoms in type 2 are:

- Increased number of skin infections & thrush
- Generalised itching or itching in the genital organs
- Delayed healing of wounds
- Infections of the gums
- Worsening of vision
- Cramp
- Lethargy
- Pain or tingling at the extremities

Diagnosis

The diagnosis of diabetes is easy when the main symptoms occur, but if the symptoms are subtler and are less striking the diagnosis can be more complex.

Many people with undiagnosed diabetes may feel fine. However, the normal functioning of internal organs (eyes, kidneys, nerves and blood vessels etc.) may be affected and within a few years complications may result. In these cases, the diagnosis is often found during a routine check-up or blood test.

Diabetes can occasionally also occur during pregnancy, which is known as “gestational diabetes” and is usually detected during routine ante-natal tests at around 4-5 months.

However, in all cases, the diagnosis of diabetes must be confirmed by a venous blood test, which should be conducted by a doctor.



Possible complications

In some cases, short-term complications, such as hypoglycaemia and diabetic ketoacidosis (DKA), can require urgent hospital treatment to stabilise the situation.

High blood sugar levels can damage the blood vessels after a period of time, this means blood cannot travel to parts of the body it is needed. As a result, this can damage parts of the body, such as the eyes and kidneys. These long-term complications develop gradually over time and can cause damage if untreated. An example of a long-term complication is diabetic retinopathy: this is caused when high blood sugar levels damages the retina, the part of the eye responsible for detecting light and sending signals to the brain. This can cause a person's eyesight to deteriorate over time.



People with diabetes are more at risk of heart disease so it is important that their blood pressure and cholesterol levels are monitored regularly. This may mean that they have to take drugs to control these as well as their diabetes.

Evidence has shown that keeping blood glucose levels within a stable target range, helps to reduce the risk of developing complications significantly. For this reason, it is important that a patient is actively involved in controlling their blood glucose.

Treatment

There is no cure for diabetes yet and it is a progressive condition. Because it is a lifelong condition, treatment must be continual and will usually be adjusted throughout the patient's life to consider any changes in blood glucose levels, weight and activity.

Insulin

Anyone living with type 1 diabetes will need lifelong insulin therapy, this can be administered via insulin injection or insulin pump.

People living with type 2 diabetes may not need to take insulin straight away, however, insulin may be necessary if the medication they are using is not helping to manage their blood sugar levels.

Diet & Exercise

It is important that a person living with diabetes has a low-fat, high-fibre diet, however, this is not just recommended only for people with diabetes, this is advised for everyone.

Those who take insulin will also need to learn how to carb count to ensure enough insulin is given to metabolise the carbohydrates they eat.

Regular physical exercise can also help to lower blood sugar levels. Many people with type 2 diabetes do not take medication and instead can manage their diabetes by maintaining a healthy lifestyle.

Tablet Therapy

It is common for people with type 2 diabetes to be prescribed medication to help manage their blood sugar levels. There are several different types of medication, for example, metformin and sulphonylureas. Some medications help to stimulate the pancreas to produce insulin and others help with weight loss.

There are two main types of diabetes

Type 1 diabetes

Type 1 diabetes mainly occurs in children and teenagers and almost always occurs for the first time in people below 30 years of age. 8% of people living with diabetes have type 1.

It usually starts more quickly with very obvious symptoms, such as sudden weight loss and thirstiness. As the pancreas does not produce insulin it is necessary to inject it in order to survive.

Type 2 diabetes

Type 2 diabetes usually occurs in people over 40 years of age, but can also be found in children and younger adult age groups particularly where there is obesity.

Type 2 is the most frequent form of diabetes representing around 90% of all cases. It starts gradually with less obvious symptoms and it can often go unnoticed for some time, symptoms can include no weight loss and thirstiness.

The pancreas continues to produce insulin, although in insufficient amounts, but it may be that the person is “insulin resistant” to his or her own insulin. In early stages of the condition it may be possible to treat it with an appropriate diet and life style changes.



A.MENARINI diagnostics

Diabetes Care Management Systems



GlucoMen iCan

GLUCOFIX TECH GK

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Blood glucose and ketone testing, CGM, and diabetes consumables

Why Menarini?

At Menarini Diagnostics, we provide a total testing solution for people with diabetes, including blood glucose and ketone meters, continuous glucose monitors and other diabetes consumables.

Our blood glucose meter, GLUCOFIX TECH GK, has a best in class set of features to make glucose testing easier. These include contactless download to a free logbook app, hypo/hyper alerts and an extra-large memory (730 results).

All meters come with a finger pricker which has features such as 5 depth penetration settings and fingers-free lancet ejection.

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