

Diabetes in children

Diabetes is a lifelong condition that sometimes starts in childhood. As a result of ongoing research, our understanding of diabetes has greatly improved and there are now extensive support and treatments available for diabetes. About 9 in 10 children and young people in the UK who have diabetes will have type 1 diabetes, and 1 in 10 will have type 2 diabetes (or other rarer types of diabetes).

Type 1 diabetes most often first starts in children (particularly in children aged 6 months to 5 years or during puberty). Type 2 diabetes more often starts in later life but is becoming more common in children due to increasing numbers of children being overweight, with poor diet and less physical activity.

See also the separate leaflets on [Diabetes \(Diabetes Mellitus\)](#), [Type 1 Diabetes](#) and [Type 2 Diabetes](#).

How do you know if your child has diabetes?

Diabetes is usually diagnosed if a child has typical symptoms (see below) with high levels of sugar in the blood. A blood test shows a high level of blood sugar (glucose). The high level of blood glucose causes some glucose to get into the urine so the first indication of diabetes may be a urine sample being positive for glucose.

What are the symptoms of diabetes in children?

The signs or symptoms of diabetes in children and young adults are the same as they are for older adults but they may present differently such as a child not wanting to play games or participate in sports or other physical activities due to having less energy. Diabetes in children may also cause changes in behaviour, poor school performance or impaired growth.

Type 1 diabetes

If your child has type 1 diabetes, symptoms tend to come on within a matter of days or weeks. The most common symptoms of type 1 diabetes in children are:

- Going to the toilet a lot to pass urine much more frequently.
- Bed wetting when your child was previously dry at night.
- Getting up in the night to go to the toilet.
- Being really thirsty despite drinking much more.
- Feeling more tired than usual. Having less energy than normal with less energy for activities.
- Blurred vision.
- Losing weight or looking thinner than usual.

Type 1 diabetes can sometimes start very suddenly and your child may become very unwell and need immediate referral to hospital. Some children may develop severe [dehydration](#) caused by a life-threatening complication of type 1 diabetes, called diabetic ketoacidosis.

Type 2 diabetes

If your child has type 2 diabetes, the symptoms are often similar to type 1 diabetes but they may be less obvious and develop more slowly, often over weeks or months. You may also notice your child getting more infections than usual. Type 2 diabetes does not cause ketoacidosis.

What causes diabetes in children?

Type 1 diabetes

It is not known for sure what causes type 1 diabetes. It is thought that type 1 diabetes may often be due to an autoimmune disease, in which the [body's defence \(immune\) system](#) makes antibodies against the beta cells in the pancreas, and so destroys the cells that make insulin. It is thought that something, such as a viral infection, triggers the immune system to make these antibodies.

Type 2 diabetes

There are several risk factors for developing type 2 diabetes. These include ethnic group, genetics, and lifestyle. In some cases, unlike type 1 diabetes, type 2 diabetes can be prevented by changing some lifestyle issues, such as improving diet, avoiding being overweight and having regular physical exercise.

Therefore, the risk factors for type 2 diabetes in children include:

- Being overweight or having inactive lifestyles.
- Family history of diabetes (2-6 times more likely to have diabetes than people without a family history). The risk of developing type 2 diabetes is about 15 in 100 if one parent has type 2 diabetes, and 75 in 100 if both parents have type 2 diabetes.
- Asian, African, and Afro-Caribbean ethnic groups are 2-4 times more likely than white people to develop type 2 diabetes.

How common is diabetes in children?

Diabetes is one of the most common long-term (chronic) diseases in the UK, and it is getting more common. Diabetes UK estimated that about 36,000 children under 19 years of age in the UK had diabetes in 2019.

Type 2 diabetes is much less common than type 1 diabetes in childhood in the UK, but the number of cases of children diagnosed with type 2 diabetes is rising.

Diagnosing diabetes in children

If your child has diabetes then the diagnosis is usually based on the typical signs or symptoms as outlined above in addition to persistently high blood sugar (glucose) levels. A high blood glucose test result is defined as a fasting blood glucose level of 7 mmol/L or more - taken when you haven't eaten or drunk for at least eight hours, or a random blood glucose of 11.1 mmol/L or more in the presence of symptoms or signs of diabetes - taken at any time in the day, even if you have eaten or drunk recently.

The HbA1c blood test shows blood glucose levels over a number of weeks but should not be used to make a diagnosis of diabetes in children.

If a diagnosis of diabetes is suspected in a child or young person, same-day referral to a multidisciplinary paediatric diabetes team is needed to confirm the diagnosis and provide ongoing care as required. This means your child will be seen the same day in hospital.

See also the leaflets on [Tests for Blood Sugar \(Glucose\) and HbA1c](#) and [Urine Dipstick Test](#).

Treating diabetes in children

Any child diagnosed with type 1 diabetes or type 2 diabetes needs to be referred on the same day to the local diabetes care team for assessment and treatment.

The treatment of type 1 diabetes always includes insulin. This requires a lot of support, especially in the first weeks and months after diagnosis. The diabetes care team will provide a great deal of information, help and support, including insulin dosing. The diabetes care team will also discuss with you whether your child would benefit from having an insulin pump.

The treatment for type 2 diabetes usually starts with lifestyle changes such as healthy diet, increasing [physical activity](#) and losing weight if needed. However, medicines are needed to treat type 2 diabetes and, as type 2 diabetes progresses over time, insulin may also be needed to control the blood sugar level.

See also the leaflets on [Insulin](#), [Type 2 Diabetes Diet](#), and [Type 2 Diabetes Treatment](#).

Preventing diabetes in children

At the moment there are no proven ways to prevent type 1 diabetes. There are no lifestyle changes that can be made to lower the risk of type 1 diabetes.

Type 2 diabetes can be preventable through lifestyle changes. The risk of type 2 diabetes can be reduced through healthy eating, regular exercise and achieving or maintaining a healthy body weight.

For both type 1 diabetes and type 2 diabetes, the risk of complications, such as [heart](#), [kidney](#) and eye disease, can be greatly reduced by regular check-ups and good control of blood glucose and other factors such as blood pressure and cholesterol levels, as well as maintaining a healthy lifestyle.

Further reading

- [Diabetes \(type 1 and type 2\) in children and young people: diagnosis and management](#); NICE Guidelines (Aug 2015 - updated May 2023)
- [Diabetes - type 1](#); NICE CKS, January 2023 (UK access only)
- [Diabetes - type 2](#); NICE CKS, August 2024 (UK access only)
- [Children and diabetes](#); Diabetes UK

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Originally authored by: Dr Colin Tidy, MRCP 12/04/2023	
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