

# Understanding type 1 diabetes

Type 1 diabetes affects about 10–15% of all people living with diabetes.

Diabetes is a condition where there is too much glucose (sugar) in the bloodstream. Glucose is an important source of energy for your body. It comes from carbohydrate foods that you eat, such as bread, pasta, rice, cereals, fruits, starchy vegetables, milk and yoghurt. Your body breaks down carbohydrates into glucose, which then enters your bloodstream.



Insulin is made in your body by the pancreas. Insulin is needed to allow glucose from the bloodstream to enter the body cells and be used for energy.

Type 1 diabetes occurs when the pancreas can't produce insulin. This happens because the cells that make the insulin (beta cells) have been destroyed by the body's own immune system.

## **Why does type 1 diabetes develop?**

The exact cause of type 1 diabetes is unknown. We do know that some people carry genes that make them more likely to develop type 1 diabetes. Diabetes occurs in these people when something triggers the immune system to start destroying the beta cells in the pancreas that produce insulin. The triggers for type 1 diabetes are not well understood.

Type 1 diabetes usually occurs in people under 40 years of age, but it can occur at any age.

## **Can type 1 diabetes be prevented or cured?**

Nothing can be done to prevent or cure type 1 diabetes, but researchers are currently working on this. If type 1 diabetes is well managed, you can continue to lead a healthy life.

**Helpline 1300 136 588**

**[ndss.com.au](http://ndss.com.au)**

## What are the symptoms of type 1 diabetes?

The most common symptoms of undiagnosed type 1 diabetes include:

- » being thirsty and drinking more than usual
- » going to the toilet (to pass urine) more often
- » unexplained weight loss
- » feeling tired and low on energy
- » mood changes.

The symptoms of type 1 diabetes can develop quickly and need immediate medical attention. If type 1 diabetes is left untreated, diabetic ketoacidosis (also known as DKA) will develop. Diabetic ketoacidosis occurs when the body can't use glucose for energy, and chemicals called ketones are produced. High blood glucose levels and ketones cause the blood to become too acidic, and result in a loss of body salts and fluids. This is life-threatening and requires urgent hospital treatment.

## How is type 1 diabetes managed?

Type 1 diabetes is managed by replacing the insulin your body can no longer make. Insulin is given by injection or by using an insulin pump. Your doctor will work with you to decide on the type of insulin you need, and will recommend how often you need to take it. This will depend on your lifestyle and individual needs. As well as taking insulin, you will need to check your blood glucose levels regularly, follow a healthy eating plan, and stay physically active.

Managing diabetes on a day-to-day basis is important for keeping blood glucose levels in the target range. This helps you to stay well in the short term and reduces the risk of long-term complications, such as damage to the eyes, kidneys, nerves and blood vessels.



## How is type 1 diabetes diagnosed?

- If your doctor thinks your symptoms suggest you have type 1 diabetes, your blood will be checked for high glucose levels, and your blood or urine for ketones. Ketones are made by the body in large amounts when there is little or no insulin. If ketones are present, you may have type 1 diabetes. A high blood glucose level will confirm the diagnosis.
- Your doctor may also do tests to look for auto-antibodies. These tests can help to work out if you have type 1 diabetes.
- If you have symptoms that sound like type 1 diabetes, see a doctor without delay and ask to be checked for diabetes. Early diagnosis of type 1 diabetes can prevent diabetic ketoacidosis.

## Who can help with your diabetes?

Managing diabetes is a team effort involving you, your family, friends and health professionals. There are many different health professionals who can help you, including:

- » an endocrinologist (diabetes specialist)
- » your general practitioner
- » a credentialed diabetes educator or diabetes nurse practitioner
- » an accredited practising dietitian
- » an accredited exercise physiologist
- » a registered podiatrist
- » a counsellor, social worker or psychologist.

### The NDSS and you

The NDSS provides a range of services to help you manage your diabetes. These include our Infoline and website for advice on diabetes management, NDSS products and a range of support programs to help you learn more about managing your diabetes.

Published June 2016