Type 2 diabetes, previously known as non-insulin dependent diabetes or mature onset diabetes, was until recently seen only in adults. However, it is now increasingly seen in children and adolescents.

What is diabetes?
Diabetes is a condition where there is too much glucose (sugar) in the blood. Glucose is the main source of energy for our bodies and comes from the carbohydrate food we eat.

Insulin is a hormone made in the pancreas (a gland behind the stomach). Insulin acts like a key to allow glucose to pass from the blood stream into the body cells to provide energy for day to day living.

Diabetes develops when the pancreas is unable to make any insulin, unable to make enough insulin or the insulin produced does not work properly. Without insulin doing its job, glucose builds up in the blood stream leading to high blood glucose levels (BGLs).

Types of diabetes
The most common types of diabetes are type 1 and type 2.

Type 1 diabetes occurs when the pancreas is unable to produce insulin. This happens when the body’s immune system (which normally protects us from infection) attacks the insulin producing cells of the pancreas until the cells are no longer able to produce insulin.

Type 2 diabetes occurs when the body either doesn’t produce enough insulin or the insulin produced doesn’t work well (called insulin resistance). Type 2 diabetes is also related to other health problems such as high blood pressure and high levels of blood fats like cholesterol.
Type 1 and type 2 — what's the difference?

**Type 1**
- Type 1 diabetes is an autoimmune condition.
- It is not related to lifestyle habits.
- It can happen to anyone at any time, but more commonly develops in children and adults up to 40 years of age.
- It is managed by daily lifelong insulin replacement (by injections or infusion via an insulin pump). Frequent blood glucose monitoring, healthy eating and regular physical activity is also very important and helps to manage the condition.

**Type 2**
- Type 2 diabetes is linked with being overweight, poor eating habits, being inactive, having a family history of diabetes and being from certain ethnic backgrounds.
- It is managed by healthy eating, regular physical activity and frequent blood glucose monitoring. Diabetes tablets and/or insulin injections may also be required.

Who is at risk of type 2 diabetes?

A number of factors increase the risk of developing type 2 diabetes. These include:
- Genetics — a family history of type 2 diabetes increases the risk to the young person.
- Weight — too much weight, especially around the waist, is likely to increase insulin resistance.
- Ethnicity — people from Indigenous, Pacific Islander or Asian cultural backgrounds are at higher risk.
- Physical activity levels — being inactive can cause insulin resistance, increasing the risk of type 2 diabetes.

How does type 2 diabetes develop?

Type 2 diabetes in young people is associated with insulin resistance, which means the body’s insulin is not working properly.

Young people with insulin resistance need to make more insulin than is ‘normally’ required to regulate their blood glucose levels. Overweight and obese young people are most likely to have insulin resistance, which is a risk factor for type 2 diabetes as well as other health problems.

Insulin resistance can progress to type 2 diabetes if the young person’s pancreas cannot continue making enough insulin to overcome their insulin resistance. Blood glucose levels then start to rise to higher than ‘normal’ levels. During puberty, hormonal changes can add to insulin resistance and type 2 diabetes is more likely to be diagnosed at this time.
What are the symptoms of type 2 diabetes?
A young person with type 2 diabetes may have no symptoms. If there are symptoms, they are usually mild and in most cases develop gradually. Symptoms can include:

• Being very thirsty
• Passing lots of urine
• Feeling tired
• Blurred vision.

How is type 2 diabetes diagnosed?

• Diagnosis needs a comprehensive medical assessment by a doctor who will ask about risk factors and symptoms, and look for signs of insulin resistance.
• A fasting blood glucose will be done, which may be followed by an oral glucose tolerance test.
• Sometimes a young person with type 2 diabetes can initially be mistaken as having type 1 diabetes until a complete assessment is done. Further blood tests can occasionally be necessary to confirm the diagnosis.

For more information about fasting blood tests and oral glucose tolerance tests refer to the *Pre-diabetes* information sheet.

How is type 2 diabetes managed?
Early management depends on how unwell the young person is at the time they are diagnosed. Longer term management includes:

• Healthy eating
• Regular physical activity
• Achieving a healthy weight
• Regular blood glucose monitoring
• Diabetes medication — tablets and/or insulin in conjunction with a healthy lifestyle
• Regular appointments for medical checkups with the treating doctor
• Diabetes self management education and support for the young person with diabetes and their carer
• Regular review of diabetes self management by the diabetes team (eg credentialled diabetes educator, accredited practising dietitian, accredited exercise physiologist and social worker).
Is type 2 diabetes serious?
Whether or not management includes tablets or insulin injections, type 2 diabetes is serious and can increase the risk of long term health problems from diabetes (diabetes complications).
When young people develop type 2 diabetes, diabetes complications such as heart disease and kidney disease are likely to occur at a younger age.
Managing diabetes well can reduce the risk of any long term diabetes complications.

Can type 2 diabetes be prevented?
The risk of type 2 diabetes in young people can be reduced with lifestyle changes that encourage healthy eating, regular physical activity and achieving a healthy weight.

For more information
To find out more about type 2 diabetes in children and adolescents, contact your State or Territory Diabetes Organisation on 1300 136 588.