

Diabetes Type 2

Diabetes causes high blood glucose levels and serious changes in metabolism.

Type 2 diabetes results from problems with the way the body produces or responds to insulin. Insulin is the hormone that enables our body cells to use glucose (a type of sugar).

Glucose (from our food) is our bodies' main fuel. It provides energy for body cells to function. In type 2 diabetes, body cells cannot use glucose properly, because they are resistant to insulin and/or the pancreas does not produce enough insulin for the body's needs. This leads to an abnormally high blood glucose level.

Type 2 diabetes used to be called 'non-insulin dependent diabetes mellitus' or 'mature-onset' diabetes. It is the most common form of diabetes. A family history of type 2 diabetes and an unhealthy lifestyle put people at an increased risk of developing the disorder. It often occurs together with high blood pressure, high blood cholesterol and excess body fat, especially around the waist.

Signs and symptoms

Symptoms usually develop gradually. They are due to high blood glucose levels (hyperglycaemia) and changes in metabolism and include:

- Excessive thirst
- Passing more urine
- Tiredness
- Blurred vision
- Frequent infections (e.g., thrush, cystitis).

Blood glucose levels may be raised for a long time before symptoms appear.

Long term effects

Over time diabetes can damage blood vessels and nerves, leading to complications including:

- Eye damage – diabetic retinopathy can cause vision impairment and blindness
- Kidney damage
- Heart disease
- Stroke
- Nerve pain or numbness (neuropathy)
- Slow healing wounds (e.g., leg and foot ulcers)
- Erectile dysfunction (male impotence).

Early and strict control of blood glucose levels can limit these complications.

Treatment

Treatment aims to improve glucose metabolism and keep fasting blood glucose levels as close to normal as possible (4–6 mmol/L). It involves healthy eating, physical activity and medicines.

There are several different types of diabetes tablets that work in different ways to improve glucose metabolism and lower blood glucose. Some people need to take more than one type of tablet and some people eventually need insulin injections.

It is usually recommended that people with type 2 diabetes test their blood glucose level regularly, using a home blood glucose monitor.

Hypoglycaemia

Hypoglycaemia means low blood glucose, which may occur if doses of diabetes tablets or insulin are not balanced to food intake and physical activity. The symptoms of

hypoglycaemia (a 'hypo') are different for different people. They include:

- Shaking, weakness, dizziness
- Sweating
- Fast heart beat
- Hunger
- Numbness or tingling around lips
- Unusual behaviour (e.g., irritability, drowsiness, confusion)
- Headache
- Blurred vision
- Slurred speech
- Loss of consciousness.

A 'hypo' needs immediate treatment. A person with diabetes who has hypoglycaemia needs to have:

- quick acting carbohydrate (glucose) (e.g., ½ glass soft drink or fruit juice (not 'diet' drinks), 3 teaspoons sugar or honey, 6-7 jelly beans), then
- longer acting carbohydrate within 20 minutes (e.g., a meal, fruit, yoghurt, milk, muesli bar).

Note: If a person with diabetes is unconscious or unable to swallow, do not give them anything by mouth. Follow first-aid procedures and phone for an ambulance (dial 000, or on a mobile phone outside its coverage area dial 112, and state 'diabetic emergency').

The National Diabetes Services Scheme (NDSS)

The NDSS is an Australian Government initiative, administered by Diabetes Australia, that provides diabetic

equipment at subsidised prices. To access the NDSS a person with diabetes must complete a NDSS registration form, have it signed by a doctor or Credentialed Diabetes Educator (CDE), and send it to Diabetes Australia. Some pharmacies act as NDSS agents and stock the subsidised equipment.

Self care

A healthy lifestyle can delay or prevent type 2 diabetes and also help treat it.

- Eat regular, healthy meals, including plenty of fruit, vegetables and grain foods. Limit or avoid foods high in fat, sugar or salt.
- Choose food and drink products with no added sugar, or sweetened with a sugar substitute (diet food and drinks). For example some fruit juices are sweetened with sucralose, a sugar substitute that does not add kilojoules (calories).
- Exercise at a moderate level for at least 30 minutes on all or most days of the week.
- Keep to a healthy body weight.
- Limit alcohol and eat carbohydrate foods when drinking.
- Don't smoke – it contributes to diabetic complications.
- Monitor your blood glucose levels regularly.
- Follow the use and care instructions for your home blood glucose monitor.
- Follow the instructions for your diabetes medicines.

Diabetes Risk

Factors that increase your risk of type 2 diabetes include

- Age over 40 years
- Aboriginal, Torres Strait Islander, Pacific Islander, Maori, Asian, Middle Eastern, Southern European or North African family background.
- A family member with diabetes.
- Ever having a high blood sugar level, including during illness or pregnancy
- Excess body fat, especially around the waist
- High blood pressure
- Smoking
- Poor diet, low in fruit and vegetables
- Lack of physical activity

If you have any of these risk factors for diabetes, consult your doctor.

- Have regular checks for blood pressure, cholesterol, eyes and kidneys.
- Take extra care of your feet and have them checked regularly by a doctor or podiatrist.
- Always have some quick-acting carbohydrate (glucose) with you.
- Teach your friends, family and co-workers how to recognise and treat a 'hypo'.
- Develop a 'sick day plan' with your doctor and follow it when unwell.
- Link up with the diabetes team in your area. Diabetic teams include doctors, diabetic educators, dietitians, podiatrists and pharmacists.
- Join Diabetes Australia and the NDSS.
- Wear identification, such as a *MedicAlert* bracelet, that says you have diabetes.

For more information

Baker IDI Heart and Diabetes Institute

Website: www.bakeridi.edu.au

Diabetes Australia

Phone: 1300 136 588

Website: www.diabetesaustralia.com.au

Type 2 Diabetes Risk Assessment Tool (AusDrisk)

Website: www.ausdrisk.com

MedicAlert

Phone: 1800 88 22 22

www.medicalert.org.au

Healthdirect Australia

Phone: 1800 022 222

Website: www.healthinsite.gov.au

Consumer Medicine Information (CMI)

Your pharmacist can advise on CMI leaflets.

National Prescribing Service (NPS) Medicines Information

Phone: 1300 MEDICINE (1300 633 424)

Website: www.nps.org.au

The Poisons Information Centre

In case of poisoning phone 13 11 26 from anywhere in Australia.

Pharmacists are medicines experts.

Ask a pharmacist for advice when choosing a medicine.

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