



FACT SHEET:

Diabetes-related complications

Looking after your diabetes is very important for long-term health. If your diabetes is well managed and you take care of your general health, you can reduce the risk of diabetes-related complications in the future.

What are the most common complications of diabetes?

Diabetes-related complications can include damage to:

- the large blood vessels (also known as macrovascular or cardiovascular complications), leading to a heart attack, stroke or circulation problems in the lower limbs and feet
- the small blood vessels (also known as microvascular complications), which can lead to problems in the eyes, kidneys and with nerves such as in the feet or nerves affecting sexual function
- other parts of the body, including the skin, teeth, gut and gums.

Large blood vessels

The main cause of large blood vessel damage in people with diabetes is atherosclerosis. Atherosclerosis occurs when plaque – made up of cholesterol, other blood fats and substances – builds up inside the walls of blood vessels. This causes blood vessels to narrow and reduces the blood flow to organs and other parts of the body.

If the plaque breaks, this can form a blood clot that can totally block the blood supply to organs and other parts of the body. This can affect the blood vessels that supply blood to the heart, brain, and lower limbs.

Heart

- Reduced blood flow increases the risk of having a heart attack.
- Heart attacks occur when a blood vessel in the heart becomes blocked, and the heart muscle becomes damaged.

- Symptoms of a heart attack can include severe central chest pain or a crushing sensation. The pain or crushing sensation may move up the neck or down the left arm or may result in difficulty in breathing. These symptoms are less common in women.
- Some people with diabetes may not have any symptoms of a heart attack due to nerve damage.

Brain

- Reduced blood flow increases the risk of having a stroke.
- A stroke can occur when the blood supply to one of the blood vessels leading to a part of the brain is suddenly blocked.
- Symptoms of a stroke can include weakness or numbness down one side of the body, droopiness on one side of the face, or difficulty talking.

Lower limbs

- Reduced blood flow to the lower limbs can affect your legs and feet. This is called peripheral vascular disease.
- This can cause pain, cold and change of colour to lower legs and feet, cause slow healing wounds, shiny skin on the legs, and pain in the buttocks, thighs or calves when walking.
- The long-term lack of blood flow to the lower limbs can lead to ulceration and infection. This can increase the risk of amputation.

The risk of damage to the large blood vessels is higher if you:

- have blood glucose levels above your target range
- have high blood pressure
- have high levels of blood fats (cholesterol or triglycerides)
- are above the healthy weight range or carry extra weight around your waist
- are a smoker
- have a family history of vascular disease.

Your doctor can check your risk for damage to the large blood vessel during your annual diabetes check-up (also known as your annual cycle of care).

Small blood vessels

Long periods of high blood glucose levels can cause damage to the small blood vessels in the eyes, kidneys, and nerves.

Eyes

- Over time, the small blood vessels in the retina can become damaged and leak fluid or bleed. This is called retinopathy.
- Other eye conditions such as cataracts and glaucoma are more common in people with diabetes.
- Eye conditions can be managed more successfully if they are found and treated early.
- Have your eyes checked by an optometrist or ophthalmologist (eye specialist) regularly to look for early signs of damage.
- Early detection and treatment of eye problems provides the best results.

Kidneys

- High blood pressure and high blood glucose levels can damage the small blood vessels in the kidneys. This causes the tiny blood vessels that filter the blood to leak. As a result, the kidneys do not work as well as they should. This is called diabetic nephropathy or diabetic kidney disease.
- Have your kidneys checked at least once every 12 months by your doctor. This will involve a urine test and a blood test as part of your annual diabetes check-up.
- Early detection and treatment of kidney problems provides the best results.

Nerves

- Nerve damage can be caused by high blood glucose levels, drinking large amounts of alcohol, and other conditions.
- Damage can occur to the nerves in the legs, feet, arms and hands. This is called peripheral neuropathy. Damage to nerves can cause pain, tingling or numbness.

- There can also be damage to the nerves affecting your stomach (gastroparesis), intestines (diarrhoea or constipation), bladder (incontinence), or genitals (erectile dysfunction in men and sexual dysfunction in women). This is called autonomic neuropathy.

Other parts of the body

Teeth and gums

- There is a higher risk of dental problems when blood glucose levels are above the target range for a long period of time. If you smoke, this also increases the risk.
- Dental problems can include tooth decay, gum infections (gingivitis) and gum disease.
- Tooth and gum infections can increase your risk of heart disease.
- Signs of dental problems include a dry mouth and sore, swollen or bleeding gums.
- It is important to brush your teeth twice a day and floss every day to prevent dental problems. Regular visits to your dentist will also help maintain oral health. Tell your dentist that you have diabetes.

Skin

- There is a higher risk of skin problems when blood glucose levels are above the target range.
- Skin problems can include very dry skin, caused by damage to the small blood vessels and nerves. There is also a higher risk of skin infections.
- You can protect your skin by avoiding irritants such as hot baths and showers, scented soap and household cleaning products.
- To avoid dry skin, use moisturisers every day but not between your toes.
- Treat any cuts on your skin promptly to prevent infection.
- See your doctor if you have any skin problems.



Staying well

There are several things you can do to reduce your risk of diabetes-related complications and stay well with diabetes.

- Talk to your doctor about whether you need to monitor your blood glucose levels at home. If you do check your blood glucose levels, aim to keep them in your recommended target range. Your doctor, diabetes nurse practitioner or diabetes educator can advise you about your blood glucose target range.
- Keep blood pressure as close to the target range as possible. The target range is 130/80 to 140/90 or less. Your doctor will advise you on a blood pressure target to meet your individual health needs. Ask to have your blood pressure checked every time you visit your doctor.
- Keep your blood cholesterol and triglycerides in the recommended target range for people with diabetes. Your doctor or diabetes nurse practitioner may prescribe medications that can help manage your cholesterol and other risk factors for cardiovascular disease.
- Make healthy food choices from a wide variety of foods. Choose from less processed wholegrains, fruit, vegetables, legumes, lean meats or poultry, fish and low-fat dairy foods or non-dairy alternatives. It is also important to limit foods high in saturated fat, salt (sodium) and added sugars. A dietitian can help you make the best food choices for your individual needs.
- Do regular physical activity. This is a great way to reduce your blood pressure, blood fats and blood glucose levels. Aim for 30 minutes most days of the week. Reduce your sitting time and/or take regular movement breaks when sitting. Talk to your doctor before starting any new exercise or activity program.
- Try to lose weight if your weight is above the healthy range. Losing even a small amount of weight will help reduce your blood pressure, blood glucose and cholesterol levels.
- Do not smoke. If you do smoke, try to quit. If you feel you cannot give up smoking on your own, ask for help. Talk to your doctor or call the Quitline on **13 78 48**.
- Have regular appointments with your doctor and diabetes health professionals. Complete all your annual cycle of care health checks. These checks are very important for assessing your health and risk of diabetes-related complications.



More information and support

- Go to ndss.com.au to search for the 'Annual cycle of care', 'Looking after your heart', 'Looking after your kidneys', 'Looking after your eyes', 'Looking after your feet', 'Looking after your dental health' and other fact sheets.
- Go to ndss.com.au/annual-cycle-of-care-podcasts and listen to the Annual Cycle of Care podcast series.
- Go to footforward.org.au to find out more about looking after your feet.
- Go to keepsight.org.au to register for the eye check reminder program for people with diabetes.
- Go to healthdirect.gov.au to find diabetes health professionals near you.



Top tips

- Speak to diabetes health professionals about how you can best reduce your risk of diabetes-related complications.
- Have regular appointments with your doctor and diabetes health professionals. They can advise you about the blood glucose, blood pressure and cholesterol target ranges that are best for you.
- Complete all your annual cycle of care health checks. These checks are very important for assessing your health and your risks of diabetes-related complications.

Notes

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The NDSS and you

Whether you have just been diagnosed with diabetes, or have been living with diabetes for a while, the NDSS provides a range of support services, information, and subsidised products to help you manage your diabetes, stay healthy and live well. For access to more resources (including translated versions), or to find out more about support services, go to **ndss.com.au** or call the NDSS Helpline on **1800 637 700**.