

Diabetes and Chronic Kidney Disease



An abstract graphic consisting of multiple concentric, swirling teal lines that spiral outwards from the top left towards the bottom right, filling the upper half of the page.

What do the kidneys do?

You have two kidneys. They sit just below your ribs on each side of your spine and behind your stomach. Your kidneys are full of tiny blood vessels that your blood travels through to be filtered and cleaned.

They make sure nutrients and fluid stay in your blood, and that waste and extra water are removed in urine (pee). The clean, filtered blood then travels to the rest of your body to keep everything working properly. Your kidneys also help to control your blood pressure and make red blood cells.

Kidney function describes how well your kidneys are working. Reduced kidney function means your kidneys have been damaged and are not working as well as healthy kidneys.



How does diabetes affect the kidneys?

When someone has diabetes, they can have too much sugar in their blood. Over time, the extra sugar in their blood starts to damage the small filters in their kidneys. This leads to:

- 1. Protein in the urine:**
Protein is needed by our bodies and usually stays in the blood. When someone's kidney filters are damaged, protein leaks into their pee. This is an early sign that the kidneys are not working properly.
- 2. High blood pressure (BP), also known as hypertension:**
When the blood vessels in our kidneys are damaged, the walls of the blood vessels can become thicker and this leaves less space for blood to flow through. The heart then must pump harder to get the blood through the kidneys. This increases blood pressure.
- 3. Scarring of kidneys:**
Causing permanent damage and **chronic kidney disease (CKD)**.
- 4. End stage kidney disease:**
Over time, the damage may get so bad that people may need dialysis or a kidney transplant. This is called **end stage kidney disease**.

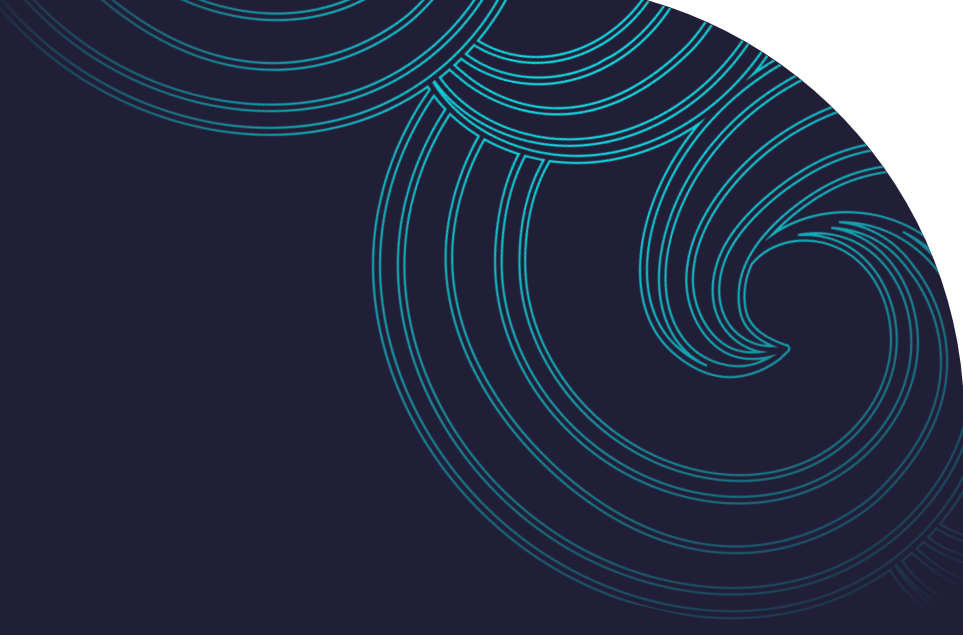
Diabetes and Chronic Kidney Disease:

Chronic kidney disease (CKD) is a condition where the kidneys become damaged and gradually stop working properly. The damage to your kidneys can't be fixed, but further damage can be slowed and managed.

Diabetes is the most common cause of CKD in Aotearoa New Zealand. Māori, Pasifika, Indian and South-East Asian people with diabetes have the highest risk of developing CKD.

While high blood sugar from diabetes can damage the tiny blood vessels in the kidney, it can also damage tiny blood vessels in other parts of the body, such as the brain, eyes, heart, and feet. This may increase the risk of having a stroke or a heart attack, and may lead to loss of eyesight, or reduced blood supply to the feet.





How can I prevent kidney damage if I have diabetes?

If you have diabetes, good management of your blood sugars will help to keep your kidney filters working well and prevent kidney damage. It will also help to protect you from strokes and heart attacks.

Your doctor or nurse will arrange regular blood tests to check your kidney function, and urine tests to check for protein in your pee.

Other things you can do to help lower your risk of developing kidney disease include:

✓	Reducing high blood pressure
✓	Eating healthy food
✓	Maintaining a healthy weight – or losing some weight if needed
✓	Being active every day – moving more and sitting less
✓	Drinking enough water or similar fluids
✓	Giving up smoking if you are a smoker
✓	Taking medicines as prescribed

For more advice, please speak to your doctor or nurse, or contact Kidney Health NZ at [kidney.health.nz](https://www.kidney.health.nz)

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