

Diabetes and Chronic Kidney Disease

(Te Ao Māori resource)



A large, stylized teal swirling pattern, resembling a traditional Māori koru or a modern wave design, occupies the upper half of the page. It consists of multiple concentric, flowing lines that spiral outwards from the top left towards the bottom right.

What do the kidneys do?

You have two kidneys (**ngā whatukuhu**). They sit just below your ribs on each side of your spine and behind your stomach. Ngā whatukuhu are full of tiny blood vessels that all your **toto** (blood) travels through to be filtered and cleaned.

Ngā whatukuhu make sure **pūmua** (proteins) and other nutrients and fluid stay in your toto, and that **para** (waste) and extra **wai** (water) are removed in mimi (pee). The clean, filtered toto 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 ngā whatukuhu are working. Reduced kidney function means your ngā whatukuhu have been damaged and are not working as well as healthy ngā whatukuhu.



How does diabetes affect ngā whatukuhu?

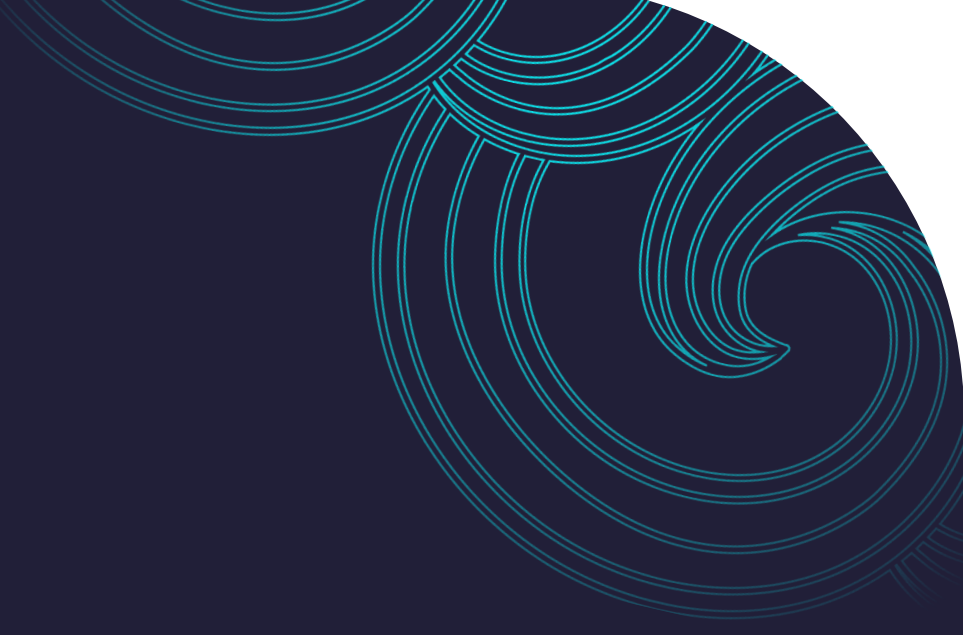
When someone has **mate huka** (diabetes), they have too much **huka** (sugar) in their toto. Over time, the extra huka in the toto starts to damage the small filters in the whatukuhu. This can lead to **mate whatukuhu**, or chronic kidney disease (CKD). Mate whatukuhu can not be fixed, however it can be managed so you stay as well as possible.



Ngā tohu o te mate whatukuhu (Signs of CKD):

- 1. Pūmua in the mimi:**
Pūmua is needed by our bodies and usually stays in our toto. When someone's kidney filters are damaged, pūmua leaks into their mimi. This is an early sign that ngā whatukuhu are struggling.
- 2. High blood pressure (BP), also known as hypertension:**
When the blood vessels in ngā whatukuhu are damaged, the walls of the 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. Pūhuki (scarring) of ngā whatukuhu:**
Damage that can not be fixed results in mate whatukuhu.
- 4. Te mutunga o te mate whatukuhu (end stage kidney disease):**
Over time, the damage may get so bad that people may need dialysis or a kidney transplant. This is known as **te mutunga o te mate whatukuhu** (end stage kidney disease).

Mate huka can also cause damage to other small blood vessels in the body, such as in **ngā kanohi** (the eyes) and **ngā waewae** (feet), as well as increase the risk of a person having a stroke or a heart attack.



Mauri and the importance of balance:

In **Te Ao Māori**, the health of the body is connected to the balance of **mauri** (life force or energy). If mate huka upsets this balance by harming the whatukuhu, it affects the mauri of the whole person. By keeping blood sugar under control, we can protect the mauri of the whatukuhu and your **taha tinana** (physical wellbeing), keeping everything in balance.

It's like caring for **whenua** (land) that's being overworked. If we don't look after it, the soil loses its strength, and it becomes harder to grow anything. The same goes for the whatukuhu. Managing mate huka carefully helps the whatukuhu stay healthy, just like looking after the whenua helps it to thrive.

How can I prevent mate whatukuhu if I have mate huka?

If you have mate huka, managing the huka in your toto well will help protect your whatukuhu from damage.

Your doctor or nurse will arrange regular tests of your toto to check your whatukuhu function, and your mimi to check for pūmua.

Other things you can do to help lower your risk of developing mate whatukuhu include:

✓	Lowering high blood pressure
✓	Eating healthy kai
✓	Keeping a healthy weight - 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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