

# Kidneys

Diabetes can cause kidney disease. Our kidneys are vital because they purify the blood by taking out waste products and extra fluid in the body. You can have kidney damage without even knowing it. That is why it is important to find out how you can protect your kidneys.

## What causes kidney disease?

Diabetes can affect kidney function by causing;

**Damage to blood vessels:** Glucose attaches itself to the small blood vessels leading into the filtering system of the kidney or to the smaller blood vessels in the filtering system (nephron), causing damage. High blood pressure causes further damage to the function of the kidney by putting extra strain on the blood vessels. The damage caused is painless and cannot be found by physical examination.

**Damage to nerves:** The waste products that the kidney normally filter are collected in the bladder as urine. A tube called the urethra then passes the urine out of the body. If diabetes has damaged the nerves it can affect the bladder causing difficulty in passing urine. If urine builds up in the bladder the pressure can cause urine to flow back up into the kidney and this causes damage.

**Infection:** Glucose in the urine provides food for bacteria (germs) to grow. People with diabetes have a higher chance of developing infections of the bladder, vagina or penis and in the kidney itself.

## How do I know if I have kidney damage?

The first sign of kidney damage can be found by a special urine test that measures the small (micro) amounts of protein (albumin) in urine (micro-albuminuria). Blood tests can check for waste products, urea and creatinine and measure the levels of these in the blood.

In the early stages of kidney damage small amounts of protein leak into the urine. People do not have any symptoms at this early stage. As time goes on more and more protein is lost in the urine. Eventually the kidney filter stops working and people become very ill. Dialysis is required so that the waste products can be filtered.

## What does it mean if I have protein in my urine?

Your doctor may have told you that you have protein in your urine and that this is a sign that there is some damage to the kidneys. It is likely that you will not have any symptoms but this does not mean it is not serious.

There are some medications that can help to delay further damage to your kidneys. You need to discuss medications with your doctor.

Your doctor will monitor your kidney function very closely and will make sure that all your medications are safe for your kidneys.



Do not take any medication without checking with your doctor or pharmacist first as it may not be safe for your kidneys. If your kidney disease is advanced your doctor will probably arrange for you to see a kidney specialist doctor called a nephrologist.

## What can I do to protect my kidneys?

### 1. Control blood pressure

See your doctor regularly to have your blood pressure checked. If you have high blood pressure, take your medication as prescribed. Using a home blood pressure monitor will help to check your blood pressure at different times of the day.

### 2. Control blood glucose

Keep your blood glucose levels as close to target as possible. A test called an A1c can be performed by your doctor to check your long-term diabetes control. You can also check your blood glucose at home. Talk to your doctor or diabetes educator about testing your blood glucose.

### 3. Treat urine infections early

Infection in the vagina or penis can cause itching and discharge. Infections in the bladder or in the kidney cause burning when passing urine and cause small amounts of urine to be passed frequently. An unexplained backache can also be a symptom of kidney infection. If you have any symptoms see your doctor immediately. Usually antibiotics are used to treat infections.

### 3. Control cholesterol levels

Cholesterol can cause narrowing and blockages in the blood vessels causing less blood flow. Talk to your doctor about keeping cholesterol as close to target as possible.

### 4. Maintain a healthy lifestyle

Lifestyle factors can increase your risk or decrease the risk. Be a non-smoker, limit alcohol, maintain a healthy weight and be as active as you can.

## How often should I have my kidneys checked?

Have your urine checked for protein every year. Your doctor will also do a blood test to check your kidney function.

## Key points to remember

Prevention is better than cure. It is very important to control blood glucose and blood pressure and have your kidney test done yearly.

## Where can I go for more information?

Diabetes Outreach  
Kidney Health Australia

[www.diabetesoutreach.org.au/consumer](http://www.diabetesoutreach.org.au/consumer)  
[www.kidney.org.au](http://www.kidney.org.au)

**Diabetes Outreach**  
8 Woodville Rd  
Woodville South SA 5011  
Telephone: (08) 8222 6775  
[www.diabetesoutreach.org.au](http://www.diabetesoutreach.org.au)

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