



Diabetes and Kidneys

Kidney disease can happen to anyone but it is more common in people with diabetes and people with high blood pressure. Kidney damage is referred to as diabetic nephropathy. Up to 30% of people with diabetes develop kidney problems over time but the risk of developing these problems can be reduced by managing your BGLs, having regular kidney and blood pressure checks and leading a healthy lifestyle.

Who is at risk of kidney problems? There are some people with diabetes who may be more likely to develop kidney problems:

- people who have had diabetes for more than 10 years
- people with a history of persistent high blood glucose levels
- people with a history of high blood pressure
- people with a history of high blood fats (cholesterol)
- people who currently smoke or have previously smoked for a long time
- people with a family history of high blood pressure or kidney disease
- indigenous Australians

Where are the kidneys? The kidneys are two small bean shaped organs, each weighing about 150 grams. They lie above the waist toward the back on both sides of the spine. The lower ribs and muscles on both sides protect them.

What do the kidneys do? The main functions of the kidneys are:

- to filter the blood to remove waste products
- to regulate the body's balance of salt, water and other chemicals
- to produce hormones and chemicals, which help regulate blood pressure, maintain calcium balance and red blood cell production

What is diabetic nephropathy?

In people with diabetes, damage to the filtering units of the kidneys may occur. This damage affects the filtering function and can lead to problems such as the loss of a protein called albumin in the urine and high blood pressure.

If picked up early and managed, serious kidney problems can be prevented. If left undetected or untreated the kidneys will begin to fail.

What happens if the kidneys fail? Toxic waste products stay in the body, fluids build up and the chemical balance is upset. Dialysis treatments, which mimic normal kidney function, or a kidney transplant will be needed.

Detecting nephropathy (kidney damage) early Early signs of kidney problems can be detected through a urine test. The urine is checked for the presence of tiny microscopic amounts of albumin.

Finding out about early kidney damage is simple and painless. Treatment at this time can prevent further damage.

There are several ways to check for nephropathy

- random or morning samples can be collected and sent for laboratory testing
- a micro-albumin dipstick test conducted by your doctor is sometimes used
- timed collections, usually of either 12 or 24 hours can sometimes be used, especially if an abnormal urine albumin result has been found previously
- how often to check
- children are checked for the first time 5 years after diagnosis – then yearly
- adolescents are checked for the first time 2 years after diagnosis – then yearly
- adults are checked every year following diagnosis

How to prevent or reduce the risks for nephropathy

- follow a healthy eating plan and maintain a healthy weight
- be physically active – at least 30 minutes of moderate intensity exercise on most days of the week
- drink plenty of water - especially when being active and in hot weather
- if you smoke - STOP! (Quitline 131 848)
- if you drink alcohol do so in moderation
- test your own blood glucose levels to know your pattern and how your choices and other influences affects them
- ensure your doctor or clinic arranges an HbA1c test every 3 – 6 months. This test, also known as a glycosylated haemoglobin, shows the average of your blood glucose levels and is expressed as a percentage.
- ensure your doctor or clinic checks your blood pressure at every visit. Keep a written record. (The ideal blood pressure for a person without kidney problems is less than 130/80 but with kidney problems the ideal is 125/75 or lower)
- ensure your doctor checks your cholesterol regularly
- ensure your doctor orders an annual urine test for the presence of microalbumin

Infections of the Bladder and Kidneys

People with diabetes are at increased risk of infections of the bladder, kidneys and urinary tract.


Infections are more likely in:

- people with high blood glucose levels
- people with poor mobility
- people with an inability to completely empty their bladder
- older people
- women

Classic signs and symptoms

- increased tiredness
- fluid retention – often seen as swollen feet and ankles
- difficulty breathing at rest
- loss of appetite
- nausea
- vomiting

For more facts and stats see [Kidney Facts and Stats](#).



It is important to note that signs and symptoms do not appear until serious damage has occurred.

Diabetes
NSW

Street Address 26 Arundel Street, Glebe NSW 2037

Postal Address GPO Box 9824, Sydney NSW 2001

ABN 84 001 363 766 CFN 12458

Phone +61 2 9552 9900

Fax +61 2 9660 3633

Customer Care Line: 1300 136 588

www.diabetesnsw.com.au