

Diabetes and kidney disease



Working together for better patient information

Diabetes mellitus (DM) is a common condition, affecting around 7% of the UK population. It is the most common cause of chronic kidney disease (CKD), responsible for around a third of people needing kidney replacement therapy (dialysis or pre-emptive kidney transplant). This leaflet explains what diabetes is, how it affects the kidneys and how you can look after your kidneys if you do have diabetes.

What is diabetes?

Diabetes is a serious condition where the glucose (sugar) levels in your blood are too high. You get glucose from food and drink and it is moved from the blood to your cells by a hormone called insulin which is made in the pancreas.

There are two main types of diabetes:

Type 1

Usually starts in childhood or adolescence, although it can occur at any age. People with type 1 diabetes can't make any insulin themselves as their bodies attack the cells in the pancreas that normally make it.

Type 2

Usually starts in middle age although it is becoming increasingly common in younger people. People with type 2 diabetes produce some insulin but it is not effective and over time not enough is made.

In both types of diabetes, because the glucose can't get into your cells, it builds up in the blood. If left untreated, high glucose levels can cause serious damage to your body, including your eyes, heart, feet and kidneys.

For more information on these and other types of diabetes see

www.diabetes.org.uk

What are the symptoms of diabetes?

The main symptoms of diabetes are:

- Having to go to the toilet to wee a lot
- Being very thirsty
- Feeling tired
- Losing weight without trying to
- Blurred vision
- Having regular infections such as thrush
- Poor healing of cuts and scrapes



How will diabetes affect my kidneys?

Diabetes can affect your kidneys in two main ways:

1. Kidney disease (diabetic nephropathy). High glucose levels cause extra blood to flow through the tiny filters in your kidneys, so they have to work harder than normal to clean it. Over time this can damage the filters, causing them to leak.
2. Disease of the kidney's blood vessels (renovascular disease). High blood pressure causes a 'furring up' of the artery to the kidney, reducing the blood supply and causing scarring.

Kidney damage occurs slowly over many years. It can be identified in its early stages by very small amounts of protein in the urine. This protein has leaked from the kidneys as a result of the damage to the filters. It is therefore important that people with diabetes are screened regularly for kidney disease in order to find and treat any problems early, before more serious damage can occur.



What other problems can diabetes and kidney disease cause?

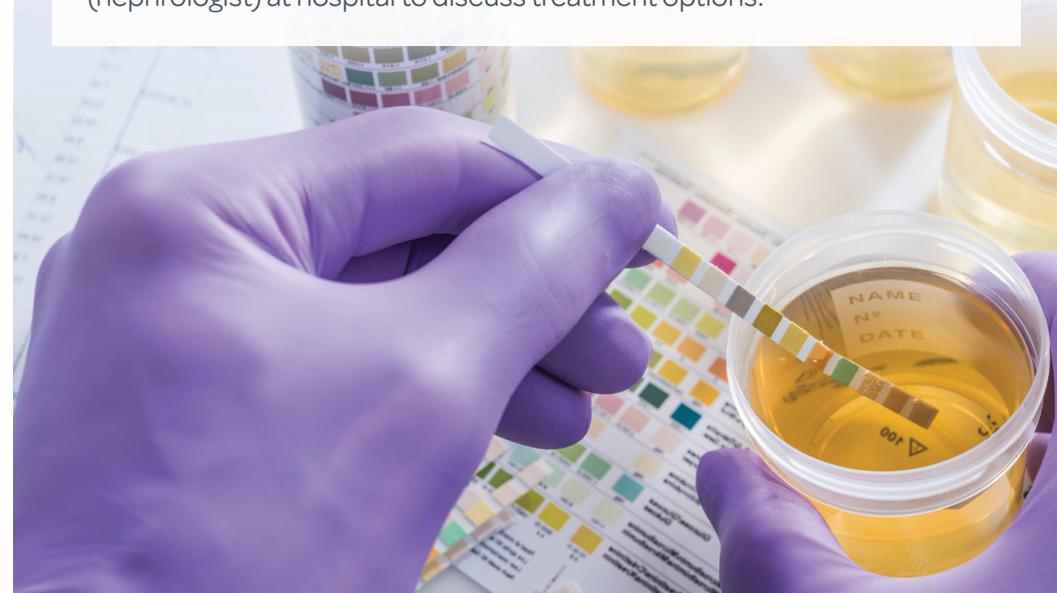
Both diabetes and kidney disease can cause high blood pressure which increases the risk of heart attacks and strokes.

Foot and eye problems are also common with people with diabetes and kidney disease, but these can be preventable. Regular checks with your GP and optician are therefore important to try to stop any problems from developing or to spot them early on when they can be easier to treat.

How will my kidneys be monitored if I have diabetes?

Your diabetes will be monitored by your GP. **It is very important to have your urine tested at least once a year, as protein leaking into the urine is the first sign of kidney damage.** It is important to pick this up early as there are many treatments to protect your kidneys from further damage.

You will also have regular blood tests to check your kidney function. If your kidney damage progresses, you will be referred to a kidney specialist (nephrologist) at hospital to discuss treatment options.



How is diabetes treated?

Diabetes is a life-long condition that needs regular monitoring.

Type 1 diabetes is treated by multiple daily insulin injections or an insulin pump. When you are first diagnosed you will be shown how to do these injections yourself at home. You will need to continue to do these injections yourself to maintain your health. This can seem very overwhelming at first but you will receive support from your healthcare team.

Type 2 diabetes is usually treated with key lifestyle changes, including changing your diet, increasing the amount of exercise you do and trying to lose weight. Most people with type 2 diabetes will also be offered medication. This is usually in the form of tablets to start with, although insulin injections may also be needed eventually.



How can I look after my kidneys if I have diabetes?

- Stop smoking. Smoking is a health risk for everyone, but for people with diabetes the risk is even greater. It can make your kidney disease worse and contribute to heart attacks and strokes. Your doctor can help and can refer you to a stop smoking service.

Visit www.nhs.uk/live-well/quit-smoking for more information.

- Keep your blood pressure under control. You should aim for a blood pressure of 130/80 or less. Your kidney team may prescribe medication to help with this. You can buy a blood pressure machine at your local chemists to check your own blood pressure at home to help keep it under control.
- Keep your cholesterol level within the range recommended by your doctor or nurse. This may involve a change in diet and/or medication. Ask your kidney team to refer you to a dietician.
- Lose weight if you are overweight. Talk to your GP about safe ways to lose weight if this applies to you.
- Keep active and eat a healthy balanced diet. It is recommended that everyone takes part in at least 30 minutes of moderate physical activity daily.
- Keep your alcohol intake to 14 units a week or less. Visit www.nhs.uk/live-well/alcohol-support for information on how to reduce your alcohol intake.

It is important that you take responsibility for your own health.

Go to all your appointments, learn the best ways to control your blood pressure and blood glucose levels and get support to take as much control of your health as possible.

Your healthcare team can help you to manage your diabetes and improve your overall health.

Where can I find out more information?

- Kidney Care UK - Patient information: www.kidneycareuk.org
- Diabetes UK: www.diabetes.org.uk
- NHS – Diabetes: www.nhs.uk/conditions/Diabetes
- NHS - BMI calculator:
www.nhs.uk/live-well/healthy-weight/bmi-calculator



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