

Renal Services

Diabetic Nephropathy

What I need to know about Nephropathy

Diabetes is a disease where the body could no longer control the sugar levels inside the blood stream. Persistently high blood sugars over a long period of time leads to damage of blood vessels and as a consequence of this many parts of the body can be affected. A combination of high blood pressure and poor control of diabetes can often lead to damage of the kidney which is known as diabetic nephropathy.

How is kidney disease detected in its early stages?

Ideally we should try to pick up any damage to the kidney as early as possible in order to treat and prevent any further deterioration. There are very few symptoms or signs of kidney disease at this early stage and tests are required in order to detect the presence of kidney damage. These tests are done routinely either at your GP practice or the diabetic clinic.

Blood tests will need to be done about two weeks before the clinic appointment and these will include:

- Urea and electrolytes: These blood tests are used to indicate the function of the kidney. In particular, the creatinine is measured. This is a waste product produced by the muscles. The kidney acts as a filter and cleans the blood of waste products. If the creatinine levels in your blood stream start to rise, it probably indicates that the kidney is not functioning well and is not cleaning the blood as it should do.
- HbA1C (glycated haemoglobin): This blood test measures how much sugar is attached to your red blood cells. It indicates what the average blood sugar control has been over the last two to three months and if sugar levels have been high, more sugar will attach to the red blood cells and HbA1C will be raised.



Patient Information

- Urine tests: One of the very earliest indications of diabetic kidney disease is the leakage of protein in the urine. The kidney is a filter which cleans the blood but normally that filter does not allow protein to leak out into the urine. Increasing protein in the urine is indication that the barrier or filter has been damaged as a consequence of kidney disease.

If tests indicate that you have diabetic nephropathy, you may be referred by your diabetologist or GP to a kidney specialist. The kidney specialist will often do further investigations as well as performing an ultrasound scan of the kidney.

What treatment is available for diabetic nephropathy?

Diabetic nephropathy if caught early enough can be halted and further damage to the kidney prevented. Treatment of early diabetic disease includes good control of blood, diabetes and cholesterol.

- Blood pressure – High blood pressure will affect your kidneys. Nearly all patients with diabetic nephropathy need blood pressure tablets. There are many types but we usually use a type of blood pressure tablet called an ACE inhibitor, which provides special protection. You may find that you need more than one type.
- Blood glucose control – This is vital in not only slowing down the damage to the kidneys but will slow down the development of any other complications associated with diabetes. We are aiming to keep your HbA1c level at less than 7mmol.
- Cholesterol – It is important that this is controlled by following a healthy diet. Most patients with diabetic nephropathy also need tablets e.g. Simvastatin, Atorvastatin, in order to control a cholesterol level of less than 5.
- Smoking – This damages the lining of the blood vessels, which already have some damage if you have diabetes and diabetic nephropathy. Smoking can increase the risk of a heart attack and gangrene to the legs. Help can be offered in order to help you give up smoking.

Patient Information

You will continue to be seen in a diabetic or renal diabetic clinic every 2-4 months until your results stabilise and then you will be seen less frequently.

It is essential that you continue to attend our diabetic annual review so that any other complications can be prevented or detected and slowed down.

What further treatment will I need until my kidney function deteriorates?

If your kidney function deteriorates, further interventions may be required to deal with complications.

- Fluid retention – As the kidneys fail, you may get fluid retention which can lead to breathlessness or swollen ankles / legs. It will be necessary to reduce your fluid intake a little and use tablets called diuretics e.g. Furosemide, to force more fluid out through the kidneys.
- Diet – This will need restricting if you develop severe kidney failure. You will be seen by a specialist dietician to advise on this when it is necessary. You need to continue to eat well but restrict some of the foods that can cause problems in kidney failure, in particular those foods containing potassium. This can cause heart problems if the potassium level gets too high.

If despite the measures taken your kidney function continues to deteriorate, your kidney team may need to discuss with you preparation plans for renal replacement therapy such as dialysis.

We often transfer you to a pre-dialysis clinic which allows you more time to discuss with the Kidney specialist (Nephrologist) or specialist nurse about further treatments. This is also done if your creatinine level rises to about 250.

These treatments can involve artificial kidney treatment (Dialysis).

Patient Information

There are two main types of dialysis

- Haemodialysis – The blood is cleaned of poisons through the use of a machine.
- CAPD – ‘Continuous Ambulatory Peritoneal Dialysis’. Special fluid is passed in and out of the abdominal cavity to remove the poisons.

You will need this treatment if the kidneys drop to 10% of normal function, there is water retention and a build up of poisons in the body. This can be a slow or rapid progression. You will generally feel unwell.

You may also be considered for a kidney or kidney/pancreas transplant if this is appropriate.

To be put on a waiting list you have to go through an assessment checking your fitness and looking at how your diabetes might have affected other parts of your body.

How will my life be affected?

Even if you are on dialysis, it is possible to lead an active life. Some patients are able to continue working. It depends on how much your diabetes has affected other parts of your body.

If you need any further information or clarification, please contact the Renal ward. Telephone: 024 7696 7777

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