Fitness for transplantation depends on how much diabetes has affected other parts of the body, particularly the heart. The transplant team will do a number of investigations, including heart tests, and the criteria for having a pancreas transplant are stricter than for a kidney transplant, because the operation is more stressful to the body.

**How will my Life be Affected?**

Even on dialysis, many diabetic patients are able to lead active lives, working and enjoying life in many ways. If your diabetes has affected other parts of your body, you may have to accept these limitations.

*This is what a kidney affected by diabetes looks like under the microscope.*

NORMAL KIDNEY

DIABETIC KIDNEY

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Diabetes and the Kidney

What is Diabetes?

Diabetes is a serious, life long condition where the glucose levels in the blood are too high. If untreated it can lead to serious health complications including damage to the kidneys. This information concentrates on the effect diabetes has on your kidneys. For further information on Diabetes please visit Diabetes UK at www.diabetes.org.uk

How can having Diabetes affect the Kidney?

One of the complications of diabetes is kidney disease, also called diabetic nephropathy. This can effect up to a third of people who have diabetes. It develops over many years and can effect anyone with diabetes. This is caused by damage to the small blood vessels in the kidneys. A kidney affected by diabetes can look normal under an ultrasound but under the microscope can show damage to the filtering elements. It is this damage to the filtering elements which causes protein to leak into the urine, which is an important marker for diabetic kidney disease.

Urine infections are also more likely to happen if you have diabetes. These can be treated with antibiotics. This is more likely to happen if you have glucose in your urine, so having good control of your diabetes will reduce the chance of infection.

What Tests are Needed?

The earliest sign of diabetic kidney disease is leaking of a protein called albumin in the urine, and this should be tested for once a year with a blood test to check the function of the kidneys. Even a small amount of protein found in the urine is important as, if it is present, it is extremely important to have blood pressure control and diabetes control.

Is there Treatment if I have Diabetic Kidney Disease?

Diabetic kidney disease is not curable but doctors use treatments to try and stabilise the kidneys. Diabetic kidney disease is not curable but doctors use treatments to try and stabilise the kidneys.

Getting blood glucose levels to within your target

This is very important. Achieving the target level of glucose will slow the damage to the kidneys, and of course is also very important to slow the rate of development of other types of diabetic complications.

Diet

If you develop severe kidney failure, your diet will need further modification. Specialist dieticians will be able to advise on this. It is important that you eat well to keep your strength up, but there are some foods that can cause problems in kidney failure. Diabetics may need to be very careful about foods containing potassium, which can cause heart problems if it gets to a very high level. Stay on a healthy diet

Attend all your medical appointments

Treatment can slow down damage to the kidneys and you will not usually have any symptoms of early damage. This is where treatment is most effective so it is important to make sure that you have your annual diabetes review.

Stop smoking

Kidney disease will get worse more quickly if you smoke so by stopping you will be protecting your kidneys.

Will I need Dialysis?

About 25% of people who have type 2 diabetes will have small amounts of protein leak from diabetic nephropathy after 10 years, however, only a few people will end up needing dialysis. Renal failure requiring dialysis is the end result of Chronic Kidney Disease and when the kidney blood tests become worse, the local kidney unit will be able to advise the team about dialysis and managing the complications of kidney disease. The best management is to follow a healthy lifestyle and ensuring that blood pressure and blood glucose levels are at target and this can slow down damage to the kidneys.

Can I have a Kidney Transplant?

The best treatment for someone with complete kidney failure is a transplant. The best type of kidney transplant is from a living donor, and if someone from the family, or a friend, offers a kidney this should be discussed with the kidney unit or local transplant co-ordinator. Although there is a severe shortage of kidneys available for transplantation, doctors also put as many people as possible on the list for a transplant from someone who has died.

It is possible to cure diabetes by transplanting a pancreas from someone who has died. The new pancreas transplant is able to produce insulin and this means that insulin is not necessary. Complications of diabetes, such as eye disease, usually stabilise. A pancreas transplant may be done at the same time as a kidney transplant, though people who already have kidney transplants may be suitable for a pancreas after kidney transplant. This type of transplant is suitable for people with Type 1 diabetes and for some people with Type 2 diabetes. But is a large operation with higher risks than a kidney transplant.