

New Onset Diabetes After Transplant (NODAT)



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Introduction

This leaflet is designed to help you understand the diagnosis of NODAT (New Onset Diabetes After Transplant), a condition experienced by some people after having a kidney transplant.

The risks of developing NODAT should have been explained to you before you had the transplant operation, but you may feel there is a difference between hearing about a possibility and actually being diagnosed with the condition. We hope the information here will answer most of your questions. If not, please take your queries to a member of the Renal team.

What Is NODAT?

Diabetes is a metabolic disease that causes high blood glucose levels. The diagnosis of NODAT follows two or more blood tests showing above-normal blood glucose levels after a patient has had a kidney transplant. This most often occurs in the first 12 weeks after transplant, but diabetes can develop later than this.

The main cause of NODAT is the anti-rejection medication that you must take to protect your new kidney. In some transplant patients, the side-effects of these medications – such as Ciclosporin (Neoral), Tacrolimus (Adoport) and Prednisolone – affect the pancreas so that it no longer produces enough insulin to metabolise carbohydrates and glucose properly. This is what causes diabetes.

Why Was I Given Drugs That Could Give Me Diabetes?

The main priority after a kidney transplant is prevention of organ rejection. This is why transplant patients have to take anti-rejection (immunosuppressant) medications, usually for the rest of their lives. Different medications carry different risks of causing diabetes, but we have to choose the medications that will do the best anti-rejection job, whatever the diabetes risks. However, awareness of the diabetes risks means that the medical team will reduce the doses of anti-rejection medications as quickly as is safely possible.

Unfortunately, there is currently no way of predicting which transplant patients are most likely to develop NODAT, nor is there an all-round effective anti-rejection medication that carries no diabetes risk at all, so it is impossible to completely avoid the risk of NODAT if you have a kidney transplant.

How Is NODAT Treated?

The treatment you require will depend on the symptoms you experience. For some, good weight control, healthy diet and exercise will be enough to keep blood glucose levels (BGLs) within normal range. Other people will need to take anti-diabetic tablets, while those with the most severe symptoms may need to start injecting insulin as soon as they are diagnosed. You may also need to use fingerprick blood glucose monitoring test equipment, to keep track of your BGLs, if your diabetes nurse feels this would be helpful.

Be aware that these treatment options will probably change as time goes on. Diabetes is a complicated condition to manage, and every individual responds differently. As with the initial cause of NODAT, medications you are prescribed for a whole range of conditions may affect your blood sugars and your diabetes control. Similarly, periods of illness – even a common cold – can require changes in diabetes management.

Your diabetes nurses will help to prepare you for and support you through these changes.

Once I Have NODAT, Does That Mean I Will Always Be Diabetic?

The good news is that around 50 per cent of people diagnosed with NODAT are only diabetic temporarily, while they are taking high levels of immunosuppressants in the immediate post-transplant period. Once the immunosuppressant levels are reduced, the body's metabolic system recovers and there is no need for anti-diabetes medication. Your glucose tolerance should continue to be monitored at least once a year after this, to be sure that diabetes does not recur.

However, some people diagnosed with NODAT will remain diabetic for the rest of their lives. If you still require anti-diabetes medication more than one year after transplant, this may be the case for you. Studies suggest that 50 per cent of patients with the most severe forms of NODAT – i.e. those requiring insulin to manage their blood glucose levels – are most likely to go on to have diabetes permanently.

If you do have diabetes permanently, you will need to take care of your health in particular ways for the rest of your life. This involves thinking about what you eat, possibly taking tablets or injecting insulin every day, having regular eye and foot checks, and watching your blood pressure control and cholesterol levels – all aspects of health that can be affected by diabetes.

Is NODAT Dangerous For My New Kidney?

Kidney damage is a complication of diabetes, so good diabetes control is vital for the well-being of your transplanted kidney.

All NODAT patients receive excellent support from the Renal Diabetes team to help you manage your diabetes, look after your transplanted kidney and remain in the best possible health.

If you have any other questions about NODAT, please do not hesitate to ask a member of the Renal team.

What People With NODAT Say:

“Before I was diagnosed with NODAT, the thought of having diabetes really scared me, but now I feel more relaxed and all the support from my clinic really helps” - Liz, 35

“Since my transplant, my kidney is working well and the insulin injections are not nearly as hard to do as I had feared. I change the amount injected when necessary, taking into account exercise etc, and my blood sugar levels are good. I’m quite happy with the treatment as it is, but we will have to see what the future holds” - Roger, 49

References

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If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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