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## Introduction

This leaflet provides information about a procedure called immunoadsorption. It explains what the procedure involves and describes the benefits and possible risks. Please read this information alongside the leaflet on ABO incompatible kidney transplantation.

If you have advanced kidney disease, having a kidney transplant may be one of the treatment choices.

Transplantation is not a cure but provides an ongoing treatment that requires you to take drugs to keep the kidney working. A kidney transplant is not necessarily for everyone and will depend on both your personal circumstances and medical condition. However, for the right person, kidney transplantation can offer the best form of treatment for advanced kidney disease.

Traditionally the blood group match between the donor (person giving the kidney) and the recipient (person receiving the kidney) has been important. If the donor and recipient blood groups were not matched (called incompatible), the recipient's immune system would produce antibodies to attack the kidney transplant and destroy it. This meant that transplants could not be performed between blood group incompatible donor and recipient. Nowadays by using new drugs and technologies together, it is now possible to perform transplants between individuals who are not blood group matched. These types of transplant are called ABO incompatible.

## What is immunoadsorption?

Immunoadsorption is a procedure that removes blood group antibodies from the blood.

To help the removal of antibodies and prepare for the transplant, immunoadsorption is used in combination with

anti-rejection drugs which are normally started 4-6 days before the transplant operation.

## Why is immunoadsorption needed?

Immunoadsorption is needed to remove the antibodies against your potential donor's blood group in order for the transplant to take place.

## What happens during immunoadsorption?

If you are on haemodialysis treatment, your dialysis access (fistula or dialysis line) will be used. However if you are not on haemodialysis a special intravenous catheter called a dialysis line is required for the duration of the immunoadsorption treatment. For more information about the dialysis line, please see the leaflet 'Having a haemodialysis line'.

One of the kidney doctors will explain the procedure and make a treatment timetable with you. The aim is to get the blood group antibody levels (often called titre levels) as low as possible. The treatment timetable will be tailored around your antibody levels and will give you the dates and times of when you need to:

- Start the drug therapy
- Have special blood tests taken
- Have immunoadsorption

Immunoadsorption will be carried out on ward 301 by specially trained nurses who will monitor and look after you throughout the treatment. Before the procedure starts special blood tests will be taken at about 8am to check the level of blood group antibody levels in your blood. The antibody level results are normally available at about 13:00 and a decision will then be made as to whether you need to have

immunoabsorption. You will be able to go home after the immunoabsorption session.

A sterile tubing set is used to pump your blood around a machine, through a special filter to separate plasma from the blood. As the antibodies are carried within plasma the plasma is passed through an adsorption column to remove the antibodies. The plasma and blood is then returned to you.

As the blood in the tubing set can sometimes clot, a drug called heparin is added to the tubing set. During the procedure your calcium level in your blood can fall. To keep your calcium levels within the normal limits you will be given a drug into the tubing set called calcium gluconate.

## How long does the procedure take?

Immunadsorption takes about 3-4 hours and you will be required to be next to the machine until the procedure is finished. You may want to bring something to read with you or your personal stereo to listen to. You will be able to eat and drink normally during the procedure.

## How many immunoabsorption sessions will I need?

The number of immunoabsorption sessions will vary from individual and will depend on your blood group antibody levels. Most people will have between 3-5 sessions although some people require more. The higher your antibody levels the more treatment is needed. Your blood group antibody levels will be monitored before and after each session to check that the antibody levels are falling to a level that will allow the transplant to take place.

Occasionally it may not be possible to reduce the antibody levels and the ABO incompatible transplant cannot take place.

Sometimes it may be necessary to have immunoabsorption on the day of your planned kidney transplant. If the blood group antibody levels rise after having the transplant you will need to have more immunoabsorption sessions.

## Are there any risks associated with immunoabsorption?

The most frequently encountered complication of immunoabsorption is an allergic reaction to the filter or adsorption column. Medication may be given before the procedure to minimise this risk.

Other possible side effects during the treatment include dizziness, nausea, feeling cold or you may experience a tingling sensation in your fingers and lips. This could be due to the calcium levels in your blood being too low. However, the nurse looking after you will be checking your levels during and after the procedure. The nurse will also be checking your blood pressure, pulse and temperature throughout the procedure.

There is also an increased risk of infection due to the drug therapy. It is important that your dialysis line is kept free from germs at all times. To reduce the risk of infections we use special protective dressings to cover the exit site and sterile gauze to wrap the line ends as well as putting an antibacterial solution into the line itself. Keep the protective dressing on at all times and do not remove it. The nurses will look after the dressing for you when you have your immunoabsorption sessions.

Other ways to help reduce the risk of infection are to avoid close contact with people who have coughs, colds, diarrhoea or vomiting.

The following signs may indicate an infection:

- Feeling hot and having a temperature above normal
- Feeling shivery, shaky and generally unwell
- Redness, swelling or oozing around the line

If you become unwell with a high temperature, shivers and shakes this may be a sign of a severe infection and you must contact the Kidney Assessment Team immediately. If it is outside the team's opening hours (08:00-20:00 Monday-Friday and 08:00-16:00 at weekends) then contact the on-call renal registrar at the Queen Elizabeth Hospital Birmingham.

## Where can I find further sources of information?

Further information can be obtained from:

### **The National Kidney Federation**

[www.kidney.org.uk](http://www.kidney.org.uk)

### **West Midlands Renal Network website**

[www.wmrn.co.uk](http://www.wmrn.co.uk)

### **NHS Choices**

[www.nhs.uk](http://www.nhs.uk)

### **British Transplant Society**

[www.bts.org.uk](http://www.bts.org.uk)

### **Transplant Support Network**

[www.transplantsupportnetwork.org.uk](http://www.transplantsupportnetwork.org.uk)

### **NHS Kidney Care**

[www.kidneycare.nhs.uk](http://www.kidneycare.nhs.uk)

### **NHS Blood and Transplant**

[www.nhsbt.nhs.uk](http://www.nhsbt.nhs.uk)

## Useful numbers

Kidney Assessment Team

07887985486

Ward 301 (Acute Renal)

0121 371 3096

Queen Elizabeth Hospital Switchboard

0121 472 1311



The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit [www.uhb.nhs.uk](http://www.uhb.nhs.uk) or call 0121 627 7803

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**Renal Unit**  
**Queen Elizabeth Hospital Birmingham**  
Mindelsohn Way, Edgbaston,  
Birmingham, B15 2WB  
Telephone: 0121 627 2000

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