

St. Michael's

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Learn about Blood Group Incompatible (ABOi) Kidney Transplants

Information for patients and families



This booklet gives you information about having a blood group incompatible (ABOi) kidney transplant.

What are blood groups?

Blood groups are different blood types that can go together. Examples of blood types are A, O, B, and AB. Blood types can be positive or negative. Some blood types can go together – these are called compatible. Some blood types cannot go together – these are called incompatible. There are antibodies in blood that become active when around incompatible blood types.

The table below shows blood group compatibilities:

Blood types that are compatible are marked with a ●:

		Recipient			
Donor	Blood Group	O	A	B	AB
	O	●	●	●	●
	A		●		●
	B			●	●
	AB				●

Example: If the recipient has blood group O, then the donor would also need to have blood group O, otherwise their body would reject the kidney. If however, the recipient has blood group B, then their donor could either be an individual with blood group B or blood group O.

What is blood group incompatible kidney transplant?

Some kidney donors do not have a blood group that is compatible with your blood group. About 30% of potential live donors for kidney transplantation are found to be blood group incompatible with their intended recipient. If you get a kidney from someone with another blood group, you will need special medical treatment. Without this treatment, your body will reject the new kidney.

Since the 1980's, techniques have been developed to safely overcome this barrier by reducing blood group antibody levels before transplantation. This has enabled many more patients to receive kidney transplants around the world.

There are safe ways of transplanting a kidney when blood groups are incompatible. This is done by reducing the blood group antibodies in your blood. If you reduce the antibodies in your blood, the new kidney will not be rejected by your body.

Blood group incompatible kidney transplants can have the same success rate as blood group compatible transplants. There is a slightly higher risk of rejection if you have higher levels of blood group antibodies.

Who is this type of transplant for?

- You need to be medically fit to receive a transplant
- Your potential donor will need to be medically fit to donate a kidney
- Your blood antibodies must not be too high

If your antibodies are too high you could consider the kidney paired donation program.

What are the risks?

All kidney transplants have risks. There are risks with the operation and the anti-rejection medications. Talk to your doctor about the risks of kidney transplant.

What are the steps for a blood group incompatible transplant?

1. Your doctor will talk to you about blood group incompatible transplant. Your doctor will assess the levels of blood group antibodies in your blood. One month before your transplant, you will get a dose of a medication to prevent your body from making antibodies against your donor's blood type.
2. Two weeks before your transplant date you will need to have a central intravenous line put in. This is a tube in your chest and neck connected to a large vein. This makes it easier to give you medication. You will not need this if you have a dialysis line or fistula already.
3. The week before your transplant you will have a treatment to remove blood group antibodies. This treatment is called Immunoabsorption.



Immunoabsorption column

4. You will be on a machine like a hemodialysis session. Immunoabsorption is used to remove blood group antibodies from your blood. The session lasts 3 to 4 hours. The number of sessions depends on the amount of antibody in your blood. Most people need 2 to 4 sessions. The sessions take place in our plasmapheresis unit.



Immunoabsorption procedure

5. Your blood group antibodies will be monitored. The transplant will only happen if your antibody levels are low enough. Sometimes it may not be possible to reduce your antibodies. Sometimes high levels of antibodies come back after transplantation and further sessions of immunoadsorption are required.
6. You will start your anti-rejection medications 7 days before your transplant.

Frequently asked questions

Do I have to have a blood group incompatible (ABOi) transplant?

No, you have many choices. You can stay on dialysis or on the Deceased Donor Kidney Transplant Waiting List, participate in the Kidney Paired Donation Program or participate in the List Exchange Program. It is important to talk with your doctor and transplant coordinator about the benefits and risks of these choices.

Are there any age restrictions on receiving a kidney from a blood group incompatible donor?

There are no age restrictions but you must be in good general health. You may need some tests before the transplant can go ahead.

How long does the work up for an ABOi transplant take?

The time from entering the live donor treatment program to receiving a kidney is usually 12 to 18 weeks. This can depend on many factors.

Sometimes your blood antibody levels are too high, or other antibodies in your blood may need a different treatment.

Do I need to be in hospital before the transplant?

You will need daily reviews and more treatment in the 10 to 14 days before your transplant. All treatments are done as an outpatient at the hospital.

How long is the hospital stay after my transplant?

Most people receiving a transplant will be in hospital between 5 to 10 days. Donors are usually in hospital for between 3 to 5 days.

Who do I contact for more information?

Contact our transplant coordinators for more information:

Recipient: (416) 867-3677

Donor: (416) 867-3676

<http://www.stmichaelshospital.com/programs/renaltransplant>

St. Michael's cares about your health. For reliable health information, visit our Patient and Family Learning Centre in the 6th floor Marketeria (Cardinal Carter Wing), or find us online at **www.stmichaelshospital.com/learn**

This information is not intended as a substitute for professional medical care. Ask your healthcare provider about this information if you have questions.

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No.72832_PE_Learn about Blood Group Incompatible (ABOi) Kidney Transplants_Digest Colour_May22_2015_V1