What is the Australian Paired Kidney Exchange Program (AKX)?

The Australian Paired Kidney Exchange (AKX) Program is a nationwide live kidney donor program. The goal of AKX is to increase live kidney donor transplants by identifying matches for incompatible donor/recipient pairs.

AKX is part of the Organ and Tissue Authority’s efforts to increase available organs from live donors. Approximately 30% of potential donors fail to fulfil their wish to donate a kidney to a relative or friend due to incompatible blood group or tissue matches. Long-term results from living donor kidney transplants are excellent. Five years after the transplant, 88% of transplants from live donors are still functioning, compared with 80% for transplants from cadaveric (deceased) donors.

A paired kidney exchange can happen when a live donor (Donor #1), who is willing to donate to a spouse, friend or relative (Recipient #1), is unable to donate because they have an incompatible blood type or tissue type. AKX will help find compatible donors amongst other registered pairs (such as Donor #2 and Recipient #2 as shown below), who might be a suitable match, and thus enable two compatible living donor transplants to occur.

Further information

Australian PAIRED KIDNEY EXCHANGE PROGRAM AKX

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Diagram of a Donor Paired Kidney Exchange

Donor #1  Donor #2
compatible compatible
incompatible incompatible

Recipient #1  Recipient #2
A transplant option for patients with an incompatible living donor
A measure of the World Best Practice Reform Package on Organ and Tissue Donation for Transplantation
How does AKX work?
If you have a willing but incompatible living donor, participation in the Australian Paired Kidney Exchange (AKX) Program will increase the chance that you will be able to receive a living donor kidney transplant.

Should you agree to participate in the program, your information will be registered in a secure computer database containing all the registered donor/recipient pairs across Australia.

The computer program searches the entire available database of registered recipient/donor pairs to look for combinations that might enable a suitable kidney exchange to occur. If the computer finds a potential match, doctors will arrange for the final tissue typing test for you and your willing living donor.

If no match is found in the first match run (the computer matching), you and your donor will be kept on the register and will be included in further computer match runs. If no match is found after several match runs, your kidney specialist will discuss other options that are available to you.

How can I join AKX?
To register with AKX you should contact your kidney specialist. You and your willing donor will be asked to:
- have the program explained to you by a medical professional
- sign an Agreement to Participate form stating that you understand this program and agree to participate
- provide a detailed medical history
- undergo a number of medical tests.

Who can participate?
If you are a patient who is eligible for a kidney transplant, and are receiving care at a transplant centre/renal unit in Australia, you may be able to participate in the program. You must have a living donor who is willing but unable to donate to you because of an incompatible blood type or tissue type. Your donor must be willing to take part in the Program and donate a kidney to someone else.

What happens if a match is found?
If a match is found you will be informed by your kidney specialist. Further testing will be required to confirm that the recipient and potential donor are compatible. Once the testing is completed, each donor and recipient pair will meet with their own transplant team to discuss the results and whether to proceed. After discussion, if the donor recipient pairs agree to the exchange, they will sign the appropriate consent forms for surgery.

There is no guarantee, even if you are identified for a possible donor/recipient exchange, that the transplant will occur. There are many health and emotional issues to be considered in the paired kidney exchange program and the process is complex. You will receive advice and support to help you understand these issues.

What happens if no match is found?
Patients who don't find a matching donor through the exchange program still have a chance of receiving a kidney transplant. If patients are eligible for the deceased donor waiting list, they will remain on the deceased donor transplant waiting list. The chance of finding a successful match for exchange should increase as more donor/recipient pairs join the program. If no match is found in your first match run, you can remain on the register and re-enter subsequent match runs. However if no suitable pair matches are found after a period of time, you may wish to consider other options after discussion with your kidney specialist.

Where would the transplant take place?
If all parties agree to an exchange, and are medically compatible, the two transplant surgeries take place at two different transplant centres. Each donor/recipient pair remains at their own transplant centre. Both operations occur at the same time (even if the other transplant is in another state). In this way, both donors are sure that each has proceeded with the surgery. Each recipient receives their kidney on the same day as their willing living donor partner donates.

Can I contact the other couple?
No. Strict privacy and confidentiality will be maintained for each donor/recipient pair. This is one of the reasons we endeavour to use different hospital sites for the two pairs of donors and recipients. The National Health and Medical Research Council (NHMRC) Organ and Tissue Donation by Living Donors – Guidelines for Ethical Practice for Health states that anonymity between donors and recipients should be maintained to avoid possible future repercussions for either party.

Can I change my mind after I have joined the program?
Donors and recipients can change their minds at any time leading up to and including the day of surgery. The donor operations are coordinated to take place at exactly the same time so that neither party is disadvantaged if one member of a donor pair chooses to withdraw from the exchange donation at the last minute.

What is the chance of finding a match?
The chance of finding a suitable match depends on a number of factors. The more donor/recipient pairs registered on the program database, the greater the chance of finding a match.

If a patient has more than one donor who is willing to enter the program, they have a greater chance of finding a match. Only the donor with the best match will actually donate their kidney. Individuals with common blood types and low levels of sensitisation to other blood and tissue antigens will also have a greater chance of matching. Alternatively, your doctor may discuss other options.

What should I do next?
For more information, ask your kidney specialist. Counselling support will be available to donor/recipient pairs through the transplant centre both before and after the paired kidney exchange.