

## INFORMATION ABOUT LIVING KIDNEY DONATION

**Background** Almost two million Canadians have chronic kidney disease. Each day, about 12 of them learn that their kidneys have failed and they need either dialysis or a transplant to survive.

For medically suitable patients, kidney transplantation is often the preferred treatment. Patients with a well functioning transplanted kidney generally live longer, have more energy and are able to return to a more normal lifestyle with no fluid restriction or need for dialysis. With excellent results like this, the demand for transplantation continues to increase.

**Transplant options** Patients can receive a kidney from either a deceased donor or a living donor. Many families make the generous decision to donate a loved one's organs when they die. However, less than 3% of all Canadians who die are suitable organ donors. Unfortunately, there have never been enough donated organs, yet the number of patients waiting for transplantation continues to rise. Patients can wait 2-5 years or longer for a suitable kidney to become available.

**Living donation** Living donation offers many advantages for the kidney recipient, including a shorter waiting time for transplant and less storage time for the kidney. These advantages usually result in a higher success rate. The waiting time is about 3 to 6 months; sometimes, a pre-emptive transplant can be done so the patient does not have to begin dialysis. Living donation provides the opportunity to plan the transplant around personal and professional obligations. After donating one of their kidneys, donors can live normal, active lives.

**Success** Recipients generally do very well following transplantation with success rates greater than 90%. Kidneys from deceased donors often last, on average, 10 to 12 years with kidneys from living donors lasting 12 to 20 years. Of course, these times vary among patients with some of our recipients still well 30 years after their transplant.

**Talk to your potential recipient** Discuss your offer with the potential recipient to make sure that he or she is willing to consider you as a donor. Not all people with kidney failure decide to have a transplant or would consider taking a kidney from a living donor. If the potential recipient decides not to accept your offer, that decision should be respected. Their decline does not in any way take away from your generous offer. The potential recipient would be assigned a separate team to evaluate their suitability.

**Who can be a donor?** Living donors can be immediate or distant relatives, spouses, and even close friends. They are carefully evaluated to ensure they are compatible with the recipient's blood type and are medically suitable to donate. Living donors must be older than 18 and in good health with no evidence of diabetes, cancer, kidney disease, heart disease or infectious diseases such as hepatitis or HIV.

**Blood type for donation**

A potential donor and recipient must have a compatible blood type. Your family physician or the living donation team can help find out your blood type and determine if you are able to donate to your recipient.

- If your blood type is O, you can donate to someone who is O, A, AB, or B.
- If your blood type is A, you can donate to someone who is A or AB (sometimes O or B).
- If your blood type is B, you can donate to someone who is B or AB.
- If your blood type is AB, you can donate to someone who is AB (sometimes B).

If you are not compatible, you and your recipient may choose to enroll in the Living Donor Paired Exchange Registry. This is a national program run by Canadian Blood Services to match incompatible pairs with other incompatible pairs ([www.blood.ca/organsandtissues](http://www.blood.ca/organsandtissues)).

**Evaluating the donor**

After it's determined that a donor and recipient have a compatible blood type, every potential donor is carefully evaluated to ensure he or she is healthy with good kidney function.

- **Medical history:** The living donation team will first review your medical history to ensure there are no health barriers. You will need to complete a full medical social history questionnaire.
- **Blood work and x-rays:** If the medical review is satisfactory, then a series of blood and urine tests as well as x-rays will be organized either at your physician's office or through the transplant centre. It is possible to discover previously unknown health conditions or reportable transmissible diseases through the testing and appropriate follow-up will be arranged.
- **Cross match:** If the above tests are satisfactory, then a blood test will determine if you and the recipient have a compatible tissue type. In this test, white blood cells from the donor are mixed with the blood from the recipient. If the donor's white blood cells are attacked and killed, this is a "positive" cross match and indicates that the donor and recipient are not compatible and the kidney would be rejected. A "negative" cross match, on the other hand, shows no reaction between the donor and recipient so surgery can proceed. Even with a negative cross match, rejection can still occur. Our concern is to provide the best match possible. If the cross match is considered unacceptable for donation to proceed, donors and recipients may choose to enter the Canadian Blood Services' Living Donor Paired Exchange Registry.

**Other assessments**

Further assessments include appointments with the Nephrologist, Surgeon and Living Donor Coordinator who will provide information about the risks and benefits of donation and how these pertain to you. Potential donors also have a psychosocial assessment and counselling with a social worker. We want to ensure potential donors have all the necessary information to make an informed, voluntary choice without guilt, obligation, coercion or monetary gain. Donors are free to change their mind about donation at any time during the evaluation process. Donors need to be in optimal health so smoking cessation and weight loss may be advised. As one of the last investigations, a computed tomography (CT) angiography, commonly known as a CT scan, is done to give detailed information about the blood vessels and the anatomy of the kidney. Donors may have a number of appointments as well as time off work for surgery and recovery, which might have some financial impact. Donors may qualify for some short-term disability and employment insurance. There is a provincial program called PRELOD (Program for Reimbursing Expenses of Living Organ Donors) which may also provide limited assistance. Medical appointments and hospital care are covered through OHIP. For donors who do not live in Ontario, medical costs are billed to the recipient's OHIP. Financial issues can be discussed with members of the Living Donor Program.

**Surgery**

The living donation surgery is a planned procedure so we can ensure both donor and recipient are in optimal health before proceeding with the operation. The removal of a kidney is called “nephrectomy.” The left kidney is usually preferred over the right kidney because it has a longer vein. Laparoscopic nephrectomy, a less invasive technique, is routinely performed at our transplant centre. A few small incisions are made in the abdomen to allow special instruments and a camera to be inserted. The surgeon removes the kidney through a small incision below the navel. The surgery takes about 3 or 4 hours with most donors recovering in hospital for 2-3 days. In the rare case when donors require a traditional “open” nephrectomy, they may remain in hospital an additional day or two. Risks are minimal, but with any surgery there may be concerns about general anaesthesia, infection, bleeding or blood clots and even the remote chance of death. Donors are very carefully assessed and managed to minimize these complications.

**After donation**

Living donors generally resume their normal, everyday lives after donating a kidney. Studies indicate that, on average, a donor’s blood pressure might increase 5 mmHg above the natural increase that occurs with normal aging. This increase may occur over the course of many years. Donors may have an increased risk of developing extra protein in their urine but the significance of this finding in otherwise healthy people remains unknown. Donors are asked to have annual blood pressure checks, blood work and urine tests. Following surgery, patients should avoid rough contact sports that may damage the remaining kidney. Patients can generally return to work 4-8 weeks after surgery. Transplants from living donors are usually very successful and donors often experience a positive feeling of satisfaction knowing that he or she has made a contribution to the improved health of a loved one. Less commonly, the donated kidney does not function in the recipient due to rejection, recurrence of disease or surgical issues.

**For more information**

If you want more information about living donation and transplantation, please contact the Renal Transplant Program office at 519.685.8500 or visit LHSC’s transplant website, [www.lhsc.on.ca/transplant](http://www.lhsc.on.ca/transplant). If you wish to speak directly to a Recipient Coordinator, please call Jessica Blaskie at 519.663.3851 or Diane Smith at 519.685.8500 ext. 32331; or you can contact the Living Donor Coordinator, Jennifer Cross, at 519.685.8500 ext. 35932. In addition, The Kidney Foundation of Canada offers a Peer Support Program (1.866.390.7337) which can arrange for you to speak with a donor or recipient about their experience.

You may also want to think about registering as a deceased donor. Be sure to talk with your family about your wishes regarding organ and tissue donation after death. Visit [www.giftoflife.on.ca/en/beadonor.htm](http://www.giftoflife.on.ca/en/beadonor.htm) to learn more about donor registration in Ontario or call the Trillium Gift of Life Network at 1.800.263.2833.