Multi-Organ Transplant Program

Living Kidney Donation

London Health Sciences Centre

Information Handbook

Multi-Organ Transplant Program

Living Kidney Donation Program

Thank you for your interest in the Living Kidney Donation Program at London Health Sciences Centre.

London's Multi-Organ Transplant Program is one of the leading transplant programs in Canada. We perform about 170 transplants each year, including kidney transplants from living donors. This booklet will give you information about kidney function, transplantation and the living donation process.

London Health Sciences Centre
Multi-Organ Transplant Program

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Cover photo: Joanne (right) donated a kidney to her friend, Joanna.

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Overview

Kidney disease is a major health issue around the world, and it is now estimated that 2 million Canadians have chronic kidney disease. Each day, about 12 Canadians learn that their kidneys have failed, and that they need either dialysis or a transplant to survive.

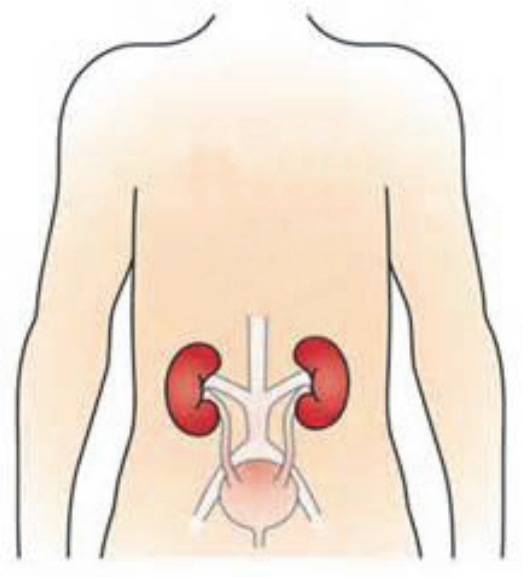
For medically suitable patients, kidney transplantation is the best option. Patients with a well functioning transplanted kidney generally live longer, have more energy, and are able to return to a more normal lifestyle with no fluid restriction or need for dialysis.

What does the kidney do?

Usually people have two kidneys, one on either side of the spine under the lower ribs. They are reddish brown in colour and shaped like kidney beans. Each kidney is about the size of a clenched fist.

The main job of the kidneys is to remove waste products from the blood and return the clean blood back to the body. A healthy kidney:

- regulates water
- regulates blood pressure
- removes waste from the body
- balances chemicals in the body
- regulates the building of bones
- controls the production of red blood cells



Why do kidneys fail?

There are many causes of kidney failure. Slow and progressive deterioration of kidney function is called chronic kidney failure. It is usually not reversible. Chronic kidney failure occurs when the tiny filters in the kidney (nephrons) that remove wastes stop working. Damage to the nephrons can be caused by conditions such as diabetes, high blood pressure, or autoimmune diseases. When kidneys fail, wastes and fluids accumulate in the body and the patient requires dialysis or a kidney transplant.

Treatment Options

There is no cure for chronic kidney disease. In the early stages, proper food choices, medications and good blood pressure control may slow the damage to the kidneys. However, once the kidneys are functioning at less than 10-20% of their normal rate, and the patient is beginning to feel unwell, either dialysis or transplantation is needed for the patient to stay alive. This period is called end-stage renal disease (ESRD).

What is dialysis?

Dialysis is a way to clean the blood by removing wastes and excess water. There are two types: hemodialysis and peritoneal dialysis.

Hemodialysis

During hemodialysis, the blood is removed from the body and passed through an artificial kidney machine. The artificial kidney cleans the blood in almost the same way that healthy kidneys do. This treatment is performed usually three times a week although it can be performed daily. It can take between three and five hours each time. Hemodialysis can be done in a hospital dialysis unit, in a self-care centre (with some assistance from the staff), or at home.

Peritoneal dialysis

Peritoneal dialysis works similarly to hemodialysis, but the blood is cleaned inside the body instead of through a machine. The space in the abdomen or "belly" that houses our organs is called the peritoneal cavity. It is lined by a thin membrane called the peritoneum. With peritoneal dialysis, the peritoneal cavity is filled with a special dialysis fluid. Excess water and waste pass through the peritoneum into the dialysis fluid. This fluid is then drained from the body and discarded. The process is repeated four to five times a day (continuous ambulatory peritoneal dialysis, CAPD), or a machine (automatic cycler) can perform exchanges during sleep. In most cases, this treatment can be performed without assistance, at home or at work. Peritoneal dialysis is sometimes done in a hospital, but more often, people are trained to do this independently at home.

What is a kidney transplant?

A kidney transplant is another treatment option for people with ESRD. It is now widely considered to be the best way to treat kidney failure; however, it is not suitable for everyone. For medically suitable patients, kidney transplantation is 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. Because of these excellent results, the demand for transplantation continues to increase.

A kidney transplant is an operation where a healthy donated kidney is transplanted into a person (the recipient). The new kidney is able to do the functions almost as well as two healthy ones. The donated kidney can come from a living person (living donor) or from a person who has died suddenly (deceased donor).

Transplant options for the recipient

Deceased donor

Many families make the generous decision to donate a loved one's organs when they die, yet unfortunately, there have never been enough donated organs. Patients can wait between two and seven years, or even longer, for a transplant kidney to become available. Deceased donor kidneys are assessed carefully to ensure they are healthy enough to be transplanted and will not transfer infectious diseases.

Living donor

Living donation offers advantages for the kidney recipient, including a shorter waiting time for transplant without needing to store or transport the kidney. A living donor may be a better genetic match to the recipient. These advantages can result in a higher success rate. The waiting time to assess a living donor and plan the surgery is about three to six months, although this time varies depending on the work-up process; sometimes, a transplant can be done so the patient does not have to begin dialysis. Living donation permits patients and their donors the opportunity to plan the transplant around their personal and professional obligations.

Transplant surgery

The transplant operation takes three to four hours. The transplant recipient remains in hospital for approximately one week following surgery. After the transplant, recipients need to take anti-rejection medication every day to prevent the immune system from rejecting the kidney. Regular blood tests are needed to watch for signs of rejection.

Success

Recipients generally do very well following transplantation from a living donor. More than 95% of kidneys are functioning after 1 year and 80% still working after 5 years. Kidneys from deceased donors often last on average 10 to 12 years, and kidneys from living donors 15 to 18 years. Of course, these times will vary among patients. In cases when the transplant was not successful, studies show that living donors are still satisfied, knowing that they have done everything they could. Although transplantation – from either a living or a deceased donor – is not a cure for kidney disease, it may prolong and enhance a person's quality of life.

Where to Start

Living donors are carefully screened before they can donate. They must be older than 18 and in good general health without significant high blood pressure, diabetes, cancer, kidney disease, heart disease or infectious diseases.

Research information about donation

If you are interested in living kidney donation, make an informed decision by getting as much information as you can. Reading this booklet is one way. Speaking with the living kidney donor coordinator at LHSC (519.633.3552) or contacting the Trillium Gift of Life Network (www.giftoflife.on.ca) is another. Additional resources are found in Appendix 1.

Talk to the 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 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.

If you do not have an intended recipient, you can contact the Living Donor Team to discuss non-directed anonymous donation.

Find out your blood type

If you don't know your blood type, talk to your family physician and have a blood test done. If you are a blood donor, your blood donor card is acceptable. The living donor coordinator can also help you arrange this testing.

Contact the Living Donor Program

Contact the Living Donor Program at 519.663.3552 for more information or to determine blood type compatibility. Some preliminary screening questions will be asked about your general health. Refer to the brief summary of the process in Appendix 2.

If you are not compatible with your intended recipient, you might want to consider the Kidney Paired Donation Program run by the Canadian Blood Services (blood.ca/en/organs-tissues/becoming-live-kidney-donor).

Compatibilty by blood type

The first step to assess compatibility is looking at blood type.

Note: Positives and negatives attached to the blood type are not important in transplant. Also, if your blood type is A or AB, there is a possibility that you could donate to O or B. An additional blood test can be done to determine subtyping.

If you have blood type:	You can donate to someone with blood type:
O	O, A, B, or AB
A	A or AB
B	B or AB
AB	AB (possibly B)

Medical history

You will need to complete a medical history questionnaire. This health screening may identify obvious reasons that would exclude you from donating, such as uncontrolled high blood pressure, kidney disease, cancer, heart disease or diabetes.

Smoking cessation or weight loss may be recommended before proceeding. If you need to lose weight, refer to Appendix 3, A Healthy Kidney Donor has a Healthy Weight.

Women can become pregnant following donation, but they should not be pregnant at the time of testing or surgery. The recommended waiting time after donation is 6–12 months. You should ensure that your physician knows that you have only a single kidney so he/she can follow you closely during your pregnancy.

Some preliminary lab tests, such as urine and blood tests, may be requested to ensure you are healthy in order to proceed to the next stage of testing.

HLA typing and cross matching

If your blood type is compatible with your intended recipient, arrangements will be made for special blood tests called HLA typing and cross matching. The purpose of HLA typing is to find out how similar your cells are to the recipient's cells. The cross match test determines if your intended recipient's immune system will attack your white blood cells and cause rejection.

If the cross match is negative, you are compatible. Your assessment will continue in order to determine if you are healthy enough to donate one of your kidneys.

If the cross match is positive, you are not compatible and cannot donate to this recipient. The option of joining the Kidney Paired Donation Program will be discussed with you.

Next Stage of Testing

The surgery to remove a kidney (called a "nephrectomy") is a major operation with some risks. As a potential living donor, you will need to undergo many tests to ensure you are healthy with excellent kidney function. During the assessment, it is possible to discover that you have a serious illness, such as cancer, kidney disease or hepatitis. Although we would ensure that you get the medical care you require, a diagnosis like this could affect your ability to get insurance or a mortgage. On a positive note, in the unlikely event that we find a medical problem, these tests may lead to early treatment and be beneficial to your health.

You will need to come to London for part of the assessment. These appointments give the donation team an opportunity to review your health to determine if you will be able to function for the rest of your life with only one kidney. Also, this is an opportunity for you to get more information about living donation. The donation team is comprised of transplant specialists who are your advocates.

Donor Nephrologist

The nephrologist is a physician who specializes in kidney donation and will speak to you regarding the risks and benefits of being a kidney donor. This appointment will involve a health history and physical examination.

Surgeon

The surgeon is a physician who performs the living donation surgery and will speak to you either at the initial stage or later in the process about the surgical process and risks. This appointment will involve a health history and physical examination.

Social Worker

The social worker meets with you to discuss emotional, social and financial aspects of donation. The social worker provides counselling to ensure you have all the information necessary to make an informed voluntary decision and that you are coming forward on your own free will. It is important that you are not donating because of guilt, obligation, financial gain or feeling coerced.

Living Donor Coordinator

The living donor coordinator is a nurse who provides the potential donor with information regarding living donation, the risks and benefits, the evaluation process, and other options for the recipient. The coordinator will be your main contact person throughout the process.

Living Donor Team Assistant

The team assistant provides information about upcoming appointments.

Ensuring the donor's health

A number of tests help determine the donor's general health and kidney function. Potential donors will need cancer screening (mammogram, Pap smear, fecal occult blood testing) according to guidelines from the Canadian Cancer Society. This can be arranged ahead of time by your family doctor.

- ***Blood tests***

  Blood tests are done to ensure that kidney function is good and that your hemoglobin, electrolytes and blood sugars are normal levels. Blood tests are also done to determine if you have been exposed to any viruses that could be passed on to the recipient. Two of the viruses that we check for are the HIV virus that can cause AIDS and the hepatitis virus.

- ***Chest x-ray***

  This x-ray is done to see if there are problems such as lung disease or an enlarged heart.

- ***Electrocardiogram (ECG)***

  An ECG records the electrical activity of the heart muscle to look for problems or signs of a previous heart attack. Electrodes are placed on the chest while you lie flat. This test only takes a few minutes and is painless.

- ***Urine tests***

  Urine samples are obtained to determine if there is blood, glucose or protein in the urine. 24-hour urine collection for "creatinine clearance" compares the urine and blood measurements of creatinine (a measure of kidney function) to ensure that your kidneys are functioning adequately.

- ***Ultrasound***

  An ultrasound test uses sound waves to visualize the kidneys. This test can determine if there are issues such as a single kidney, cysts, or kidney stones.

- ***Computed Tomography angiography (CT scan)***

  CT scan, a more detailed x-ray, can give more in-depth information about the structure of the kidney and blood vessels. This scan acts as a map for the surgeons when they plan your surgery.

Sometimes:

- ***Nuclear Medicine Scan – Isotope GFR***

  A nuclear scan can give more detailed information about the function of the kidney, and how much function comes from each kidney.

Rarely:

- ***Cystoscopy***

  Cystoscopy is rarely done in the assessment of living donors. However, if the spot sample of urine comes back with blood in the sample on multiple occasions, a cystoscopy may be done. This test allows visual examination of the bladder and its drainage system, and it is performed in the urologist's examination room in clinic.

- ***Kidney Biopsy***

  A biopsy is rarely done in the assessment of living donors. However, if there is some question about the health of the kidneys, this test is performed to allow close examination of kidney function.

Risks of Donation

There is evidence that living with just one kidney will likely have little impact on your health because the remaining kidney enlarges. This may take up to one year. Despite this, living donors need to be informed of the potential physical and psychological risks involved before consenting to donate a kidney.

Short-term risks

Short-term risks are directly related to the surgical procedure itself, and they are common to any major surgery.

- Allergic reactions to anaesthesia (less than 2%); usually avoided through careful screening of the donor's allergies before surgery.
- Blood clots (less than 2%) where clots that form in the legs can travel to the lungs. Getting out of bed and walking around as much as possible helps avoid this. Donors will also be given a pair of tight (compression) stockings to wear, which keeps the blood flowing and prevents blood from clotting.
- Infection of the surgical wound, bladder infection and respiratory secretion build-up are possibilities in less than 10% of patients, and these can usually be easily treated with antibiotics, deep breathing and coughing exercises.
- Bleeding requiring blood transfusion (less than 1%).
- As with any major surgery, there may even be a risk of death. This risk is very low at 0.03% or three donors in every 10,000 procedures.
- All patients experience some pain and discomfort after an operation. Pain management will ensure you are as comfortable as possible.

Long-term risks

Long-term medical risks faced by living kidney donors remain uncertain; however, based on a detailed review of published studies, the following can be said:

- Living donors generally live normal lives following donation of one of their kidneys. Studies indicate that, on average, blood pressure may increase above the natural increase that occurs with normal aging. This increase may occur over 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. There have been cases of kidney failure after donation, but the chance of this occuring is low.
- Donors are required to have yearly blood pressure checks, blood work and urine tests. Following surgery, rough contact sports that could damage the remaining kidney need to be avoided. It is important to maintain a healthy lifestyle with good nutrition and fitness after donation.
- Sometimes, donors feel disappointment if, in the rare case, the donated kidney does not function. However, most donors still feel satisfied with their decision to donate. They often report a higher quality of life, which may be related to a greater sense of self-worth following donation.
- Donors may have a number of appointments in addition to time off work for the surgical procedure and recovery. This could be a financial consideration for you. Donors may qualify for short-term disability and employment insurance to assist with these costs. The medical appointments and surgical stay are covered through OHIP. For out-of-country donors, these medical costs are billed to the recipient's OHIP.
- There is a government program that might help with out-of-hospital expenses related to living donation. Please keep all your receipts and mileage for possible reimbursement through the Program for Reimbursing Expenses of Living Donors (PREOD) (see Appendix 4). Financial issues can be discussed with the social worker.
- Another issue to consider is insurance coverage after donation. There are reports of different practices among insurance companies regarding coverage. Your rates **may** increase if a new illness is found during your work-up or they may increase because you will be living with one kidney. You might want to investigate this before donating.

Making the Decision

After the medical tests and assessment, the Living Donor Team will decide one of the following:

- You need further testing before the final decision can be made
- You are not a suitable living donor
- You are not compatible with your intended recipient, but you could be a living donor through the Kidney Paired Donation Program
- You can donate a kidney to the intended recipient

If you are healthy enough to donate a kidney, the final decision is left to you. **Donors are free to change their mind at any point during the evaluation.** If you decide not to donate, the donation team will support you. The reasons for your decision will remain confidential.

If you choose to donate, the donation and transplant teams will work together to schedule the surgery while considering both donor and recipient preferences and health status.

If you are unable to donate, there are other ways you can help the recipient:

- Our brochure, Finding a Donor, outlines how you could help by becoming an advocate and reaching out to other potential donors.
- If the recipient does not have another potential living donor, he or she can go on the waiting list for a deceased donor transplant. The recipient will need someone to offer support while hospitalized for the transplant.
- After the transplant, you can help get the recipient to the hospital for clinic appointments or help with household errands and tasks.
- You can also register your wishes to be a donor after death by going to any ServiceOntario branch or online at https://beadonor.ca.

Surgical Process

Planning a date

Once the decision is made to proceed with living kidney donation, the date for surgery will be discussed between the donation and transplant teams. At LHSC, we are able to book an Operating Room (OR) three days per month for living donor transplant surgery.

Surgical preparation

Both donor and recipient are seen at LHSC two weeks before the planned surgical date. These final visits allow for repeat cross matching, review of medical history, physical examination and consent as a well as a pre-admission clinic visit. At the Pre-Admission Clinic, blood and urine testing will be done. We will discuss pain control after surgery and how to care for yourself when you go home. The day before surgery, you can eat lightly with nothing to eat or drink after midnight. This includes chewing gum.

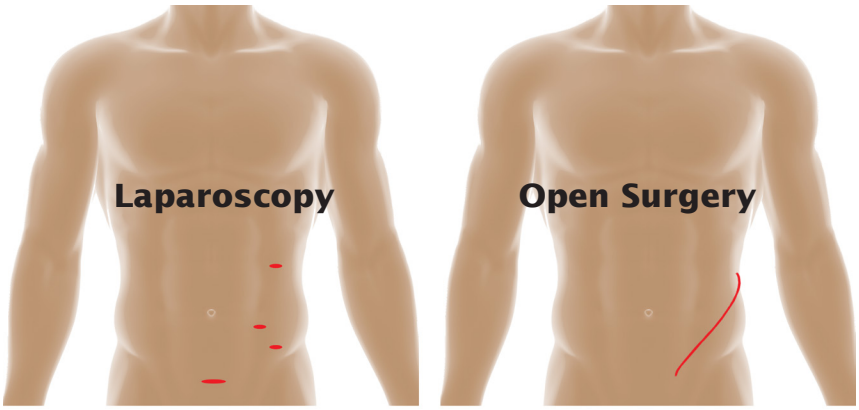
Day of surgery

Both donor and recipient are asked to report to the Surgical Preparation Unit for 6:00 a.m. on the morning of surgery. You will have your blood pressure, temperature, and pulse checked and an intravenous started. Blood will be drawn and stored for future crossmatch and virus testing. You will also meet the Anaesthetist who will be giving you the medications to put you to sleep for the surgery. Living donation and transplant is an elective procedure. If health concerns are identified the morning of surgery, the procedure may be cancelled or postponed. In very rare cases, the surgical team is required to perform a deceased donor transplant, which takes priority. In this case your planned living donor surgery would be postponed or rescheduled. While very inconvenient, if your loved one was waiting for a deceased donor transplant, we hope that you would understand this very rare occurrence.

Your family can wait for you in the waiting room outside the OR where the doctor will come to discuss the outcome of your surgery. You will wake up in the Post Anaesthetic Care Unit (PACU) and will stay there until you are transferred to your room on the surgical floor.

Surgical Procedure

Nephrectomy is the Latin term for “removal of a kidney”. In most cases, the left kidney is removed for donation because the vessels are longer. There are two types of surgery: laparoscopic and open. Open nephrectomy is rarely done.



Laparoscopic Surgery:

This surgery is done through a few small incisions in the abdomen. A tiny camera is inserted through one of the incisions and the surgery is performed while watching a video monitor. The surgeon inserts special instruments through the incisions to detach the kidney, which is removed through a small incision below the naval. This procedure takes three to four hours. After the kidney is retrieved, it is flushed with a cold solution to help preserve it, and it is prepared for transplant into the recipient. Sometimes, a robotic system is used to remove the donated kidney through a small incision (4-6 cm) in the navel. In rare cases, the surgeon might have to resort to an open nephrectomy.

Open Nephrectomy Surgery:

An incision is generally made on the left side of the abdomen, along the bottom of the lower rib. The kidney is carefully disconnected from its blood supply, the veins and arteries are clamped, and the kidney is lifted out, flushed with a cold solution to help preserve it and prepared for transplant into the recipient. This surgery takes about three hours.

Post-surgical recovery

Day of surgery: Following surgery, a nurse will check your blood pressure, temperature, breathing, urine output and abdominal dressing frequently for the first 24 hours. You will be encouraged to do leg exercises to prevent blood clots. Your TED stockings and Pneumatic compression stockings will help with your blood circulation.

You will be encouraged to do deep breathing and coughing exercises to prevent a collection of fluid in your lungs. The intravenous (IV) in your arm will be used to give you medications and IV fluids. Pain medications can be given through the IV, as needed. Alternatively, you may have a Patient Controlled Analgesia (PCA) pump for pain. The PCA is a special pain control system that is hooked up to the IV and allows pain medication to be given. You control when pain medication is given by pressing a button. The anaesthetist sets limits on how much medicine you can have in an hour. You will be able to take a few ice chips or small sips of water. A catheter (a soft rubber tube with a small balloon) will have been inserted in your bladder to continuously drain urine from the bladder. You may receive oxygen for a short time. You will be monitored to see when the oxygen can be stopped.

Postoperative Day 1: Your blood will be drawn in the morning and your vital signs checked periodically. Your activity will progress from sitting in a chair to walking in the hallway. Your diet will progress from clear fluids to creamy fluids and then to a light meal by the end of the day. Your surgeon will remove your dressing. The healing of your incision will be checked until you are discharged. The catheter will most likely be removed today.

Postoperative Day 2: If you are on a PCA pain pump, it will be stopped today and you will be given pills for your pain. You will be walking several times today in the hallway. Your diet will be a regular diet today, as long as you are passing gas rectally.

At LHSC, our focus is not only your care and treatment while in hospital, but also your discharge from hospital. A discharge policy is in place to ensure that patients who no longer need acute care services are discharged in order to accommodate other patients who require admission. The involvement and cooperation of patients and families in discharge planning not only helps to meet their needs, but also balances the use of precious health care resources.

Postoperative Day 3: In most cases, you will be discharged from the hospital today. You will be able to bathe, dress and care for yourself. Your family doctor will receive a letter with some recommendations about your ongoing care.

Discharge instructions

Incision care: About one week after surgery, your incision should be well healed. The small steri-strip bandages may be starting to peel off. Trim the excess ends and let them fall off on their own. You may shower but no tub baths. Gently clean your incision with soap and water. Rinse and carefully pat dry.

Activity: For six weeks after your surgery, or as directed by your surgeon, avoid lifting anything heavier than five to ten pounds. Do not shovel, rake or vacuum. Gradually increase your activity. It is normal to get tired easily because your body is using a lot of energy to heal itself. Listen to your body. Return to work as recommended by your surgeon usually after six weeks, sometimes as long as twelve weeks if heavy lifting is involved.

Pain medication: We recommend that you take pain medication regularly for the first week or two following the surgery so that you are comfortable. These pain medications will be tailored to your individual pain tolerance. These medications can be constipating. Your surgeon will prescribe a stool softener to take with your pain medication to prevent constipation.

Diet: A well-balanced diet will help with your recovery. Eat small meals more often and have protein with each meal. Protein helps your body heal. Protein can be found in meat, poultry, legumes (e.g. chick peas, lentils), peanut butter, eggs and milk products. Drink six to eight glasses of fluid per day (not including coffee, tea or cola). Having a lot to drink may help you to avoid constipation.

Notify your family doctor or surgeon if you have the following symptoms

- Swelling or cramping in your stomach
- Constipation or diarrhea
- Your incision, or the skin around it, becomes red, swollen or extremely painful
- You have increased drainage from your incision
- There is a bad odour from your incision
- Your incision separates at the skin line
- If you have a temperature over 38˚C or 100.4˚F
- You have blood in your urine or dark or foul-smelling urine
- You have back pain or leg pain (do not massage your calves)

Your donated kidney

The recipient's surgery will happen immediately after your surgery. The surgeon will take your kidney and insert it into the recipient. In most cases, the transplanted kidney starts working right away and puts out urine. In some cases, the kidney can be somewhat sluggish because of the handling and requires watchful waiting or even dialysis. If your recipient agrees, the transplant team will keep you posted on the outcome. In rare cases, the kidney may not function. Although extremely disappointing for both the donor and the recipient, this does not in any way minimize the generous gift you have given to your loved one. Your donation team will be there to support you through the process regardless of the outcome.

Follow-up after surgery

The surgeon sees the donor approximately one month after surgery. Blood and urine samples are often done at this time to ensure the donor's remaining kidney is functioning well. The living donor coordinator and social worker are in touch with the patient generally by phone in the first week following the surgery and also at the return visit. Remember, you will not be able to drive for two to three weeks (as long as you are taking narcotics for pain control). Do not lift anything heavier than 5-10 pounds during your post-op recovery.

The yearly follow-up can be managed by your family physician. It is essential that you receive life-long follow-up care with blood pressure checks and urine and blood samples to maintain long-term health. It is the responsibility of each living donor to ensure an annual check-up is done through the family doctor or with the donor nephrologist.

Life after Donation

As previously discussed, we anticipate your life with one kidney will be normal but there are some healthy strategies that we encourage you to consider.

- Do some aerobic exercise for at least 30 minutes on four days of the week. You should avoid rough contact sports that may damage the remaining kidney.
- Ideal body weight should be maintained and weight loss strategies should use a balanced approach. High protein diets or other body-building substances should be discouraged because they may contribute to kidney injury.
- Avoid using nonsteroidal anti-inflammatory drugs (i.e., ibuprofen, Motrin, Advil) because these types of drugs are associated with kidney damage and high blood pressure.
- Alcohol should be limited to two drinks or fewer per day. Weekly intake should not exceed 14 standard drinks for men and nine standard drinks for women.
- Follow Canada's Food Guide to maintain a healthy diet.
- Salt intake should be minimal.
- Kidney donors are strongly encouraged to stop smoking for their lifetime prior to donation. Smoking cessation is recommended to help prevent heart, lung and kidney disease.

You must have the following tests on a yearly basis, which can be arranged through your family doctor or through our program:

- **blood pressure measurement**
- **serum creatinine**
- **urine for microalbumin/creatinine ratio**

If you or your doctor have any concerns after the donation, you can contact the Living Donor Program at any time.

Appendix 1

Contact Information

Living Donation Team	Telephone Number (Area Code 519)
Living Donation Team (Main Line)	663-3552
Beth Montesi - Living Donor Coordinator	685-8500 x35932
Christy Masse - Living Donor Coordinator	685-8500 x35846
Dr. A. Garg - Living Donor Nephrologist	685-8500 x58066
Dr. F. Rehman - Living Donor Nephrologist	685-8500 x33285
Dr. P. Luke - Surgeon	685-8500 x33180
Dr. A. Sener - Surgeon	685-8500 x33352
Dr. D. Quan - Surgeon	685-8500 x33355
Heather Schmidt - Social Worker	685-8500 x35331
Outpatient Urology Clinic	685-8500 x33188
Prescription Centre	663-3231

Additional Resources

Multi-Organ Transplant Program, LHSC	www.lhsc.on.ca/transplant
Living Kidney Donation Program, LHSC	www.lhsc.on.ca/livingkidneydonation
Video: Living Kidney Donation at LHSC	https://www.youtube.com/watch?v=5XI7uYdwyQE
Trillium Gift of Life Network	www.giftoflife.on.ca
PRELOD Program	www.giftoflife.on.ca/resources/pdf/PRELOD FAQ.pdf
Kidney Foundation of Canada, Ontario Branch	www.kidney.on.ca
Kidney Foundation of Canada, National Branch	www.kidney.ca
Kidney Paired Donation Program (Canadian Blood Services)	https://blood.ca/en/organs-tissues/becoming-live-kidney-donor
Cancer Screening Guidelines (Canadian Cancer Society)	www.cancer.ca/screening

Appendix 2

Overview of the Living Donation Process

Initial Screening

- Potential donor contacts Living Donor Program
- Initial screening about general health and compatibility with recipient

If you are not compatible, you might be able to enroll in the Kidney Paired Donation (KPD) Program through Canadian Blood Services (https://blood.ca/en/organs-tissues/becoming-live-kidney-donor)

If you are compatible, you will undergo complete health and social screening

Lab Work & Diagnostic Testing

- You need to have further tests (urine, blood, x-rays) to assess your health
- If these results are acceptable, you can proceed to the next stage

Matching

- Testing assesses how well your genes match the recipient
- You will meet with the living donor coordinator and social worker
- If the crossmatch is poor, you might be able to enroll in the KPD Program
- If the crossmatch is favourable, you can proceed to the next stage of testing

Consultations & Additional Testing

- You will meet with the nephrologist and surgeon for further assessment
- If you are not suitable, the surgery will not proceed
- If you are suitable, surgery will likely proceed

Surgery

- Before surgery, you must go to the Pre-Admit Clinic for final crossmatch and medical tests
- After surgery, your hospital stay will be three or four days before discharge

Follow-up

- An appointment will be scheduled with the surgeon approximately one month after donation
- You will have telephone follow-up with the living donor coordinator
- Medical information will be given to your family doctor for ongoing care, and you must have an annual physical check-up
- If you have any concerns, you can contact the Living Donor Program
- You will receive a letter from our program with an invitation to attend the annual Donor Recognition Evening

Appendix 3

A Healthy Kidney Donor has a Healthy Weight

Why should I lose weight?

A person who is overweight has a greater risk of complications during and after surgery:

- difficulty removing the kidney means a longer operating time and possible damage to the kidney structure
- slow wound healing, possible hernia
- excess weight may be harmful to the remaining kidney
- a person's BMI (Body Mass Index) should be in the "normal weight" category

What is BMI?

BMI (Body Mass Index) is your weight (in kilograms) divided by your height (in meters) squared.

BMI is an equation that health professionals use to evaluate weight and health risks associated with weight (i.e. diabetes with overweight individuals, osteoporosis with underweight individuals)

Classification	BMI Category (kg/m^2)	Risk of developing health problems
Underweight	< 18.5	Increased
Normal Weight	18.5 - 24.9	Least
Overweight	25.0 - 29.9	Increased
Obese class I	30.0 - 34.9	High
Obese class II	35.0 - 39.9	Very high
Obese class III	>= 40.0	Extremely high

Source: www.hc-sc.gc.ca/fn-an/nutrition/weights-poids/guide-ld-adult/bmi_chart_java_graph_imc_java-eng.php

What is "healthy" weight loss?

Experts agree that the best way to reach a healthy weight is to follow a sensible eating plan and engage in regular physical activity. Weight-loss programs should encourage healthy behaviours that help you lose weight and that you can maintain over time.

Safe and effective weight-loss programs should include:

- healthy eating plans that reduce calories but do not rule out specific foods or food groups
- adequate water consumption with smaller, more frequent meals
- regular physical activity and/or exercise instruction
- tips on healthy behaviour changes that also consider your cultural needs
- slow and steady weight loss of about ¾ to 2 pounds per week and not more than 3 pounds per week (weight loss may be faster at the start of a program)
- medical care if you are planning to lose weight by following a special formula diet, such as a very low-calorie diet
- a plan to keep the weight off after you have lost it

Who should I talk to about weight loss?

- Always consult your physician before undertaking a weight-loss program.
- Consult a dietitian for information and guidance.
- Consider seeing a certified, trained health professional.

I want to lose weight on my own!

- If you don't need the extra motivation of a program or a professional to lose weight then you must gather the correct information so you can make informed, educated decisions on how to go about losing weight properly.
- Canada's Food Guide to Healthy Eating is recommended. Visit Health Canada online (www.hc-sc.gc.ca) for more information about nutrition and physical activity.

How do I choose a weight-loss program?

Gather as much information as you can before deciding to join a program. Providers of weight-loss programs should be able to answer these questions:

- What does the weight-loss program consist of?
- What are the staff qualifications?
- Does the product or program carry any risks?
- How much does the program cost?
- What results do participants typically have?

Resources:

Health Canada Online
www.hc-sc.gc.ca

Canada's Food Guide (Health Canada)
www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php

Physical Activity Guide (Public Health Agency of Canada)
www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/index-eng.php

Appendix 4

Financial Considerations

Organ donors are not paid for giving a kidney. There will be some expenses because of trips to London for assessment and surgery. Donors are unable to work while recovering from surgery. There is, however, some financial help for living donors.

The medical appointments and tests associated with donor assessment and surgery are covered if you are a Canadian resident. Donors from outside the country are also covered for assessment and surgery if it is done in Canada. If international donors complete testing in their own country, they may have to pay for these tests.

Those considering kidney donation should think about getting life insurance before donating. Reassuringly, most insurance companies do not charge more for insurance; however, it is possible that, during the assessment, a medical condition might be identified that could affect life insurance. Anyone undergoing major surgery is also encouraged to consider making a will and designating a power of attorney before the operation.

Living donors might have access to sick time or short-term disability benefits through their work. For those with no sick benefits, they might be eligible to receive employment insurance sick benefits provided they worked the qualifying number of hours in the past year. For Ontario residents who are self-employed without sick benefits, an application for loss of income subsidy benefits can be made through the Program for Reimbursing Expenses of Living Donors (PRELOD).

The Ministry of Health established PRELOD to help reduce some of the financial impact of living donation. PRELOD is administered by the Trillium Gift of Life Network (TGLN) to reimburse living donors for certain qualified out-of-pocket expenses related to travel, parking, meals and accommodation during the assessment and at the time of surgery. It does not reimburse all expenses, but it aims to reduce some of the financial burden that might prevent someone from becoming a living donor. For those coming from Northern Ontario, they must first apply for the Northern Travel Grant. Some expenses that are not covered through this grant might be covered through PRELOD.

Application process for PRELOD

You can obtain an application package from our transplant program, the Kidney Foundation or the TGLN website (www.giftoflife.on.ca). Review the forms thoroughly and refer to the application checklist included in the package to ensure the application is completed correctly with all supporting documentation.

To learn more about PRELOD, visit the TGLN website or contact the PRELOD Administrator (PRELOD@giftoflife.on.ca; 1.888.9-PRELOD; 1.416.619.2342).

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London Health Sciences Centre
Multi-Organ Transplant Program

Living Kidney Donation