The Gift of Life — Living Donor Kidney Transplant
A Donor’s Guide

Living kidney donors are a unique group of people. We believe that Living Donors are true heroes at Boston Medical Center! Donating a kidney is a courageous, generous act. You would be giving the gift of life to someone in need.

The decision to become a living donor is a personal one, with internal motivations unique to each individual. We recognize the emotion, time, energy, and consideration that you have invested and greatly appreciate the thoughtfulness and unselfish decision to even come forward to be considered as a living donor. One of the goals on Boston Medical Center is to be sure that all living donors are able to ask questions at any time during their journey, to provide any assistance possible, and to create a relationship where the donor feels comfortable and unpressured. The donor coordinators at Boston Medical Center are available to answer any questions you may have. You have the right to change your mind about being a living donor at any time. Your reasons for doing so will remain confidential. We will support and respect your decision you no matter what you decide.
Our kidneys

Each of our two kidneys is about the size of a clenched fist. Your kidneys lie under your ribs in the back, just above the waistline, closer to your back. One kidney on each side of your spine. [One kidney is located on each side of your spine]. Each kidney usually has one renal artery that supplies it with blood. One renal vein returns the blood to the general circulation. The kidneys help your body with some of the following functions: maintain a balance of water and chemicals, called electrolytes, filter the body’s waste products out of the blood, which then leave the body in the urine, keep a steady blood pressure, secrete erythropoietin, a hormone needed to make red blood cells, and maintain strong bones. There are more than one million nephrons inside each kidney. These nephrons are special filtering units that perform the work inside the kidneys and make urine. Urine travels from the kidneys by tubes called ureters to the bladder, where it leaves the body. When nephrons stop working, this is called end-stage renal disease (ESRD). There are many causes of ESRD.

Why become a living kidney donor?

A living donor transplant has many advantages over a deceased donor kidney transplant, the most important being a significantly higher success rate. Additional reasons include:

- A kidney from a living donor generally functions immediately after transplant. A deceased donor kidney might take several days or weeks to function normally.
- The living donor transplant can be scheduled, allowing the recipient and donor preparation time. Recipients will not know when a deceased donor kidney will be available, and surgery must be performed very soon after it is available.
- There may be a reduced risk of rejection, especially if the kidney is donated by a blood relative.
- A living donor transplant can shorten the amount of time a recipient has to wait to receive a kidney transplant.
- People with kidney failure who have a kidney transplant live longer and have a better quality of life than people who stay on dialysis. You can be the one to save them!
- A kidney transplant from a living donor starts working faster, lasts longer, and can extend a recipient’s life span compared to individuals who receive a kidney transplant from a deceased donor.
- Recipients on our transplant Waitlist can wait up to 8 years or more for a deceased donor kidney transplant. A living kidney donor transplant takes them off the list and off dialysis sooner. The sooner they are off dialysis, the better the outcome for the recipient.
- Because the recipient of a live donor kidney is removed from the national transplant waiting list, the next patient on the list gets the next available deceased donor kidney; therefore, the donor is directly and indirectly giving the gift of life to more than one person.
- Many donors report great emotional benefit in giving the gift of transplant to a loved one or friend. Transplants can improve the recipient’s quality of life, allowing him/her to return to normal activities.
Who can be a living donor?

- A donor can be a family member, distant relative, friend, or co-worker. You do not have to be a “blood relative” of the recipient.
- It is also possible to donate a kidney to someone in need who you don’t know. This is called an “Altruistic” or “Good Samaritan” donation.
- If you are not a compatible match with your recipient, there are options for you to still give through our paired exchange or kidney swap program. Through these programs, donors have the opportunity to save two or more lives.
- Living kidney donors must be willing to donate of their own free will without outside pressure.
- Donors must be healthy and free from chronic conditions such as heart disease, cancer or other serious medical conditions that could place them at higher risk for surgical or long-term complications from donation.
- Age 18–65
- Able to understand the risks and possible complications of kidney donation
- In a stable life situation and must have family or social support to help during recovery that is separate from that of the recipient’s social support.

Having one kidney does not affect a person’s life expectancy. Donors can have children, work, run and exercise. There are no restrictions, but we do encourage donors to commit to living a healthy lifestyle for the rest of their lives.

How does living donation help my recipient?

- Success rates are generally higher with living donor transplantation. This is because living donor kidneys are transplanted immediately after removal, and the kidney may be able to function in the recipient much quicker.
- If the match is close enough, the recipient can often take lower doses of their anti-rejection medication, meaning fewer side effects.
- While dialysis is a life-sustaining treatment, over time it can take its toll on the body and shorten one’s lifespan. With living donation, the recipient can avoid a long wait for a kidney.
Absolute contraindications for Living Kidney Donation are:

- Diabetes
- High blood pressure requiring 3 or more medications
- Uncontrollable hypertension or history of hypertension with evidence of end organ damage
- Age <18 years
- Mentally incapable of making an informed decision
- Uncontrolled diagnosable psychiatric conditions requiring treatment before donation, including any evidence of suicidality.
- Active illicit substance abuse
- Mild cardiac disease
- Chronic lung disease
- Active malignancy or incompletely treated malignancy
- Recent history of cancer
- HIV positive
- High suspicion of donor coercion
- High suspicion of financial exchange or gifts of meaningful consideration between donor and recipient
- Evidence of acute symptomatic infection (until resolved).
- Incarceration with scheduled deportation from the United States

Relative contraindications for Living Donation are:

- High blood pressure requiring 1–2 medications
- Body Mass Index > 35 kg/m²
- Age <20 or >65 years
- History of gestational diabetes
- Mild/Moderate controlled psychiatric disease
- Hepatitis C positive
- Hepatitis B Core Antibody positive
Each Living Donor’s evaluation is unique to that individual. How quickly the process proceeds depends upon your comfort level and your availability, along with the availability of the evaluation team. The team will work with your schedule to try to be accommodating as possible. We appreciate how valuable your time is and what a gift you are offering. We will work with you to ensure an easy evaluation, on your schedule.

**Evaluation Process**

Each Living Donor’s evaluation is unique to that individual. How quickly the process proceeds depends upon your comfort level and your availability, along with the availability of the evaluation team. The team will work your schedule to try to be accommodating as possible. We appreciate how valuable your time is and what a gift you are offering. We will work with you to ensure an easy evaluation, on your schedule. Donors always have the option to stop the evaluation process or surgery at any time in a way that is protected and confidential.

You must call our Donor Coordinator yourself to start the process. We have access to interpreters for most languages. You will undergo a thorough evaluation to determine the medical appropriateness and safety of your donation. You will meet with many members of the donation team who may include:

Initially we will ask you to participate in a brief telephone interview to determine your demographics and health history. The Coordinator will send you some educational documents to review about living donation and is available to answer your questions. You will receive a telephone call from our Independent Living Donor Advocate. Next, we ask you to do some initial blood and urine tests. These are reviewed before moving to the next steps of a living donor evaluation.
The Living Donor Team

- The **Living Donor Coordinator** provides initial screening and education about the donation process.
- A **Nephrologist** is a physician who is responsible for the thorough medical evaluation you will undergo to ensure you are medically suitable to donate. The nephrologist’s role is to make sure you have no medical problems that could make this procedure more risky for you and that you do not have any conditions that could be transmitted to your recipient.
- A **Living Donor Surgeon** is a specially trained surgeon who will meet with you to discuss the surgical procedure. The surgeon will discuss the possible risks and complications of the donation and will examine you to determine your appropriateness, from a surgical standpoint, of donating one of your kidneys.
- A **Social Worker** will meet with you to discuss the financial and social implications of donating a kidney. The social worker will identify your social support network and evaluate your ability to cope with the stress of donation. The social worker will also discuss the potential impact the donation may have on your health and life insurance.
- A **Transplant Pharmacist** will review your current med list and identify any potential hazards associated with drug-drug interactions and make appropriate recommendations to minimize the effects or avoid them entirely.
- A **Independent Living Donor Advocate (IDA)** is a professional at the hospital who is not part of the transplant team but is available to answer any questions or address any concerns you may have associated with the transplant process and provide support. This person is an advocate for you.
- A **Psychiatrist** will conduct a more in-depth evaluation and assessment of your psychosocial history and the relationship between you and the intended recipient.
- A **Dietitian** will perform a nutritional assessment and provide nutrition education. If you need to lose weight prior to donation, the dietitian can develop an appropriate diet for you.
- Some potential donors may be referred to other services for consultation. For example, some patients may need to see a pulmonologist (lung doctor) or a cardiologist (heart doctor) to assess for other medical conditions.

Several tests are done to determine if you can be a suitable donor. Remember, further tests may be required based on the results of these tests and your medical and psychosocial evaluation.

Blood tests are done to determine your blood type compatibility with the recipient. Your blood and urine counts and chemistries will be checked. Testing for the presence of current or previous infections, including HIV, hepatitis and other infections, will be performed. All donors are screened for drugs of abuse.
Transplant Independent Living Donor Advocate Team

Boston Medical Center has an Independent Living Donor Advocate team, 2 wonderful, compassionate members of the Boston Medical Center’s Patient Advocacy Team. They are not members of the Transplant Team. The living donor advocate or living donor advocate team are not involved in transplantation activities on a routine basis.

Our Independent Donor Advocates are:

Carol Jones – 617-414-1723 (primary ILDA)  Sheryl Katzanek – 617-414-1778 (secondary ILDA)

Every living donor candidate will be assigned and have an interview with an ILDA prior to the initiation of the evaluation and throughout the donation phase. Please reach out to one of these Advocates with any questions or concerns as you go through the process of becoming a living donor.

The primary responsibility of the independent living donor advocate or an independent living donor advocate team is to ensure protection of the rights of living donors and prospective living donors. The independent living donor advocate or living donor advocate team is responsible for:

- Representing and advising the donor;
- Protecting and promoting the interests of the donor; and
- Respecting the donor’s decision and ensuring that the donor’s decision is informed and free from coercion.

Boston Medical Center’s independent living donor advocate or living donor advocate team is experienced with:

- Knowledge of living organ donation, transplantation, medical ethics, and informed consent; and
- Understanding of the potential impact of family and other external pressures on the prospective living donor’s decision whether to donate and the ability to discuss these issues with the donor.

- The organ donation process;
  - The requirements of the informed consent process;
  - The immediate and long-term expectations following donation;
  - The immediate and long-term risks of donation;
  - The expected outcomes for the recipient;
  - The potential financial responsibilities related to donation; and
  - Any alternative treatment(s) for the potential transplant recipient, if available.

The ILDA or ILDAT are primarily the Representatives of the donor candidate. There may be instances where the advocate/team advises the potential donor candidate where to seek additional information, encourages the candidate to ask pertinent questions, encourages the candidate to have additional discussions with the family or advises the donor candidate to delay the decision to donate at any point without reprisal if they choose. However, the advocate/team does not advise as to a decision on donation.

All discussions and meetings between the potential donor candidate and the advocate/team must center upon the needs, interests and choices of the potential donor. These discussions must not address the needs of the potential recipient. If at any point in the process the donor changes his/her mind and decides not to donate, the advocate will support and intercede on behalf of the donor candidate if indicated.
Compatible ABO blood types

First, a simple blood test is performed to determine your blood type and that of the recipient. Here’s how your blood type should be compatible with the recipient’s blood type:

- If you have blood type A, your recipient should have blood type A or AB.
- If you have blood type B, your recipient should have blood type B or AB.
- If you have blood type AB, your recipient must have blood type AB.
- If you have blood type O, you are a universal donor and can donate to someone of any blood type: A, B, AB, or O.

Tissue typing

Tissue typing is a blood test that evaluates the compatibility, or closeness, between your tissues and the recipient’s. A human lymphocyte antigen (HLA) blood test is used to determine tissue type and help ensure that you’re a good genetic match for the recipient. In an HLA blood test, the tissue typing lab can identify and compare information about you and your recipient’s antigens (the “markers” in cells that stimulate antibody production) so they can match your kidney to the recipient.

While biological siblings (brothers and sisters) have the best chance of being a perfect match (six of six antigens), advancements in anti-rejection medicines have greatly reduced the occurrence of rejection in kidneys from unrelated donors. Researchers are also making strides in the development of treatments that will significantly increase the donor success rate when tissue doesn’t closely match.

Crossmatching

In crossmatching, your blood and the recipient’s blood are placed together in a test tube and examined to see if there is cell damage. If all your cells survive, there is a negative crossmatch, which is considered a good result. If your cells begin to die, a positive crossmatch results and gives a preview of what might happen with a transplant. In this case, it may be determined that the risk of proceeding with the transplant would be too high.

Other tests include a chest x-ray, EKG, urine tests, and a CT scan to identify the anatomy of your kidneys. Pulmonary function tests may be required, especially if you have a history of smoking or lung disease. This is a breathing test to analyze your lung capacity. Also required testing includes Pap test for women 18 years of age and older, Mammogram for women 40 years of age and older, Colonoscopy for both women and men 50 years of age and older.

Please know that your personal and medical information will never be shared with the potential recipient at any time by our team.

Once you have completed your workup, your case will be presented to our Living Donor Selection Committee. At this meeting a complete review of all your testing and consults will be done to determine if it is safe for you to donate a kidney. Once you have been approved for donation by the Committee, we will schedule your surgery after discussing the timing with you. Living donation can be scheduled at the convenience of the donor.
Surgery

Laparoscopic nephrectomy is a minimally invasive procedure that uses a laparoscope to remove a kidney for donation. Laparoscopic kidney removal is considered minimally invasive because it only requires three or four small non-muscle-cutting incisions rather than one large muscle-cutting incision in the abdomen. Laparoscopy—also known as “keyhole surgery”—is a minimally invasive surgical procedure during which a special camera, called a laparoscope, is used to produce an inside view of the abdominal cavity. Surgeons use the laparoscope, which transmits a real-life picture of the internal organs to a video monitor, to guide them through surgical procedures.

Because laparoscopic donor nephrectomy is a minimally invasive procedure, donor patients experience significantly less discomfort, have a shorter recovery period, and return to work more quickly than donors who had traditional open surgery. Because the incisions are small, laparoscopic donor nephrectomy is associated with reduced post-operative pain and a shorter hospital stay, and patients experience a quicker return to normal eating habits and daily activities.

To prepare for surgery, you should:

- Stop smoking at least 6 weeks prior to the surgery, even if you're a light smoker. Smokers have an increased risk of cardiovascular and pulmonary complications with any surgery.
- Stop drinking alcohol. If you have a history of heavy alcohol use, it's important that you tell our doctors. You should not return to drinking alcohol after surgery until advised it is safe to do so by the transplant team.
  - **Avoid nonsteroidal mediations** (NSAIDS like Advil or Motrin) and aspirin for seven days before surgery. These medications can affect the ability of the blood to clot and put you at higher risk of bleeding. You should avoid these non-steroidal medications after the surgery as well, as they are harsh to kidneys. You may take Tylenol, if needed and can resume Aspirin after the surgery.
- You can eat and drink normally until the day before the surgery. You will have a clear liquid diet from midnight to midnight then nothing by mouth until surgery. You will take a laxative the day before surgery. Your surgeon will instruct you and give you a prescription for the laxative. If you regularly take any medications, we will instruct you about these when you come in for the final pre-operative appointment before surgery.

You and your recipient will be admitted to the hospital on the day of the surgery. The operations on the donor and the recipient take place simultaneously, in separate operating rooms. Living Donor Surgery is done with general anesthesia, and usually takes 2-3 hours. You will recover initially in the PACU or Recovery Room then be moved to an inpatient bed on the surgical floor.

Usually the incisions are closed with sutures beneath your skin. These sutures dissolve and do not require removal. Small strips of tape are placed over the external incision and will fall off within a few weeks of surgery.

Most donors spend 2 days in the hospital after the surgery. If you live out of state, you should remain close to Boston Medical Center for at least two weeks after surgery and return to BMC if you experience any problems during your recovery. We recommend that you have a relative or friend stay with you, especially immediately after you leave the hospital. You will have a lifting restriction for a
short time after the surgery to help avoid developing hernia in the incision. Your surgeon and coordinator will discuss this with you.

**Recovery after living donor surgery**

Living donors are generally in the hospital for about two days. Upon discharge, all donors are prescribed medication for pain management at home and generally do not need any other medications. Sometimes a stool softener is needed to prevent constipation caused by prescription pain medications. You may not be able to drive for 4 weeks. You will have lifting and bending restrictions for at least 4-6 weeks. Do not swim, soak in a hot tub or take a tub bath until your Steri-StripsTM are off. You can shower or take sponge baths. Allow water to flow over your incision(s) and pat dry. There is no need to cover the wound with a dressing. The Steri-Strips™ offer extra support while your incision heals. Over time, these strips curl up and fall off on their own or they will be removed in the outpatient Transplant Clinic. There are no diet restrictions when you are home. Keep taking a stool softener to help prevent constipation. Most kidney donors can resume normal activities after four to six weeks, depending on the physical demands of daily living and work tasks. Your Surgeon will advise you on your restrictions and will guide your recovery. You will see your surgeon at 4 weeks after surgery for a post op checkup.

Once the donor has healed from the surgery, the person should not experience a difference in energy level, ability to work, life expectancy, susceptibility to illness, sexual function, or feeling of good health. Also, donation should not affect fertility. Many female kidney donors have had normal pregnancies after donation. Studies have shown a very slight increased risk of gestational hypertension or pre-eclampsia in pregnancy after living donation. Donors also might receive a certain amount of satisfaction knowing they were able to help save another person’s life.

If you work, consider talking with your employer before donation about existing leave policies and the use of short-term disability insurance. The coordinator can assist in completing these forms once the surgery is scheduled and complete return-to-work forms after surgery.

Walking is very important to your recovery. Each day, you should push yourself a bit more. By walking as soon after your surgery as possible, you will help prevent complications.

- Notify your surgeon if you have any of the following:
  - A temperature above 101.0°F
  - Chills
  - Swelling, inflammation (redness) or tenderness around your incision
  - Abnormal or smelly discharge from the wound

Your coordinator is also available for any questions or concerns.
Possible donor complications

- The transplant team works to make sure there is the least possible risk to you, either at the time of the surgery or in the future.
- Living Donor surgery complications are very rare. Complications can occur when undergoing any surgery and can include:
  - Bleeding: Any type of surgery has a risk of bleeding. Severe bleeding during donor nephrectomy surgery is extremely rare, and a blood transfusion is virtually never required.
  - Infection: The wound from the incision may become infected. This may delay the healing process but can be easily treated with antibiotics.
  - Hernia: Due to a weakness of the muscles at the incision scar, a bulging of the incision area may occur. This is why you will have a lifting restriction for a brief period after surgery to prevent this.
  - Pneumonia: Surgery increases the risk of developing pneumonia. The nurses will instruct you on techniques to decrease this risk, such as coughing, deep breathing, and using an incentive spirometer (breathing tool).
  - Blood clots: Clots can occur after any surgery due to decreased activity. In order to prevent this, the nurses will encourage you to sit up at the side of the bed and start walking around the unit the night of surgery.
  - Injury to surrounding tissue or other organs: Injury to surrounding tissue or organs is extremely rare. This could occur during the surgery and may contribute to blood loss that could require blood transfusions and the possibility of a larger incision.
  - Allergic reaction: In the event you have an allergic reaction to anesthesia or any other medication administered, the doctors will take immediate corrective action.
  - Death: Although exceedingly rare, death is a risk of any surgical procedure. One study indicates the risk of death associated with kidney donation to be 0.03%.
- Some other negative symptoms the donor may experience after surgery include nausea, vomiting, constipation, fever and urinary pain related to the placement of a catheter in the bladder. Some donors may experience anxiety that the transplant will be unsuccessful or even sadness if the donated kidney fails. The transplant team can help you through this process and will continue to be available long after donation.
- A human body is able to function normally with one working kidney. However, each donor and donation experience is different. On average, donors will have 25%–35% permanent loss of kidney function at donation. Risk of end stage renal disease for living kidney donors is close to that of the general population with the same demographic profile, but living kidney donors may have a higher risk of developing end stage renal disease than healthy non-donors with similar medical characteristics.
• Medical evaluation of young potential donors cannot totally predict lifetime risk. Donors may be at higher risk for Chronic Kidney Disease if they sustain damage to the remaining kidney. Development of Chronic Kidney Disease and progression to End Stage Renal Disease may be more rapid with only 1 kidney. Dialysis or kidney transplant is required when reaching End Stage Renal Disease.

• Obesity, diabetes, hypertension or other donor-specific medical conditions may impact your risk of developing kidney disease. These medical risks may be short term or permanent and any risk cannot be predicted.

Your Donor Coordinator and Living Donor Advocate will follow you throughout your hospital stay and are available to you while you recover at home. Your Coordinator will teach you how to care for yourself before you go home and will give you contact information for every member of your Donor Team while you are here in the hospital, so in the event you need one of them once home, you can easily reach them.

Financial information

The recipient’s insurance typically covers the medical evaluation, the surgery, hospitalization and the initial follow-up care lasting usually 60 to 90 days after the donation. The recipient’s insurance typically does not cover transportation costs, lodging, child care or lost wages. Some transplant candidates have Medicare, which may provide coverage for donors who have donation-related complications.

If there are financial concerns relating to transportation and lodging costs for evaluation and donation, there is a program that may help. The National Living Donor Assistance Center (NLDAC) provides funds to potential living donors to cover the cost of travel, lodging, meals and other non-medical expenses related to appointments for evaluation, surgery and follow-up care. Applications for this can be obtained from your Donor Coordinator. The approval of your application is based on the income of both the donor and recipient and will be reviewed within 15 days of submission. [https://www.livingdonorassistance.org/Home/default.aspx](https://www.livingdonorassistance.org/Home/default.aspx)

Follow-up

All transplant centers are required by UNOS to follow up with donors for a minimum of two years. These visits are required at six months, one year and two years post-donation. For all living donors, this service is provided at the Boston Medical Center’s Transplant Clinic at no cost to the living donor. All donors are scheduled for these appointments by the Donor Coordinator to be performed at BMC, but donors can complete this follow-up appointment with their own physician under their own insurance coverage if they choose, and arrange to have results sent to the Donor Coordinator. We ask all donors to see their primary care physician annually and to be sure to let any healthcare provider know in the future that they have donated a kidney.

If for any reason our donor cannot see their PCP, your transplant doctor at Boston Medical Center will see you, after the required 2 years of appointments.
Common concerns

Relationships: When things go well and the transplant is successful, this tends to have a positive impact on the relationship between the donor and recipient. If there are complications or the transplant fails, this could have a negative impact on the donor-recipient relationship. Also, if the donor decides not to donate or is not eligible to donate for any reason, this could also affect the relationship. We encourage all living donors to talk with their recipient directly about their decision and feelings. If the donor doesn’t feel comfortable, the living-donor advocate or social worker can be a resource. Our team will never discuss any information about donors with recipients or recipient’s family.

Scars: Some potential donors are concerned with the scar from the incision. The procedure for kidney donation has changed over the years, and the Boston Medical Center offers a surgical technique called “laparoscopic nephrectomy with hand assist.” This utilizes small incisions and results in less scarring. Some donors have considered it their “badge of honor” for being a live donor.

Family Planning: Many female donors have gone on to have normal pregnancies after kidney donation. We do advise that you wait at least one year after you donate so the body has plenty of time to recuperate. If you do become pregnant, make sure your obstetrician or gynecologist knows you donated a kidney. That way, he/she can monitor your remaining kidney thru any pregnancy. There is a slight risk in pregnancy after kidney donation for gestational hypertension and or pre-eclampsia. We encourage any donor who wishes to conceive after donation to work with an Obstetrical Team who specialize in higher risk patients.

Time Off: Your recovery time will depend on how well your body reacts to the surgery. We usually advise planning 4–6 weeks recovery before returning to your job. Living donation can be scheduled at the convenience of the donor.
Paired exchanges

Donors who are not matches to their intended potential transplant candidate have the option of participating in a paired donation program (where your donated kidney goes to a different recipient, and in return your recipient will receive a living donor kidney from another individual). You can learn more about these programs from your coordinator.

Our Transplant Center participates in several paired exchange programs, to give our recipients and their donors the most options to match for transplant.
If you are interested in learning more about the Living Donation Program at Boston Medical Center, please contact the Living Donor office at 617-638-8368 or 617-638-8430.
Please note: It is illegal to sell human organs for the purpose of transplantation. Federal law stipulates that no person may be paid and/or receive valuable consideration for donating an organ.