

Living Kidney Donation: Frequently Asked Questions

What is transplantation?

Transplantation is a surgical procedure in which a diseased organ, such as a heart, kidney, liver, or pancreas, is replaced in one person by a healthy organ donated by another person.

What organs can be transplanted?

Healthy organs that can be used to replace a diseased organ include lungs, heart, pancreas, liver, and bowel. The organ most commonly transplanted is the kidney.

What are the sources for the organs?

Organs for transplantation come from either living or nonliving donors. A nonliving donor is an individual who has been declared brain dead and the family has made the decision to donate his or her organs.

Can I be a living donor?

Living donor candidates can include the recipient's parents, children (over the age of 18 years), brothers and sisters, and distant relatives—called living related donors. Living donors can also include adoptive relatives, in-laws, friends, church members, and spouses, as well as strangers—called living unrelated donors. Living “stranger-to-stranger” donation is new and is not an option at all transplant centers.

In general, a potential donor must be in good health (ie, free from cancer, high blood pressure, diabetes, kidney disease), have a blood type that is compatible with that of the potential recipient, and should make the decision to donate voluntarily and without pressure from family, friends, or the recipient.

What organs can I donate as a living donor?

Because the majority of people are born with 2 kidneys, the kidney is the most common organ donated by a living donor. Although you can donate sections of other organs, including the lung, liver, pancreas, and bowel, the discussion that follows pertains to living kidney donors.

What are the advantages of living donation?

- The success rate is higher than for nonliving donor transplantations.
- A better genetic match lessens the risk of rejection.
- The kidney from a living donor usually functions immediately because it does not have to be transported long distances; it can be transplanted

immediately from the donor to the recipient.

- The transplant surgery can be scheduled at a time that is convenient for both the donor and the recipient.

What is the success rate in living donation?

According to the United Network for Organ Sharing (UNOS),¹ the success rate for living donor kidney transplantations is 95% and 88% at 1 year and 3 years, respectively, compared with a 1-year and 3-year success rate of 88% and 78%, respectively, for non-living donor kidney transplantations. The success rate of kidney transplantations differs between transplant centers. Ask the transplant center where the donation will take place for its particular success rates. Current statistics on individual transplant centers, the number and type of transplantations done, and living donor and recipient outcomes can be obtained from UNOS; call (888) 894-6361 or visit www.unos.org.

What are the health risks for the living donor?

As with any surgery there are risks, including the risk of death. However, donating a kidney should not change your life expectancy nor does it increase the risk of developing kidney failure. The remaining kidney takes over the work of both kidneys.

Do I need to follow any dietary restrictions before or after donation?

If you are overweight, you may be asked to lose weight before transplantation. Exercise, a well-balanced diet, and a healthy lifestyle are encouraged. Check with the transplant center to see if they recommend any dietary changes either before or after surgery.

Can smokers be living donors?

Because smoking damages the lungs, smokers may be at a higher risk of developing pneumonia after surgery. Be honest with the transplant center about smoking habits to ensure that the donation and transplantation are successful. Transplant centers have different policies regarding smoking and living donation.

Several people in my family are good donor candidates; how do we decide who would be the best donor?

Talk to members of the transplant team about this

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issue; they will be able to provide some advice on how to decide. If all medical factors are equal, potential donors will need to consider their overall health, any medical problems, level of activity, the effects of donation on children or other family members, financial considerations, time lost from work, travel expenses, and distance from the transplant center.

What if my friend or family member doesn't want me to donate?

Some individuals with kidney failure may decide not to have a transplant or choose not to consider living donation. The person with kidney failure can choose to accept or reject your offer to donate. The patient, who must live with the disease, has the right to decide what is to be done; his or her decision, as well as that of the donor, must be respected.

Can I be tested as a donor without the recipient knowing?

No. It is not possible to be tested anonymously. The exception would be if the donor was considering donating to a stranger. Even then, anonymity is not guaranteed.

Who pays?

The recipient's Medicare or private health insurance generally pays for the cost of the living donor's evaluation, testing, and surgery, if the donation is to a family member or friend. Coordinate your tests with the transplant coordinator at the hospital in case there are any exceptions.

Medicare or private insurance does not cover time off from work and travel expenses. However, you may be eligible for sick leave, state disability, and the Family and Medical Leave Act. Some follow-up expenses may also not be covered; therefore, it is important to discuss these matters with the transplant center. The financial counselor at the transplant center can answer any questions you have about the cost of donation.

What is a donor advocate?

A donor advocate is a medical professional who is not involved in the direct care of the potential recipient. The donor advocate's role in the donor evaluation process is to protect and represent the best interests of the donor.

What if I decide against being a living donor?

The decision to become a living donor must be made voluntarily. Living donors must feel free to change their minds at any time during the evaluation process without fear of embarrassment or repercussions:

There may be instances [...] in which the potential donor seeks the support of the transplant team to decline donation. For example, if the potential donor anticipates being ostracized from the family by saying "no" to the recipient, the transplant team could assist the potential donor in developing an appropriate medical disclaimer, enabling the potential donor to decline gracefully...²

What if I develop kidney failure later on and need a transplant?

Talk to your transplant team about any preexisting condition or other factors that may put you at a higher risk of developing kidney disease, and consider this risk carefully before making a decision about donation. There have been cases in which living donors needed a kidney later—not necessarily because of the donation itself. It is considered a potential risk of donation. As of 1996, UNOS policy gives extra points on the waiting list to living donors.

What questions should I ask?

Table 1 presents a suggested list of topics that you should discuss with your healthcare team before donation. Many of these topics are discussed in this article. Before surgery, you will have the opportunity to discuss the donation process and to receive counseling to help prepare mentally and emotionally for the donation and recovery. If you have questions, the transplant team can help. The decision to donate will affect all your family members and should not be taken lightly.

Table 1 Elements of disclosure for potential living donors

- Description of the evaluation, the surgical procedure, and the recuperative period
- Anticipated short- and long-term follow-up care
- Alternative donation procedures, even if only available at other transplant centers
- Potential surgical complications for the donor, citing the reports of donor deaths (even if never experienced at that transplant center)
- Medical uncertainties, including the potential for long-term donor complications
- Any expenses to be borne by the donor
- Potential impact of donation on the ability of the donor to obtain health and life insurance
- Potential impact of donation on the life-style of the donor, and the ability of the donor to obtain future employment
- Information regarding specific risks and benefits to the potential recipient
- Expected outcome of transplantation for the recipient
- Any alternative treatments (other than organ replacement) available to the recipient
- Transplant center-specific statistics of donor and recipient outcomes

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It is normal for a donor and the donor’s family to have fears and concerns about potential complications. This might be felt by some as reluctance to donate, but it is a natural reaction to a major surgery. Speak openly with the transplant team about these fears. All conversations between the living donor and the transplant team and the results of medical testing will be kept confidential.

What is involved in the evaluation process?

The evaluation of the donor is coordinated by the transplant center. Table 2 provides a summary of the evaluation process for living donors. These tests may differ in each transplant center, so check with the transplant coordinator, physician, or your donor advocate as to the exact tests. Time will be allotted for asking questions and addressing any concerns you

carefully removed and transplanted into the recipient. Immediately, the donor’s single remaining kidney will take over the work previously done by both kidneys. The length of time the actual surgery takes will vary depending on the type of procedure done to remove the kidney. The transplant team will be able to give you that information.

How is the kidney removed?

A kidney can be removed using traditional open or laparoscopic surgery. The transplant team can provide information about the different types of surgery.

- Open surgery involves a surgical incision around the donor’s lower back and side to remove the donor kidney.
- Laparoscopic surgery involves several small incisions made in the abdomen. Surgical instruments

Table 2 The living donor evaluation: a summary

Financial consultation	The transplant center determines who (eg, private insurance, the recipient’s Medicare) will cover the donor’s medical expenses for the donation.
Immunological tests	A blood sample will be taken to determine if the donor’s and the recipient’s blood types are compatible, the quality of the antigen matches, and if the recipient has antibodies against the donor’s kidney. The results of these tests should be known before the donor proceeds through the evaluation.
Physical examination	The physician at the transplant center will do a thorough physical examination to ensure that the donor is in good health. The donor should provide medical records at this visit.
Psychosocial	A psychosocial evaluation is done to determine that the donor has adequate information to make an informed decision about kidney donation and provides an opportunity for the donor to express any concerns in a confidential setting.
Blood and urine tests	Blood and urine samples are obtained to ensure that the donor has normal blood count, electrolytes, and kidney function, and to determine that if there are any viruses, such as human immunodeficiency virus or hepatitis, that could be passed onto the recipient.
Radiology examination	1. A chest radiograph and electrocardiogram are obtained to ensure that there is no contraindication to the surgical procedure or anesthesia. 2. Special radiographs of the kidneys are obtained to look at the internal structure of each kidney and how each kidney functions, and to look at the blood vessels that carry the blood to each kidney and from each kidney.

may have. If you have reservations about being a donor, the transplant team can provide confidential advice. Time spent with the transplant coordinator, physician, and donor advocate is an opportunity for you to express any concerns in a confidential environment.

When the tests are completed, the results are presented to the transplant team (ie, surgeons, transplant physicians, transplant coordinators, nurses, social workers, and financial counselors) to determine if you are a suitable candidate for donation. The length of the testing process depends on your availability for testing, the results of the completed tests, and the individual policies and procedures of the transplant center involved.

The surgery

Once all tests are completed, the surgery is scheduled. A general anesthetic is administered in the operating room. Generally, the donor and the recipient are in neighboring operating rooms. The kidney is

are inserted through these incisions and allow for the removal of the donor kidney.

The choice of which procedure is performed is dependent on many factors: previous surgeries, size of the donor, or anatomy of the kidney to name a few. Discuss the choice of procedure, including the risks and benefits of each, with the transplant surgeon and learn as much as possible about both types of procedures.

The surgery involves the same level of risk for you as any other major surgery, including the risk of death. The major risks of surgery relate to anesthesia, blood loss, and the potential for injury to the kidney or other organs during the operation. The risks associated with surgery and donation should be discussed with your transplant team.

What happens after surgery?

You will spend several hours in the recovery room before returning to the hospital room, and you

will have an intravenous catheter inserted to administer fluids and a catheter in the bladder to monitor urine output. You will be encouraged to cough and deep breath to prevent pneumonia and will be assisted out of bed the day following surgery.

The length of stay in the hospital will vary depending on the individual donor's rate of recovery and the type of procedure performed (traditional vs laparoscopic kidney removal); the usual stay is 3 to 5 days. Because the rate of recovery varies greatly among individuals, ask the transplant center for their estimate of your particular recovery time.

What happens after I leave the hospital?

At first, you will typically feel tenderness as the incision continues to heal. Generally, heavy lifting is not recommended for about 6 weeks after surgery. You will be given an appointment for a postdonation evaluation about 2 to 4 weeks after discharge from the hospital. It is important that you speak with the transplant staff about the best ways to return as quickly as possible to being physically fit.

Donors are encouraged to have long-term medical follow-up with their primary care doctors. A urinalysis (urine test) and blood pressure check should be done every year.

Will my activities be restricted?

The American Academy of Pediatrics, American Academy of Family Physicians, and the Medical Society of Sports Medicine have suggested that people with 1 kidney avoid sports that involve higher risks of heavy contact or collision, including, but not limited to, boxing, field hockey, football, ice hockey, lacrosse, martial arts, rodeo, soccer, and wrestling, as well as extreme activities such as skydiving. Anyone with a single kidney who decides to participate in these sports should be extra careful and wear protective padding. He or she should understand that the consequences of losing a single kidney are serious.

Some studies report that living donors may have a greater chance of developing high blood pressure. Consult with your doctor about the risks of living donation. Pregnancy after donation is possible but is usually not recommended for at least 6 months after the surgery. Talk to your physician about pregnancy and make sure you have good prenatal care.

Some branches of military service, police, and fire departments will not accept individuals with only 1 kidney. In addition, if you are already in military service, certain new service career options may not be available to you. If you are currently in one of these fields, or if your future plans include these career choices, you should check to see if living donation would affect your eligibility for that particular field.

Will I be able to obtain insurance coverage after donation?

The living kidney donor should not have problems in maintaining health or life insurance coverage because of the donation. However, some living donors have had difficulty changing insurance carriers after the donation because of higher premiums or a preexisting waiting period. Contact the social worker or financial counselor at the transplant center about your concerns.

Education is the key!

Whether you have a family member or friend or simply wants to make a person with kidney disease better, education about the living donation process is the key to being able to make an informed decision.

1. *Educate yourself.* If you are thinking about being a living donor, you should first read as much as possible about living donation. The National Kidney Foundation has an information packet on living donation that can answer many of a potential living donor's questions.

2. *Consider your reasons.* Potential living donors should understand the risks and benefits of donation. Think about the reasons for wanting to donate and the impact of donation on you and your family—emotionally, physically, and financially.

3. *Important to know!* Living donation is a beautiful and selfless gift made from the donor to the recipient with no expectation of material compensation. Under US law, it is illegal to buy or sell organs.

4. *Request information from a transplant center.* If you decide to pursue donation, whether as a donor to a family member, friend, or stranger, you need to contact transplant centers in your area about the possibility of being a living donor. If you want to donate to a family member or friend, you will need to contact that person's transplant center for more information.

If you are interested in being a living donor to a stranger, you can find a list of all US transplant centers by state online at <http://www.transplantliving.org/members/search.asp>. Under "Select a Member Type," choose "Transplant center." Then select your state of residence and you will find all the transplant centers in that state. When you contact a transplant center to ask about living donation, ask to speak with the kidney transplant coordinator who will be able to tell you if the center accepts "stranger" donors, and if so, what you will need to do to get started.

Although giving someone a kidney may improve the recipient's quality of life, it is a decision that should be made after careful thought and discussions with family and medical professionals.

Web sites

www.livingdonors.org—lists information about being a nondirected donor, the National Kidney Foundation's Internet chat schedule, interactive listserv and message boards for living

Resources for Patients

donors and professionals, and general questions and answers about living donation for lung and liver donation
livingdonors@kidney.org or (800) 622-9010—provides additional information from the National Kidney Foundation
www.kidney.org/recips/livingdonors/#18—Elements of Disclosure taken from the Statement on the Live Organ Donor published in *JAMA*.²
www.kidney.org/general/news/onekidney.cfm—information on living with 1 kidney
usmilitary.about.com/library/weekly/082701.e.htm—general information about military enlistment standards
www.transplantliving.org—UNOS Web site, publishes data and statistics for every transplant center, patient resources, and general information. Call UNOS at (888) 894-6361 or (804) 330-8500 to order a booklet, What Every Patient Needs to Know, which includes a section on financial issues for both donors and recipients.
www.transplantliving.org/transplant101 lists questions to ask a transplant center and additional information about donation and transplantation
www.kidney.org/recips/livingdonors/jama_article.pdj—Consensus Statement on the Live Organ Donor¹

References

1. United Network for Organ Sharing. Available at: <http://www.unos.org>. Accessed March 17, 2003.
2. The authors for the Live Organ Donor Consensus Group. Consensus statement on the live organ donor. *JAMA*. 2000;284:2919-2926.

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