Living Organ Donor
Kidney Program
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Kidney transplantation is an acceptable and highly successful treatment for people whose own kidneys have stopped working. A kidney transplant allows a person to stop dialysis and resume a more active and independent lifestyle.

Kidneys for transplant come from three sources: an unrelated person who has died recently (deceased donor); a relative such as a sibling, parent, adult, child, or cousin; or from a living, but unrelated person such as a spouse, close friend, or significant other. There are many advantages to receiving a living donor kidney transplant over a deceased donor. Those advantages include a greater long-term success rate, lower incidence of rejection, and less waiting time for a transplant.

This brochure is designed to give possible donors the information necessary to help make the decision of whether or not to donate. Learning as much as possible about kidney donation will help each person make the decision that is right for them. Donating is a personal decision that only each individual can make. Donating a kidney is giving a tremendous gift to another person. It must be done on a voluntary basis and not out of a sense of obligation or pressure from others to the appropriate person.

The kidneys are two organs located toward the back of the body on either side of the spine, just above the waist. Each kidney is approximately the size of a fist and is partially protected by the ribs. Although most people are born with two kidneys, it is possible for our bodies to function normally with only one.

The kidneys’ main function is to act as a filtering system for the body—getting rid of waste products and extra water. Blood enters the kidneys through blood vessels and passes through thousands of tiny filtering units. The cleansed blood then leaves the kidneys and returns to the body. Wastes and extra water leave the kidney in the form of urine. After leaving the kidneys, urine travels to the bladder and eventually leaves the body.

When a person’s kidneys fail, this filtering system no longer works properly. This is called End Stage Renal Disease (ESRD). A person with ESRD must either undergo dialysis treatments regularly or receive a transplant to survive.
Donor Information

Donation Options

Although deceased donor kidney transplants are successful in most cases, there are still several reasons why a transplant from a living donor is preferred. In general, a relative’s kidney will match the recipient more closely than that of a deceased donor. This similarity results in fewer cases of rejection, lower doses of necessary medication, and a greater long-term success rate for the recipient. Secondly, the recipient of a living donor kidney is less likely to need temporary dialysis after the transplant. This is because the kidney has not been stored for several hours like a deceased donor kidney. The living donor kidney usually begins to work immediately. Finally, the wait for a deceased donor kidney can be very long. Many patients wait five or more years for a kidney to become available. With a living donor, the transplant surgery can be scheduled at a time that is convenient for both the recipient and the donor.

Who Can Donate?

Basic criteria for donating includes:
- Minimum age of 18 years old
- Approximate maximum age of 60 years old
- Good general health (no history of diabetes, high blood pressure, or Hepatitis C)
- No history of kidney disease
- No major weight problems
- Willing and interested in donating

Blood Typing – There are four different blood types. They are A, B, AB, and O. Every person has one of these blood types. The donor’s blood type does not have to be the same as the recipient’s blood type. It does not matter if the donor’s blood type is Rh (+) or (-).

<table>
<thead>
<tr>
<th>Blood Type</th>
<th>Can receive a kidney from</th>
<th>Can donate a kidney to</th>
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<tbody>
<tr>
<td>O</td>
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<td>O, A, B, AB</td>
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Donor Testing and Work-up Process

The transplant coordinator will begin by discussing with the potential donor his/her medical history, height, weight and Blood Pressure. Potential recipients and donors, if acceptable, undergo three initial blood tests to check for compatibility. First, the donor’s blood type is checked. This must be compatible with the recipient’s blood type. Next, the donor’s blood is mixed with the recipient’s blood in a test called a “crossmatch.” This test measures the reaction of the recipient’s blood to the donor’s blood. The results of the crossmatch are used to decide if the recipient’s body would accept a kidney from the donor. Finally, the donor and recipient’s tissue typing are compared to look for similarities.

Once it has been determined that the potential donor and recipient are compatible, additional testing is started on the donor. This testing is done in order to safeguard the donor’s health and to ensure that the donor has adequate kidney function. Typically, the donor testing includes many blood tests (including tests for viral diseases such as AIDS and hepatitis), urine tests, a chest x-ray, an electrocardiogram (EKG) to check the donor’s heart, and a CAT scan. The donor evaluation includes appointments with healthcare professionals such as a social worker, nephrologist, and surgeon from the transplant team. The donor evaluation can be done at Loma Linda University Medical Center (LLUMC) or at a hospital close to the donor. Most testing can be arranged around work and school schedules.

The donor evaluation time period varies with each person and depends on the potential donor’s availability to schedule appointments. In general, the donor evaluation period takes approximately two months to complete. Once the evaluation is complete and reviewed by the transplant committee, a date for the transplant surgery will be set.

Donation Surgery

A week prior to surgery, a final physical examination and several routine tests are performed to ensure that both the donor and recipient are healthy at this time. A final crossmatch is also performed to make sure the donor and recipient are still compatible. The donor and recipient are admitted to the hospital the day of the scheduled transplant surgery. The transplant team can cancel the transplant surgery at any time until the actual moment of surgery.
due to reasons such as a cold or infection in either of the patients or a change in the crossmatch results.

The laproscopic hand-assisted donor nephrectomy, an operation to remove the kidney, is a major surgery. Laproscopic removal of the donor kidney is a new surgical technique first performed in 1995. The surgery takes approximately four hours and is performed under general anesthesia. The surgeon inserts a tiny camera and slim surgical instruments through four small holes into the donor’s abdomen. With these instruments he/she detaches the kidney, arteries, veins, and ureter. The kidney is removed through a small incision (approximately 2 1/2 inches). The advantages of this technique are that it reduces recovery time and pain for the donor. Not all donors qualify for the laproscopic surgery. The weight of the donor, number of arteries attached to the kidney, and other factors are taken into account by the surgeon when he/she decides what technique to use for the donor nephrectomy. The transplant operation will immediately follow the donor nephrectomy and will take place in an adjoining operating room.

After surgery, the donor is first taken to the recovery room and then to the transplant unit. The pain after the donor surgery is controlled with intravenous pain medication. The average hospital stay for the donor after surgery is three days.

### Types of Donor Incisions

- **1/2” Port Site**
- **1/4” Port Site**
- **2” Incision Site**
- **1/2” Port Site**

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### Recovery After a Donor Nephrectomy

Everyone recovers differently. Most people heal quickly and have an uncomplicated course of recovery. After surgery and discharge from the hospital, donors may still feel some discomfort around the incision site and a general feeling of tiredness. This is the body’s natural reaction to surgery, and it will improve with time.

It is important for donors to rest as needed and not to over-exert themselves after returning home from the hospital. Most donors can return to work or school approximately four to six weeks after donating. During this period, donors should avoid heavy lifting (anything over 15 pounds) or extreme physical exertion for a period of 12 weeks. No driving should take place for two weeks after surgery. Donors can resume sexual relations approximately three to four weeks after discharge from the hospital.

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### Financial and Insurance Considerations

Medicare will pay all of the donor’s medical expenses related to the kidney donation including his/her donor evaluation and hospitalization. For the donor of a Medi-Cal recipient, a Treatment Authorization Request (TAR) will be required to cover hospitalization. In the event that the evaluation uncovers medical conditions requiring treatment, the donor becomes the responsible party.

Medicare does not pay for travel, meals, or lodging expenses that may be incurred before or after surgery. The loss of wages or salary while the donor is in the hospital or recovering at home, is not reimbursed by Medicare. However, state disability insurance (if a California resident) and/or sick time or vacation time from work are means of financial support during this time. Both donors and recipients are encouraged to discuss their financial concerns with the transplant financial coordinator and/or social worker. Should you receive any bills related to the donation evaluation from the hospital, labs, or physicians, forward them IMMEDIATELY to the living donor coordinator.
What if the donor and recipient live in different states?
Donation is possible regardless of distance. The transplant coordinator will make arrangements for the donor to meet a local nephrologist (kidney specialist) who will do the testing. However, the surgical evaluation must be performed by a donor surgeon at Loma Linda University.

How risky is the operation for the donor?
Like any major surgery, there are risks involved for the donor. Donors are at risk for complications such as pneumonia or infection. These complications are not life-threatening, but they can delay your recovery time. Any questions or concerns regarding complications may be directed to the transplant coordinator, the nephrologist, or the surgeon.

How much pain will the donor experience after surgery?
There will be pain after surgery. However, pain medication will be given at a level to make the patient comfortable.

Will donation affect future pregnancy or fathering of a child?
No. Many people have become parents after donating a kidney.

Will donations shorten or affect my expected lifespan?
No. A donor can expect to have a normal lifespan.

Do some donors feel uncomfortable or have trouble making the decision to give a kidney?
Yes. This is a major decision and a major issue for many people, especially relatives of those in need of a kidney. It is the right of the potential donor to make the decision whether or not to donate. Learning as much as possible about the procedure will help the potential donor make the best decision. Donating should be done on a voluntary basis and not out of a sense of obligation or pressure from others. In the event that a potential donor decides not to donate, the transplant team can ease the situation by keeping the reasons confidential.

Does a donor have to change their lifestyle in any way after donating?
In general, donors should practice healthy lifestyle habits such as exercising regularly, eating properly, and getting enough rest. Donors should consult a physician before participation in any high risk contact sports like karate, boxing, football, etc.

Is a donor more likely to develop kidney diseases or other medical problems later in life?
No. Donors are no more likely to experience kidney disease or medical problems than the general population. In general, kidney failure is caused by diseases that would affect both of a person’s kidneys equally.

What if the transplant doesn’t work?
Sometimes this happens despite every effort to achieve a successful transplant. In case this happens, neither the donor nor the recipient should feel responsible.

Can I be paid for my kidney?
No. It is against the law in the United States to buy or sell organs.
Resources

UNOS
Web site specific for patient and general public
1-804-782-4841
www.transplantliving.org

National Kidney Foundation
Provides links for people interested in kidney donation
www.livingdonors.org

American Kidney Fund
Limited grants to kidney transplant, dialysis patients, and donors
1-800-638-8299
www.akfinc.org

Glossary

Compatibility: Capable of being used in transplant without immunological reaction (rejection).

Computed Tomography (CAT) Scan: Computerized pictures using injected contrast material to provide very detailed x-rays.

Crossmatch: The blood test where the donor’s white blood cells and the recipient’s blood (serum) are mixed together to look for a reaction between the recipient and donor.

Dialysis: Replaces the functions of the kidneys, which normally serve as the body’s natural filtration system. Through the use of a chemical solution known as dialysate, the treatment removes waste products and excess fluids from the bloodstream, while maintaining the proper chemical balance of the blood.


End Stage Renal Disease (ESRD): A permanent condition in which a person’s kidneys no longer work, causing deadly waste product to buildup in the blood. A person with ESRD must undergo dialysis treatments or receive a kidney transplant to stay alive.

Nephrologist: A physician specializing in the functions and diseases of the kidneys.

Rejection: The process that happens when a recipient’s immune system attacks the transplanted organ.

Tissue Typing (HLA typing): A blood test to identify the inherited antigens (markers) that are on human white blood cells and tissue.

Ultrasound: Using sound waves to “see” body structures and organs like the kidneys. An ultrasound test does not involve radiation.
Many strengths. One mission.

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