

INTRODUCTION

You have been scheduled for an evaluation for a kidney transplant. This evaluation will allow you to:

- *Learn more about kidney transplantation*
- *Meet members of the kidney transplant team at the Hospital of the University of Pennsylvania*
- *Determine if kidney transplant is the right treatment option for you*

Please read this information prior to your evaluation so you will be prepared and to help answer any questions you may have.

ABOUT THE KIDNEYS

Your kidneys are important parts of your body. Most people have two but occasionally people are born with one kidney. You can function normally if only 20 percent of one kidney is working.

Where are the kidneys?

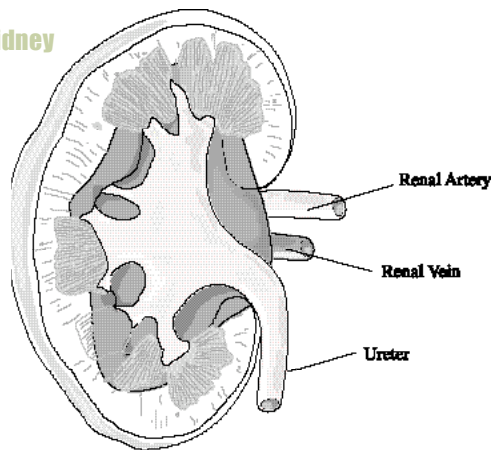
The kidneys are located around the level of your natural waist, in the back. They are protected from external shock by muscles, body fat, and bones.

What do the kidneys do?

- Rid the body of internal waste products
- Control blood pressure
- Help control blood production

Properly functioning kidneys can easily perform all of these tasks. Without adequate kidney function, there may be a build-up of poisonous waste products, high blood pressure, anemia, as well as fluid overload (too much fluid) that can cause swelling and shortness of breath.

Cross-section of kidney



TREATMENTS FOR KIDNEY FAILURE

You and your doctor will determine the best treatment option for you. This decision is influenced by your medical history, present state of health and your personal situation.

Dialysis

Dialysis (cleansing of the blood with an artificial kidney machine) may be needed to perform the tasks that the kidney once performed. Once dialysis has been started, some people find it to be an acceptable treatment and they have few, if any, problems with dialysis therapy.

Some people may feel that dialysis is not acceptable, or they may wish to try and avoid dialysis and proceed to another form of treatment—kidney transplantation. Concerns about how well a person will physically tolerate dialysis, or how dialysis will affect their job, family and social life are factors that may lead some to consider having a kidney transplant.

Kidney Transplant

A transplant occurs when someone receives a part of another person's body to replace a damaged or poorly functioning organ. In kidney transplantation, the new kidney is surgically implanted in the patient's lower abdomen. The patient's own kidneys are left in place unless there is a special reason to remove them.

WHERE DOES THE KIDNEY COME FROM?

Cadaveric Donors

A cadaveric organ comes from a person who has been declared "brain dead." The family of the person who has died makes the decision to donate their loved one's organs.

- You can receive a kidney from a person of any sex, race or ethnicity
- Waiting times can be from two to six years
- In general, there are not enough cadaveric donors for all the people who need a transplant. There is no guarantee that you will receive a kidney.

ADD

7) pg. 8

Living Donors

A living donor is a healthy individual who volunteers to give you one of their two kidneys.

There are two types of living donors:

- Blood relative—parents, children, siblings
- Non-blood relative—spouse, close friend

Criteria for Living Donors

- Between 18 and 60 years old
- Healthy with no history of heart disease, high blood pressure or cancer
- Willing to give their kidney
- Must have a blood type that is compatible with the recipient’s
- Must complete a medical evaluation

In most cases, receiving a kidney from a living donor is the best option because there is minimal waiting time and the procedure provides the best quality organ.

MATCHING RECIPIENTS AND DONORS

Before a kidney is given to you, special blood tests for tissue typing and compatibility testing will be performed at our transplant center. There are three blood tests that are done: blood typing, tissue typing and crossmatching.

Blood Typing

Recipients must have a blood type that is compatible with the potential donor. There are four blood types—A, B, AB, and O. Below is a table showing which blood types are compatible.

Recipient’s Blood Type	Donor’s Blood Type
O	O
A	A or O
B	B or O
AB	A, B, AB or O

Tissue Typing

Each person has a specific tissue type, identified by six antigens or identifying markers. Tissue typing is performed by analyzing blood samples to determine your genetic markers. The recipient’s typing is compared to the potential donor’s typing to determine similarities. For example:

HLA Antigens

Recipient	1	2	8	40	3	5
Donor	1	2	14	18	4	7

In the example above, the donor and recipient match two antigens, 1 and 2. It is not necessary to match any antigens for a successful transplant if the blood group is compatible and the final crossmatch test is compatible.

Crossmatching

The crossmatch test determines if your body’s defenses or immune system would destroy tissue from a particular donor. Although each test is an important part of kidney selection, the crossmatch is the most important test. To receive a kidney transplant, you must have a compatible crossmatch with the donor.

ADVANTAGES AND DISADVANTAGES OF KIDNEY TRANSPLANTATION

There are several factors to consider before you decide to pursue kidney transplantation.

Advantages

- No longer need dialysis as long as kidney functions adequately
- Blood pressure is often easier to manage, but may still require medication
- Long-term follow-up care is less time-consuming than dialysis
- Fluid and dietary restrictions are usually no longer necessary
- May return to work
- Improved quality of life with expected increase in lifespan
- More cost effective than dialysis

Disadvantages

- Risks involved from general anesthesia as with any major operation
- Addition of immunosuppressive medication (and possible side effects) to your current medicines
- Need for continued care by a kidney specialist
- Transplantation is a treatment not a cure

It is important to remember that your kidney function and response to the medications must be medically managed for a healthy, long-term outcome.

THE TRANSPLANT EVALUATION VISIT

At your evaluation appointment, you will learn more about kidney transplantation as a treatment option and how it will fit into your life. A summary of your medical records will be requested from your dialysis unit or physician before your evaluation appointment.

Your evaluation appointment will be four to six hours long and will include:

- Registration
- Informational presentation
- EKG (electrocardiogram) test
- Multiple blood samples
- Physical examination by the transplant physician and review of your medical history
- Individual meeting with a Transplant Coordinator
- Meeting with the Social Worker
- Meeting with the Financial Counselor
- Chest X-ray

EVALUATION FOLLOW-UP

If the transplant team determines that you are a candidate for a kidney transplant, additional testing or physician consultations may be required. Before you can be placed on the transplant waiting list or schedule a transplant, the transplant team must review these additional test results or consults.

Standard Additional Tests

Women

- Pap smear within one year of visit
- Women over 35 must have a screening mammogram; annual mammograms are required for women over 40

Men over 50

- A current PSA (prostate blood test)

REMEMBER: Before you can be placed on the transplant waiting list or schedule a living donor transplant all results must be reviewed by the transplant team.

TRANSPLANT WAITING LIST

If you are determined to be a candidate for transplantation, you will receive a letter indicating you have been placed on the waiting list.

There is no such thing as “the top of the list.” The order of the list changes with every kidney that becomes available and is dependent on blood type, tissue type and crossmatching results. The length of time you may wait will depend on your blood type and crossmatch reactivity to individual donors.

What to do while you are on the list

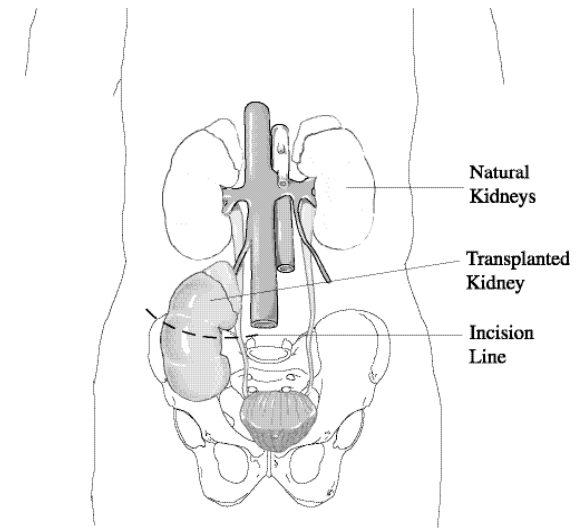
- Make sure the Transplant Center has your current phone numbers.
- Always provide a back up number of a friend or relative in case the coordinator cannot find you.
- Cell phones and beepers can be helpful to use when you are away from home.

- Let family and friends know your schedule.
- Have a plan for how you will get to the hospital.
- Notify the Transplant Center immediately if your insurance changes.

ADMISSION TO THE HOSPITAL AND SURGERY

- When you are admitted for a cadaveric transplant, you will have blood tests, an EKG, chest X-ray and physical exam before you go to the operating room.
- If you are receiving a living donor kidney, both you and the donor will be admitted to the hospital the morning of the scheduled procedure. All pre-operative testing will have been completed.
- After surgery, all transplant patients go the recovery room. You will be there about two hours.
- You will come back to the Transplant Unit after surgery. It is common to feel groggy and weak from the anesthesia.
- You will have an intravenous line, or “IV,” after surgery for fluid and medicines.
- Special medications called “immunosuppression” will be started the day of the surgery.
- A foley catheter (tube that drains urine from your bladder) will be placed in the operating room and is usually in for a day or two after surgery.
- If you have a kidney from a living donor, the transplanted kidney generally makes urine right away. It may even make large amounts of urine the first day.
- If you have a cadaveric kidney transplant, the kidney may not make urine initially. Sometimes it takes days or weeks to function well. In some situations, you may need to have dialysis for a period of time.
- Patients are usually in the hospital for three to seven days.

Location of transplanted kidney



IMMUNOSUPPRESSION FOLLOWING TRANSPLANT

The transplant team will generally prescribe a three-drug regimen tailored to your individual needs to help prevent rejection. Taking these medications is the single most important thing to do in order to prevent rejection and they must be taken as directed. Not taking the medications immediately or missing doses will cause damage to and eventual loss of your kidney.

Rejection

Rejection occurs when your body recognizes the transplanted kidney as foreign and begins to attack it. Symptoms of rejection may include fever, pain in the kidney area, decreased urine output, and weight gain. A general sick feeling may occur or you may not experience any symptoms.



Penn Transplant Program

A Patient's Guide to

KIDNEY TRANSPLANT

Information

Penn Transplant Center
Hospital of the University of Pennsylvania
Ground Gates
3400 Spruce Street
Philadelphia, PA 19104



1-800-789-PENN | PENNHEALTH.COM