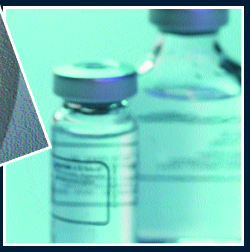
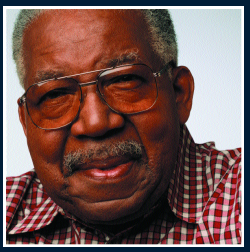
Kidney Failure

CHOOSING A TREATMENT THAT'S RIGHT FOR YOU





Kidney Failure

CHOOSING A TREATMENT THAT'S RIGHT FOR YOU

NIDDK
National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Diseases

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Introduction

Your kidneys filter wastes from your blood and regulate other functions of your body. When your kidneys fail, you need treatment to replace the work of healthy kidneys to survive.

Developing kidney failure means that you have some decisions to make about your treatment. If you choose to receive treatment, your choices are hemodialysis, peritoneal dialysis, and kidney transplantation. Each of them has advantages and disadvantages. You may also choose to forgo treatment. By learning about your choices, you can work with your doctor to decide what's best for you. No matter which treatment you choose, you'll need to make some changes in your life, including how you eat and plan your activities. But with the help of your health care team, family, and friends, you can lead a full, active life.

When Your Kidneys Fail

Healthy kidneys clean your blood by removing excess fluid, minerals, and wastes. They also make hormones that keep your bones strong and your blood healthy. When your kidneys fail, harmful wastes build up in your body, your blood pressure may rise, and your body may retain excess fluid and not make enough red blood cells. When this happens, you need treatment to replace the work of your failed kidneys.

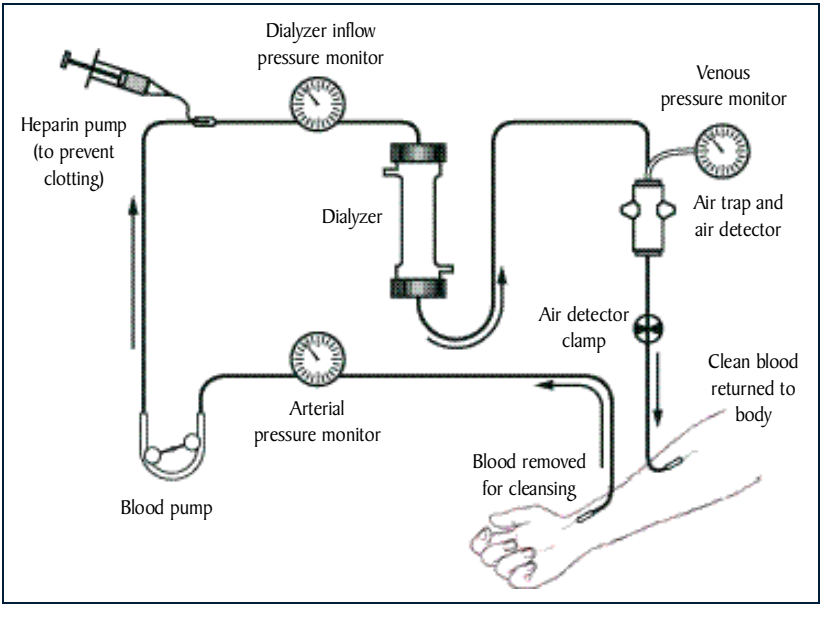
Treatment Choice: Hemodialysis

Purpose

Hemodialysis cleans and filters your blood using a machine to temporarily rid your body of harmful wastes, extra salt, and extra water. Hemodialysis helps control blood pressure and helps your body keep the proper balance of important chemicals such as potassium, sodium, calcium, and bicarbonate.

How It Works

Hemodialysis uses a special filter called a dialyzer that functions as an artificial kidney to clean your blood. During treatment, your blood travels through tubes into the dialyzer, which filters out wastes and extra water. Then the cleaned blood flows through another set of tubes back into your body. The dialyzer is connected to a machine that monitors blood flow and removes wastes from the blood.



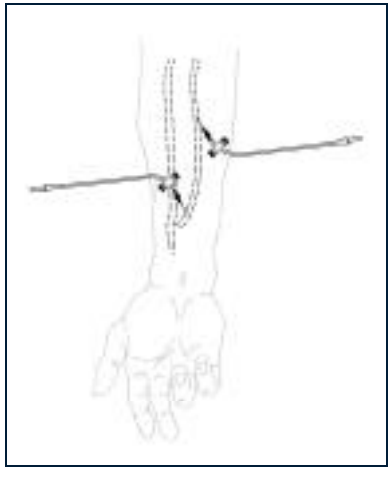
Hemodialysis.

Hemodialysis is usually needed three times a week. Each treatment lasts from 3 to 5 or more hours. During treatment, you can read, write, sleep, talk, or watch TV.

Getting Ready

If you choose hemodialysis, several months before your first treatment, an access to your bloodstream will need to be created. You may need to stay overnight in the hospital, but many patients have their access placed on an outpatient basis. This access provides an efficient way for blood to be carried from your body to the dialysis machine and back without causing discomfort. The two main types of access are a fistula and a graft.

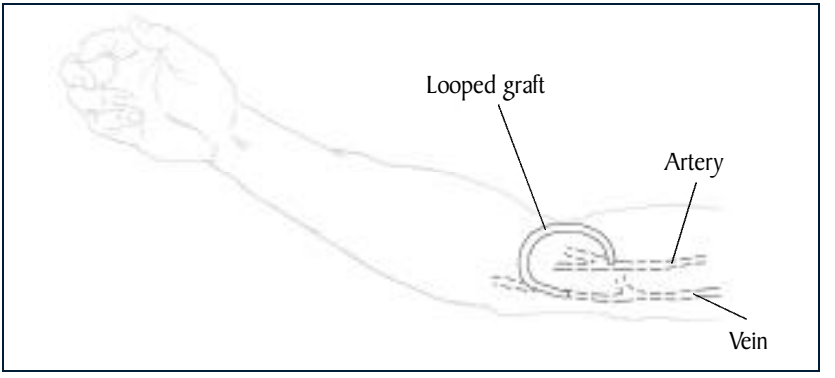
- A surgeon makes a fistula by using your own blood vessels; an artery is connected directly to a vein, usually in your forearm. The increased blood flow makes the vein grow larger and stronger so that it can be used for repeated needle insertions. This is the preferred type of access. It may take several weeks to be ready for use.



Arteriovenous fistula.

- A graft connects an artery to a vein by using a synthetic tube. It doesn't need to develop as a fistula does, so it can be used sooner after placement. But a graft is more likely to have problems with infection and clotting.

Needles are placed into the access to draw out the blood. You'll be given a local anesthetic to minimize any pain during dialysis.



Graft.

If your kidney disease has progressed quickly, you may not have time to get a permanent vascular access before you start hemodialysis treatments. You may need to use a catheter, a tube inserted into a vein in your neck, chest, or leg near the groin, as a temporary access. Some people use a catheter for long-term access as well. Catheters that will be needed for

Catheter for temporary access.

more than about 3 weeks are designed to be placed under the skin to increase comfort and reduce complications.

For more information about vascular access, see the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) fact sheet *Vascular Access for Hemodialysis*.

Who Performs It

Hemodialysis is usually done in a dialysis center by nurses and trained technicians. In some parts of the country, it can be done at home with the help of a partner, usually a family member or friend. If you decide to do home dialysis, you and your partner will receive special training.

Possible Complications

Vascular access problems are the most common reason for hospitalization among people on hemodialysis. Common problems include infection, blockage from clotting, and poor blood flow. These problems can keep your treatments from working. You may need to undergo repeated surgeries in order to get a properly functioning access.

Other problems can be caused by rapid changes in your body's water and chemical balance during treatment. Muscle cramps and hypotension, or a sudden drop in blood pressure, are two common side effects. Low blood pressure or hypotension can make you feel weak, dizzy, or sick to your stomach.

You'll probably need a few months to adjust to hemodialysis. Side effects can often be treated quickly and easily, so you should always report them to your doctor and dialysis staff. You can avoid many side effects if you follow a proper diet, limit your liquid intake, and take your medicines as directed.

Diet for Hemodialysis

Hemodialysis and a proper diet help reduce the wastes that build up in your blood. A dietitian is available at all dialysis centers to help you plan meals according to your doctor's orders. When choosing foods, you should remember to

- Eat balanced amounts of high-protein foods such as meat, chicken, and fish.
- Control the amount of potassium you eat. Potassium is a mineral found in salt substitutes, some fruits (bananas, oranges), vegetables, chocolate, and nuts. *Too much potassium can be dangerous.*
- Limit how much you drink. When your kidneys aren't working, water builds up quickly in your body. Too much liquid makes your tissues swell and can lead to high blood pressure, heart trouble, and cramps and low blood pressure during dialysis.
- Avoid salt. Salty foods make you thirsty and make your body hold water.
- Limit foods such as milk, cheese, nuts, dried beans, and dark colas. These foods contain large amounts of the mineral phosphorus. Too much phosphorus in your blood causes calcium to be pulled from your bones, which makes them weak and brittle and can cause arthritis. To prevent bone problems, your doctor may give you special medicines, which you must take with meals every day as directed.

For more information about choosing the right foods, see the NIDDK booklet *Eat Right To Feel Right on Hemodialysis.*

Pros and Cons

Each person responds differently to similar situations. What may be a negative factor for one person may be positive for

In-Center Hemodialysis

Pros

+ Facilities are widely available.
+ You have trained professionals with you at all times.
+ You can get to know other patients.

Cons

– Treatments are scheduled by the center and are relatively fixed.
– You must travel to the center for treatment.

Home Hemodialysis

Pros

+ You can do it at the times you choose (but you still must do it as often as your doctor orders).
+ You don't have to travel to a center.
+ You gain a sense of independence and control over your treatment.

Cons

– You must have a helper.
– Helping with treatments may be stressful to your family.
– You and your helper need training.
– You need space for storing the machine and supplies at home.

another. The boxed text on page 7 lists the general advantages and disadvantages of in-center and home hemodialysis.

Working With Your Health Care Team

Questions You May Want To Ask:

- Is hemodialysis the best treatment choice for me? Why?
- If I'm treated at a center, can I go to the center of my choice?
- What should I look for in a dialysis center?
- Will my kidney doctor see me at dialysis?
- What does hemodialysis feel like?
- What is self-care dialysis?
- Is home hemodialysis available in my area? How long does it take to learn? Who will train my partner and me?
- What kind of blood access is best for me?
- As a hemodialysis patient, will I be able to keep working? Can I have treatments at night?
- How much should I exercise?
- Who will be on my health care team? How can these people help me?
- Whom can I talk with about finances, sexuality, or family concerns?
- How/where can I talk to other people who have faced this decision?

For more information about hemodialysis, see the NIDDK booklet *Treatment Methods for Kidney Failure: Hemodialysis*.

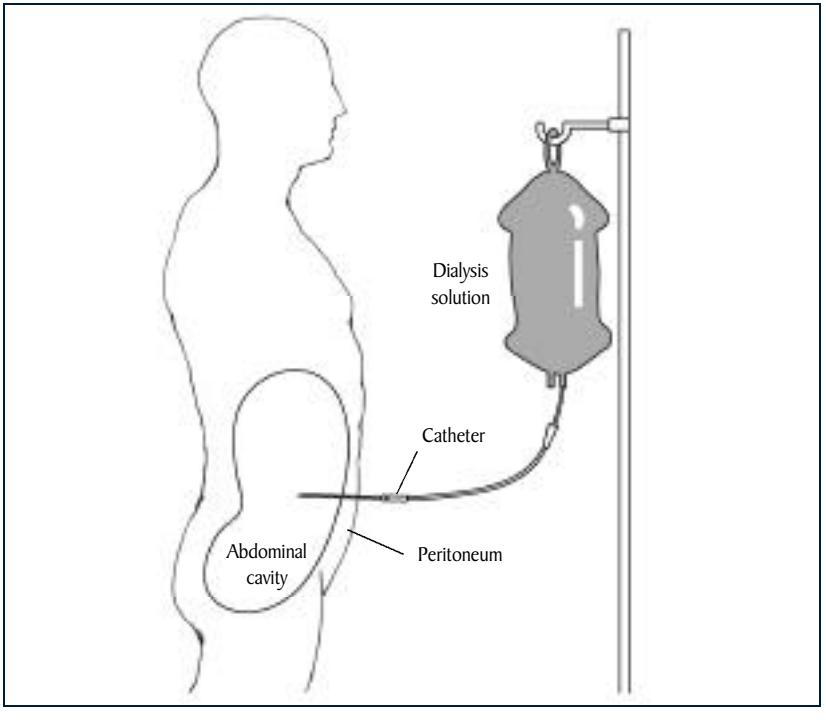
Treatment Choice: Peritoneal Dialysis

Purpose

Peritoneal dialysis is another procedure that removes extra water, wastes, and chemicals from your body. This type of dialysis uses the lining of your abdomen to filter your blood. This lining is called the peritoneal membrane and acts as the artificial kidney.

How It Works

A mixture of minerals and sugar dissolved in water, called dialysis solution, travels through a soft tube into your abdomen. The sugar, called dextrose, draws wastes, chemicals, and extra water from the tiny blood vessels in your peri-



Peritoneal dialysis.

toneal membrane into the dialysis solution. After several hours, the used solution is drained from your abdomen through the tube, taking the wastes from your blood with it. Then you fill your abdomen with fresh dialysis solution, and the cycle is repeated. Each cycle is called an exchange.

Getting Ready

Before your first treatment, a surgeon places a small, soft tube called a catheter into your abdomen. The catheter tends to work better if there is adequate time—usually from 10 days to 2 or 3 weeks—for the insertion site to heal. This is another way in which planning your dialysis access can improve treatment success. This catheter stays there permanently to help transport the dialysis solution to and from your abdomen.

Types of Peritoneal Dialysis

There are three types of peritoneal dialysis.

1. **Continuous Ambulatory Peritoneal Dialysis (CAPD)**
   CAPD is the most common type of peritoneal dialysis. It requires no machine and can be done in any clean, well-lit place. With CAPD, your blood is always being cleaned. The dialysis solution passes from a plastic bag through the catheter and into your abdomen, where it stays for several hours with the catheter sealed. The period that dialysis solution is in your abdomen is called the dwell time. Next, you drain the dialysis solution back into the bag for disposal. You then use the same catheter to refill your abdomen with fresh dialysis solution so the cleaning process can begin again. With CAPD, the dialysis solution stays in your abdomen for a dwell time of 4 to 6 hours (or more). The process of draining the used dialysis solution and replacing it with fresh solution takes about 30 to 40 minutes. Most people change the dialysis solution at least

four times a day and sleep with solution in their abdomen at night. With CAPD, it's not necessary to wake up and perform dialysis tasks during the night.

2. **Continuous Cycler-Assisted Peritoneal Dialysis (CCPD)**
   CCPD uses a machine called a cycler to fill and empty your abdomen three to five times during the night while you sleep. In the morning, you begin one exchange with a dwell time that lasts the entire day. You may do an additional exchange in the middle of the afternoon without the cycler to increase the amount of waste removed and to reduce the amount of fluid left behind in your body.

3. **Combination of CAPD and CCPD**
   If you weigh more than 175 pounds or if your peritoneum filters wastes slowly, you may need a combination of CAPD and CCPD to get the right dialysis dose. For example, some people use a cycler at night but also perform one exchange during the day. Others do four exchanges during the day and use a minicycler to perform one or more exchanges during the night. You'll work with your health care team to determine the best schedule for you.

Who Performs It

Both types of peritoneal dialysis are usually performed by the patient without help from a partner. CAPD is a form of self-treatment that needs no machine. However, with CCPD, you need a machine to drain and refill your abdomen.

Possible Complications

The most common problem with peritoneal dialysis is peritonitis, a serious abdominal infection. This infection can occur if the opening where the catheter enters your body becomes infected or if contamination occurs as the catheter

is connected or disconnected from the bags. Peritonitis requires antibiotic treatment by your doctor.

To avoid peritonitis, you must be careful to follow procedures exactly and learn to recognize the early signs of peritonitis, which include fever, unusual color or cloudiness of the used fluid, and redness or pain around the catheter. Report these signs to your doctor immediately so that peritonitis can be treated quickly to avoid serious problems.

Diet for Peritoneal Dialysis

A peritoneal dialysis diet is slightly different from a hemodialysis diet.

- You'll still need to limit salt and liquids, but you may be able to have more of each, compared with hemodialysis.
- You must eat more protein.
- You may have different restrictions on potassium.
- You may need to cut back on the number of calories you eat because there are calories in the dialysis fluid that may cause you to gain weight.

Your doctor and a dietitian who specializes in helping people with kidney failure will be able to help you plan your meals.

Pros and Cons

Each type of peritoneal dialysis has advantages and disadvantages. (See the boxed text.)

Working With Your Health Care Team

Questions You May Want To Ask:

- Is peritoneal dialysis the best treatment choice for me? Why? If yes, which type is best?

Peritoneal Dialysis

CAPD

Pros

+ You can do it alone.
+ You can do it at times you choose as long as you perform the required number of exchanges each day.
+ You can do it in many locations.
+ You don't need a machine.

Cons

– It can disrupt your daily schedule.
– This is a continuous treatment, and all exchanges must be performed 7 days a week.

CCPD

Pros

+ You can do it at night, mainly while you sleep.

Cons

– You need a machine.

- How long will it take me to learn how to do peritoneal dialysis?
- What does peritoneal dialysis feel like?
- How will peritoneal dialysis affect my blood pressure?
- How will I know if I have peritonitis? How is it treated?

- As a peritoneal dialysis patient, will I be able to continue working?
- How much should I exercise?
- Where do I store supplies?
- How often do I see my doctor?
- Who will be on my health care team? How can these people help me?
- Whom do I contact with problems?
- Whom can I talk with about finances, sexuality, or family concerns?
- How/where can I talk to other people who have faced this decision?

For more information about peritoneal dialysis, see the NIDDK booklet *Treatment Methods for Kidney Failure: Peritoneal Dialysis.*

Dialysis Is Not a Cure

Hemodialysis and peritoneal dialysis are treatments that help replace the work your kidneys did. These treatments help you feel better and live longer, but they don't cure kidney failure. Although patients with kidney failure are now living longer than ever, over the years kidney disease can cause problems such as heart disease, bone disease, arthritis, nerve damage, infertility, and malnutrition. These problems won't go away with dialysis, but doctors now have new and better ways to prevent or treat them. You should discuss these complications and treatments with your doctor.

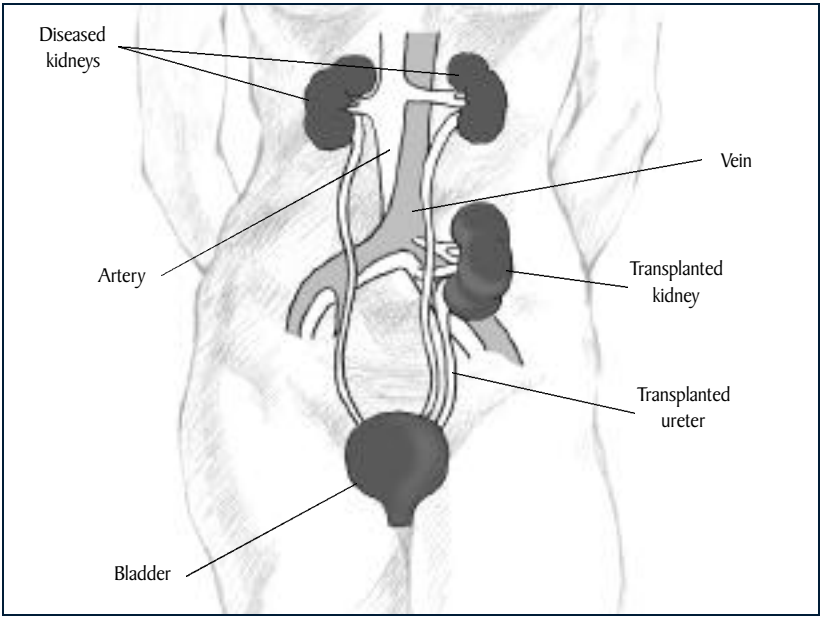
Treatment Choice: Kidney Transplantation

Purpose

Kidney transplantation surgically places a healthy kidney from another person into your body. The donated kidney does the work that your two failed kidneys used to do.

How It Works

A surgeon places the new kidney inside your lower abdomen and connects the artery and vein of the new kidney to your artery and vein. Your blood flows through the donated kidney, which makes urine, just like your own kidneys did when they were healthy. The new kidney may start working right away or may take up to a few weeks to make urine. Unless your own kidneys are causing infection or high blood pressure, they are left in place.



Kidney transplantation.

Getting Ready

The transplantation process has many steps. First, talk with your doctor, because transplantation isn't for everyone. Your doctor may tell you that you have a condition that would make transplantation dangerous or unlikely to succeed.

You may receive a kidney from a member of your family (living, related donor), from a person who has recently died (cadaveric donor), or sometimes from a spouse or a very close friend (living, unrelated donor). If you don't have a living donor, you're placed on a waiting list for a cadaveric kidney. The wait for a cadaveric donor kidney can be several years.

The transplant team considers three factors in matching kidneys with potential recipients. These factors help predict whether your body's immune system will accept the new kidney or reject it.

- **Blood type.** Your blood type (A, B, AB, or O) must match the donor's. This is the most important matching factor.
- **Human leukocyte antigens (HLAs).** Your cells carry six important HLAs, three inherited from each parent. Family members are most likely to have a complete match. You may still receive a kidney if the HLAs aren't a complete match as long as your blood type matches the organ donor's and other tests are negative.
- **Cross-matching antigens.** The last test before implanting an organ is the cross-match. A small sample of your blood will be mixed with a sample of the organ donor's blood in a tube to see if there's a reaction. If no reaction occurs, the result is called a negative cross-match, and the transplant operation can proceed.

The Time It Takes

How long you'll have to wait for a kidney varies. Because there aren't enough cadaveric donors for every person who needs a transplant, you must be placed on a waiting list. However, if a voluntary donor gives you a kidney, the transplant can be scheduled as soon as you're both ready. Avoiding the long wait is a major advantage of living donation.

The surgery takes 3 to 4 hours. The usual hospital stay is about a week. After you leave the hospital, you'll have regular followup visits.

If someone has given you a kidney, the donor will probably stay in the hospital about the same amount of time. However, a new technique for removing a kidney for donation uses a smaller incision and may make it possible for the donor to leave the hospital in 2 to 3 days.

Between 85 and 90 percent of transplants from cadaveric donors are working 1 year after surgery. Transplants from living relatives often work better than transplants from cadaveric donors because they're usually a closer match.

Possible Complications

Transplantation is the closest thing to a cure. But no matter how good the match, your body may reject your new kidney. A common cause of rejection is not taking medication as prescribed.

Your doctor will give you drugs called immunosuppressants to help prevent your body's immune system from attacking the kidney, a process called rejection. You'll need to take immunosuppressants every day for as long as the transplanted kidney is functioning. Sometimes, however, even these drugs can't stop your body from rejecting the new kidney. If this

happens, you'll go back to some form of dialysis and possibly wait for another transplant.

Immunosuppressants can weaken your immune system, which can lead to infections. Some drugs may also change your appearance. Your face may get fuller; you may gain weight or develop acne or facial hair. Not all patients have these problems, though, and diet and makeup can help.

Immunosuppressants work by diminishing the ability of immune cells to function. In some patients, over long periods of time, this diminished immunity can increase the risk of developing cancer. Some immunosuppressants can cause cataracts, diabetes, extra stomach acid, high blood pressure, and bone disease. When used over time, these drugs may also cause liver or kidney damage in a few patients.

Diet for Transplantation

Diet for transplant patients is less limited than it is for dialysis patients, although you may still have to cut back on some foods. Your diet will probably change as your medicines, blood values, weight, and blood pressure change.

- **You may need to count calories.** Your medicine may give you a bigger appetite and cause you to gain weight.
- **You may have to eat less salt.** Your medications may cause your body to retain sodium, leading to high blood pressure.

Pros and Cons

Kidney transplantation has advantages and disadvantages. (See the boxed text.)

Kidney Transplantation

Pros

+ A transplanted kidney works like a normal kidney.
+ You may feel healthier or "more normal."
+ You have fewer diet restrictions.
+ You won't need dialysis.
+ Patients who successfully go through the selection process have a higher chance of living a longer life.

Cons

– It requires major surgery.
– You may need to wait for a donor.
– Your body may reject the new kidney, so one transplant may not last a lifetime.
– You'll need to take immunosuppressants, which may cause complications.

Working With Your Health Care Team

Questions You May Want To Ask:

- Is transplantation the best treatment choice for me? Why?
- What are my chances of having a successful transplant?
- How do I find out whether a family member or friend can donate?
- What are the risks to a family member or friend who donates?

- If a family member or friend doesn't donate, how do I get placed on a waiting list for a kidney? How long will I have to wait?
- What symptoms does rejection cause?
- How long does a transplant work?
- What side effects do immunosuppressants cause?

	Hemodialysis	
	In Center	Home
Schedule	Three treatments a week for 3 to 5 hours or more.	More flexibility in determining your schedule of treatments.
Location	Dialysis center.	Home.
Availability	Available in most communities; may require travel in some rural areas.	Generally available, but not widely used because of equipment requirements.
Equipment and Supplies	No equipment or supplies in the home.	Hemodialysis machine connected to plumbing; chair.
Training Required	Little training required; clinic staff perform most tasks.	You and a helper must attend several training sessions.
Diet	Must limit fluids, sodium, potassium, and phosphorus.	
Level of Freedom	Little freedom during treatments. Greater freedom on nontreatment days.	More freedom to set your own schedule. You're still linked to a machine for several hours a week.
Level of Responsibility	Some patients prefer to let clinic staff perform all tasks.	You and your helper are responsible for cleaning and setting up equipment and monitoring vital signs. Can be stressful on family helpers.

- Who will be on my health care team? How can these people help me?
- Whom can I talk to about finances, sexuality, or family concerns?
- How or where can I talk to other people who have faced this decision?

Peritoneal Dialysis		Kidney Transplantation	
CAPD	CCPD	Cadaveric	Living
Four to six exchanges a day, every day.	Three to five exchanges a night, every night, with an additional exchange begun first thing in the morning.	You may wait several years before a suitable kidney is available.	If a friend or family member is donating, you can schedule the operation when you're both ready.
		After the operation, you'll have regular checkups with your doctor.	
Any clean environment that allows solution exchanges.		The transplant operation takes place in a hospital.	
Widely available.	Widely available.	Transplant centers are located throughout the country. However, the demand for kidneys is far greater than the supply.	
Bags of dialysis solution take up storage space.	Cycling machine; bags of dialysis solution.	No equipment or supplies needed.	
You'll need to attend several training sessions.		You'll need to learn about your medications and when to take them.	
Must limit sodium and calories.		Fewer dietary restrictions.	
You can move around, exercise, work, drive, etc., with solution in your abdomen.	You're linked to a machine during the night. You're free from exchanges during the day.	Offers the greatest amount of freedom.	
You must perform exchanges four to six times a day, every day.	You must set up your cycler every night.	You must take immunosuppressants every day for as long as the transplanted kidney functions.	

For more information about transplantation, see the NIDDK booklet *Treatment Methods for Kidney Failure: Kidney Transplantation*.

Treatment Choice: Refusing or Withdrawing From Treatment

For many people, dialysis and transplantation not only extend life but also improve quality of life. For others who have serious ailments in addition to kidney failure, dialysis may seem a burden that only prolongs suffering. You have the right to refuse or withdraw from dialysis if you feel you have no hope of leading a life with dignity and meaning. You may want to speak with your spouse, family, religious counselor, or social worker as you make this decision.

If you withdraw from dialysis treatments or refuse to begin them, you may live for a few days or for several weeks, depending on your health and your remaining kidney function. Your doctor can give you medicines to make you more comfortable during this period. Should you change your mind about refusing dialysis, you may start or resume your treatments at any time.

Even if you're satisfied with your quality of life on dialysis, you should think about circumstances that might make you want to stop dialysis treatments. At some point in a medical crisis, you might lose the ability to express your wishes to your doctor. An advance directive is a statement or document in which you give instructions either to withhold treatment or to provide it, depending on your wishes and the specific circumstances.

An advance directive may be a living will, a document that details the conditions under which you would want to refuse treatment. You may state that you want your health care team to use all available means to sustain your life. Or you may direct that you be withdrawn from dialysis if you become permanently unresponsive or fall into a coma from which you won't awake. In addition to dialysis, other life-sustaining treatments that you may choose or refuse include

- Cardiopulmonary resuscitation (CPR)
- Tube feedings
- Mechanical or artificial respiration
- Antibiotics
- Surgery
- Blood transfusions

Another form of advance directive is called a durable power of attorney for health care decisions or a health care proxy. In this type of advance directive, you assign a person to make health care decisions for you if you become unable to make them for yourself. Make sure the person you name understands your values and is willing to follow through on your instructions.

Each State has its own laws governing advance directives. You can obtain a form for an advance medical directive that's valid in your State from Partnership for Caring (see the "Resources" section at the back of this booklet).

Paying for Treatment

Treatment for kidney failure is expensive, but Federal health insurance plans pay much of the cost, usually up to 80 percent. Often, private insurance or State programs pay the rest. For more information, see the NIDDK fact sheet *Financial Help for Treatment of Kidney Failure*.

Conclusion

Deciding which type of treatment is best for you isn't easy. Your decision depends on your medical condition, lifestyle, and personal likes and dislikes. Discuss the pros and cons of each treatment with your health care team and family. You can switch between treatment methods during the course of your therapy. If you start one form of treatment and decide you'd like to try another, talk to your doctor. The key is to learn as much as you can about your choices first. With that knowledge, you and your doctor will choose the treatment that suits you best.

Resources

Organizations That Can Help

American Association of Kidney Patients
100 South Ashley Drive
Suite 280
Tampa, FL 33602
Phone: 1–800–749–2257 or (813) 223–7099
Email: AAKPnat@aol.com
Internet: www.aakp.org

American Kidney Fund
6110 Executive Boulevard
Suite 1010
Rockville, MD 20852
Phone: 1–800–638–8299 or (301) 881–3052
Email: helpline@akfinc.org
Internet: www.akfinc.org

Life Options Rehabilitation Program
603 Science Drive
Madison, WI 53711–1074
Phone: 1–800–468–7777 or (608) 232–2333
Email: lifeoptions@medmed.com
Internet: www.lifeoptions.org

National Kidney Foundation, Inc.
30 East 33rd Street
New York, NY 10016
Phone: 1–800–622–9010 or (212) 889–2210
Email: info@kidney.org
Internet: www.kidney.org

Partnership for Caring: America's Voices for the Dying
1035 30th Street, NW.
Washington, DC 20007–3823
Phone: 1–800–989–9455
Internet: www.partnershipforcaring.org

Additional Reading

If you would like to learn more about kidney failure and its treatment, you may be interested in reading

AAKP Patient Plan
This is a series of booklets and newsletters that cover the different phases of learning about kidney failure, choosing a treatment, and adjusting to changes.
American Association of Kidney Patients
100 South Ashley Drive
Suite 280
Tampa, FL 33602
Phone: 1–800–749–2257 or (813) 223–7099
Email: AAKPnat@aol.com
Internet: www.aakp.org

Financing Transplantation: What Every Patient Needs To Know, 2nd edition, 1996
United Network for Organ Sharing
1100 Boulders Parkway
Suite 500
P.O. Box 13770
Richmond, VA 23225–8770
Phone: 1–888–894–6361 to order single copies
(804) 330–8541 to order bulk copies
Internet: www.unos.org

Kidney Disease: A Guide for Patients and Their Families
American Kidney Fund
6110 Executive Boulevard

Suite 1010
Rockville, MD 20852
Phone: 1–800–638–8299 or (301) 881–3052
Email: helpline@akfinc.org
Internet: www.akfinc.org

Medicare Coverage of Kidney Dialysis and Kidney Transplant Services: A Supplement to Your Medicare Handbook
Publication Number HCFA–10128
U.S. Department of Health and Human Services
Health Care Financing Administration
7500 Security Boulevard
Baltimore, MD 21244–1850
Phone: 1–800–MEDICARE (1–800–633–4227)
TDD: 1–877–486–2048
Internet: www.medicare.gov/Publications/English.asp

National Kidney Foundation (NKF) Patient Education Brochures (includes materials based on NKF's Dialysis Outcomes Quality Initiative)
National Kidney Foundation, Inc.
30 East 33rd Street
New York, NY 10016
Phone: 1–800–622–9010 or (212) 889–2210
Internet: www.kidney.org

What Every Patient Needs To Know, 1997
United Network for Organ Sharing
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Suite 500
P.O. Box 13770
Richmond, VA 23225–8770
Phone: 1–888–894–6361 to order single copies
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Newsletters and Magazines

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National Kidney Foundation, Inc.
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Phone: 1–800–622–9010 or (212) 889–2210
Email: info@kidney.org
Internet: www.kidney.org

For Patients Only (published six times a year)
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20th Floor
New York, NY 10017–6222

Renalife (published quarterly)
American Association of Kidney Patients
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William Owen Jr., M.D.
Duke University Medical Center

Richard D. Swartz, M.D.
University of Michigan Health System

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Kim Bayer, M.A., R.D., L.D.
BMA Dialysis
Bethesda, MD

Cora Benedicto, R.N.
Clinic Director
Gambro Health Care
N Street Clinic
Washington, DC

National Kidney and Urologic Diseases Information Clearinghouse

3 Information Way
Bethesda, MD 20892–3580
Phone: 1–800–891–5390 or (301) 654–4415
Fax: (301) 907–8906
Email: nkudic@info.niddk.nih.gov

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