

Your Kidney or Kidney/Pancreas Transplant

A guide for transplant recipients and their families



Call the Kidney Transplant Clinic if you:

- have any symptoms you're worried about
- have questions for the nurse
- need to make an appointment
- need to have a prescription filled.

Call (615) 936-0695 if it's been **less than 1 month** since your transplant.

Call (615) 343-1064 if it's been **more than 1 month** since your transplant, or if you're calling after hours.

Call 911, or go immediately to the ER if:

- you have stools that are black or bloody
- you have chest pain
- you have shortness of breath
- you have a fast heart beat.

Vanderbilt Transplant Center

Vanderbilt Transplant Center in Nashville, Tennessee, is one of the South's main providers of solid organ and stem cell transplantation. We offer programs in heart, kidney, liver, lung, pancreas, and bone marrow transplantation, and our outcomes are among the best in the country. Our specialists strive to return every patient to a full and active life. Our mission is to provide end-stage organ failure patients the opportunity to lead extraordinary lives. Thank you for trusting us with your care.

As we treat you, we promise to:

- include you as the most important member of your health care team
- personalize your care with a focus on your values and needs
- work with you to coordinate your care
- respect your right to privacy
- communicate clearly and regularly
- serve you and your family with kindness and respect.



About this book

This book explains how the kidney and pancreas transplant process works and what you can expect after surgery, including the medicines you'll take for the rest of your life, the type of diet you'll need to eat, the guidelines you'll follow to stay healthy, and what you can expect as you recover.

For you to stay healthy after transplant, you must take responsibility for your own care for the rest of your life. There's a lot for you to learn. We don't expect you to know it all at once, but we do expect you to make your best effort to be independent. We're here to help you. But remember: the most important person in your health care team is YOU.

Some things you need to do:

- Take your medicines exactly like your doctor tells you.
- Keep all of your scheduled doctor and blood work appointments.
- Develop or keep healthy habits. This means you need to eat healthy, exercise on a regular basis, and develop healthy ways to cope with stress.
- Communicate well with your family and the transplant team.
- Make sure you have someone who can be your caregiver. This is required for transplant.

Transplant videos

In addition to reading this booklet, you can also watch a series of videos we've made that help explain the transplant process. To watch the videos, scan this QR code with the camera on your smart phone or tablet.

Or visit VanderbiltHealth.com/Transplant and click on the Transplant Patient Education Videos link.



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After Surgery: At the hospital

Pain

After surgery, it's common to have some pain and discomfort. Previous transplant recipients have described this pain as very manageable.

- For the first 24 hours after surgery, we'll most likely give you pain medicine through your IV.
- When you're able to drink fluids by mouth again, we'll likely switch you from IV pain medicine to oral pain medicine.

Your incision

It's normal for fluids to drain from your incision for some time after your surgery. We'll check the dressing on your incision often and will change it as needed.

Tests and measurements

- We'll do daily blood tests while you're in the hospital.
 - We'll do blood tests every morning to follow your progress and adjust your daily medicines as needed.
 - The most important kidney function blood tests are creatinine and B.U.N. (blood urea nitrogen).
 - With pancreas transplants, you'll have blood tests to check serum glucose, amylase, and lipase.
- We'll measure and test the amount of body fluids your body is making.
- Other tests, such as X-rays, will be done when and if they're needed.
- If your new kidney does not make urine right away, we may do a painless test called an ultrasound. It's done to make sure there are no problems with the blood vessels or ureter of your new kidney.
- We'll regularly check your vital signs. This includes checking your blood pressure, your breathing, your heart rate, and your temperature.
 - We may wake you at night to check your vital signs. This helps us know how your body is responding to your new kidney.
 - We'll encourage you to take your vital signs as soon as you're able, so you can participate in your own care.

Foley catheter

For at least 3 days after surgery, you'll have a Foley catheter tube in your bladder. This helps us know how much urine you're making. Don't be alarmed if you see clots and blood-tinged urine in the tube. This is normal after surgery.

- We'll measure your urine every hour.
- Occasionally your catheter will need to be irrigated or changed to remove clots that could clog the tube.
- You may have bladder spasms while the catheter is in place. We'll give you medicine if you need it to lower the pain and discomfort of these spasms.

After your catheter is removed

After your catheter is removed, we'll continue to measure how much urine your body makes. At first, the nurses on the floor will measure this for you. Later, we'll teach you how to do this by yourself.

Keep in mind that until your bladder stretches back out to hold larger amounts, you may find you have to get up to go to the bathroom more often in the night to pass urine.

Exercising your lungs

We'll expect you to begin coughing and doing deep breathing exercises while you're still in the recovery room after surgery. We'll show you what you need to do. Exercising your lungs can help keep you from getting pneumonia—a common

problem after any kind of surgery. If you have some discomfort around your incision when you cough, you can lower it by holding a pillow with some pressure over your incision when you cough.

Checking your weight

We'll weigh you every morning before breakfast. It's important that you're weighed at the same time each day, on the same scale, and while wearing similar clothes. This is a habit you need to continue after you leave the hospital. Weight gain may be one of the first signs that your body is rejecting your new kidney, especially if you also have less urine output.

Sleeping

Some people have trouble sleeping in the hospital. And some people have strange dreams that seem very real. Many transplant recipients also say they have memory problems after the surgery. These problems are temporary and shouldn't worry you.

Walking

As soon as the first day after surgery, we'll encourage you to get out of bed and walk around. Our goal is for you to walk around your room and down the hall at least 3 times a day. Walking increases your blood circulation, helps relieve gas pains, and helps keep your muscles toned.

Learning about your care

While you're in the hospital, we'll teach you how to care for yourself once you're at home. You'll have many things to remember. Taking an active role in your self-care and developing a daily routine while you're in the hospital will help you better care for yourself once you get home.

As you know, getting a new kidney or kidney and pancreas is a life-long commitment. Transplanted organs need a lot of care, attention, and monitoring to do their job. Your role as a member and a partner of the transplant team becomes more important than ever after surgery.

The role of your caregiver

As you learned when you were first being evaluated for transplant, a reliable, committed support person is necessary for you to successfully go through the transplant process.

During your time at the hospital, your designated caregiver will learn how to help care for you. He or she will:

- be with you when we give you your medicines
- learn what your medicines do and learn about their side effects
- learn to check your blood sugars and give you insulin injections if you need them
- learn how to care for your transplant incision as you heal.

By the time you leave the hospital, your support person will:

- know all about the medicines you'll take and their side effects
- be able to help you take your medicines exactly how you're supposed to
- be able to help you keep track of the medicines you take by writing down in a daily medicine log the times you take your medicines and the doses you take
- be ready to go with you to your lab and clinic appointments and your other medical visits to discuss your condition with the doctor and report any issues you're having
- have learned about (and be able to help you watch for) signs and symptoms of organ rejection, medicine side effects, or any other medical issues after you've left the hospital
- be ready to help you with your personal care, such as bathing or shaving
- continue helping you with your insulin injections and blood sugar checks.

Tips for a faster recovery

We'll work with you while you're in the hospital to help you get stronger faster. Here are some of the ways you can feel better faster:

1. Keep walking!

Walking before and after transplant will help keep your muscles strong and also help you recover faster. At first, you may need our help, but as you build up your strength you'll be able to walk by yourself.

2. Eat healthy!

When you first begin to eat after surgery, we'll give you clear liquids. If that goes well, you'll be moved to more solid foods until you're eating normally. Your body will need extra calories while you heal. It's important that you eat. The dietitian will meet with you after your transplant to talk with you about your diet.

3. Make it a priority to relax!

It's important that you relax while you recover. Any quiet activity that you enjoy can help you pass the time and keep you relaxed. Needlepoint, reading, playing cards, or puzzles are some good examples. Activities like these can also help minimize any pain you may have.

The length of your hospital stay

The average stay after a kidney transplant is 3 to 4 days. The average stay for pancreas transplant or a kidney and pancreas transplant is 5 to 10 days.

How long you'll be in the hospital will depend on:

- your personal situation and history
- how soon your new organ starts working
- how your body responds to your new organ
- how your body responds to your new medicines.

Visitors

You may have visitors while you're at the hospital at Vanderbilt. One person 18 or older may even stay with you in your room. Cots may be available on request.



After the hospital: Your recovery

You'll still be recovering when you leave the hospital. You and your caregiver need to follow all the home care instructions we give you. Be sure you know the signs of organ rejection, infection, and other problems.

Clinic hours

The clinic is open Monday to Friday from 8:00 a.m. to 4:30 p.m.

Ways to reach the clinic

Reach us by phone

If it's been less than 1 month since your transplant, you can call us at (615) 936-0695.

If it's been more than 1 month since your transplant, or if it's after hours, call us at (615) 343-1064.

During business hours

When you call, you'll be asked to leave a message. A post-transplant coordinator will call you back within 24 hours depending on the issue you're having and how urgent it is.

At night or on the weekend, if you have an urgent need

If you call after hours, you'll reach an operator. They'll page the provider on call, who will then call you back. Some reasons to call after hours include a rise in blood pressure, flu-like symptoms, fever, or you've been throwing up, and it's getting worse.

Reach us through your My Health at Vanderbilt (MHAV) account

You can use your MHAV account to send a message to your provider. It may take up to 48 hours for us to get back to you. It will depend on the issue you're having and how urgent it is. No matter what time you send your message, we only check and reply to messages during clinic hours—Monday to Friday, 8:00 a.m. to 4:30 p.m.

If you need help with your MHAV account, call (615) 343-4357.

When to call the clinic

If you're having any of these symptoms

- a temperature higher than 100.5°F (38°C)
- blood pressure higher than 160/100
- blood pressure lower than 100/60
- flu-like symptoms such as chills, aches, joint pain, headache, and fatigue
- a sick stomach or you begin to vomit
- two or more loose stools (diarrhea) in a day
- increased pain, redness, or tenderness over your transplant site
- abnormal drainage from or around your incision

- changes in your urine, including urine that's very dark or tea-colored, cloudy, bloody, or has a bad smell; you make less urine or no urine at all; there's pain or burning when you urinate; or more frequent urination
- light or clay-colored stools
- yellowing of the eyes or skin
- a 6-pound weight gain in less than 3 days
- abnormal blood sugars
- a sore throat
- you lose 3 or more pounds in less than 1 day
- you have increased swelling in your hands or feet
- you have sores or blisters in your mouth
- you see white spots on your tongue or in your mouth.

Also, call us if

- you cannot or did not take your anti-rejection medicines
- your drainage tube comes out
- you have stomach pain or indigestion that won't go away
- you've been exposed to someone with the chicken pox, measles, German measles, or mumps
- another doctor changes one of your medicines or prescribes new medicine.

When to call 911 or go to the ER

If it's an emergency, immediately call 911 or go to the closest ER. You don't need to call the clinic first. It's an emergency when you:

- have nausea or vomiting that keeps you from keeping down liquids or medicines
- have very bad belly pain or pain over the transplant area
- stop making urine
- have chest pain
- have shortness of breath
- have a fever higher than 101°F (38.3°C)
- run out of rejection medicines over the weekend.

If you go to an ER that's outside of Vanderbilt, ask the ER doctor to contact the Vanderbilt transplant doctor on call through the Vanderbilt Access Center at (615) 875-4000. We need to know when you're in an ER at another hospital, especially if there's a plan for you to be admitted. In most cases, we'll want you to be transferred to Vanderbilt so we can care for you here.

Track your daily numbers

Every day you'll need to write down your blood pressure, weight, urine output, and blood sugar levels. Use the charts on pages 70 to 72 to keep track of these numbers.

- Record your blood pressure and temperature every morning and evening at about the same time.
- Weigh yourself every morning.
 - Use the same scale each time.
 - Every time you weigh yourself, wear clothes that weigh about the same.
- Measure and write down how much urine your body makes each day. Do this every day until your first appointment after surgery.

Track your blood sugar levels

If you have diabetes, we'll talk to you about keeping track of your blood sugar. It's important for you to do this. Any sudden change to your blood sugar levels may mean there's a problem with your new kidney or pancreas.

If you've had a pancreas transplant, you'll need to monitor both your fasting and your non-fasting blood sugars.

- Take your fasting blood sugars at least 8 hours after you last ate or drank anything but water.
- Take your non-fasting blood sugars at least 2 hours after you last ate or drank anything but water.

Drink enough fluids

- For most patients, we recommend drinking 2 to 3 liters (65 to 100 ounces) of fluids each day.
- Your fluids should be mostly water and non-caffeinated drinks.
- Limit caffeinated drinks to 1 or 2 a day.

Take care of your incision

Keep your incisions clean and dry as they heal. If there's an open area, your doctor may ask you to shower to help clean the wound. DO NOT scrub your incision. Sometimes patients leave the hospital with a small drain that removes extra fluid from the surgical site. If you leave the hospital with a drain in place, the nurses will teach you how to empty the drain and record the amount of drainage that you have.

- You may shower. But do not take baths until the staples are removed from your incision and it's completely healed.
- Do not lift, push, or pull anything that weighs more than 5 pounds until your staples are removed.
- You may drive after your staples are out or after 2 weeks, but only if you haven't taken narcotic pain medicine for at least 24 hours.

Stay healthy while caring for pets

After surgery and for the rest of your life, do not clean birdcages or change litter boxes. The medicines you take to prevent rejection mean that bacteria around animal waste are now more likely to make you sick. You could breathe in the bacteria or get it on your hands or clothing and eventually get an infection.

Keep up with your care

Your doctor will follow your health for the rest of your life to make sure your transplanted organs are working like they should. Be sure to keep all of your follow-up appointments.

For the first couple months after transplant, most of your care will be at Vanderbilt. After that, we encourage you to follow up with your local kidney doctor and involve them in your long-term care. This will be in addition to your ongoing care with your Vanderbilt kidney transplant providers.

You'll see your kidney doctor (nephrologist) at one of these clinics:

- Medical Specialties Clinic
1301 Medical Center Drive, Suite 2501
Nashville, TN 37232
- Vanderbilt Hepatology and Liver and Kidney Transplant Center
1500 21st Avenue South, Suite 3400
Nashville, TN 37232

You'll also see a kidney transplant surgery nurse practitioner at the Vanderbilt Hepatology and Liver and Kidney Transplant Center. They work closely with your transplant surgeon.

Going back to work

- If you work, we encourage you to go back to work as soon as possible after transplant. Most working patients go back to their jobs 2 to 3 months after transplant. Of course, this depends on the type of work you do.
- Your social worker will help you make plans for going back to work. We also have a return-to-work specialist who will be happy to help you get back to work or even change to a new kind of job.





Sexual activity

You may have sex as soon as you're ready after your transplant. Sexual activity will not hurt your kidney since it's well protected. We do recommend that you stay safe when you have sex. Safe sex is defined as using a condom and avoiding high risk behaviors such as having multiple sexual partners.

Sex drive

If you feel that you don't have your normal sex drive, if intercourse causes pain, or if you have any problems regarding your sexuality, talk to your transplant team. We're concerned about your overall health and well-being, which includes your sexuality.

If you're male

Kidney disease, diabetes, or some of the medicines you take after transplant can cause impotence. If this is a problem for you, talk to your transplant team. We can suggest further treatment.

If you're female

Birth control

If you're a female of child bearing age and you haven't been surgically sterilized, it's important for you to use birth control after transplant. You may be taking medicines that could harm a fetus. It's important that you don't become pregnant while taking such medicines.

Do not use any kind of birth control (except condoms) without talking to your doctors. Talk to your gynecologist about your birth control. You, your gynecologist, and your transplant doctor must all agree on the kind of birth control you plan to use. All medicines, including birth control medicines, affect your liver. Some of these medicines can harm someone who has had a transplant. These medicines may also interact with other medicines you take.

Gynecology appointments

Stay up to date with your gynecology appointments and your yearly pap smears.

Pregnancy

It's best to wait at least 1 year after transplant before becoming pregnant. Talk with your transplant team before trying to become pregnant.

Medicine refills

Always make sure you ask for refills while you still have 7 to 10 days of medicine left. This will help to make sure you get them in time.

There are several ways you can ask for your refills.

Call center

You may call the Transplant pharmacy at:

- Local: (615) 343-3658
- Toll-free (800) 408-3626

The phone lines are open Monday to Friday, from 8:00 a.m. to 5:00 p.m., on Saturday from 8:00 a.m. to 4:00 p.m. We're closed on Sunday.

My Health at Vanderbilt

You can ask for a refill in your My Health at Vanderbilt account.

Pharmacy pick-up

You can pick up your medicines Monday to Friday, 10:00 a.m. to 5:30 p.m., at:

Outpatient Pharmacy
The Vanderbilt Clinic
1301 Medical Center Dr., Suite 1815
Nashville, TN 37232

On weekends, you can pick up your medicines from 10:00 a.m. to 4:00 p.m. at:

Medical Center East Pharmacy
1215 21st Avenue South, Suite 1006
Nashville, TN 37232

Refill Form



VanderbiltHealth.com/
TransplantRefill

Pharmacy Website



VanderbiltHealth.com/
TransplantPharmacy

Potential complications of kidney transplant

Common complications after a kidney transplant are:

- rejection
- infection
- high blood pressure
- diabetes
- delayed kidney function
- ureter complications
- bleeding
- thrombosis
- recurrence of original disease
- dehydration.

Rejection

Organ rejection is a complication of kidney transplant. Rejection happens when the body's immune system recognizes the new organ as something foreign in the body and tries to destroy it.

Organ rejection can happen at any time throughout the life of your new organ. There are two major types of kidney transplant rejection—acute and chronic.

Acute rejection

Acute rejection is a sudden reaction of your immune system against your new kidney. As many as 1 in 5 transplant patients may have this type of rejection at some point in time. Acute rejection causes kidney function to decrease. If acute rejection isn't treated, the transplanted kidney will be destroyed by your immune system.

- If it happens, acute rejection usually happens during the first year after transplant. But it can happen at any time.
- An acute rejection episode will require you to return to the hospital.
- If treated early, kidney function will almost always improve.
- If your body totally rejects your new kidney, you'll need dialysis. The new kidney may or may not need to be taken out of your body.

Signs of acute kidney rejection

- increase in temperature
- sudden weight gain
- sudden ankle swelling
- decrease in how much urine you make
- pain, tenderness, or swelling of the new kidney
- elevated creatinine levels.

Sometimes, the only sign of acute kidney rejection is an increase in creatinine noted in your blood work. That is why it's so important to follow up in the transplant clinic and have your routine blood work done. For the first 2 months after transplant, you'll have your labwork done at least once a week as your doctor directs.

Treating acute kidney rejection

There are several ways to treat an acute rejection episode. The goals of treatment are to stop your immune system from rejecting your kidney and to prevent any further damage.

- One treatment is to give you large doses of steroids through an IV. This treatment may cause you to feel agitated and restless. This feeling is temporary and will usually go away in a few hours.
- Other strong immunosuppressive drugs may also be given to you through IV.

Chronic rejection

Chronic kidney rejection is when there's a slow decrease in overall kidney function. This type of rejection usually happens months or years after the transplant. Because this rejection is a slow process, dialysis may not be needed for quite some time, possibly years.

Treating chronic kidney rejection

The cause of this type of rejection is not clearly understood. Treatment with medicine doesn't work as well as it does with cases of acute rejection.

If your body shows signs of a rejection episode, you may have a kidney biopsy and ultrasound. If tests confirm chronic kidney rejection, the amount of anti-rejection medicine you take will be increased or a different combination of anti-rejection medicines may be prescribed.

Infection

Infection is the most common complication of transplant. The anti-rejection medicines that you take after transplant will lower your body's ability to fight infection. This puts you at greater risk for developing an infection.

Common infections after transplant

The most common infections after transplant are from dormant viruses that you already had in your body before surgery. It's also possible for a dormant virus in the donor kidney to cause an infection in your body.

Other common infections are:

- lung infections
- infections of the surgical incision
- bladder or urinary tract infections.

Signs of infection

- fever
- tiredness
- diarrhea or vomiting
- redness or drainage around your incision
- a cough or sore throat.

Treating infection

If you get an infection, it will be treated with antibiotics, anti-viral medicines, or anti-fungal medicines. When needed, the infectious disease team at the medical center will consult with the transplant team about your case.

Preventing infection with medicine

After your transplant, you may take anti-bacterial, anti-viral, and anti-fungal medicines for a certain period of time to help prevent infection. If you get an infection after leaving the hospital, you'll probably be given antibiotics and treated as an outpatient. Sometimes, however, people do need to come back to the hospital to be treated with IV medicines.

Handwashing to prevent infection

One of the best ways to prevent infection is to keep your hands clean.

- Always wash your hands with soap and water before you eat.
- Always wash your hands with soap and water after you go to the bathroom.
- When you're out, you may also use antibacterial gels to clean your hands.
- When people come to visit you, make sure they're well. Your visitors should also always wash their hands when they come to visit you to prevent the spread of germs.

Other ways to prevent infection

- Do not see your dentist for at least 90 days.
- Do not work in a garden, dig in dirt, or mow your lawn for at least 8 weeks.
- Do not get routine vaccines (flu, pneumonia, Covid-19) for 90 days.
- Never get live vaccines.

High blood pressure

Some patients develop high blood pressure after transplant. If you develop high blood pressure after your kidney transplant, your doctor will prescribe you medicine to regulate it. If you already take blood pressure medicine, your doctor may change your dose or type of medicine.

Diabetes

Some anti-rejection medicines can cause diabetes.

- Diabetes is an increase in the level of sugar in your blood.
- Symptoms of diabetes include:
 - increased thirst
 - increased urination
 - blurred vision.

You can help control your blood sugar by eating a healthy diet, exercising, and keeping a healthy weight. If needed, a medicine called insulin may be prescribed to help control your blood sugars. If you do develop diabetes, we'll give you special instructions for managing it.

If you have to start taking insulin to control your blood sugar, we'll teach you how to give yourself the injections.

Delayed kidney function

If you get a kidney from a donor who has died, it can sometimes take longer for it to start working in your body. To get an idea of why this happens, it helps to think of your new kidney as being “asleep” (this is called acute tubular necrosis, or ATN).

This condition can happen in about 25 percent of patients who get a kidney from a donor who has died. It can last a few days or as long as 2 to 4 weeks.

What if this happens to me?

- You may need dialysis until the kidney starts to work on its own.
- You should plan to stay within 1 hour of Nashville for 2 to 4 weeks.
- We'll do blood tests 2 to 3 times a week.
- We'll see you in the transplant clinic 2 times a week.
- You'll need to keep track of:
 - how much you pee
 - how much you drink
 - your weight
 - your blood pressure.

Ureter complications

Each kidney has a tube (called a ureter) that connects it to the bladder. It's how urine leaves the kidneys. When you have a transplant, the donor kidney and ureter are transplanted together. The end of donor ureter is then attached to your bladder. In the weeks after transplant, there's a risk of the new ureter leaking or becoming blocked after surgery.

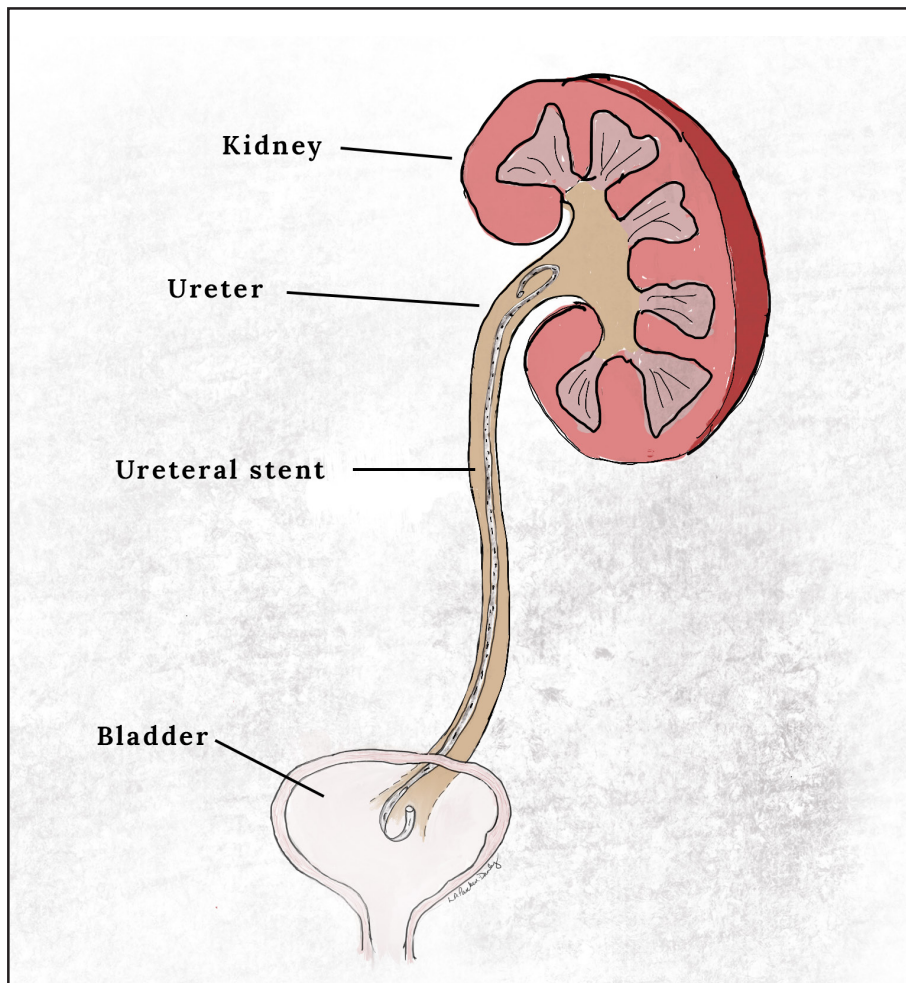
Signs of problems with your new ureter include a sudden decrease in urine output or pain. An ultrasound will usually show us if you're having this problem. If the new ureter becomes disconnected, blocked, or starts to leak, you'll likely need surgery to fix it.

Your surgeon will put a stent inside the new ureter to help prevent problems

A ureteral stent is a thin tube that is used to support the new ureter while you recover. It will be put in at the time of transplant. The stent helps keep urine moving from your kidneys to your bladder and gives the new connection time to heal.

It's normal for the stent to cause some bleeding

It's normal to have some blood in your urine while the stent is in your body. It's also possible to have bleeding for a few days after it's taken out.



Your stent will be removed 3 to 8 weeks after transplant

The procedure to take out a stent is called a cystoscopy. You'll have it done at Vanderbilt's outpatient urology clinic. It only takes a few minutes, and you'll be able to go home right after.

During the procedure, the provider will guide a cystoscope (a tube with a camera on the end) through your urethra and up to your bladder. The camera helps the provider find the stent so it can be removed. A topical numbing medicine will be used to help keep you from having pain.

Bleeding

Sometimes, a new kidney may begin to bleed. This may require a blood transfusion. On rare occasions, a second surgery may be required to control the bleeding.

Thrombosis

In about 1 percent of patients, the blood vessels to the kidney clot after transplant. This is called thrombosis. If this happens, the kidney cannot work and must be removed. You'll go back on dialysis, and you may be listed for another kidney transplant.

Recurrence of disease

In some cases and over time, the original disease that caused your old kidney to fail can develop in your new kidney as well.

Examples of such diseases are:

- MPGN (membranoproliferative glomerulonephritis)
- FSGS (focal segmental glomerulosclerosis)
- IgA nephropathy
- diabetes.

If you had any of these diseases before transplant, your transplant doctor will closely monitor your lab work and urine for any signs of recurrence.

Dehydration

After transplant, you'll need to drink more fluids than you did when you were on dialysis. It's common for people with kidney transplants to sometimes get dehydrated.

Dehydration can make you:

- feel dizzy or light-headed
- develop low blood pressure
- have elevated creatinine levels.

You may have times when you have to check-in to the hospital for a brief stay to get fluids through an IV.

Potential complications of pancreas transplant

The most common complications after a pancreas transplant are:

- rejection
- infection
- bleeding
- blood clotting in the pancreas
- enteric leak (when pancreatic digestive juices leak into the place where the pancreas is connected to the intestine)
- pancreatitis (inflamed pancreas)
- dehydration.

It's not uncommon for pancreas transplant recipients to be re-hospitalized with complications during the first 6 months after surgery.

Rejection

If you have rejection, it's a sign that your immune system has identified your new pancreas as unknown tissue and is trying to get rid of it. Preventing rejection with immune-suppressing medicines is the first priority.

Signs of rejection

It can be harder to detect early-stage rejection with pancreas transplants than it is with kidney transplants.

- Measuring blood amylase and lipase levels and being aware of belly or back pain and fever are ways of detecting pancreas rejection.
- Blood sugar levels aren't a useful tool for detecting pancreas rejection because blood sugar levels rise only when much of a pancreas's functions have been lost.

If you have signs of possible rejection after you've left the hospital, you may need to come back to the hospital for more tests or medicine.

Infection

The anti-rejection medicines you take after transplant will lower your body's ability to fight infection. This puts you at greater risk for developing an infection.

Common infections after pancreas transplant

The most common infections after transplant are from viruses that you already had in your body but were previously dormant. It's also possible for a dormant virus in the donor pancreas to cause infection in your body.

Other infections are:

- urinary tract infections
- wound infections
- pneumonia
- the collection of fluid or an abscess around the pancreas.

Signs of infection

- fever
- tiredness
- diarrhea or vomiting
- redness or drainage around your incision
- a cough or sore throat.

Checking for infection

If we think you might have an infection, we'll do tests to find out for sure if you have one. Possible samples we might test include blood, urine, or sputum (the substance coughed up from your lungs).

Treating infection with medicines

If you develop an infection, we'll treat you with a medicine that specifically targets that infection. The infectious disease team at the medical center will consult with the transplant team when necessary.

Preventing infection with medicines

After your transplant, you may be prescribed anti-bacterial, anti-viral, and anti-fungal medicines for a period of time to help prevent infection. If you were to get an infection after leaving the hospital, you'd probably be given antibiotics and treated as an outpatient. Sometimes, however, people do need to come back to the hospital for treatment with IV medicines.

Handwashing to prevent infection

One of the best ways to prevent infection is to keep your hands clean.

- Always wash your hands with soap and water before you eat.
- Always wash your hands with soap and water after you go to the bathroom.
- When you're out, you may also use antibacterial gels to clean your hands.

Blood clotting

Blood circulation in the pancreas is relatively slow. Because of this, clotting of blood in the pancreas is a possible complication of a transplant. Approximately 5 to 10 percent of pancreas transplants fail within the first week after surgery because of clotting. We'll probably give you a mild blood thinner to lower the chances of this happening.

Bleeding

Blood thinners (heparin, lovenox, aspirin) are often used after transplant to prevent clotting of the pancreas. These medicines raise the risk of bleeding around the pancreas. This might require a blood transfusion or even another surgery to stop the bleeding. If bleeding happens, it's usually within 2 to 3 days after surgery.

Enteric leak

Occasionally, pancreatic juices leak from the place the new pancreas connects to your intestine. This is called an enteric leak. If this happens, you may get severe stomach pains. The leak can be treated with a tube (drain) that's put in place by a radiologist during a CT scan or with another surgery.

Pancreatitis

Pancreatitis is when your new pancreas becomes inflamed or swells. It may be caused by trauma that happened to your new pancreas at any point from the time of the donor's death to the time of organ retrieval, storage, or implantation. Signs of pancreatitis include belly or back pain with abnormal lab results.

Pancreatitis usually happens within the first several days after surgery. It generally improves with the use of IV fluids alone.

Dehydration

After your transplant, you'll need to drink more fluids than you did when you were on dialysis. It's common for people with kidney transplants to sometimes get dehydrated.

Dehydration can make you:

- feel dizzy or light-headed
- develop low blood pressure
- have elevated creatinine levels.

You may have times when you have to stay in the hospital for a short time to get fluids through an IV.

Understand your medicines

Learn about your medicines and take them as prescribed

- One of the leading causes of organ rejection is not taking medicines correctly.
- Do not crush or cut a tablet unless you're advised to do so.
- If you're unable to take any of your medicines because you're vomiting, contact your doctor immediately.
- You should discuss any new medicine with your transplant team BEFORE you take it. Many medicines can interact with your anti-rejection medicine, including all over-the-counter and herbal medicines.
- Do not leave your medicines in your car. Store your medicines in a cool, dry place and away from direct sunlight. Do not allow liquid medicines to freeze.
- Store your medicines in their bottles or in a medicine organizer (pillbox).
- Be safe: Always keep all your medicines in a place where children and animals cannot get to them.
- Do not drive or operate dangerous machinery within 24 hours of taking narcotic pain medicine.
- Always bring your transplant medicines with you when you come to the clinic or if you're admitted to the hospital.

Keep track of your medicines

Keep a current list of your medicines with you at all times, including all non-prescription and herbal medicines.

Make sure you do not run out of your medicines

Make sure you always refill your medicines before you run out! Missing 1 or 2 doses of any of your medicines, or even taking your medicines late, can cause your body to reject your new kidney or pancreas.

If you ever have trouble paying for your medicines, tell your social worker

If you ever have problems paying for your medicines, your copays, or problems caused by changes to your insurance coverage, call your social worker right away. They can help you.

Keep track of your medicines when you travel

- Take your medicines with you if you're away from home for a long time.
- If you fly, carry your medicines with you.
- Do not check your medicines with your luggage.
- Take an extra 3 to 4 days of medicines in case you're delayed getting back home.

Tips to help you remember when to take your medicines:

- Get a pill box with days of the week and times on it.
 - Fill your pill box once a week.
 - Keep your pill box in a place where you'll see it often during the day.
- Make a chart of your medicines with the name of each drug, time of day you take each pill, and the number of pills you take at each dose. Then mark off the chart when you have taken each dose.
- If you have a smart phone, you can download and use a medicine reminder app.
- Set an alarm clock, kitchen timer, or alert on your smart phone to remind you when to take your medicines.
- It may be easier to remember to take your medicines at the right time if you take them when you're doing things you do every day, like with meals or when a certain TV show starts or ends.



Common medicines for transplant recipients

After transplant, you'll have to take various medicines for the rest of your life. The medicines in this section are the ones transplant recipients commonly take.

Prograf, Envarsus XR

- This medicine is also known as:
 - tacrolimus
 - FK506.
- It's an anti-rejection medicine used to stop your body from rejecting your new organ.
- It comes in 2 forms, with different instructions for each form.
 - Prograf (immediate release)
 - Envarsus ER (extended release)

Important

Do not take your regular morning dose on days when you have transplant follow-up appointments.

Possible side effects

- headache
- hand tremor
- hair loss
- high blood pressure
- increased blood sugar
- infection
- decrease in kidney function

Special instructions

- Do not eat grapefruit or drink grapefruit juice at any time while you're taking this medicine.
- Take your dose at the same time every day, 12 hours apart.

Neoral, Gengraf, Sandimmune

- This medicine is also known as cyclosporine.
- It's an anti-rejection medicine used to stop your body from rejecting your new organ.

Important

Do not take your regular morning dose on days when you have transplant follow-up appointments.

Possible side effects

- high blood pressure
- headache
- increased hair growth
- hand tremor
- gum over-growth
- infection
- decrease in kidney function

Special instructions

- Take your dose at the same time every day, spaced 12 hours apart
- Do not eat grapefruit or grapefruit juice at any time with this medicine.
- Do not store capsules outside original dose package for more than seven days.
- Take this medicine with food.

Rapamune

- This medicine is also known as sirolimus.
- It's an anti-rejection medicine used to stop your body from rejecting your new organ.

Important

Do not take your regular morning dose on days when you have transplant follow-up appointments.

Possible side effects

- anemia
- higher cholesterol levels
- decreased wound healing
- mouth ulcers
- edema

Special instructions

- Take your dose at the same time each day.
- Do not eat grapefruit or drink grapefruit juice any time with this medicine.
- Take this medicine with food.

Zortress

- This medicine is also known as everolimus.
- It's an anti-rejection medicine used to stop your body from rejecting your new organ.

Important

Do not take your regular morning dose on days when you have transplant follow-up appointments.

Possible side effects

- anemia
- higher cholesterol levels
- decreased wound healing
- mouth ulcers
- edema

Special instructions

- Take your dose at the same time each day, spaced 12 hours apart.
- Do not eat grapefruit or drink grapefruit juice any time with this medicine.
- Take this medicine with food.

CellCept, Myfortic

- This medicine is also known as mycophenolate.
- It's an anti-rejection medicine used to stop your body from rejecting your new organ.

Possible side effects

- diarrhea
- feeling sick to your stomach or throwing up

Special instructions

- Pills should always be swallowed whole.
- Never crush, chew, or open these pills.
- This medicine can cause birth defects when used during pregnancy or by the father at the time his sexual partner becomes pregnant.
- Use 2 different types of birth control to avoid pregnancy when you're using this medicine and for 6 weeks after stopping this medicine, unless you or your partner has an IUD, tubal ligation, or vasectomy. The 2 methods of birth control you can choose are:
 - two different barrier methods at the same time (a condom and a diaphragm)
 - one barrier method along with a hormonal method.
- Take this medicine with food.

Prednisone

This is an anti-rejection medicine used to stop your body from rejecting your new organ.

Possible side effects

- anxiety and mood swings
- difficulty sleeping (insomnia)
- acne, thin skin, or rash
- weight gain
- higher blood sugar levels
- swelling of face or feet
- stomach ulcers

Special instructions

Take this medicine with food.

Bactrim

- This medicine is also known as:
 - trimethoprim/sulfamethoxazole
 - TMP/SMZ
- It's used to prevent bacterial infections

Possible side effects

- rash
- greater sensitivity to sunlight

Special instructions

- If you get any skin rashes, tell your doctor.
- Take this medicine with food.

Dapsone

This medicine is used to prevent bacterial infections.

Possible Side Effects

- anemia
- rash

Special Instructions

Take this medicine with food.

Nystatin

This medicine is used to prevent thrush (fungal) infections.

Possible Side Effects

- feel sick to your stomach (nausea)
- belly pain

Special Instructions

Do not eat, drink, or brush your teeth for 20 minutes after your swish and swallow.

Valcyte

- This medicine is also known as valganciclovir.
- It's used to prevent viral infections.

Possible side effects

- feeling sick to your stomach
- vomiting

Special instructions

- Swallow tablets whole; do not crush.
- This medicine can cause birth defects when used during pregnancy or by the father at the time his sexual partner becomes pregnant.
- Use 2 different types of birth control to avoid pregnancy while you're using this medicine and for 6 weeks after stopping this medicine, unless you or your partner has an IUD, tubal ligation, or vasectomy. The two methods of birth control you can choose are:
 - two different barrier methods at the same time (a condom and a diaphragm).
 - one barrier method along with a hormonal method.
- Take this medicine with food.

Zovirax

- This medicine is also known as acyclovir.
- It's used to prevent viral infections.

Possible side effects

- headache
- feeling sick to your stomach or throwing up
- rash
- greater sensitivity to sunlight.

Special instructions

Take this medicine with food.

Mag-Ox

This medicine contains magnesium in the form of magnesium oxide. It's used to raise the levels of magnesium in your body.

Possible side effects

- diarrhea
- feeling sick to your stomach

Special instructions

Take this medicine with food.

K-Phos Neutral

This medicine contains phosphorus in the form of potassium phosphate. It's used to raise the levels of phosphorus in your body.

Possible side effects

- feel sick to your stomach
- throwing up (vomiting)
- diarrhea

Special instructions

Take this medicine with food.

Prilosec

- This medicine is also known as omeprazole.
- It's used to prevent acid reflux.

Possible side effect

headache

Special instructions

Take this medicine on an empty stomach.

Pepcid

- This medicine is also known as famotidine.
- It's used used to prevent acid reflux.

Possible side effect

headache

Special instructions

Take this medicine on an empty stomach.

Senokot-S

- This medicine is also known as sennosides or docusate.
- It's used to soften stools and prevent constipation.

Possible side effects

- diarrhea
- crampy or achy stomach pains

Special instructions

Do not take this medicine if you have diarrhea.

Stay safe when taking over-the-counter medicines

After transplant, you need to be very careful about the medicines you take, including over-the-counter medicines. Many of these medicines ARE NOT safe! Read these pages and make sure you and your caregiver know exactly which medicines are safe and which medicines are not.

Herbal supplements

Remember: herbals are medicines too. Avoid any herbal supplement unless it's been approved by your transplant doctor.

Call the kidney transplant office if:

- you're sick and have fever or chills
- you're sick and have symptoms that last longer than 5 days.

Remember:

The most acetaminophen (Tylenol) you can take in any single day is 3,000 mg!

You may take these over-the-counter medicines

For a cold or congestion, you may take:

- Tylenol Chest Congestion (contains acetaminophen and guaifenesin)
- Ocean Nasal Spray
- Dimetapp Long Acting Cough and Cold (chlorpheniramine and dextromethorphan)
- Tavist (clemastine)
- Zicam (zincum aceticum; zincum gluconicum)
- Coricidin HBP
- Vicks Vaporub
- Afrin Nasal Spray (oxymetazoline), but do not use for any longer than 3 days

For allergies, you may take:

- Tylenol Severe Allergy (acetaminophen and diphenhydramine)
- Claritin or Alavert (loratidine)
- Zyrtec (cetirizine)
- Allegra (fexofenadine)
- Benadryl (diphenhydramine)
- Flonase (fluticasone) nasal spray

For cough or sore throat, you may take:

- Tylenol Cough and Sore Throat (acetaminophen and dextromethorphan)
- Tylenol Cough and Sore Throat Nighttime (acetaminophen, dextromethorphan, and doxylamine)
- Delsym or Robitussin (dextromethorphan)
- Mucinex (guaifenesin)
- Mucinex DM or Robitussin DM (guaifenesin and dextromethorphan)
- Chloraseptic spray and lozenges

For a headache, you may take:

- Tylenol (acetaminophen) or Tylenol Extra Strength (Never take more than 3,000 mg of acetaminophen a day!)
- Tylenol PM (acetaminophen and diphenhydramine)

For arthritis, you may take:

- Tylenol Arthritis
- Capsaicin Cream

The medicines on this page are safe.

You may take these over-the-counter medicines

For diarrhea, you may take:

- Immodium (loperamide)
- Immodium Advanced (loperamide and simethicone)
- Metamucil
- Fiber-Con

For constipation, you may take:

- Colace (docusate)
- Dulcolax or Correctol (bisacodyl)
- Metamucil
- Fiber-Con
- Miralax
- Senna

For insomnia, you may take:

- Benadryl (diphenhydramine)
- Tylenol PM (acetaminophen and diphenhydramine)

For intestinal gas, you may take:

- Mylanta Gas (simethicone)
- Gas X (simethicone)

For indigestion or heart burn, you may take:

- Zantac (ranitidine)
- Pepcid (famotidine)
- Axid (nizatidine)
- Prilosec OTC (omeprazole)
- Prevacid OTC (lansoprazole)

The medicines on this page are safe.

NEVER take these over-the-counter medicines!

Do not take these pain relievers:

- Motrin, Advil, Midol (ibuprofen)
- Aleve (naproxen)
- Aspirin for pain relief (a baby aspirin for heart protection is OK)
- Excedrin (acetaminophen, aspirin, and caffeine)
- Anacin (aspirin and caffeine)
- BC Powder (aspirin, caffeine, and salicylamide)
- Goody's Powder (acetaminophen, caffeine, and aspirin)
- Doans (magnesium salicylate)
- Orudis KT (ketoprofen)

Do not take these decongestants:

- Sudafed (pseudoephedrine)
- Sudafed PE (phenylephrine)
- Alka-seltzer Cold

Do not take these stomach or bowel medicines:

- Maalox or Mylanta (magnesium hydroxide, aluminum hydroxide, and simethicone)
- Milk of Magnesium (magnesium hydroxide)
- Magnesium Citrate
- Fleets (sodium phosphate)
- Pepto Bismol
- Tagamet (cimetidine)

The medicines on this page are NEVER safe!

Eat right and keep a healthy weight

Good nutrition is key!

One of your major goals after transplant is to build and keep good eating habits. Good nutrition is essential to your recovery after transplant. Good nutrition is also needed to preserve the function of your newly transplanted organs. A good diet will help keep you healthy for life.

A good diet will also:

- help you keep a healthy weight.
- help you avoid some of the side effects of the anti-rejection medicines you'll take. Potential side effects of these medicines (especially, Cyclosporine [Neoral, Gengraf] and Tacrolimus [prograf, FK-506]) include:
 - weight gain
 - protein loss
 - elevated blood sugar
 - high cholesterol
 - high triglyceride levels
 - high blood pressure
 - swelling
 - thinning of the bones (osteoporosis)
 - increased infection risk, including sickness from bacteria in foods.

Building a nutrition plan

- We'll teach you how to create a healthy diet while you're still in the hospital after your transplant.
- Once you leave the hospital, you may ask us to refer you to a transplant dietitian if you have questions or think you may need help.
- If you're on Medicare, you'll have nutrition coverage for 3 years after transplant.

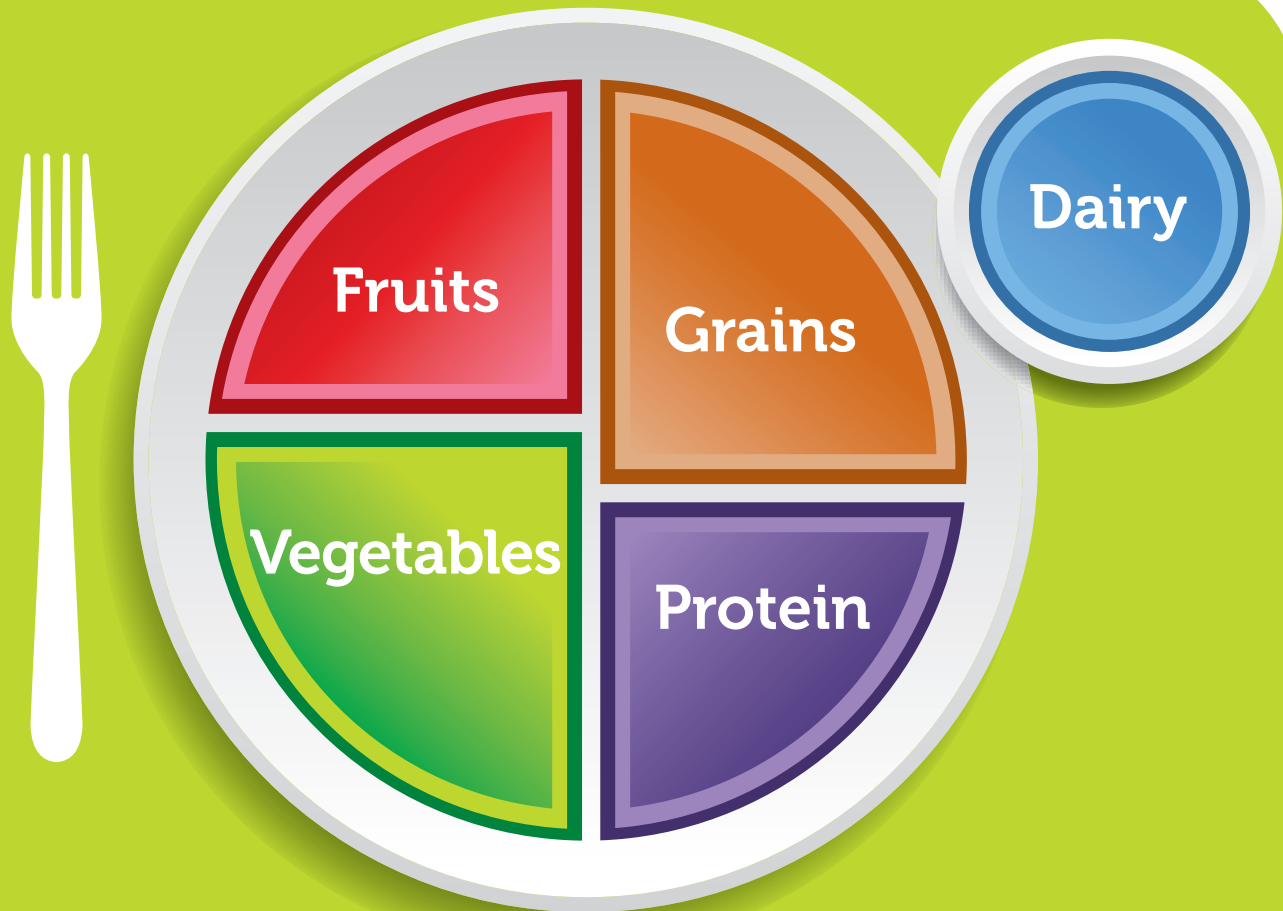


Eat a variety of foods every day

Food Group	Foods Included	Servings a Day	Serving Size
Grains	Whole grain bread, pasta, oatmeal, brown rice, unsweetened breakfast cereals, tortillas, grits	6 to 8 servings, based on age and activity level	1 slice of bread; ½ hamburger bun, hotdog bun, or English muffin; 1 cup dry cereal; ½ cup cooked rice, pasta, or cereal
Vegetables	Any vegetable or 100 percent vegetable juice	3 to 5 servings	½ cup cooked or 1 cup raw vegetables; 6 ounces of juice.
Fruits	Fruit or 100 percent fruit juice. DO NOT EAT: grapefruit, pomegranate, blood orange (or Seville), or star fruit in any form, whether as fruit or juice!	2 to 4 servings of fruits. Limit juice to no more than 1 serving a day	½ cup sliced fruit. 1 medium-sized whole fruit; 6 ounces juice. ¼ cup dried fruit.
Dairy	Skim or 1 percent milk, low-fat yogurt, and cheese	3 servings	1 cup milk or yogurt; 1 ½ ounces of cheese.
Protein	Lean meat, poultry, fish, dried beans, peas, eggs, nuts, seeds, peanut butter, cholesterol-free egg substitute	6 to 9 ounces (3 servings of 2 to 3 ounces each)	1 ounce meat, fish, poultry; ¼ cup dried beans or peas; ¼ ounce nuts or seeds; 2 Tbs peanut butter.
Fats	Oils, margarine, butter, mayonnaise, salad dressing	1 to 3 servings	1 tsp butter, margarine, or oil.



Building your plate like this will help you eat a balanced diet ...



Choose **MyPlate**.gov

Keep a healthy weight

Transplant can cause your body weight to change. For the first 4 to 6 weeks after surgery, we recommend that you simply focus on maintaining your weight. After you've healed, you should focus on staying at a healthy body weight that's based on your height. This will help prevent and limit common complications of transplant—such as heart disease, high cholesterol, high blood pressure, and imbalances in blood sugar.

Stay active

Regular exercise will help you control your weight. We suggest 30 to 60 minutes of physical activity every day.



Keep an eye on your appetite

Be aware that prednisone and some of the other medicines you'll take can cause you to feel hungry even though you've already eaten as much food as you need.

Tips for keeping a healthy body weight:

- Eat 3 meals daily.
- Limit snacking. But if you do snack, add in more vegetables such as carrots and hummus, low fat cheese and celery, and cucumbers in tzatziki Greek yogurt.
- Drink plenty of water. You may be thirsty, not hungry.
- Choose lean meats and low-fat dairy foods over high calorie and high fat meat options.
- Get plenty of fiber by adding more whole grains, vegetables, and fruits to your diet.
- Be mindful when you eat. Avoid eating in front of the TV. Sit at the table instead.
- Plan your meals ahead of time. It will keep you from having to make last-minute choices when you're hungry.

Eat enough protein

Your body needs protein to heal. It's important that you eat enough of it after your transplant. At each of your 3 daily meals, include foods that are high in protein, such as chicken, turkey, fish, lean beef, eggs, dairy, nuts, and beans.

A good rule of thumb is using the size of your fist to measure out your protein portion. You may also eat protein rich snacks between meals. Eating and drinking 3 servings of dairy each day will also help you get all the protein you need. Additional protein supplements are not necessary unless you're having difficulties with eating or you're losing weight.

Limit how much sugar you eat

If you already have diabetes, having a kidney transplant will not cure it. If you also had a pancreas transplant, your blood sugar levels may improve. But even if your levels improve, you still need to limit how much sugar you eat. Some medicines, such as prednisone, tend to raise blood glucose levels. This is true for you even if you never had diabetes or even if your blood sugar levels have improved.

Over time, high blood sugar levels can damage the kidneys and lead to a decline in kidney function. This is why it's so important for you to keep your sugar levels at a normal level. Limiting sugary foods will help you do this.

Avoid or limit	Substitute with
Sugar, honey, syrup	Splenda, Sweet N' Low, NutraSweet, Equal, Light syrup, Stevia
Jam, jelly	Sugar-free and light products
Candy, cookies, doughnuts, pastries, cake	Vanilla wafers, angel food cake
Sodas, colas, sugary drinks, sweetened teas	Water, tea sweetened with sugar substitutes
Fruit sweetened in syrup	Fruit packed in its own juice
Jello, pudding, custard	Sugar-free jellos, puddings, and custards

Carbohydrates

Carbohydrates are foods that can raise your blood sugar. Foods that contain carbohydrates include:

- breads, crackers, and cereals
- pasta, rice, and grains
- starchy vegetables such as potatoes, corn, and peas
- beans and legumes
- milk, soy milk, and yogurt
- fruits, and fruit juices
- sweets such as cakes, cookies, ice cream, jam, and jelly.

The best way to control your blood sugars is to limit your sweets, cut out sugary beverages, and build your meals like the plate method that's pictured on page 35.

Eat a low-fat diet

After transplant, you need to limit the fat in your diet. This will help prevent or reduce problems like heart disease, high cholesterol, and obesity. A low-fat diet will also help you keep a good weight and stay healthy.

- Choose plant-based proteins that don't have cholesterol in them. Examples are beans, nuts, and tofu.
- Choose lean meat options such as chicken, turkey, fish, and low-fat dairy.
- Choose unsaturated fats such as avocado, nuts and seeds, and vegetable oils such as olive oil, canola, and sunflower oil.
- Limit saturated fats. This includes whole milk dairy, fatty meats, butter, ice cream, palm and coconut oils, and high-fat cheeses.
- Avoid all trans-fats. Foods that have trans-fats in them include processed and pre-packaged foods, margarine, fried foods, fast food items, convenience foods like frozen pizzas and snacks, and sweets including pies, cookies, and other pastries.

Cooking tips for a low-fat diet

- Braise, boil, steam, poach, or use an outdoor grill. These cooking methods require no added fat.
- Roast meats on a rack so fats can drip off while the meat cooks.
- When you bake fish or poultry, use tomato sauce to keep it moist. You can also dip it in skim milk and roll in seasoned bread crumbs or cornflakes so it bakes to a crunchy finish.
- Use plain, nonfat yogurt, fat-free mayonnaise, or sour cream as a base for salad dressings or in recipes.
- Make stews, gravies, and soups a day ahead of time. This makes it easy to skim the hardened fat off the top after they've cooled. Making them in advance also gives the flavors time to blend and develop.
- Always trim the extra fat off meat or the skin off chicken both before and after you cook them.
- When you cook with hamburger meat, choose extra lean ground beef that has less than 10 percent fat.
- Use non-stick sprays and non-stick pans to lower the fat in your cooking.

Eat less sodium (salt)

Sodium is a mineral found in many foods. Salt is the term commonly used when people talk about sodium. Your body needs some sodium to work properly, but most Americans eat 3 to 4 times more than they need every day!

Restrict your sodium intake to 2,300 milligrams each day. This is equal to 1 teaspoon of salt.

How too much sodium affects your body

Your body needs sodium to work. But too much sodium can be very harmful for transplant patients.

Eating too much salt can cause high blood pressure or make high blood pressure worse. This is because too much sodium causes fluid to build up in your tissues and blood. When this happens, your blood pressure goes up. Over time, high blood pressure may cause damage to your heart, liver, and lungs. It may make it hard for you to breathe. Too much fluid in the body may also increase your risk of having a stroke.



High blood pressure can also damage your new kidney. When you eat too much salt, the kidneys are forced to work over-time to try and get rid of the extra sodium and fluid that your body doesn't need. Kidney damage may cause your kidney function to be poor, which will result in even more fluid and waste build up in the body.

After transplant, you may not need to restrict your fluid intake, unless your doctor tells you to.

Tips for cutting back on sodium

- Do not add salt to your meals before or after cooking. Remember: 2,300 mg is your sodium limit for the day, and this is equal to just 1 teaspoon of salt! It's too easy for this to add up when cooking.
- Avoid eating processed foods. Eat more fresh foods instead.
 - Choose most of your fruits and vegetables whole from the produce section.
 - Choose fresh meats.
 - Choose frozen fruits, vegetables, and meats that do not have added sauces or seasonings.
- Avoid processed meats such as bacon, sausage, deli meats, and hot dogs.
- Be smart when eating out in restaurants. Restaurants, fast food, and convenience meals can be very high in sodium.
 - Look for the nutrition information either online or in the store before you make your choices. Keep track of how much sodium is in the foods you choose.
 - Let the server know that you want your food to be cooked without salt and that you would like your salad dressings and sauces on the side.
- Watch out for hidden sources of sodium. Avoid added sodium in sauces, condiments, dressings, and other things people often add to meals.

Remember: Sea salt is still salt!

Use food labels to make low-sodium choices

Food labels and packaging can help you make good choices and control how much sodium you eat. A good guideline is to only eat snacks that have less than 140 mg of sodium and to only eat meals that have less than 500 mg of sodium.

- "Salt-free" or "sodium-free" on a package means the foods contain less than 5 mg of sodium per serving.
- "Very low-sodium" means a food has less than 35 mg of sodium per serving.
- "Low-sodium" means a food has less than 140 mg of sodium per serving.
- Beware of foods that are described as "unsalted," "no added salt," or "reduced sodium." These foods might still be high in sodium.

How to read a food label

1. Check the serving size and the amount of servings per container.
2. Find the sodium row to find the total amount of sodium in milligrams. You want to choose a food that is low sodium. This means it will have less than 140 mg per serving.
3. Read the ingredients. Check for things that add sodium to food. These include baking powder, baking soda, brine, disodium, monosodium glutamate (MSG), sodium metabisulfite, sodium nitrate, sodium nitrite, sodium phosphate, and sodium propionate.

Nutrition Facts	
6 servings per container	
Serving size	1 cup (230g)
Amount per serving	
Calories	250
% Daily Value*	
Total Fat 12g	14%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 8mg	3%
Sodium 140mg	6%
Total Carbohydrate 34g	12%
Dietary Fiber 7g	25%
Total Sugars 5g	
Includes 4g Added Sugars	8%
Protein 11g	
Vitamin D 4mcg	20%
Calcium 210mg	16%
Iron 4mg	22%
Potassium 380mg	8%
*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Make eating a low-sodium diet easier

- Do not add salt to your food.
 - About one half of table salt is made up of sodium.
 - Remember: Just one teaspoon of table salt contains 2,300 mg of sodium!
- Take the salt shaker off your table.
- Do not add salt to your food when you cook.
- Do not use seasonings that contain the word “salt.”
- Do not use spices that are labeled as salt substitutes. They're very high in potassium. Too much potassium can be dangerous for some people after transplant.
- Experiment with herbs, spices, and fruit juices to add flavor to foods.

Watch out for processed foods!

According to the Centers for Disease Control and Prevention, 77 percent of sodium in the American diet comes from processed foods.

The top 10 processed food sources, are:

- breads and rolls
- cold cuts and cured meats
- pizza
- enhanced poultry
- soups
- sandwiches
- cheese
- pasta dishes
- meat dishes
- snack foods.

Low-sodium seasoning ideas

Blend #1 (for vegetables and meat)

1 teaspoon thyme
¾ teaspoon rosemary
1 teaspoon marjoram
½ teaspoon sage

Blend #2 (for vegetables, poultry, and meat)

¾ teaspoon marjoram
½ teaspoon oregano
½ teaspoon rosemary
½ teaspoon thyme
½ teaspoon sage

Blend #3 (for fish)

¾ teaspoon parsley flakes
½ teaspoon sage
¼ teaspoon paprika
¼ teaspoon onion powder
¼ teaspoon marjoram

Blend #4 (for meat, potatoes, and vegetables)

1 teaspoon dry mustard
½ teaspoon thyme
½ teaspoon sage
¼ teaspoon marjoram

Blend #5 (For meat, potatoes, and vegetables)

½ teaspoon garlic powder
½ teaspoon onion powder
¼ teaspoon ground celery seed
½ teaspoon dry mustard
¼ teaspoon thyme
½ teaspoon paprika
½ teaspoon white pepper



More low-sodium seasoning ideas

Try using these spices and herbs to add extra flavor to your food.

Beef: Dry mustard, marjoram, nutmeg, sage, thyme, pepper, bay leaf, basil, caraway seed, curry, dill, rosemary, savory onion, garlic.

Roast beef: Rub with pepper and ginger.

Goulash: Onions, bay leaf, tomato, paprika.

Pork: Sage, basil, caraway seed, thyme, marjoram, rosemary, chives, onion, garlic. Serve with applesauce or spiced apples.

Lamb: Mint, rosemary, curry, dill, whole cloves, sage, marjoram, garlic, onion. Rub chops with pepper and ginger before broiling. Serve with broiled pineapple rings.

Veal: Bay leaf, ginger, marjoram, curry, basil, savory, sage, thyme, garlic, onion. Rub chops with pepper and saffron.

Chicken: Paprika, thyme, sage, parsley. Serve with cranberry sauce or baked apples.

Special sausage: Mix fresh ground pork with sage and freshly ground black pepper.

Fish: Dry mustard, paprika, curry, bay leaf, lemon juice, lemon, margarine.

Egg: Black pepper, dry mustard, paprika, curry, green pepper, onion.



Serve with jelly.

Asparagus: Lemon juice, French dressing, grated nutmeg.

Cabbage: Mustard dressing, dill seed, margarine with lemon and sugar, vinegar.

Carrots: Parsley, mint, nutmeg, tarragon, chives.

Cauliflower: Nutmeg, bitters.

Cucumbers: Serve thinly sliced, raw. Combine with raw onion in vinegar.

Eggplant: Cook with tomatoes, bay leaf, oregano.

Green beans: Marjoram, lemon juice, nutmeg, dill seed, onion.

Sweet potatoes: Glaze with margarine and sugar or orange juice, sugar and cornstarch.

White potatoes: Mash and add freshly grated onion and nutmeg or chives. Or toss sliced potatoes with olive oil, rosemary, garlic powder, and black pepper and bake.

Rice: Cook and serve with honey or fresh fruits.

Squash: Onion, ginger, mace.

Choose these foods to lower how much salt you get

Food group	Foods we suggest
Grains	Bread, bagels, roll (no salted tops) Homemade bread made with low-sodium baking powder Cold cereals, especially shredded wheat and puffed rice Oats, grits, cream of wheat Pasta, quinoa, rice Popcorn, pretzels, or crackers (all with no salt) Corn tortillas
Proteins	Fresh meat and fish, turkey bacon (check nutrition label to make sure they're not packaged in a sodium solution) Canned or packed tuna (no more than 4 ounces at 1 serving) Beans and peas Soybeans and tofu Eggs Nuts or nut butters with no salt
Dairy	Milk or milk powder Plant milks such as rice or soy Yogurt, Greek yogurt Block cheese or low-sodium cheese in small amounts (Swiss, ricotta, and fresh mozzarella are lower in sodium than others) Cream cheese Low-sodium cottage cheese
Vegetables	Fresh and frozen vegetables with no added sauces or salt Homemade soups (no salt) Canned vegetables and soups (low sodium, sodium free, no salt)
Fruit	Fresh and canned fruits Dried fruits (raisins, cranberries, prunes)
Oils	Tub or liquid margarine Canola, corn, peanut, olive, safflower, or sunflower oils
Condiments	Fresh or dried herbs (basil, rosemary, sage, thyme, paprika, others) Ketchup (low sodium) Vinegar Lemon or lime juice Pepper, red pepper flakes, cayenne Hot sauce (limit to 1 to 2 drops) Salt-free seasoning mixes and marinades Vinegar and oil salad dressing

Do not eat these foods

Food group	Foods we suggest you stay away from
<p>Grains</p>	<p>Breads or crackers topped with salt Cereals (hot or cold) with more than 300 mg of sodium per serving Biscuits, cornbread, and other "quick" breads made with baking soda Packaged bread crumbs Seasoned and packaged rice and pasta mixes Self-rising flour</p>
<p>Proteins</p>	<p>Bacon, ham, sausage, pepperoni, hot dogs, and other cured meats Canned meats like chili, Vienna sausage, sardines Smoked fish and meats Frozen meals with more than 600 mg of sodium per serving Egg substitute with added salt</p>
<p>Dairy</p>	<p>Buttermilk Processed cheese spreads Cottage cheese (except low sodium) American or feta cheese Shredded cheeses String cheese</p>
<p>Vegetables</p>	<p>Canned vegetables (except salt-free, sodium-free, or low sodium) Frozen vegetables with seasonings and sauces Sauerkraut and pickled vegetables Canned or dried soups (except salt-free, sodium-free, or low sodium) French fries and onion rings</p>
<p>Fruit</p>	<p>Dried fruits preserved with additives that have sodium All types of olives</p>
<p>Oils</p>	<p>Salted butter or margarine</p>
<p>Condiments</p>	<p>Salt, sea salt, kosher salt, onion salt, garlic salt Seasoning mixes with salt Bouillon cubes Ketchup BBQ or Worcestershire sauce (except low sodium) Soy sauce Salsa, pickles, olives, relish Salad dressings like ranch, blue cheese, Italian, French</p>

Never eat or drink these fruits

- Grapefruit or grapefruit juice
- Pomegranate or pomegranate juice
- Blood orange or blood orange juice (also known as Seville oranges)
- Star fruit or star fruit juice

These fruits and juices, especially grapefruit, interact with your anti-rejection medicine. This can cause it to build up to toxic levels in your blood. The chart on the next page is a list of common drinks that contain or may contain grapefruit. You still need to check all your food labels since this list may not cover all the drinks that are currently available.



Do not drink these. They all have (or may have) grapefruit in them!

Coca Cola products	Dr. Pepper/7-Up products	Pepsi products
Canada Dry Citrus Blend	7-Up (all flavors)	Citrus Blast
Dasani Sparkling Pink Grapefruit	Country Time Lemonade	IZZE Sparkling Grapefruit
Fanta Grapefruit	Crush (all citrus flavors)	IZZE Fortified Sparkling Grapefruit
Fanta Grapefruit Lemon	Hawaiin Punch Mango Monsoon Juice Drink	Lipton Diet Green Tea with Citrus
Fanta Grapefruit Lemon-Lime	Hawaiian Punch Polar Blast Juice Drink	Naked Juice Cold Pressed Orange Grapefruit
Fanta Grapefruit Pineapple	Mistic Tropical Carrot	Ocean Spray Ruby Red Grapefruit Juice
Fanta Grapefruit Raspberry	Orangina	Ocean Spray Ruby Red Grapefruit Juice Drink
Fresca and Diet Fresca	Ruby Red Squirt	Propel-Citrus Punch with Calcium
Full Throttle Citrus Blend	Snapple (all citrus tea flavors)	Season's Harvest Grapefruit Juice Beverage
Fuze Tangerine Grapefruit	Squirt and Diet Squirt	Sierra Mist (multiple flavors)
Minute Maid Grapefruit Juice	Stewart's (all citrus flavors)	Sobe Energy Citrus Flavor
Nestea Citrus Green Tea	Sun Drop and Diet Sun Drop	Tropicana Pure Premium Golden Grapefruit Juice
Nestea Grapefruit Honey Green Tea	Sunkist (all citrus flavors)	Tropicana Pure Premium Golden Grapefruit Juice with Vit D
Powderade Citrus Blend	Venom Energy + Mango	Tropicana Pure Premium Ruby Red Grapefruit Juice
Simply Grapefruit	Venom Low Calorie Citrus Energy Drink	Tropicana Ruby Red Grapefruit Juice and Drink
Sunny D (all flavors)	Wink Citrus Soda	Tropicana White Grapefruit Juice
Vitamin Water Tropical Citrus		

Get enough calcium in your diet

You need 1,200 to 1,500 mg calcium each day. Use the table below to figure out how much calcium you get from foods every day. You may need to take a supplement if you're not getting as much as you need through foods.

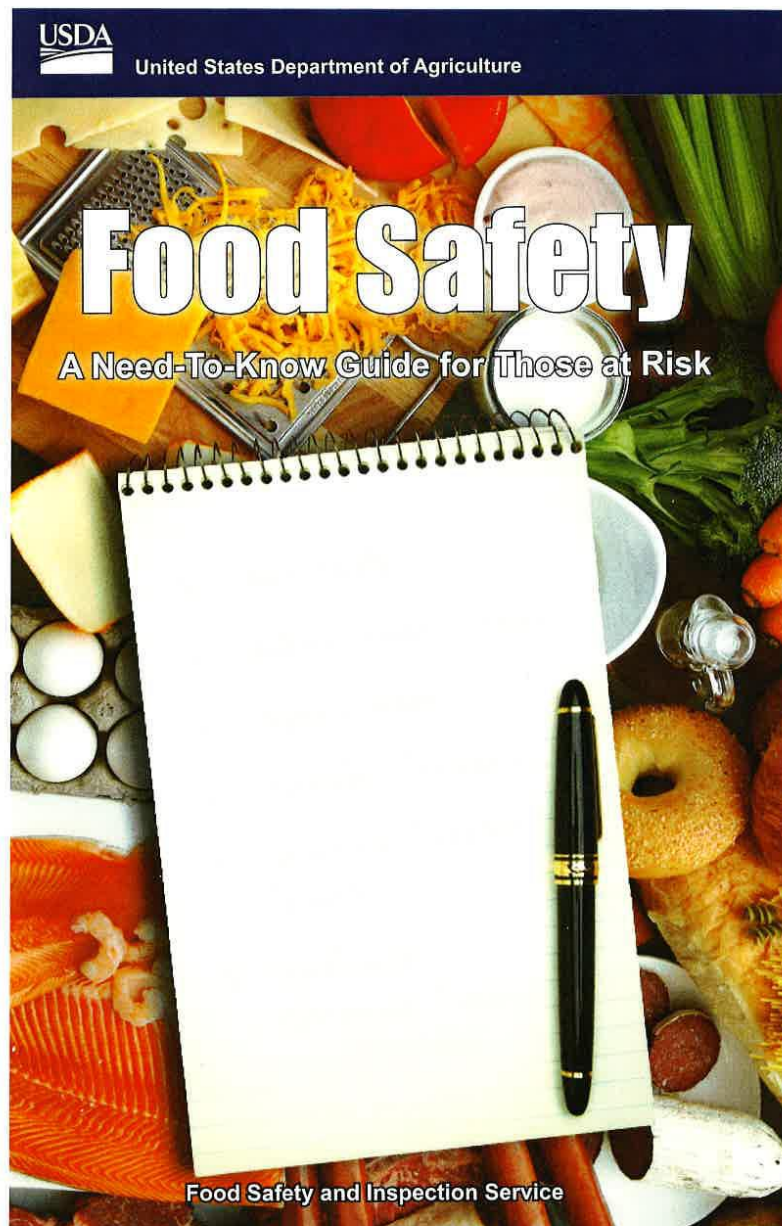


Food	Serving size	Milligrams (mg) of calcium
2% milk	1 cup	297
Skim milk	1 cup	302
Plain low-fat yogurt	1 cup	415
Fruit low-fat yogurt	1 cup	314
1% Cottage cheese	1 cup	138
2% Cottage cheese	1 cup	155
Mozzarella cheese, part skim	1 ounce	183
Ricotta cheese, part skim	½ cup	337
Light n' Lively, Sharp cheddar	1 ounce	192
Light n' Lively, Swiss	1 ounce	214
Pink salmon, canned with bones	3 ounces	212

Practice food safety

After your transplant, you need to take extra care to prepare food safely. This will help prevent illness caused by unsafe food.

Use the Food Safety for Transplant Recipients booklet we give you to learn what you need to do to lower your risk of getting foodborne illness or food poisoning.



Make good choices when you go out

Though it's best to eat home-cooked food as much as you can, it's possible to make good choices when you eat away from home. Some tips:

- Choose restaurants that have good food safety ratings. These are usually found at the front of each restaurant. If you can't find the rating, ask your server or the host.
- Review the menu before you go. It may be easier to make good choices if you plan ahead. You may be able to find all the nutrition information you need before you even get to the restaurant.
- Ask questions and talk to your server about any food concerns you have. Common food-safety questions include: how the food is cleaned or cooked, if the dairy or egg they use is pasteurized, and if the chef can cook your food without salt.
- Build your plate so it looks like the plate method that's pictured on page 35. Go for a plate that's half filled with fruits and vegetables.
- Limit how much you add to your food, such as sauces, condiments, or toppings.
- Choose water and other drinks that don't have any calories.
- Do not eat raw or undercooked foods, such as oysters, sushi, and undercooked eggs.
- Avoid buffets. They're a common source of infection. This includes fast food buffets and sandwich stations.
- At events and parties, be the first to serve yourself food. This will help keep you from getting germs from others who handle the food.
- At events and parties, always avoid food that has been sitting out for too long.

Watch your potassium levels if your doctor says to

If your medicine causes your potassium levels to be high, you'll need to avoid foods high in potassium. Your doctor will tell you if you need to eat a low-potassium diet. Information about potassium is now listed on the Nutrition Facts food label. The information on the next 2 pages will help you know which vegetables and fruits are high and low in potassium.

Potassium levels in vegetables

A serving of vegetables is ½ cup, unless otherwise specified.

Vegetables that are low in potassium (less than 200 mg per serving)

Asparagus	Corn	Kale	Rhubarb
Beets	Cucumber	Lettuce	Summer squash
Cabbage	Eggplant	Mushrooms	Tomato, ½ small
Carrots	Green beans	Mustard greens	Turnip greens
Cauliflower	Green peas	Okra	Turnips
Celery	Green pepper	Onion	Wax beans
Collard Greens	Hominy	Radishes	

Vegetables that are high in potassium (more than 200 mg per serving)

Baked beans	Great northern beans	Pumpkin	Sweet potato
Black-eyed peas	Lentils	Restaurant french fries	Tomato sauce
Broccoli	Lima beans	Restaurant potato salad	Tomato juice
Brussels sprouts	Navy beans	Sauerkraut	V-8 juice
Butter beans	Pinto beans	Soy beans	Winter squash
Chickpeas	Potato	Spinach	Yams
Crowder peas	Potato chips	Split peas	

Food tip: Lower the potassium in potatoes and squash when you cook them at home

When you make potatoes (white or sweet) or squash (butternut, acorn), first peel and dice them or cut them into small slices. Put them in a large pot and cover with water. Bring it to a boil. Then turn off the heat and carefully drain the water. Refill the pot with fresh water until your potatoes or squash are fully covered. Bring them to a second boil and cook until they're done. Carefully drain the pot again and prepare them as you normally would.

This method removes more potassium than just soaking them before you cook.

Potassium levels in fruits

Fruits that are low in potassium (less than 200 mg per serving)

Apple, 1 med	Canned pears, ½ cup	Peach, 1 med
Apple juice, ⅓ cup	Canned plums, ½ cup	Pear, 1 med
Applesauce, ½ cup	Canned peaches, ½ cup	Pineapple, 1 cup
Berries, ½ cup	Cherries, ½ cup	Pineapple juice, ⅓ cup
Canned fruit cocktail	Grape juice, ⅓ cup	Plum, 1 med
Canned fruit nectars	Grapes, ½ cup	Strawberries, ½ cup
Canned mandarin oranges, ½ cup	Lemon, 1 med	Tangerine, 1 med.
	Lime, 1 med	

Fruits that are high in potassium (more than 200 mg per serving)

Avocado	Dried dates	Mango	Prune juice
Banana	Dried figs	Nectarine	Raisins
Cantaloupe	Honeydew	Orange juice	Watermelon
Dried apricots	Kiwi	Papaya	

Potassium levels in other foods

All foods contain potassium, but fruits and vegetables are the biggest sources. Other foods such as dairy products, meat (any animal protein), nuts, seeds, and bran are good sources of phosphorus and magnesium. But they're also good sources of potassium. Be careful with your portion sizes so you get the right amount of potassium.

Work with your transplant dietician or nurse practitioner to keep all your minerals balanced by making the right food choices.

Increase the phosphorous in your diet if your doctor says to

Your doctor will tell you if you need to add more phosphorous to your diet. Information about phosphorous is not always listed on food labels. Use the information on this page to learn which foods are high in phosphorous.

These foods are high in phosphorous

Food	Phosphorous (mg)	Food	Phosphorous (mg)
All-bran cereal, ½ cup	345	Oatmeal, 1 cup	178
Almonds, ¼ cup	184	Pancake, plain, 2 4-inch	254
Beef, 3 oz.	225	Peanut butter, 2 Tbsp	120
Beef liver, 3 oz.	412	Pork chop, 3 oz	215
Brazil nuts, 1 oz. (6 to 8 nuts)	206	Salmon, 3 oz	214
Buttermilk, 1 cup	218	Sesame seeds, 2 Tbsp	124
Cheddar cheese, 1 oz.	145	Shrimp, 3 oz	174
Chicken, 3 oz	216	Soy milk, 1 cup	118
Cottage cheese (low fat), 1 cup	302	Sunflower seeds, 2 Tbsp	200
Crab, 3 oz.	240	Tuna, 3 oz	139
Crowder peas, 1 cup	268	Turkey, 3 oz	214
Crystal light		Vitamin water,	
"classic orange," 1 cup	100	"revive fruit punch," 1 cup	261
Great northern beans, 1 cup	292	Waffles, plain, 2 4-inch	278
Halibut, 3 oz.	244	Whole-grain cereal, 1 oz	100
Lentils, 1 cup	356	Whole-wheat bread, 1 slice	64
Lima beans, ½ cup	105	Whole-wheat muffin	167
Milk (skim), ½ cup	247	Yogurt (low-fat), 1 cup	250
Oat bran (cooked), 1 cup	261		
Oat bran muffin, 1	214		

Increase the magnesium in your diet if your doctor says to

Your doctor will tell you if you need to add more magnesium to your diet. Information about magnesium is not always listed on food labels. Use the information on this page to learn which foods are high in magnesium.

These foods are high in magnesium

Food	Magnesium (mg)	Food	Magnesium (mg)
Almonds, 2 Tbsp	86	Multigrain cereal, $\frac{2}{3}$ cup	16
Apricots, 3 medium	8	Oatmeal, 1 cup	55
Artichoke, 1 medium	180	Okra, 1 cup	41
Avocado, 1 medium	71	Oysters (cooked), 3 oz	19
Banana, 1 medium	33	Peanut Butter, 2 Tbsp	51
Black-eyed peas, $\frac{1}{2}$ cup	43	Plantain, 1 medium	49
Bran muffin	60	Potato, 1 medium	55
Brazil nuts, 2 Tbsp	4	Pumpkin seeds, 2 Tbsp	152
Broccoli, $\frac{1}{2}$ cup	19	Scallops, 3 oz	23
Brown Rice, $\frac{2}{3}$ cup	57	Sesame seeds, 2 Tbsp	101
Cashews, 2 Tbsp	74	Soy milk, 1 cup	46
Cereal, whole grain, 1 oz	50	Soybeans, $\frac{1}{2}$ cup	74
Chicken 3.5 oz	27	Spinach, $\frac{1}{2}$ cup	78
Chickpeas, $\frac{1}{2}$ cup	40	Sunflower seeds, 2 Tbsp	100
Halibut, 3 oz.	90	Swiss chard, $\frac{1}{2}$ cup	76
Kiwi fruit, 1 medium	23	Tofu, $\frac{1}{2}$ cup	118
Lentils, $\frac{1}{2}$ cup	35	Whole-wheat bread, 1 slice	24
Lima beans, $\frac{1}{2}$ cup	40	Whole-wheat English muffin	47
Mackerel, 3 oz	65	Whole-wheat pasta, 1 cup	42
Milk, 1 cup	34	Yogurt (low-fat), 1 cup	26

More ways to stay healthy

Stay active

Regular exercise after transplant is as important as eating a healthy, balanced diet. Exercise will help you:

- control weight gain
- keep your heart and body healthy
- increase your energy
- lower your stress
- improve your sleep
- feel good emotionally
- improve your digestion
- have good posture.



Exercising safely

- After your surgery, you need to take things slowly. Pace yourself. Rest when you're tired.
- For the first 6 weeks after surgery, do not lift anything that weighs more than 5 pounds. This includes children, pets, and groceries.
- For the first 2 months after surgery, avoid hard exercise. This includes contact sports like football, basketball, and hockey, as well as jogging, tennis, and weight lifting.
- Avoid any activity that causes discomfort to your incision or could possibly result in a blow to the area of your new organ.
- Always talk to your doctor or nurse before you start any new exercise plan.
- Exercise you might consider includes biking, swimming, and walking.

As you recover, it may seem as if there is a fine line between doing enough to get your body fit and doing too much. If you have any questions or concerns about your level of activity, talk with your transplant team.

Building strength and endurance

It's important for you to regain your muscle strength and overall endurance after transplant. But don't do too much too soon. You should gradually increase your activity over time.

- When you first leave the hospital, try to walk for 5 to 10 minutes a day. When that becomes easy for you, gradually increase the time that you walk until it reaches at least 30 minutes a day.
- As you heal completely, you should plan to get at least 30 to 60 minutes of physical activity every day.

These exercise guidelines are the same that are given to everyone to stay healthy.

Staying motivated

Some things you can try:

- Find organized programs designed specifically for transplant patients.
- Find a friend or support person who will exercise with you.
- Try an exercise video.
- Join the YMCA or a gym.
- Talk to us about any questions about your personal exercise plan or any issues you have about exercising.



Prevent infection

The medicines you'll take for the rest of your life will make you more prone to getting infections. The good news is that you can help prevent infection with simple, good habits.

Some of these things you'll need to do for the rest of your life. Others may be lifted in time. Your transplant doctor or nurse practitioner will tell you when some of these restrictions may be lifted.

Tips for preventing infection:

- Stay away from people who are obviously sick with the flu or a cold.
- Try to avoid children with chicken pox or strep throat.
- Wash your hands with soap and water before you eat and after you go to the bathroom. This is one of the best ways to prevent infection. When you're out of the house, you may also use anti-bacterial gels to clean your hands.
- Shower or bathe regularly.
- Clean cuts and scrapes right away with soap and water; then apply an antiseptic and a bandage.
- Do not, under any circumstances, change the litter in the cat box or birdcage without wearing gloves. This could cause a serious infection. Avoid cat scratches.
- For 8 weeks after your transplant, do not garden, dig in the dirt, or mow the lawn without wearing gloves. Doing any of these activities without gloves could cause serious infection.
- Keep your fingernails and toenails clean and trimmed. If your toenails are hard to manage or are ingrown, see a foot specialist.
- Talk to your doctor about getting the flu and pneumonia vaccines. Neither vaccine contains live viruses. After 3 months, both vaccines will be safe for you to have.
- Do not get any vaccine that contains a live virus, such as the smallpox or polio vaccine.
- Talk to your doctor if someone in your house will get a live virus vaccination for a virus you have not already been vaccinated against, such as chickenpox, zoster, oral polio, or diphtheria
- Do not smoke. And do not expose yourself to second-hand smoke.
- Avoid community whirlpools.
- Avoid swimming in lakes or ponds.



Take care of your skin

Transplant patients have a higher risk of getting skin and lip cancers. This risk increases with time. You must always protect your skin from the ultraviolet rays of the sun that cause skin cancers.

- Always use sunscreen (at least SPF 35) before going outside. Every 2 hours while you're outside, apply sunscreen again.
- Do not use tanning beds.
- Regularly check your skin for any unusual skin or mole changes.
- We recommend that you visit a dermatologist once a year.

Get your regular check-ups and screenings

See your primary care doctor regularly, and have the routine screenings he or she recommends for you.

Take care of your eyes

Visit your eye doctor once a year.

Take care of your teeth and gums

- Brush your teeth after each meal and at bedtime.
- Floss your teeth gently every day.
- Examine your mouth every day, and call your doctor or nurse if you have sores, blisters, or white spots.
- Visit your dentist every 6 months.
- Make sure the dentist knows what anti-rejection medicines you take before they do any dental work.
- Do not plan any routine dental work until 3 months after your transplant.
- To prevent infection, you may need to take an antibiotic before having some types of dental work. Regular dental cleanings usually do not require you take an antibiotic. Talk to your kidney doctor about this. He or she will tell you what you should do.
 - Amoxicillin is usually the antibiotic of choice.
 - If you're allergic to amoxicillin, you can take clindamycin (Cleocin) instead.
 - If you're taking Prograf or Neoral, you should not take erythromycin, clarithromycin (Biaxin), or dirithromycin (Dynabac).
- The medicine Neoral can cause an overgrowth of your gum tissue that can become swollen and painful. Ask your dentist to suggest oral hygiene measures to relieve the discomfort.

If you're male

Do a testicle self-exam every month. Call your doctor if you see or feel any abnormal or unusual lumps.

If you're older than 50

- Get screened for prostate cancer once a year.
- Talk to your doctor about having a screening colonoscopy.

If you want to have a child

Although men may father children at any time after transplant, talk to your doctor before you try to conceive. It's important for you to be sure that the medicines you're taking, such as CellCept, will not harm a fetus.

If you're female

- Have a pap smear once a year.
- Do a breast self-exam every month. The best time to do this is one week after your period ends.
- Talk to your transplant doctor or nurse about your method of birth control. Your body may begin making eggs again 2 to 6 months after your transplant surgery and even before your regular menstrual periods return. This is why birth control is highly recommended.

If you decide to become pregnant

If you decide to become pregnant after your transplant, it's very important to discuss this with your transplant doctor or nurse practitioner in advance. Some of the medicines you'll be on may not be safe for you to take during pregnancy.

- Avoid pregnancy for at least 1 year after your transplant.
- If you're taking the medicine CellCept, it's important that you avoid pregnancy at all times while you're taking it. If you decide you want to become pregnant, talk to your doctor first so you can talk about alternative medicines.

If you use tampons

Choose the smallest size needed to meet your needs. Change tampons often to avoid getting an infection.

If you're older than 50

Talk to your doctor about having a colonoscopy screening.

Take care of your emotional health

It's common and even healthy for transplant recipients and their loved ones to have many different emotions throughout the transplant process. These feelings will vary from person to person. Everyone's responses are different. It's important to understand some of the reasons for your stressors and how to successfully manage them.

How physical stress may affect your emotions

It's common for emotional distress, like sadness or frustration, to increase during times of physical discomfort or when medical symptoms are present. This will improve as you get better.

Depression

It's very unlikely that you'll develop clinical depression following your transplant. (A person who is clinically depressed often loses interest in most activities and may have difficulty concentrating, have feelings of sadness, have less energy, sleep badly, and have a low appetite.)

However, it would not be uncommon if you feel sad or let down for a short period of time following your transplant.

Anxiety

You may also experience anxiety, worry, and fear during the transplant process. Such emotions are normal, and even healthy. Many patients, for example, have a fear that their bodies will reject their new organs. They also worry about what their lives and futures after transplant will be like. Again, keep in mind that these are normal thoughts and emotions.

Stress

Stress is a natural part of our daily lives; it's both healthy and necessary. But too much stress can be harmful. Emotions brought on by the stress of having a transplant include sadness, frustration, and anger.

To help lower your stress:

- get enough sleep
- do not smoke, use any form of nicotine, drink alcohol, or do illicit drugs
- do things that relax you, such as meditation, yoga, baths, reading, and listening to music.

Coping techniques

Coping refers to the way people react in the face of a challenge (such as getting a transplant) and how they comfort themselves in response to stress. Of course, not all ways of coping are healthy. Before your surgery, think of ways you have of coping that are healthy. Try to use these healthy coping techniques instead of unhealthy ones.



Learn as much as you can

It often helps to get as much information as you can about your medical condition. The more you know about what to expect and what you'll need to do throughout the transplant process, the more prepared you'll be. Knowing more will also help you have more realistic expectations, which can often lower stress.

Find support

Spend time with friends you can talk with about your feelings. You can also find support groups to join. It's important to have a place where you can talk about how you feel. Resources to help you find support are listed in the next section of this book, on page 65.



Patient tools and resources

Helpful organizations

There are many national and local organizations dedicated to providing information and support to transplant recipients. We encourage you to get as much information as you can as you go through this difficult time in your life.

The following is only a sampling of the resources available to you, and one resource will likely lead you to another.

If you live outside of middle Tennessee, you may have local resources in your area.



National Kidney Foundation

(615) 427-3207, Middle Tennessee
(855) 653-2273, NKF Cares helpline
Email: nkfcare@kidney.org
Web: Kidney.org

Children's Organ Transplant Association

(800) 366-2682
Web: COTA.org

American Association of Kidney Patients (AAKP)

(800) 749-2257
Email: info@aakp.org
Web: AAKP.org

Polycystic Kidney Research Foundation

(816) 931-2600
Email: pkdcure@pkdcure.org
Web: PKDCare.org

Transplant Recipients International Organization, Inc.

(813) 800-8746
Email: info@trioweb.org
Web: TrioWeb.org

Tennessee Kidney Foundation (TKF)

(615) 383-3887, Middle Tennessee
Web: TennesseeKidneyFoundation.org

Writing to your donor family

Tennessee Donor Services is a non-profit organization that was chosen by the federal government to manage organ donation in Middle Tennessee. The organization helps transplant recipients and donor families communicate in writing. All communication is completely anonymous and all identities are kept confidential.

The decision to write to your donor's family is a very personal one. Whether or not you decide to write to the donor family is your choice.

General information you might include if you decide to write a letter

- the state in which you live (not city)
- your job
- your family situation such as marital status, children, or grandchildren (do not include any last names)
- your hobbies or interests

Don't make any assumptions about your donor family's religious beliefs

Since you do not know anything about your donor family's religious beliefs (or if they have any religious beliefs at all), please consider this if you're including religious comments.

Talk about your experience

Some things you might include:

- your gratitude for the family and their gift
- how long you waited for a transplant
- what the wait was like for you and your family
- how the transplant has improved your health and changed the life of you and your family, for example:
 - things you can do now that you couldn't do before your transplant
 - trips you're able to take or traveling you can do that you couldn't do before your transplant
- what has happened in your life since your transplant, for example:
 - Did you celebrate another birthday?
 - Did you, your son, or your daughter marry?
 - Did you become a parent or grandparent?
 - Did you return to school or accept a new job?

Closing your card or letter

- Sign your first name only.
- Do not include your address, city, or phone number.
- Do not include the name or location of the hospital or your doctor(s).

Preparing your card or letter

- Place your card or letter in an envelope. Do not seal it yet.
- On a separate piece of paper, write your full name and date of your transplant.
- Place that paper in the same envelope as your card or letter and seal it.

Mailing your letter

Send the letter and the sheet with your name and transplant date to your social worker at Vanderbilt Transplant Center:

Vanderbilt University Medical Center
Medical Specialties
Nephrology Clinic
1301 Medical Center Drive, Suite 2501
Nashville, TN 37232-5356
ATTN: Transplant Social Work

When we get your letter, the transplant social worker will read it to make sure everything is confidential and then send it to Tennessee Donor Services.

- A Tennessee Donor Services coordinator will contact the donor family to offer them the option of receiving the letter.
- If the family wishes to receive your card or letter, Tennessee Donor Services will mail it to them.

Allow for extra mailing time

Since your card or letter must be mailed to the Transplant Center first, and then forwarded to Tennessee Donor Services, please allow extra time for it to reach the donor family. It may take a few weeks after you have mailed your card or letter for the donor family to get it.

If you write a letter, you may or may not hear back from your donor family

Some donor families have said that writing about their loved one and their decision to donate helps them in their grieving process. Other donor families, though they're appreciative of your card or letter, prefer privacy and choose not to write to the transplant recipients. Some donor families may not even want to read your card or letter.



Places to stay in Nashville

Hospital Hospitality House

(615) 329-0477

HHHNashville.org

The Hospitality House provides housing at a minimal cost for patients and family members of patients staying in Nashville area hospitals. Private rooms and bath for 2 people, with community kitchen and living space, free parking, Vanderbilt shuttle service, a stocked kitchen, and laundry facilities. Family members older than 14 can stay here. Reservations are typically made after a patient is in the hospital. They can only be made in advance for special reasons. Initial referral has to be made by the transplant staff or transplant social worker. There is often a wait list to stay here. All guests must complete a background check.

Scarritt Bennett Center

(615) 340-7500

The Iris Motel (UrbanNashville)

(615) 669-1293

Near Vanderbilt Hospital and offers discount rates. Vanderbilt shuttle service available. No kitchenettes. Microwave and refrigerator in common living room. Children can stay with an adult. Private room with a common bathroom that is adjoined to another guest room. Two people per room.

The Iris Motel handles bookings for Scarritt Bennett Center. You may call either one to set up your stay.

Homestead Suites

(615) 316-9020

Located near the airport, offers discount prices for short or long term stay for Vanderbilt transplant patients. No shuttle service provided.

Extended Stay America

(615) 383-7490

(800) 398-7829

Located near Vanderbilt on West End Avenue, offers short and extended stays. Shuttle service provided.

Best Western Music Row Inn

(615) 242-1631

(800) 937-8376

Located near Vanderbilt at the intersection of I-40, I-65, and I-24 on Music Row.

Holiday Inn Express

(615) 244-0150

(800) 465-4329

Only 2 minutes from the hospital, Holiday Inn Express provides a complementary continental breakfast and free shuttle service to and from the hospital.

The Hotel Preston
(615) 324-9826

Centrally located near the airport, Opryland, downtown Nashville and Cool Springs. Discounted transplant rates and shuttle service available.

Comfort Inn
(615) 255-9977
(800) 424-6423

Located at 1501 Demonbreun Street. Within 1-mile radius of Vanderbilt.

The Village At Vanderbilt
(615) 320-5600

403 Village at Vanderbilt, Nashville, off 21st Avenue. Near the Vanderbilt campus.

MedStay
(615) 981-7431

Furnished apartments for patients who need short- or long-term medical care. Located near Vanderbilt along the shuttle route. Rates are based on availability. Learn more at TheMedStay.com. Or send an email to: james@mhscare.com.

For more local hotel options, visit: VanderbiltHealth.com/information/guest-services and click on the Hotel Accommodations Options button.

**Patients and families must call hotels for current rates and openings and if there are any discounts.*

**Patients may want to call their insurance company's member services department (phone number on the back of your insurance card) to ask if they have any lodging or travel benefits.*



Track your vital signs

Vital Signs		SUN	MON	TUES	WED	THUR	FRI	SAT
Blood pressure	AM							
	PM							
Heart rate (pulse)	AM							
	PM							
Temperature	AM							
Weight	AM							
Blood sugar								
Breakfast	Blood sugar							
	Insulin units							
Lunch	Blood sugar							
	Insulin units							
Dinner	Blood sugar							
	Insulin units							
Bedtime	Blood sugar							
	Insulin units							

Track your fluids

Write down how much you drink (In), pee (Out), and how much fluid comes out of your JP drain (JP) each hour. Bring this sheet with you to your next visit.

	Sunday			Monday			Tuesday			Wednesday		
	In	Out	JP	In	Out	JP	In	Out	JP	In	Out	JP
8:00 am												
9:00 am												
10:00 am												
11:00 am												
Noon												
1:00 pm												
2:00 pm												
3:00 pm												
4:00 pm												
5:00 pm												
6:00 pm												
7:00 pm												
8:00 pm												
9:00 pm												
10:00 pm												
11:00 pm												
Midnight												
1:00 am												
2:00 am												
3:00 am												
4:00 am												
5:00 am												
6:00 am												
7:00 am												
Total												

(continued on next page)

Track your fluids

Write down how much you drink (In), pee (Out), and how much fluid comes out of your JP drain (JP) each hour. Bring this sheet with you to your next visit.

	Thursday			Friday			Saturday		
	In	Out	JP	In	Out	JP	In	Out	JP
8:00 am									
9:00 am									
10:00 am									
11:00 am									
Noon									
1:00 pm									
2:00 pm									
3:00 pm									
4:00 pm									
5:00 pm									
6:00 pm									
7:00 pm									
8:00 pm									
9:00 pm									
10:00 pm									
11:00 pm									
Midnight									
1:00 am									
2:00 am									
3:00 am									
4:00 am									
5:00 am									
6:00 am									
7:00 am									
Total									

