YOUR GUIDE TO

Life After Kidney Transplant

American Kidney Fund®
FIGHTING ON ALL FRONTS

KIDNEY HEALTH
FOR ALL™

INTRODUCTION

The American Kidney Fund (AKF) believes that everyone who needs a kidney transplant deserves equal access to their best health possible, no matter where they live, what language they speak or the color of their skin.

However, many people face barriers to their care before and after their transplant, especially people of color. One barrier is not getting information about preparing for and taking care of a new kidney after a transplant.

To help you navigate the transplant process, AKF has developed guides for:

- **Preparing for a kidney transplant:** In 2024, AKF developed the award-winning *Your Guide to Kidney Transplant*, a tool that gives practical information on kidney transplants.

  DOWNLOAD GUIDE

- **Preparing for life after kidney transplant:** In 2025, AKF developed this current guide to give clear, accurate information on how to prepare for life after a transplant.

What is the purpose of this guide?

This guide will help you learn what to expect after a transplant. A kidney transplant is a life-changing experience. It marks the end of your previous chapter and the start of a new one filled with healing, hope and new possibilities.

A kidney transplant is considered the best treatment option for kidney failure because it raises your chance of living a longer, healthier life. It can give you the chance to return to activities you enjoy or could not do because of dialysis.

However, life after a transplant also comes with questions and challenges, including:

- Healing from surgery
- Appointments and tests
- New medicines
- Health issues that can happen after a transplant, such as delayed graft function and side effects from medicines

Life after a transplant can seem overwhelming, but we hope this guide helps you feel prepared and supported.

Who is this guide for?

This resource is for anyone considering a transplant, including if you:

- Have recently had a transplant
- Are on the transplant waitlist
- Are about to have a transplant

This resource is also for your caregivers to help you through the changes after your transplant.

Acknowledgements

Creating this guide would not have been possible without the guidance from transplant experts, including transplant team members, patients, and caregivers. Their lived experiences and clinical expertise were essential to make this a patient-centered resource based on science.

The AKF team has also made sure all content follows the United Network for Organ Sharing (UNOS) policies and the National Institute of Diabetes and Digestive and Kidney Disease (NIDDK) data. AKF will update this resource regularly.

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LIFE AFTER YOUR TRANSPLANT: THROUGH THE STAGES

RECOVERY
FIRST 3 MONTHS
3-6 MONTHS
6-12 MONTHS
12 MONTHS +

A kidney transplant offers you hope, but at the same time, you have just been through a major surgery. This next phase of your life will involve many follow-up trips to your transplant center, new medicines and adjusting to any side effects or health problems.

You can ease these challenges by being open with your transplant team and loved ones about your struggles and questions to keep your new kidney as healthy as possible.

RECOVERY

What happens during recovery?

TIMING

You will be in the hospital anywhere from three to seven days after your transplant surgery. Most people can return home within seven days, but sometimes you may stay longer or have more follow-up appointments if:

- You have delayed graft function, which is a transplanted kidney that does not work right away after surgery. If this happens, you may need dialysis in the first seven days after your transplant.
- Your body has a poor response to surgery, such as an infection, fluid buildup or bleeding.
- You show early signs of rejection, which is when a recipient's body notices that their new kidney comes from a different person and starts to attack it.
- You have reactions to new medicines.

INSTRUCTIONS FOR CARE

In the hospital, many transplant team members will make bedside visits to check on your health and teach you how to care for your kidney once you return home.

NOTE: You will be on pain medicines, so it is very important for your caregiver, loved one or support person to be there when your transplant team visits to listen and remember their instructions.

GETTING UP AND AROUND

Your transplant team will encourage you to start walking within a day after your surgery. After a major surgery, walking may:

- Improve your recovery from surgery
- Lower the chance of health issues, such as constipation and blood clots[1]
- Improve your overall quality of life!

URINATING (PEEING)

Before your transplant, you didn't need to urinate as often because your kidneys were not working properly. After your kidney transplant:

- You may need to urinate more often. For example, if you were on dialysis, your bladder may be smaller and you may need to urinate more often until it returns to its previous size.
- Your body may make more urine than before—and if you had a living donor kidney transplant, you may be making a lot more urine.

To help your body adjust to making urine with your new kidney, you will have:

- A foley catheter (a thin, flexible tube) placed in your bladder to drain urine and lower the chance of urine leaks. It is usually in for 2-3 days, but you may go home with a foley catheter still in place.
- A ureteral stent (a thin, flexible tube inserted into the ureter, which carries urine from the kidney to the bladder) placed during your transplant. It lowers the pressure between your kidney and bladder and will be removed during one of your follow-up appointments.

TIP: Drink 64 ounces of fluid (eight, 8-ounce cups) each day to help flush your kidneys and get them working properly.

NOTES

What can I expect in the three months after my transplant?

In the first three months, you will return to the transplant center once or twice a week for follow-up appointments. Your transplant team will:

- Check your wound, your body's reaction to new medicines and any pain or discomfort you may be feeling
- Give you regular blood and urine tests to check the health of your kidney, look for infections and review your levels of anti-rejection medicines (immunosuppressants)
- Check on side effects from your new medicines and adjust them as needed
- Sometimes, send you to a different location for lab work and closely check all your results

TALK TO YOUR TRANSPLANT TEAM ABOUT ANY CHALLENGES YOU FACE

Your ability to care for your new kidney can be lower if you have:

- A lack of regular transportation
- Financial challenges
- Limited social support (help from family and friends)
- A lack of information about after-transplant care

SPEAK UP ABOUT YOUR NEEDS

Black Americans and Hispanic/Latino Americans face more system barriers throughout the transplant process. This leads to a higher number of new kidneys failing after a transplant.[2]

These barriers may include:

- A lack of providers who look like themselves, causing cultural differences
- Higher uninsured rates
- Less access to health care
- Bias and discrimination in the health care system

To learn more about these health inequities and find resources, visit AKF's Kidney Health for All website.

You can raise your chances of a healthy outcome by speaking up about your own needs after your transplant. If you have any of these challenges and want support, talk to your transplant social worker and they can connect you with resources to help.

WHAT ACTIVITIES CAN I RETURN TO IN THE FIRST THREE MONTHS?

Activity

Your transplant team will encourage you to walk in the first three months.

They will tell you what activities not to do, such as **not to lift objects over five pounds.**

A jug of milk is about eight pounds.

Lifting objects heavier than this in the first three months after surgery could raise your chances of having a hernia (a bulge or swelling that happens when an organ or tissue pushes through a weak muscle wall).

Work

Your ability to work will depend on:

- The type of job you have. If you work remotely (from home) and your job doesn't demand physical tasks, you should be able to return to work a few weeks after your transplant.
- Your chance of being exposed to infections at work or traveling to work

After your transplant, take it slow and ease into work as you recover. Consider working half-days at first—you just had a major surgery and are still adjusting to your new medicines.

Talk to your transplant team about a safe time for your return to work.

Preparing to leave work before your transplant

To prepare for your time off work during your surgery and recovery, talk to your transplant team social worker and employer in the months and weeks before.

This will help you understand your options for leave and what paperwork you'll need to fill out. Many patients use the Family Medical Leave Act (FMLA), which can help protect your job while you're recovering.

FMLA allows qualified employees to take time off from work for certain medical or family reasons without losing their job or health insurance. The leave is unpaid, but it protects your job and health coverage during this time.

What can I expect three to six months after my transplant?

For many people, six months can be a turning point to their “new normal.”

You will still go back to your transplant center about once a month and have lab tests. The tests will check if your kidney is healthy and your anti-rejection levels are within normal range. At this point, you will likely only see the transplant nephrologist (kidney doctor) or an advanced practice provider (APP), such as a nurse practitioner or physician associate.

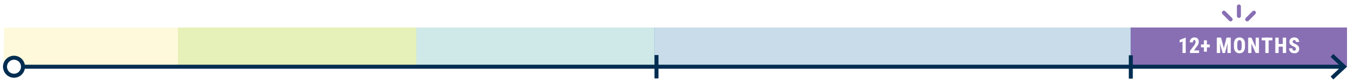
What can I expect six to 12 months after my transplant?

Your transplant nephrologist may be able to see you for the full 12 months after your transplant. But they may refer you back to your own general nephrologist earlier if:

- You live far from the transplant center
- Your transplant team is not available to keep seeing you

Your transplant team may make changes to your medicines, such as:

- Take you off antiviral and antibacterial medicines
- Lower the amount of your antirejection medicines because the chance of transplant rejection is lower



What can I expect at 12 months and beyond?

You will likely visit your transplant team at least once a year.

Your general nephrologist will continue to:

- Do regular lab tests to check how your kidney is working and check for any signs of rejection
- Check if your medicines are working well or causing side effects

If you have any concerns or questions about caring for your transplant and regular testing, always reach out to your transplant team.

YOUR HEALTH CARE AFTER A TRANSPLANT

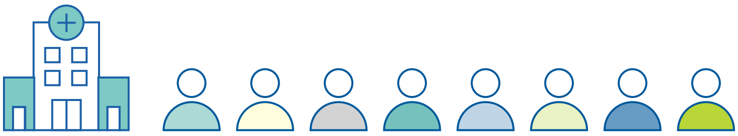
Taking care of your kidney after a transplant may take some getting used to. You will have many doctors' appointments, new medicines to take every day and a variety of tests at each appointment. Your transplant team will check on how you are recovering from surgery, the health of your kidney and if your new medicines are causing any side effects.

What will follow-up look like?

You will see some of the same transplant team members in the hospital and at follow-up appointments during your recovery. After you leave the hospital, your follow-up will include:

- Regular appointments with your transplant nephrologist (kidney doctor), an advanced practice provider (APP) such as a nurse practitioner or physician associate and a transplant pharmacist
- One to two appointments with your transplant surgeon if your wound is healing well
- Care as needed from other transplant professionals, such as your social worker, psychologist and dietitian – let your team know if you would like to see any of these other providers

Which transplant team members will I see in the hospital after my transplant?



TRANSPLANT SURGEON

This is the doctor who performs your kidney transplant surgery. The transplant surgeon will:

- Check on you when you wake up from surgery
- Visit you a few times to make sure your wound is healing
- Review your lab results to make sure your new kidney is working

TRANSPLANT NEPHROLOGIST

This is a kidney doctor who is trained to care for transplant patients. The transplant nephrologist does not perform the transplant surgery, but they will:

- Work with the transplant coordinator to manage your medical care, tests and the medicines you take before and after surgery
- Refer you back to your own general nephrologist for your follow-up care—the timing of this depends on your transplant nephrologist and your transplant center but most often happens around 12 months after your transplant

NURSE PRACTITIONER/PHYSICIAN ASSOCIATE (ADVANCED PRACTICE PROVIDERS OR APPS)

Your APPs are highly trained health care professionals who help manage your care while you are recovering from your surgery. They will:

- Check on you often while you are in the hospital to make sure your new kidney is working properly
- Likely see you at your follow-up appointments after your transplant to check on your recovery and your kidney function

TRANSPLANT COORDINATOR

Your transplant coordinator is a nurse or other health professional who manages all aspects of the transplant (before transplant to after transplant) and is your main point of contact through process. At many centers, the transplant coordinator will:

- Arrange follow-up appointments
- Be available to answer questions about medicines and lab results in between appointments

TRANSPLANT PHARMACIST

These are medicine experts who work with your surgeons, nephrologists, APPs and other team members to coordinate your medicines after your transplant. After your transplant, they will:

- Check the amount of medicines in your blood to adjust the doses as needed
- Tell you how to take your medicines

TRANSPLANT SOCIAL WORKER

Your transplant social worker helps you and your family understand and cope with any issues related to your illness or side effects from the transplant. They will:

- Educate you and give emotional support and resources to help you, your family and other support people in your life adjust to changes to life after a transplant
- Be a helpful resource if issues come up, such as help with financial aid or other community support services

TRANSPLANT PSYCHOLOGIST OR PSYCHIATRIST

This is a mental health professional who can support your mental wellness after your transplant and help you find ways to manage any strong emotions. They can:

- Help find out if your emotions are a side effect of your medicines and if so, have your transplant pharmacist adjust the medicines
- Help you understand other things that may be affecting your mental health and help you manage them

TRANSPLANT DIETITIAN

A transplant dietitian has training in food and nutrition for people with a transplant. They can:

- Help you plan your food and nutrition after your transplant
- Help you create and follow a kidney-friendly eating plan just for you

Communicate openly with your transplant team members—it is essential to having a successful kidney transplant. They will help you manage all aspects of your care after your transplant and can answer any questions.

NOTES

What tests will I have after my transplant?

At your various follow-up appointments, your transplant team will do tests to check your health.

BLOOD TESTS TO MEASURE KIDNEY HEALTH

Blood test	What it measures	What it tells you and your doctor
Complete Blood Count (CBC)	Measures different parts of your blood, such as your red blood cells, white blood cells and platelets.	• Red blood cells show if you are anemic, when your body doesn't have enough healthy red blood cells to carry oxygen to your tissues. This can cause fatigue, weakness and shortness of breath. • White blood cells show signs of infection (if you have a high amount) and a weakened immune system (if you have a low amount). • Platelets show if your blood can clot normally—this may be due to an infection or a weakened immune system from anti-rejection medicines (immunosuppressants).
Comprehensive Metabolic Panel (CMP)	Measures 14 substances: • Glucose • Calcium • Sodium • Potassium • Carbon dioxide • Chloride • Albumin • Total protein • Bilirubin • Creatinine • Liver enzymes (ALP, ALT, AST) • Blood urea nitrogen (BUN) It measures more than a Basic Metabolic Panel (BMP), which measures eight substances.	Helps you and your doctor: • Review your overall health • Diagnose certain medical conditions • See how your medicines are working and if they are causing side effects • Find any changes in your liver and kidney function or metabolism (how your body turns food and drinks into energy)
Infection testing	Measures if you have an infection. Common tests include: • BK virus (BKV) • Cytomegalovirus (CMV) • Epstein-Barr Virus (EBV) You may have a higher chance for these infections if you are CMV-antibody negative or EBV-antibody negative and your donor is CMV-antibody positive or EBV-antibody positive.	Your doctor may test for infections because your anti-rejection medicines weaken your immune system. This means it cannot protect you from infections as well. You may not have infection testing regularly and your doctor may only test for infections that are common in your region.

BLOOD TESTS TO MEASURE KIDNEY HEALTH (CONT.)

Blood test	What it measures	What it tells you and your doctor
Immuno-suppressant drug levels	Measures how much immunosuppresants are in your system. These may include: • Tacrolimus • Sirolimus • Everolimus • Cyclosporine You will usually get this test in the morning before you take your dose.	Helps you and your doctor check how much medicine is in your system and if you are taking the right amount of medicine to prevent rejection or injury to your new kidney.
Donor-Specific Antibodies (DSAs)	Measures proteins in your blood that may develop over time. Your body may make DSAs against your new kidney because it sees it as a foreign object in your body.	Tells you and your doctor if you may have antibody-mediated rejection (AMR), the leading cause of late kidney transplant failure or loss (rejection more than one year after a transplant). It is a syndrome that happens when your immune system sees your new kidney as foreign and attacks it. Each transplant center tests for DSAs at different times. Ask your center how often your DSA will be checked.
Serum creatinine	Measures creatinine in your blood. Creatinine is a waste product in your blood that comes from your muscles and is filtered out of your blood through your urine (pee) by a healthy kidney. If your kidneys cannot filter creatinine, it will build up in your blood and cause a high level of serum creatinine.	Can tell you and your doctor if your kidneys are not working well or if you have a kidney injury But, it may not find early kidney injury. And it may not be as accurate as other tests because people have different muscle mass, age and nutrition levels.

You are your most important advocate! If you want to know which tests you are getting or to learn more about a specific test result, ask your transplant team!

You can ask for a test if it is not part of your treatment plan and ask the team to explain the results to you. It's their job to check your health and help you understand your test results.

OTHER TESTS TO MEASURE KIDNEY HEALTH

Test	What it measures	What it tells you and your doctor
Kidney biopsy	A procedure where your doctor inserts a needle and takes a small piece of tissue from your kidneys to look at under the microscope.	Tells you and your doctor if you have early scarring, injury from medicine or rejection. Most doctors will only do a biopsy if there is a good reason for it, such as if they notice your lab results are not in normal limits and want to understand what is causing the changes.
Donor-Derived Cell-free DNA ("dd-cfDNA")	Measures parts of DNA floating in your blood from cells that are injured or dying, which come from the donated kidney. ***NOTE:*** *Having DNA from your kidney donor in your bloodstream will not change your DNA.*	Finds kidney injuries and signs of rejection months earlier than other tests. Your transplant team will decide how often you get the test depending on your chance of rejection and other factors. Many doctors will do this test starting one to three months after your transplant and then again every three to six months. They may test more often if they are concerned about rejection. Doctors often use these tests for the life of your kidney. Medicare will cover cell-free DNA tests for up to three years after a transplant.

What medicines will I take?

You will take many medicines after your kidney transplant. Your transplant team will adjust the amounts and types of medicines in follow-up appointments.

Your team will give you medicines and a medicine list before they discharge you from the hospital.

Your transplant pharmacist will talk to you about the new medicines in a 45- to 60-minute education session. They will review your pill box, which medicines you will be on and when to take them.

Ask your transplant pharmacist if you ever need more information or a review of your medicines. You should have detailed discussions with your transplant pharmacists about the risks of taking different anti-rejection medicine, to find the best medicine for you.

TIP: Caregivers, loved ones and other support people are very important in conversations about your medicines. Make sure they are ready to learn about these medicines with you. Bring at least one person with you to your education session with the transplant pharmacist.

NOTE: Talk to your doctor and pharmacists about any allergies or other medicines you are taking. This can affect how well your new medicines work.

Anti-rejection (immunosuppressant) medicines

Anti-rejection medicines, also called immunosuppressants, help prevent your body from rejecting your new kidney. However, they also lower your body's ability to fight off germs and illness. This means your lowered immune system will not be able to fight off infections as much as it could before your transplant.

You will be on anti-rejection medicines for the life of your new kidney.

There are three different types of anti-rejection medicines:

1 INDUCTION MEDICINES

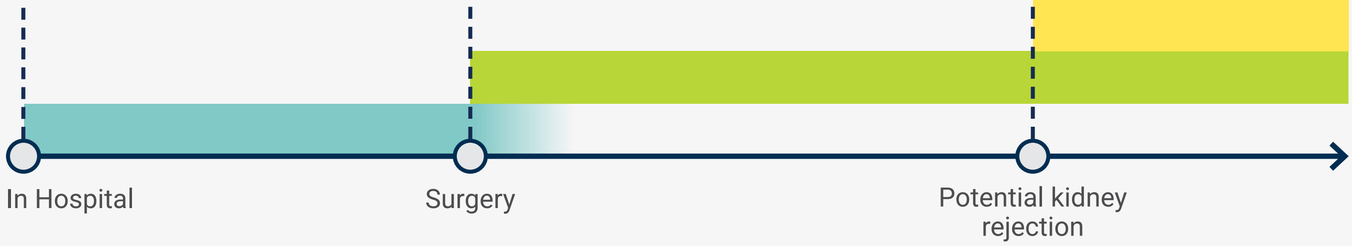
Induction medicines are infused into a vein during your surgery and continue during your recovery in the hospital

2 MAINTENANCE MEDICINES

Maintenance medicines you will start taking after your surgery and will continue to take **for the life of your kidney**, usually taken by mouth (oral).

3 REJECTION MEDICINES

Rejection medicines you will start taking if your body starts to reject your new kidney



Common side effects from anti-rejection medicines include:

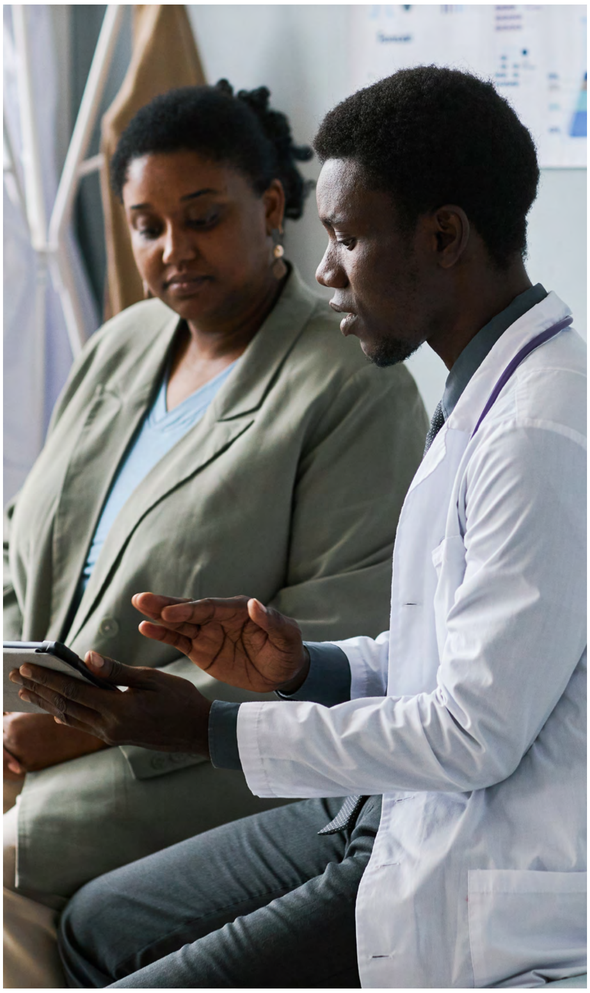
- High blood pressure

> **NOTE:** Consistent high blood pressure can cause various health problems. Talk to your transplant team if you have consistently high blood pressure.

- High cholesterol
- High blood sugar (hyperglycemia)

> **NOTE:** Some anti-rejection medicines can cause high blood sugar or diabetes (called post-transplant diabetes mellitus, or PTDM). If you want to learn more, ask your doctor or transplant pharmacist to learn if your blood sugar is rising.

- Diarrhea
- Tremors (shaking or trembling movement of one or more body parts, such as your hands)
- Trouble falling asleep or staying asleep
- Anemia (low level of red blood cells)
- Low level of white blood cells
- Bone loss
- Delayed wound healing



COMMON MAINTENANCE ANTI-REJECTION MEDICINES

TACROLIMUS

This is often the main transplant rejection medicine you will take. It is used with other transplant medicines.

Types

- **Immediate-release tacrolimus (Prograf®):** Released right away and absorbed into your bloodstream within a few hours.
  - *Form: A capsule taken by mouth*
  - *How often: Twice a day (every 12 hours)*
- **Extended release (XR) tacrolimus (Envarsus XR® or Astagraf XL®):** Released slowly over a 24-hour period.
  - *Form: Capsule or tablet taken by mouth*
  - *How often: Once a day*

Instructions

- Take tacrolimus at the same time every day.
- You can take your medicine either with or without food, but take it the same way each time.
- Do not crush, cut or chew the tablets or open the capsules.

Your transplant team will check your levels of tacrolimus through blood tests. Based on your levels, they will decide on your dose.

Your transplant team will ask you not to take your tacrolimus dose before your blood test to get an accurate measure. Don't forget to take your dose right after your blood test.

Side effects

Common side effects include tremors (shaking) and a rise in blood pressure and blood sugar.

Often these side effects improve or go away as time goes on. Your transplant team will make sure that tacrolimus levels in your blood do not get too high, because that can raise your chance of side effects.

Tell your doctor if any of these symptoms are severe or do not go away.

MYCOPHENOLATE

This is used with other transplant medicines to prevent rejection.

Types

- **Mycophenolate mofetil (Cellcept®)**
  - *Form: Capsules*
  - *How often: Twice a day (every 12 hours) however, may be adjusted based on tolerance*
- **Mycophenolate sodium (Myfortic®)**
  - *Form: Tablets*
  - *How often: Twice a day (every 12 hours)*

Instructions

- Your dose may change over time depending on how well you do on the medicines, if you get an infection or have signs of rejection.
- Do not crush, cut or chew the tablets or open the capsules.
- Unlike tacrolimus, your doctor will not regularly check levels of mycophenolate in your blood.
- Please tell your doctor if you are pregnant or planning to become pregnant. Mycophenolate should not be used in pregnancy.

Side effects

Common side effects include feeling sick to your stomach, throwing up and diarrhea. Tell your doctor if any of these symptoms are severe or don't go away.

COMMON MAINTENANCE ANTI-REJECTION MEDICINES (CONT.)

PREDISONE

This is a steroid that prevents rejection and lowers inflammation. It is used with other transplant medicines.

Types	Instructions	Side effects
• **Form:** Tablets • **How often:** Once a day	Your transplant team may start you on a high dose and lower it over the first few weeks to months after your transplant. Your doctor may change your dose often. Due to a high chance of side effects, your doctor will change you to a low dose or take you off of prednisone.	• Common side effects include a rise in blood sugar, a rise in blood pressure, mood swings, trouble sleeping, upset stomach, vision changes and weight gain. – *If you have high blood sugar (hyperglycemia) after your transplant, your transplant team may ask you to check your blood sugar at home and do insulin injections. This is usually only required right after a transplant and if you are taking a high dose of prednisone.* • Prednisone may cause other side effects. If you have unusual symptoms that are not going away, talk to your doctor about the changes you are having.

Missed dose instructions for tacrolimus, mycophenolate and prednisone:

It is important not to miss a dose of your maintenance anti-rejection medicines. If you realize you have missed a dose:

- If it is within four hours after a missed dose, take the medicine as soon as you remember and tell your transplant team that you took it late.
- If it is more than four hours after a missed dose, don't take the medicine until you contact your transplant team for next steps.

Try your best NOT to miss a dose because missed doses can give you a higher chance of rejection.

COMMON MAINTENANCE ANTI-REJECTION MEDICINES (CONT.)		
BELATACEPT (NULOJIX®) This is an infusion medicine that works to prevent rejection. It is used with other transplant medicines.		
Types	**Instructions**	**Side effects**
• **Form:** An infusion through your vein either at an infusion center or through your home infusion company. • **How often:** During the initial phase (for about 12 weeks after your transplant) you will get higher doses more often. Then, you will enter the maintenance phase and get doses every 28 days.	**Missed dose instructions:** It is important to not miss your appointments to receive this medicine. You have a window of three days before or after a dose if you need to reschedule your infusion.	• Belatacept does not usually cause many side effects. • Your transplant team will check for reactions to the infusions and any signs of infection.

Drug interactions

Before your transplant: It is important to tell your transplant team about every medicine you are taking. They will let you know what you can continue or need to stop taking after your transplant. This includes:

- Any prescribed medicines you take by mouth
- Eye drops
- Ear drops
- Infusions
- Injections
- Topical creams
- Herbal supplements
- Vitamins

After your transplant: Some medicines, herbal supplements and vitamins may interfere with your anti-rejection medicines (immunosuppressants) and give you a higher chance of rejection or side effects. Talk with your transplant team and general nephrologist:

- Before you start any medicines not prescribed by your transplant team or general nephrologist
- Before you take any herbal supplements, herbal teas or vitamins

Talk with your transplant pharmacist about what is safe for you to take.

Food interactions

After your transplant, do not eat these foods:

- Grapefruit or grapefruit juice
- Seville oranges
- Pomelos
- St. John's Wort

These foods can change the way your body breaks down and gets rid of your transplant medicines. This could give you a higher chance of rejection or severe side effects. For a complete list of foods to avoid, see the Healthy Living with a Transplant section on page 24.

Other medicines you may take

Anti-infection medicine

- To prevent infections after your transplant, your doctor may prescribe antibacterial, antiviral or antifungal medicine. Your doctor will explain your medicines, doses and how often to take them.

Pain medicine

- Pain is common after your transplant surgery, so your transplant team will give you pain medicine. You should not need to take these for more than two weeks after surgery.
- Do not take non-steroidal anti-inflammatory drugs (NSAIDS), such as ibuprofen, naproxen or aspirin because they may injure your new kidney.

⚠ **IMPORTANT NOTE:**
The side effects that can happen with these medicines can be unpleasant and be hard to manage. You are not alone! These are common side effects and talking to someone who has also had a transplant can bring comfort during a difficult time. Reach out to your transplant team to get connected with people who can help you.

Stomach medicine

- Some anti-rejection medicines can cause stomach problems. Your transplant team may give medicine to help protect your stomach and prevent these side effects.
- They may also prescribe acid-reducing medicines, such as heartburn medicines, that prevent stress ulcers in your stomach.

Coping with your new medicines

Learning about these medicines can feel overwhelming. You may take many different pills, each with a specific purpose, at different times of the day. Your medicine schedule can be strict and missing doses could hurt your new kidney.

It is normal and okay to feel anxious and confused as you get used to this new routine. Your transplant pharmacist will work with you to make sure you understand your new treatment plan.

There will also be other daily changes to adapt to after the surgery. Follow your transplant team's recommendation for healthy living to keep your new kidney healthy.

HEALTHY LIVING WITH A TRANSPLANT

Once you are back home after your transplant, life will look quite different. You are recovering from a major surgery, are on new medicines and have a new working kidney.

It may take time to get used to keeping your new kidney healthy. In this section, read about the important changes you can make:

- Eating changes
- Lowering your chance of infections, especially early on
- Being active and exercising
- Taking care of your mental health

By making these changes, you will have a higher chance of a healthy kidney and good overall health.

Eating changes after a transplant

Food is such an important part of your overall quality of life!

You have likely spent a lot of time thinking about which foods you can eat. And if you have had food restrictions, thinking about food can be stressful.

Your transplant team will work with you to keep you and your kidney healthy and make sure you can enjoy foods you were not able to eat before.

Three areas to learn about eating after your transplant are:

- Fluid intake
- Kidney-friendly eating plan
- Food and medicine interactions

Learn how to eat healthy after a transplant at:

kidneyfund.org/eating-after-transplant

FLUID INTAKE

After a kidney transplant, your doctor will ask you to drink 64 fluid ounces (or a half gallon) of fluids each day—water is best, but juice may be okay. This equals eight, 8-ounce cups of water a day.

If you were on dialysis before your transplant, you may have been limited to around 32 fluid ounces each day. So, this means you now need to drink twice as much water as you drank before.

This can be a challenge as you get used to frequent urination (peeing), while your bladder returns to its original size and your kidney starts making urine.

Here are some steps to help you drink enough fluids:

1. Fill a large water bottle with 16 fluid ounces of water
2. After each meal, try to drink that entire bottle before your next meal
3. Then, add in sips of water or other fluids throughout the day

Talk to your team if you are having trouble drinking this amount of water.

KIDNEY-FRIENDLY EATING PLAN

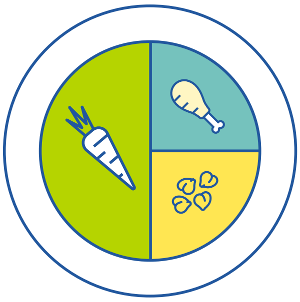
In the first three months after your transplant, you may not get your appetite or taste back yet. But as it comes back, you can follow a kidney-friendly eating plan to help keep you and your new kidney healthy.

After your transplant, you have a higher chance of:

- Weight gain
- High blood pressure
- High blood sugar

A kidney-friendly eating plan can help you avoid these health problems. You can:

- Eat non-processed foods to avoid added sodium and sugar
- Control your calories
- Eat lean protein—as you are healing within the first 3 months after your transplant, your body needs lean body mass from protein
- Split your meals in this way:



● 50% **Vegetables**

● 25% **Lean protein**

● 25% **Complex carbohydrates**

Lean proteins are high in protein but low in fat and calories, such as:

- Skinless chicken, eggs or turkey
- 90% or leaner ground beef
- Beans, peas and lentils
- Low or no-fat yogurt or cottage cheese
- Nuts and seeds
- Seafood
- Tofu

Complex carbohydrates contain vitamins, minerals and fiber. Your body digests them more slowly, which avoids spikes in your blood sugar. These include:

- Whole grain bread and pasta—barley or farro can help control blood sugar and carbohydrates
- Brown rice
- Beans and legumes, such as lentils or chickpeas
- High fiber fruits, such as avocados, berries, figs or apples
- Starchy vegetables like sweet potatoes

A kidney-friendly eating plan is important, but so is balance! Eat kidney-friendly food most of the time, but allow yourself to indulge in other foods, too. Use the **Find a Nutrition Expert** tool to find a dietitian who can help you make a plan.

WHEN TO SEE A TRANSPLANT DIETITIAN

At some transplant centers, you will see a transplant dietitian:

- During evaluation and preparation
- During your hospital intake
- Before discharge
- And after you leave the hospital

At many transplant centers, you will see the transplant dietitian more often if you:

- Lose or gain weight
- Have high blood sugar
- Have nutrition problems

NOTE: If you have had a kidney transplant in the last three years and you are referred by a doctor, Medicare will cover consultation with a renal (kidney) dietitian who is enrolled as a Medicare provider. This coverage falls under Medicare Part B's Medical Nutrition Therapy or MNT benefit.[3]

ACCESS TO KIDNEY-FRIENDLY FOODS

Around one in 10 households in the United States does not have access to safe and healthy foods[4]. If you are having trouble getting kidney-friendly foods, review AKF's related resources and learn more about assistance programs that can help:

- Commodity Supplemental Food Program (CSFP): This includes monthly food packages for people 60 years and older.
- MyPlate: An online resource that can help you make healthy choices within your budget. You can find ways to save more while shopping and new ways to make simple, healthy recipes you can afford.
- SNAP (Supplemental Nutrition Assistance Program): If you qualify, you can use SNAP to pay for nutritious foods in grocery stores. You can only use SNAP to pay for foods such as fruits and vegetables, meat and fish, dairy products, breads and cereals, other snack foods and non-alcoholic beverages, as well as seeds and plants.
- American Kidney Fund Community Resource Finder: You can search for food pantries and programs, markets, and more in your community by entering your zip code.
- Hunger Free America: A resource to help you find food assistance programs and services near you by entering your address.

Food and medicine interactions

Your new medicines are vital to prevent your body from rejecting your new kidney. But some of your medicines interact with some common foods.

If you eat these foods, they could change how your body breaks down and gets rid of your transplant medicines. This gives you a higher chance of rejection or severe side effects.

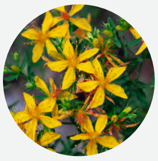
Here are some general rules from most transplant teams:

DO NOT EAT OR DRINK:

Grapefruit

Pomelo,
a large citrus fruit

Seville oranges, also called **bitter oranges**



St. John's Wort, a flowering plant whose flowers and leaves are used in some teas, tablets, liquids, or medicines

NOTE: Be sure to read the ingredients of teas, tablets, liquids, and medicines to check for St. John's Wort.

YOU MAY NEED TO AVOID:

Pomegranate

Other citrus foods, such as lemons, limes, and tangerines

Chamomile tea

Blood oranges

Honey

This is general advice. Your transplant pharmacist and transplant dietitian will give you specific advice.

TIP: If you have a strong preference for one of these, work with your transplant team to see if they can make any changes to your medicines.

Lowering your chance of infections

You will be on anti-rejection medicines (immunosuppressants) for the life of your new kidney. These medicines are vital to prevent your body from rejecting your new kidney. However, they also lower your body's ability to fight off germs and illness. This means your lowered immune system will not be able to fight off infections as much as it could before your transplant.

Because of this, you should limit your chance of infections. To help with this:

- Wash your hands with water and soap or use alcohol-based hand sanitizer
- Wear a mask, especially in the first three months
- Wait two to three months before getting any new vaccines because your immune system will not respond well while you're on high doses of anti-rejection medicine
- Follow food safety rules—see below to learn more

TIP: In the first three months after your transplant, avoid large crowds, such as at churches, movie theaters or stadiums.

RISK OF CANCER

Your new anti-rejection medicine will lower your immune system so your body doesn't attack your new kidney. With a lowered immune system, you also have a higher chance of developing cancer. **More than 5 out of 10 (50%) recipients may get skin cancer[5].** It is extra important to take steps to prevent cancer by:

- Applying sunscreen every day to any skin that will be in the sun
- Staying up-to-date on your regular cancer screenings

FOOD SAFETY RULES

Due to your lowered immune system after your transplant, food safety is especially important to avoid infection from bacteria or viruses in foods. Below are some tips:

Always wash your hands, kitchen surfaces, fruits, and vegetables before, during and after cooking.

Do not cross-contaminate, where bacteria from one food spreads to another. It often happens when handling raw meat, seafood, or poultry (chicken, turkey, duck, and geese). To avoid cross-contamination:

- Separate raw meat, poultry, and seafood from other foods in your grocery bags and refrigerator.
- Do not place cooked food on plates that held raw foods. If you must use the same plate, first wash it with soapy water before placing the cooked food.
- Use two cutting boards – one for raw foods and a different one for ready-to-eat foods, such as cooked meat, vegetables, fresh fruits, and bread.

Avoid:

Sprouts and microgreens—these are too small to wash.

Raw meat, runny eggs, sushi with raw fish or ceviche (an uncooked mixture of raw seafood, citrus and other flavors)

Buffets, where there is a higher chance of bacteria in food

Well water to drink or brush your teeth—use bottled water, or tap water that was boiled for at least two minutes

Cook animal products to safe internal temperatures:

- Use a food thermometer to measure the internal temperature of cooked foods.
- Place the food thermometer in different places of the meat, seafood, or egg products to make sure all of it is cooked to a safe temperature.

TIP: Do not wash chicken or other meat, as this spreads salmonella on your kitchen surfaces.

FOODS	FOOD SAFETY RULES (INTERNAL TEMPERATURES)
Raw meat such as beef, lamb, and pork	Cook to 145°F. Do not rely on the color of meat, as it does not always mean it is safely cooked to eat. Allow the cooked meat to rest for 3 minutes after you remove it from heat.
Ground beef	Cook to at least 160°F.
Poultry or ground poultry, such as chicken and turkey	Cook to 165°F.
Fully cooked hams that are packaged at a USDA-inspected plant	Reheat to 140°F.
Ham repackaged at any other location or for leftover fully cooked ham	Reheat to 165°F.
Seafood like shrimp, lobster, and crab	Cook to 145°F and until the shells turn red and the flesh appears to shine and not look see-through.
Eggs	Cook until the yolk and egg whites are firm. Only use recipes in which eggs are cooked or heated to 160°F.
Sauces, soups and gravy	Bring to a boil when reheating.
Hot dogs, lunch meats and other deli meats	Avoid these foods. Or, reheat them until steaming hot or 165°F.
Foods that go bad quickly, such as rice and pasta	Refrigerate within 90 minutes after cooking.
Frozen foods	There are three safe ways to thaw frozen foods: • In the refrigerator • In cold water • In the microwave Plan ahead to avoid foods from getting into the "temperature danger zone" (40°F–140°F).

Learn more about food safety after a transplant:
[USDA Food Safety: A Need-to-Know Guide for Those at Risk]

BEING ACTIVE AND EXERCISING

Being active each day is another important part of taking care of your new kidney.

To make sure your body recovers well after surgery, your transplant team will recommend that you:

- Start walking the first day after surgery—research shows this can lower your chance of blood clots and blockages in your intestines and will improve your lung function.
- Slowly add other types of exercise, such as lifting light weights, riding a stationary bike or swimming.
- Avoid lifting 5 pounds or more in the first eight to 12 months to avoid a hernia (a bulge or swelling that happens when an organ or tissue pushes through a weak muscle wall).

Each person's recovery will be different. Your transplant team will give you the best advice for your health.

MENTAL HEALTH

You will go through many changes after your transplant. It is normal to feel overwhelmed and have new feelings. Below, read about some common feelings after a transplant and ways to help you cope.

Feeling lonely or isolated

After your transplant, you are adjusting to a whole new routine. You will need to limit contact with others, especially in the beginning:

- You must avoid crowded places.
- You must limit visitors and sometimes even close family or friends.
- And if you went to in-center dialysis, you no longer have the daily connection of other regular people and providers.

This is to prevent infections and keep you healthy since you have a lowered immune system. It's for your safety, but it can be lonely and make you feel isolated.

You are not alone—it is common to feel like you have lost part of your support system. Many other people have also gone through this. Ask your transplant center if they offer support or if they can connect you with national programs that can offer support.

Anxiety about your health

Feeling anxiety and worrying about your health is real. Frequent worry about your health may take over, even when your labs or checkups say things are okay.

After a transplant, it is common to:

- Worry about rejection
- Feel unsure about what side effects are normal
- Feel overwhelmed by the side effects of new medicines
- Have racing thoughts
- Have bodily symptoms like trouble sleeping
- Feel a sense of unease—especially when something changes or while you are waiting on lab results

This is completely normal. Feeling anxious does not mean something is wrong with you. You are juggling a lot—a strict medicine plan, new ways to care for your transplant and regular follow-ups.

Talk to your transplant team if your anxiety ever interferes in your daily life. They can offer you treatments that can really help.

Remember—your emotional well-being is just as important as your lab numbers!

Depression

You may feel down or disconnected after your transplant, even when you and others expect you to feel better.

You might notice that you sleep more, but still wake up exhausted. Maybe you avoid calls or texts, cancel plans or find it hard to enjoy things that used to matter to you. You might even ask yourself, “Why don’t I feel grateful?” or “What’s wrong with me?” These can be signs of depression. Your body has been through a major trauma, and now your mind is trying to catch up.

Your emotional health is just as important as your physical health. Talk with a transplant social worker, kidney-informed therapist or peer mentor to get mental health support. There are many treatments for depression that really work.

Survivors' guilt

If your kidney was from a deceased donor, you could feel both gratitude and relief, but also deep sadness. You might think about the donor or their family or even feeling guilty that you are alive because someone else is not.

This just means your heart is trying to make sense of something very complex.

Some people find comfort in writing to their donor's family when they are ready. You do not have to do it right away, or at all. But it can be a way to share thanks and honor the gift you received. If you are curious about this option, talk to your social worker.

Other mood changes

After a transplant, it is very normal to feel several mood changes at the same time, such as:

- Lack of sleep or nightmares
- Irritability
- Hallucinations
- Shame from new bodily changes

You are not alone! These can be a common side effect from your anti-rejection medicines (immunosuppressants) like prednisone, a steroid you are likely taking. It can be hard to adjust while trying to get back to your new normal.

If this is happening to you, do not ignore it. Talk to your transplant pharmacist and social worker. They can tell you what is due to your medicines. They can also make changes to your doses or connect you with mental health support.

You do not have to cope on your own. Your team is here for your whole health, body and mind.

If you ever feel overwhelmed, whether it is trouble sleeping, mood swings, anxiety or just not feeling like yourself, talk to your transplant team. They are here to do more than just manage your labs and medicines. They are also here to support your mental health. Your transplant social worker can connect you with a therapist, peer support or other help, and your pharmacist can review your medicines to see if changes would help you.

Your caregivers, loved ones and support people are *important!*

Your caregivers are anyone who you trust to help with your day-to-day needs, such as bringing you meals or helping with your medicine. But caregivers also do more than that. They can listen, check on your mood and notice when something feels off.

When you are having a tough time, your caregivers can help you talk about it, find support, and remind you that you are not alone. Having someone by your side can make a big difference in your recovery—in your body and your mind.

For you, the caregiver

As a caregiver, you often give so much of yourself that you forget to take care of your own needs. It is normal to feel tired, stressed or burned out. And it is okay to ask for help. Asking for help shows strength in taking care of yourself, not weakness.

Several states offer respite programs. These programs can provide someone to care for your loved one for a few hours or days so you can go to appointments or simply rest.

It can be hard if your loved one has mood swings. Remember, they are going through many physical and emotional changes. It will take time for them (and you) to adjust.

You do not have to do it alone. Look into respite care in your area! They are there for you, just like you are there for your loved one.

YOUR NEW NORMAL: A RANGE OF POSSIBILITIES

You spent a lot of time and energy preparing for your kidney transplant. But the journey continues after your surgery. Your new normal may bring different possible outcomes.

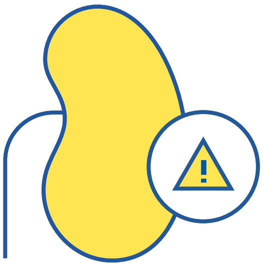
> *Going through transplant is like entering a long-term relationship. There will be bumps along the way and it requires ongoing communication with your transplant team.*
>
> **— Dr. Silas Norman, transplant nephrologist**

1 YOUR KIDNEY COULD START WORKING RIGHT AWAY

Your surgery goes well, your kidney immediately "wakes up," you're able to go home within 3-7 days, your kidney numbers are within a healthy range and you have very few side effects from your anti-rejection medicine. But you are still recovering from a major surgery, so you may not feel normal as you recover.

> *Once I got this working kidney, everything felt back to normal and I had so much energy. And then, I had to learn what life was like after getting a transplant. There's a lot you have to go through to care for your new kidney.*
>
> **— Christopher Bryant, kidney transplant recipient**

2 YOUR KIDNEY COULD START WORKING, BUT YOU HAVE SIDE EFFECTS



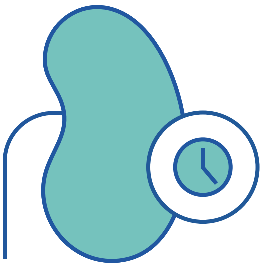
Your kidney could start working shortly after surgery, but you may have side effects from your anti-rejection medicines. Everyone responds differently to these. It may take time to get used to many new changes.

TIP: If you have side effects, your transplant pharmacist can often change your medicine dosage. Share how you are feeling with your transplant team and do not lose hope!

> *If you don't feel right or if you feel something's off, advocate for yourself and your transplant team can adjust your meds.*
>
> **— Shayla Harris, kidney transplant recipient**

> *It's okay that transplant recipients don't feel well right away or in the months following surgery, it takes a while to get used to medications and medications to get used to you.*
>
> **— Dr. Goni Katz-Greenberg, transplant nephrologist**

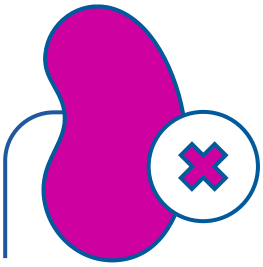
3 YOU MAY HAVE DELAYED GRAFT FUNCTION (DGF)



This is when your new kidney does not start working right away. It usually starts working a few days to several weeks later, but could last for three to four weeks or even longer. In the rare case that after three months, your kidney is still not working (primary non-function), your transplant team may decide to relist you on the transplant waitlist.

> *Your initial recovery may have challenges and may not be reflective of how you will feel in the long-term—the ultimate goal of kidney transplantation is improved quality of life and survival.*
>
> **— Dr. Samira Farouk, transplant nephrologist**

4 YOUR NEW KIDNEY COULD REJECT WITHIN THE FIRST YEAR REQUIRING TREATMENT



Rejection is higher in the first year, so it's very important for your transplant team to monitor your kidney and get treatment when needed!

> *Transplant is a marathon, not a sprint. Sometimes there are big hills to climb to reach the transplant finish line, and the transplant marathon is different for everyone.*
>
> **— Loretta Phillips, advanced nurse practitioner**

To lower your chance of these problems, follow your transplant team's instructions for your:

- Medicines
- Wound care at the surgery site
- Daily changes, such as food and exercise
- Preventive screenings or testing

It can feel overwhelming to think about the possible problems after your transplant. But remind yourself that a kidney transplant gives you the chance to live a healthy and fulfilling life after kidney failure. If you have any of these problems, talk to your transplant team so they can make changes to your treatment plan.

POSSIBLE PROBLEMS AFTER A TRANSPLANT

Delayed graft function (DGF)

Delayed graft function is when your new kidney does not start working right away.

It is common for your new kidney to take some time to work. DGF usually lasts from a few days to several weeks, but in some rare cases could last for three to four weeks or even longer.

Your transplant team may have you return to or start dialysis until your new kidney begins working or "wakes up." During this time, you will see your transplant team or have labs done more often.

In rare cases, if your kidney is still not working after three months, your transplant team may decide the kidney is not going to work (primary non-function) and will relist you on the transplant waitlist.

DGF happens in about one in four (26%) people with a kidney transplant.[6] DGF is rare in living donor kidney transplants.

Primary non-function

Primary non-function is when your new kidney never starts working. It can happen, but is very rare. If this happens, you will be required to start dialysis and may continue it regularly. But do not be discouraged, if this does happen, it does not prevent you from having another transplant.

Rejection

Rejection happens when your body notices that your new kidney comes from a different person and starts to attack it. Your anti-rejection medicines (immunosuppressants) help to stop this from happening, but sometimes rejection may still happen.

Your transplant team will closely watch your kidney health often through lab tests to make sure your kidney is working and not going through rejection.

Rejection is most common in the first year after a transplant: Four out of 100 kidneys stop working in the first year.[7]

So, it is essential to take care of your kidney! You should:

- Go to all of your appointments
- Take your medicine
- Openly communicate with your transplant team about how you are feeling and any new symptoms.

Rejection is a risk for any recipient, but remember that:

- Living kidney donor transplants last 15-20 years on average
- Deceased kidney donor transplants last 10-15 years on average[8]

Infections

You have a higher chance of infections due to your anti-rejection medicines. These medicines are vital to prevent your body from rejecting your new kidney. However, they also lower your body's ability to fight off germs and illness. This means your lowered immune system will not be able to fight off infections as much as it could before your transplant.

Common infections include:

- Urinary tract infections: A bacterial infection in the organs that make urine (pee) and remove it from your body
- BK Virus: A common virus that feels like a cold. It can stay in your body and "wake up" after a transplant, when your immune system is weaker.
- CMV: A virus that can be a serious illness in transplant recipients. It can stay in your body and "wake up" after a transplant.

Your transplant team will give you antibiotics to prevent infections within the first three to six months after surgery. If you do have an infection, your transplant team will give you treatment depending on what type and where the infection is.

Urine leak

You may have urine (pee) leak around the area of your kidney. Here is how this may happen:

During your surgery, your new kidney's ureter (a tube that connects your kidneys to your bladder) will be connected to your bladder. Urine then passes through from your kidneys to your bladder.

If your bladder is very full and not emptied well, the pressure can cause the new ureter connection to become weak. If the ureter does not heal well to the bladder, urine may leak back into the belly and can cause pain, swelling or infection. Resting the area and giving it time to heal will fix the leak, but occasionally you will need surgery to fix the leak.

Pain

After your kidney surgery, you may feel soreness or pain around the surgery site while you are healing.

You will be able to return to work and other normal activities within three months after surgery unless your transplant team advises you not to.

Avoid lifting heavy objects more than 5 pounds until your doctor tells you that your wound has completely healed.

Bleeding or blood clots

After any surgery, there is a risk of bleeding.

Your transplant team will look closely at your blood tests for signs of blood loss or anemia (low red blood cell count) during your hospital stay and follow-up visits. Some bleeding is normal, but if it is serious, you may need treatment such as a blood transfusion.

Blood clots can also form:

- Near the surgery site
- In a blood vessel in your leg
- In the blood vessels connected to your new kidney

If this happens, you may need blood thinners and close monitoring, or a procedure to remove the clot and improve blood flow to your kidney.

Tell your transplant team if you have a personal or family history of blood clots. You may need to take blood thinners after surgery to prevent clots. Your doctor will manage these carefully to balance the chance of clotting with the chance of bleeding.

Always let your transplant team know if you have any unusual symptoms after surgery, which could be a sign of bleeding or blood clots, such as:

- Sudden swelling in one or both of your legs
- Pain in your stomach area or side
- Feeling dizzy or faint
- Unusual bleeding or bruising

Your safety is a priority! Your team will take steps to prevent and treat any problems like bleeding or blood clots.

Hernia

A hernia happens when an organ pushes through a weak area in your stomach muscle where your new kidney is. This happens when the scars from surgery do not heal properly.

You may feel a lump or have a lot of discomfort or pain. This can stop you from some daily activities.

To help avoid hernias, you should avoid lifting five pounds or more in the first eight to 12 months after surgery.

To treat a hernia, you will need surgery, but hernias can come back again.

Fluid collection

You may have fluid collection around your kidney. This could be from a urine leak or other causes such as fluid from recovery.

This is very common and can happen at any time. Some people may feel this as discomfort, and some people may not.

Fluid collection can raise your chance of infection or it may put pressure on your kidney.

If your transplant team notices fluid collection around your kidney, they may need to sample it to find the cause. They may treat this in a few ways:

- Wait for the fluid to re-absorb
- Drain it
- If it is due to a urine leak, do surgery or a procedure to repair the leak in the ureter connection

CONCLUSION

A kidney transplant brings hope for many people. It can feel like a new lease on life!

As you go through your own transplant journey, you will get used to the changes in your kidney care and your daily life, in your own time. This guide is here as a reference to be more prepared for these changes.

If you have specific questions about your care or changes after your transplant, talk to your transplant team. They are here to help you have a successful life after transplant.

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RESOURCES

LIFE AFTER YOUR TRANSPLANT: THROUGH THE STAGES	
American Kidney Fund (Recovery after transplant surgery)	Discusses what to expect after a transplant surgery, including how to tell how well your kidneys are working and when you can do normal activities again.
Family and Medical Leave Act	The U.S. Department of Labor describes what the Family and Medical Leave Act is and the benefits it gives employees.
YOUR HEALTH CARE AFTER A TRANSPLANT	
UNOS (Your Transplant Team)	The United Network for Organ Sharing (UNOS) describes your transplant team who will help you recover from surgery, talk to you about care after surgery and provide support.
Cleveland Clinic (Comprehensive Metabolic Panel)	Describes the comprehensive metabolic panel (CMP), which are blood tests that measures 14 different substances in your blood.
Cleveland Clinic (Complete Blood Count)	Discusses the complete blood count (CBC) blood test, which measures your red blood cells, hemoglobin, white blood cells and platelets.
American Kidney Fund (Kidney Biopsy)	Explains why a doctor might do a kidney biopsy and what you can expect before, during and after.
CareDx (Donor-derived Cell free DNA)	CareDx provides a short video of a transplant nephrologist (kidney doctor) explaining what cell free DNA is and how it works to find possible problems with your new kidney.
UNOS (Post Transplant medicines)	Describes anti-rejection medicines that work to lower side effects and lower the immune system to help prevent transplant rejection.
HEALTHY LIVING WITH A TRANSPLANT	
Ask a Dietitian	AKF's resources on working with a dietitian to learn about kidney-friendly eating.
CareDx (Infections and Kidney Transplant Patients: What to know)	CareDx shares important tips about infections after a kidney transplant.
United States Department of Agriculture (USDA) Food Safety for transplant patients	The U.S. Department of Agriculture shares a food safety guide to lower your chance of foodborne illness.
American Kidney Fund (How can I eat healthy after a kidney transplant?)	AKF provides tips on food safety, healthy eating, fluid, sugar, and sodium for kidney transplant recipients.

Commodity Supplemental Food Program (USDA)	This program helps older adults with low-income by distributing nutritious USDA food and administrative funds in certain states.
CareDx (Food and Diet)	CareDx offers nutritious and delicious transplant-friendly recipes.
MyPlate (USDA)	USDA's MyPlate app can help you make healthy food choices within your budget. Use the app to find grocery savings in your area and how to make budget-friendly foods.
Supplemental Nutrition Assistance Program (SNAP)	The SNAP program provides food benefits to low-income families to use in addition to grocery budgets to afford nutritious food.
American Kidney Fund (Community Resource Finder)	This AKF tool connects you with help near you. You can find help paying your bills, finding health care, getting emergency aid, finding support groups and more.
American Kidney Fund (Kidney-friendly eating on a budget)	AKF offers tips and resources on coping with the challenges of a kidney-friendly eating plan, especially for people on a tight budget.
Hunger Free America	A tool to find food assistance near you by entering your address.
American Kidney Fund (Mental Health and Support after Transplant)	AKF discusses the mental aspects of living after a transplant including how to reach out for support.
Respite Care	The National Institute on Aging (NIA) describes respite care and how to find programs in your area.
POSSIBLE PROBLEMS AFTER A TRANSPLANT	
American Kidney Fund (Kidney donation and transplant)	AKF explains possible problems after a kidney transplant.
Care DX (Kidney Transplant Rejection: What You Need to Know)	CareDx explains what causes kidney transplant rejection and how to lower the chance of rejection.
OTHER RESOURCES	
American Kidney Fund (Kidney Kitchen)	AKF's Kidney Kitchen offers in-depth information and tools to eat well for your kidneys. Explore helpful cooking demos and recipes that are good for your kidneys.
American Kidney Fund (Supporting patients with chronic kidney disease facing food insecurity)	AKF discusses the challenges of food insecurity for people living with chronic kidney disease and explains food assistance programs and resources you may qualify for.

GLOSSARY

Advanced Practice Provider (APP)	A health care professional who helps manage a recipient's care after their transplant, such as a nurse practitioner or physician assistant.
Antibody-mediated rejection (AMR)	When a recipient's immune system attacks their new kidney due to donor-specific antibodies (DSAs), a type of protein.
Anti-rejection medicines (immunosuppressants)	Medicines a recipient takes to prevent their body from rejecting their new kidney.
Blood clots	When clumps of blood form in blood vessels that can block blood flow. This can happen sometimes after surgery.
Blood sugar (glucose)	The main sugar in our blood. It is our body's primary source of energy.
Care partner/caregiver	A family member or friend who helps a recipient by going to appointments or helping at home.
Complete Blood Count (CBC)	A blood test that measures red and white blood cells and platelets, and looks at overall health.
Complex carbohydrates	Foods that our bodies digest more slowly, which avoids spikes in blood sugar. These include peas, beans, whole grains and vegetables.
Delayed graft function (DGF)	When a new kidney does not work right away after a transplant. Also known as "sleepy kidney."
Donor-derived cell-free DNA	A blood test that finds DNA from the donor kidney in a recipient's bloodstream. When there is damage to a transplant, like rejection, cells are injured and the donor's DNA from the kidney is released into the recipient's blood (called donor-derived DNA). If there is more of this DNA than normal, it could mean a kidney injury.
Donor-specific antibodies (DSAs)	Proteins a recipient's body may make against a new kidney because it sees it as a foreign object in the body.
Electrolytes	Substances in our bodies that help keep fluid and chemical levels in balance.
Family Medical Leave Act (FMLA)	The FMLA allows qualified employees to take time off from work for certain medical or family reasons without losing their job or health insurance. The leave is unpaid, but your job and health coverage are protected during this time.
Fluid collection	When fluid builds up in the body's tissues or spaces, often causing swelling.
Foley catheter	A soft tube inserted into the bladder to help drain urine (pee) after surgery.

Food insecurity	Not having enough affordable, healthy food. This is due to systemic issues, such as a high cost of living or low income.
Graft	A word for a tissue that is transplanted, such as a new kidney from a donor.
Hernia	A bulge or swelling caused by an organ pushing through a weak area in the muscles, sometimes from lifting heavy things too soon after surgery.
Hyperglycemia	When glucose (sugar) levels in the blood are higher than the normal range. Also called high blood sugar.
Induction medicines	Medicines a recipient gets during surgery to start weakening the immune system to lower the chance of rejection.
Kidney biopsy	Taking a sample of kidney tissue to look for signs of rejection or injury. It is invasive and only done when lab tests show abnormal results.
Lean protein	Foods that are high in protein but low in fat and calories, such as: • Skinless chicken or turkey • 90% or leaner ground beef • Beans and lentils • Low or no-fat yogurt or cottage cheese • Fish
Maintenance medicines	Long-term medicines that a recipient takes every day to prevent the immune system from attacking their new kidney.
Post-transplant diabetes mellitus (PTDM)	When a recipient develops diabetes (high blood sugar levels) after their transplant.
Primary non-function	When a new kidney never starts working after a transplant. It can happen, but is very rare.
Rejection of a transplant	When a recipient's body notices that their new kidney comes from a different person and starts to attack it. Anti-rejection medicines help to stop this from happening, but sometimes rejection may still happen.
Rejection medicines	Medicines a recipient takes if their body shows signs of rejecting their new kidney.
Renal dietitian	A registered dietitian who is highly educated in food and nutrition. They focus on the needs of people with chronic kidney disease.
Serum creatinine	A blood test that measures creatinine, a waste product in your blood that is filtered out of your blood through your urine (pee) by a healthy kidney. If your kidneys are unable to filter creatinine, it will build up in your blood and cause a high level of serum creatinine. This test doesn't always accurately measure kidney health.
Support network	A person's social support. A group of people who provide them with emotional, social or practical help.

Supportive care	Sometimes called palliative care. A type of medical care that provides comfort and support for people with serious illnesses. It focuses on relieving pain, symptoms or stress. It is not just for people with a terminal illness.
Survivor's guilt	Stress or guilt a person feels when they have survived an event that others did not survive. For a recipient, they may feel this when they receive a kidney from someone who passed away.
Urine (pee) leak	A complication when urine leaks from the tube (ureter) connecting a recipient's bladder and the transplanted donor kidney. This can lead to swelling, possible infections and be painful. It can usually heal on its own with rest, although some situations may need surgery to fix the leak.
Urine (pee) output	The amount of urine (pee) the body makes. This usually increases after a successful kidney transplant. It is important to tell your transplant team if you notice a change in the amount of urine you are making.
Ureter	The tube that carries urine from the kidney to the bladder.
Ureteral stent	A thin, flexible tube that is placed into the ureter (tube) to support the connection at the bladder and keep the ureter open from the kidney to the bladder.
Urinary tract infection (UTI)	An infection that happens when bacteria enters the urinary tract through the urethra (the tube that lets urine leave the body).

Citations

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KNOW YOUR NUMBERS

Post-transplant testing results:

DATE	TIME	BLOOD GLUCOSE	BLOOD PRESSURE

KNOW YOUR NUMBERS

Post-transplant testing results:

DATE	URINE OUTPUT (in mL)	NOTES

KNOW YOUR NUMBERS

Post-transplant testing results:

DATE	URINE PROTEIN/ CREATININE RATIO	NOTES

DATE	CREATININE LEVEL	NOTES (i.e., Need to drink more water)

DONOR SPECIFIC ANTIBODY TESTING COMPLETION DATE:

CELL-FREE TESTING DATE:

LAST BIOPSY DATE:

KNOW YOUR NUMBERS

Post-transplant medicine tracking:

MEDICINE	TIME OF DAY	DOSE	PURPOSE/NOTES	POSSIBLE SIDE EFFECTS
Tacrolimus				
Mycophenolate				
Prednisone				
Bactrim / Atovaquone (circle one)				
Valcyte / Acyclovir (circle one)				
Nystatin / Fluconazole / Mycelex (circle one)				
Other				
Other				
Other				
Other				

IMPORTANT QUESTIONS

IMPORTANT PHONE NUMBERS

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