



Taking Care of Yourself After a Kidney Transplant

SANFORD[®]
HEALTH

After Your Kidney Transplant

Congratulations on your recent kidney transplant! The Sanford Transplant Team is excited to partner with you, your kidney doctor, and your primary care doctor to provide you with great care after your transplant.

This Booklet Will Answer Some of Your Questions

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How Will You Follow-Up?

Important Things to Remember After Your Transplant

- Take your medicines as directed.
- Keep a list of the medicines you take with you at all times.
- Wear an identification (medical alert) bracelet.
- Call the transplant office if you start any new medicines or stop any previously prescribed medicines.
- Perform your “self-cares” as instructed by your doctor or the transplant team.
- Keep all of your doctor appointments.
- Call your doctor or the transplant coordinator if you experience any of the warning signs of infection or rejection.
- Call the transplant office if you have a change of:
 - Address
 - Phone number
 - Your insurance coverage
- Notify the transplant coordinator at time of any hospitalization outside of the Sanford system.

Leaving the Hospital

You will be able to go home when the transplant team feels you are ready. Before you leave the hospital, a member of the transplant team will go over the things you need to know when you go home.

Things to Know

You will not be on your own.

The Transplant Team will continue to be a resource for you.

It is important you stay in close contact with the Transplant Team.

You should stay in the area for several weeks after discharge. Close monitoring and follow up care are important for success after transplant.

Appointments for follow-up visits and lab tests will be set up before you go home. The Transplant Coordinator will give you a schedule of these appointments and explain where you need to go for each appointment.

Some Normal Feelings You May Have

- Excitement
- Worried
- Overwhelmed
- Frustrated
- Impatient

Be sure to share these feelings with your family, friends, and transplant team. They are there to help and provide the caring support you need.

What Do You Need to Know for Self-Cares?

There are self-cares that you will do each day to monitor your health when you are at home. You will review and practice these with nurses during your hospital stay.

- If you notice any new tenderness over the kidney, you should call your doctor or transplant coordinator.
- Take your temperature to check for an infection or fever.
 - Take your temperature 1 time each day, more often if you feel ill or have had a fever.
 - Follow the directions that come with the thermometer.
 - Do not drink anything hot or cold before checking your temperature.
 - If your temperature is above 100 degrees, call your transplant coordinator or your doctor.
- Weigh yourself
 - Weight gain or loss could show a change in kidney function.
 - You should weigh yourself at about the same time each day.
 - It is best to weigh before breakfast but after you have gone to the bathroom.
 - Use the same scale.
 - Wear the same amount of clothes when you weigh yourself.
 - If you gain or lose more than 3 pounds in one day, you should call your doctor or transplant coordinator. Extra weight gain or loss could mean something in your body is not functioning correctly and your doctor will need to find out why.
- Measure Intake and Output
 - You will need to measure and record the fluids you take in and your urine output the first few weeks after transplant. Your goal is to take in more fluid than you are getting rid of. This will help the kidney to work better.

Here Is a Table to Help You Know How Much Fluid Is in What You Commonly Drink:

| | | |
|-----------------|-----------|---------|
| ½ cup | 4 ounces | 120 mLs |
| 1 cup | 8 ounces | 240 mLs |
| 1 can of pop | 12 ounces | 355 mLs |
| 1 pint | 16 ounces | 473 mLs |
| 1 bottle of pop | 20 ounces | 590 mLs |
| 1 quart | 32 ounces | 960 mLs |

- Take your first blood pressure of the day, after taking your morning blood pressure medication.
- Take your blood pressure 2 times a day. Keeping your blood pressure within the guidelines set by your doctor is important for good kidney function.
 - Before taking your blood pressure, sit and relax for at least 5 minutes. Feet should be flat on the ground and legs not crossed. This will help to get a more accurate reading.
 - Keep track of your blood pressure results.
 - Report sudden increases, decreases, or a general trend over several days to your transplant doctor or coordinator.

You Should Call Your Doctor or Transplant Coordinator If:

- Your systolic blood pressure (top number) is above 160
- Your diastolic blood pressure (bottom number) is above 100 or below 50
- Your heart rate is above 100 or under 50
 - High blood pressure can be a side effect of your medicines after transplant. Medicine may be needed for blood pressure control.

To help you keep track of your temperature, weight, and other important measurements you will be given self-care recording sheets. You must bring these weekly charts to your follow-up visits so the doctor can review them!

Lab Schedules and Doctor Visits

You will be watched closely after your transplant. Lab tests and doctor visits should be less often as time goes on.

Lab Results

Your lab test results help monitor your kidney function and how well your medicine is working.

The transplant office will call you with your lab results. You may also see your lab results in MySanfordChart. Some of the tests may include:

- **Creatinine** – this test shows how well the kidney is working
 - An increased level may show either:
 - A problem with the kidney
 - Side effects from anti-rejection medicines
- **White Blood Count (WBC)** – this test measures the amount of white blood cells in the blood.
 - A low WBC will increase your risk for infection.
 - A high WBC may mean you have an infection.
 - A low or high WBC may mean you need to have the doses of your medicine changed.
- **Hemoglobin** – this test measures the ability of blood to carry oxygen
- **Anti-rejection Drug Levels**
 - This test measures the amount of anti-rejection medicine in your blood at its lowest level. This is done just before you take your regularly scheduled morning dose. This is called a “trough level.”
- Other lab tests may be performed to monitor your overall health. Some of those tests are:
 - **Blood Sugar (Glucose)** – This test measures the amount of sugar in your blood.
 - **Calcium** – The kidney helps regulate calcium levels. Kidney malfunction can result in low levels of calcium.
 - **Phosphorus** – This level may be low or high after a kidney transplant. You may need to take medicine to add or remove phosphorus from your blood or you might need to adjust the amount of phosphorus rich foods in your diet.
 - **Magnesium** – If too much magnesium is removed by the new kidney, you may need to take medicine to add magnesium to your blood or increase your dietary intake of foods containing magnesium.
 - **Potassium** – This level may be low or high after a kidney transplant. You might need to take medicines to add or remove potassium in your blood or you might need to adjust your foods containing potassium.

Doctor Visits

- It is very important that you see your transplant doctor or nephrologist.
- These visits, with the lab tests, help the doctor assess your general health and the health of your transplanted kidney.
- Often, the doctor can detect early signs of rejection or infection before you notice any symptoms.
- Missing your doctor visits and lab appointments can mean a bad outcome for your transplanted kidney.

**Keep all lab and doctor appointments.
Your new kidney depends on it.**

Infection

The same drugs that help prevent transplant rejection can also increase risk for an infection. Infections after transplant are most often in the lungs or urinary tract. The risk of infection is the greatest right after your transplant, when your doses of anti-rejection medicines are at their highest.

Most Infections Can Be Successfully Treated

You must be able to recognize the warning signs of infection. You need to report them right away so treatment can begin right away. These same symptoms may be a warning sign of a rejection episode.

Call the Transplant Doctor right away if you have any of these signs of infection:

- Coughing
- Shortness of breath – Hard to breathe
- Sore throat
- Respiratory congestion
- Redness or drainage of a cut or wound
- Pain, burning or pressure during urination (peeing)
- Frequency and urgency of urination
- Fever over 100° F (38° C)
- “Flu-like” symptoms – chills, aches, tiredness, dizziness, headache, nausea, vomiting, diarrhea

Tips for Preventing Infection

The first couple of months after your transplant you will be taking higher doses of anti-rejection medicines, which can put you at a higher risk to get an infection.

You do not need to isolate yourself. However, if you do not have direct contact with people who have active infections, you will greatly lower your chances of getting an infection.

- Stay up to date with age and disease-recommended vaccinations. Please ask your transplant team if you have questions regarding which vaccines you should get. You should not receive any live vaccines after transplant.
- Stay away from crowds.
- You may be asked to wear a mask for the 1st month after transplant when out around large numbers of people such as in clinics and stores.
- Keep your distance from people who are sick.
- Wash your hands often with soap and water.
- Clean all cuts and scrapes with soap and water.
- Do not, under any circumstances, change cat litter or clean birdcages. They can be major sources of infection.
- Daily tooth and mouth care are important. Your mouth can also be a source of infection. It is very important that you continue to see your dentist for dental care.
- Dirt and lawn clippings have molds, bacteria, and fungus in them. You should wait three months after your surgery before gardening.
- Changing diapers – it is recommended that you wear gloves, especially with infants who may have had the live rotovirus vaccine.
- Use bug repellent to prevent West Nile Virus and Lyme Disease.

What Do You Need to Know About Your Medicines?

You are responsible for taking the medicines prescribed for you. You are responsible to understand:

- The name and purpose of each medicine
- What the medicine looks like
- When to take each medicine
- How to take each medicine
- How long to continue taking each medicine
- Main side effects of each medicine
- What to do if you forget to take a dose
- When to order more medicine so you do not run out – always keep at least a 1 week supply on hand
- How to get your medicine
- Your financial responsibility for each medicine
- What you should avoid while you are taking medicine
- If your medicine needs to be handled in a special way

Your transplant team will determine the right dose for you based on your weight, lab tests, and the possible side effects of the medicine.

The facts below do not cover everything about each medicine. This does not replace your pharmacist or doctor's advice. Always follow the teaching given to you by your transplant team. Not every medicine in this handbook will be prescribed for you. You will not have all of the side effects listed for each medicine. You will see that most side effects decrease with time.

Storage

- Keep medicines in the original container, tightly capped, until you fill your pillbox. Once you put them in your pillbox, keep the container tightly sealed.
- Store in a cool, dry place away from direct sunlight.
- Do not store medicines in the bathroom – moisture and heat can cause them to lose their strength.

- Do not allow liquid medicines to freeze.
- Do not store medicines in the refrigerator unless your pharmacist advises you to do so.
- Keep all medicines away from children.

Before You Take Your Medicines

- Ask your transplant pharmacist or transplant coordinator to help you choose the best times to take your medicines.
- Take each medicine at the same time every day. Always!
- Follow a written schedule.
- Do not cut or crush a tablet unless you are told to do so.

Let Your Transplant Team Know If You:

- Cannot take your medicines by mouth because of illness
- Forgot to take a dose of medicine
- Have vomiting, diarrhea, or nausea for 24 hours or more
- Feel you are having a reaction to your medicines
- Think the directions on the label may be different from what you were told
- Have trouble removing child-resistant caps
- Have a reason to take any over the counter medicine such as: pain relievers, cold remedies, or diet pills
- Have had a change in health or eating habits
- Have a new prescription from your local doctor or a change in a current prescription
- Have any unusual symptoms or side effects, since they may be related to the medicine you are taking

Reminder: Never stop taking your medicines or change the dosage without your transplant team's approval. A risk of rejection and loss of the new kidney always exists.

Anti-Rejection Medicines (Also Called Immunosuppressants)

- Your body sees your new kidney as foreign and will try to attack (reject) it.
- 2 or 3 medicines are used to slow down (suppress) your immune system so your body will not attack the new kidney.

- Take these medicines on time every day. The level of the medicine needs to stay very steady in your body. If levels get too high, side effects could happen. If levels get too low, rejection could happen.
- You will take these medicines as long as the transplanted kidney is working in your body.

Thymoglobulin (Antithymocyte Globulin, ATG)

- This medicine is often used one time a day for 1 to 14 days.
- This medicine is only given intravenously (IV). It takes 6 to 12 hours to administer.
- You may receive medicines to help reduce the side effects of this medicine. The other medicines may include: Tylenol (acetaminophen), Benadryl (diphenhydramine), Solu-Medrol (methylprednisolone) and/or prednisone.
- Report any side effects to your nurse as soon as possible. These include, but are not limited to, difficulty breathing, fever, chills, rash, nausea, vomiting, diarrhea, muscle aches, infection, pain during infusion, a decrease in white blood cells and decrease in platelets.

Simulect (Basiliximab)

- This medicine is often used at the time of transplant and then once again 4 days later.
- This medicine is only given intravenously (IV). It takes several minutes to administer.
- The most common side effect of this drug is nausea.

Prednisone or Methylprednisolone

- This medicine is often given 1 or 2 times a day, starting the day of transplant.
- Methylprednisolone is given intravenously (IV).
- It is best to take prednisone with food.
- Side effects include, but are not limited to, high blood sugar, increased appetite, weight gain, osteoporosis (brittle bones), high cholesterol, mood swings, anxiety, stomach ulcers, swelling and slow growth (in children).

Nulojix (Belatacept)

- This medicine is often used on the day of transplant, post-operative day 5, at the end of week 2 and week 4, and then every 4 weeks.
- This medicine is only given intravenously (IV). It takes 30 minutes to give.
- Side effects include, but are not limited to, anemia, diarrhea, urinary tract infection, edema, constipation, high blood pressure, fever, headache, a decrease in white blood cells and an increased risk to develop post-transplant lymphoproliferative disorder.

Neoral or Gengraf (Cyclosporine Modified)

Prograf (Tacrolimus, FK 506)

- You will use 1 medicine or the other, but will not use both of the above at the same time.
- This medicine is often used 2 times a day. The doses should be 12 hours apart.
- Pills are preferred, but intravenous (IV) injection may be used.
- On a day when your medicine level is to be measured, take your morning dose of medicine after your blood has been drawn.
- Side effects include, but are not limited to, headaches, abnormal kidney function, high blood pressure, high blood sugar, high cholesterol, infection, elevated potassium level in your blood, decreased magnesium level in your blood, excessive hair growth or hair loss, trouble sleeping, swelling or overgrowth of the gums, nausea, diarrhea, shaking, or numbness and tingling of your hands or feet.

Cellcept (Mycophenolate Mofetil)

Myfortic (Mycophenolic Acid)

- In the body, CellCept is turned into Myfortic, so the 2 medicines work the same. You will use 1 medicine or the other, but will not use both at the same time.
- This medicine is often used 2 times a day. The doses should be 12 hours apart.
- Pills are preferred, but intravenous (IV) injection may be used.
- Swallow whole - Do not break, crush, or chew the pill before swallowing.
- Take this medicine on an empty stomach if possible. It needs to be taken the same way with food – either always with a snack or always on an empty stomach.
- Side effects include, but are not limited to, heartburn, stomach discomfort, infection, nausea, vomiting, diarrhea, and a decrease in white blood cells (which can affect your ability to fight infection).
- CellCept and Myfortic should not be used by pregnant women unless the possible benefits justify the possible danger to the unborn baby. Women of childbearing age should use effective contraception before the medicine, during the time they are taking it, and for 6 weeks after stopping the medicine. Call your transplant team immediately if you think you are pregnant or want to become pregnant at some point.
 - Mycophenolate Risk Evaluation and Mitigation Strategy (REMS) is a program to tell doctors, nurses, pharmacists and patients about the risks of taking mycophenolate during pregnancy. It is mandated (required) by the Food and Drug Administration (FDA).

- Females of childbearing age will be educated on the increased risks of first trimester pregnancy loss and congenital malformations when taking mycophenolate during pregnancy. Pregnancy prevention and planning is extremely important when taking mycophenolate. Your provider may perform routine pregnancy tests if you are of childbearing age. Females of reproductive potential include girls who have entered puberty and all women who have a uterus and have not passed through menopause.

Infection Fighting Medicines

- The anti-rejection medicine may slow down your body's ability to respond to an infection.
- 2 or 3 medicines are used to help protect your body against certain illnesses during the first few months after transplant.

Bactrim (TMP/SMX or Trimethoprim/Sulfamethoxazole)

Dapsone

- These medicines are used to prevent and or treat certain pneumonias and other illnesses.
- This medicine is usually taken by mouth 1 time a day or 1 time every other day. You will likely take it for 3 to 6 months.
- Drink plenty of fluids with this medicine.
- Do not take Bactrim if you are allergic to sulfa. In that case, your transplant team may give you dapsone or pentamidine.
- Side effects include, but are not limited to, nausea, rash, itching, increased potassium, decreased white blood count and increase risk of sunburn.

Pentamidine Inhalation

- This medicine is given by a respiratory therapist or a pulmonary department.
- The medicine is taken by breathing the medicine into your lungs through a tube and a machine called a nebulizer.
- The treatment usually takes 20-30 minutes to complete.
- This medicine is usually taken once a month for 6 months.
- You may also be given a medication called albuterol to open up the lungs or help you breathe.
- Side effects include, but are not limited to, burning pain, dryness, or sensation of lump in throat, chest pain or congestion, and coughing.

Mycostatin (Nystatin) Liquid

- This medicine is used to treat or prevent fungal infections, such as thrush, in your mouth.
- If using a liquid, you will need to swish it around in your mouth and then swallow it.
- This medication should be taken after meals and other medicines to allow it to work in your mouth.
- Do not eat or drink anything for at least 30 minutes after taking the medicine.
- Side effects include, but are not limited to nausea, vomiting, diarrhea and unpleasant taste.

Valcyte (Valganciclovir)

- This medicine may be given to help prevent or treat infections that are caused by a virus called cytomegalovirus (CMV).
- More than half of people have had CMV in the past. It would look like a bad cold or flu.
 - In patients with a kidney transplant, it can cause bigger problems that could lead to a hospital stay.
 - If you or the kidney donor had CMV in the past – you will take valganciclovir.
- This is an expensive medicine. You will get help with your insurance to get it paid for as much as possible.
- It is usually taken by mouth 1 time per day or 1 time every other day. You will likely take it for 3 to 6 months.
- Take this medicine with food if stomach upset occurs.
- Swallow whole - Do not break, crush, or chew the tablet before swallowing.
- Valcyte has caused birth defects in animals and may impair fertility. Since it may cause birth defects, both women and men of childbearing age should use effective birth control during and for 90 days following the use of Valcyte. If you suspect you are pregnant, contact your transplant team immediately.
- Side effects include, but are not limited to, dizziness, nausea, diarrhea, a decrease in red blood cell counts, a decrease in white blood cells, and a decrease in platelets.

Zovirax (Acyclovir)

- This medicine may be given to help prevent viral infections, such as cold sores, chicken pox, or shingles.
- It is usually taken by mouth 3 times a day. You will likely take it for 3 months.
- Side effects include, but are not limited to, tiredness, headache, nausea, vomiting, or diarrhea.

Other Medicines

Medicines to Protect the Stomach

Because some medicines can cause stomach ulcers or heartburn, you may be given other medicine to help protect your stomach. Some examples of these medicines are:

- Pepcid (famotidine)
- Protonix (pantoprazole)
- Nexium (esomeprazole)
- Prilosec (omeprazole)

These medicines are often taken 1 to 2 times a day. Pills are preferred, but intravenous (IV) injection may be used. It is important to follow instructions about meals and other medicines when taking any of these medicines. Side effects include, but are not limited to, headache, nausea, vomiting, diarrhea, constipation, and gas.

Medicines That Lower Cholesterol

You may need to take other medicine to help lower your cholesterol. Some examples of these medicines are:

- Lipitor (atorvastatin)
- Zetia (ezetimibe)
- Zocor (simvastatin)
- Tricor (fenofibrate)
- Crestor (rosuvastatin)
- Fish oil

Vitamin or Mineral Pills

Your transplant team may advise you take vitamin and or mineral supplements if your diet is not providing enough of the nutrients you need. Some examples of these supplements are:

- K-Phos Neutral/Phospha 250 Neutral/PhosNaK (sodium and potassium phosphates)
- MagOx / Slow-Mag (magnesium)
- K-Dur / Klor-Con (potassium chloride)
- Multivitamin
- Calcium
- Vitamin D

Food Interactions

Talk to the transplant team before eating any **grapefruit or pomegranate, including juices**—they can interact with your medicines.

Alcoholic Beverages

Drinking too much beer, wine, and liquor may damage your liver. Many medicines are broken down by the liver and, if combined with alcohol, could harm your liver. Ask your transplant team for advice if you want to drink alcoholic beverages.

Caution: Herbal products or teas

Little is known about drug interactions between herbals and anti-rejection medicines, it is advised that transplant patients do not take herbal products.

Products that may “enhance your immune system” may lead to rejection.

Herbal products are not controlled by any government agency. This means that they are not tested for safety, side effects, or drug interactions in the same way as prescription medicines.

Check with you transplant team before taking any nutritional supplement, including herbal products.

Non-Prescription and Over-the-Counter (OTC) Medicine Guidelines

- OTC medicines do not require a doctor’s prescription for purchase, but they do have real effects and should be used with caution.
- Medicines can have several names. The best place to look for the generic name is on the back of the package under “ingredients”. Be sure to read the labels of all medicines.
- Single active ingredient products are better choices than products with more than one active ingredient.
- Follow the manufacturer’s label for dosing directions or call our office for guidance. If symptoms do not improve in 2-3 days, contact your doctor.

Caution: Medicines to avoid

Use of these medicines can lead to kidney damage:

- Ibuprofen (Motrin or Advil)
- Naproxen (Aleve)
- Aspirin in high doses (>325 mg)

| Problem | Generic Medicine Name | Common Brand Names |
|---------------------------------|---|---|
| Allergies, sneezing, runny nose | loratadine, cetirizine, fexofenadine, cromolyn nasal spray, diphenhydramine, chlorpheniramine | Claritin, Zyrtec, Allegra, NasalCrom, Benadryl, Chlortrimeton |
| Chest congestion | guaifenesin, topical menthol/camphor/eucalyptus | Mucinex, Robitussin, Vicks Vaporub |
| Constipation | docusate, senna, psyllium, bisacodyl, polyethylene glycol 3350 | Colace, Senokot, Senokot-S, Metamucil, Dulcolax, Miralax |
| Cough | guaifenesin, dextromethorphan, topical menthol/camphor/eucalyptus | Mucinex, Delsym, Robitussin, Robitussin DM, Vicks Vaporub |
| Diarrhea | loperamide | Imodium A-D |
| Dry eyes/irritation | artificial tears | Refresh Tears, TheraTears |
| Gas/abdominal bloating | simethicone | Mylicon, Mylanta gas, Gas-X |
| Headache, fever, body aches | acetaminophen Do not use ibuprofen, naproxen, aspirin >325 mg. | Tylenol Do not use Motrin, Advil, Aleve, Ecotrin. |
| Heartburn/stomach upset | famotidine, omeprazole, calcium carbonate Do not use bismuth subsalicylate. | Pepcid, Prilosec, Tums Do not use Pepto-Bismol. |
| Joint aches | capsaicin cream | Capzasin-P |
| Motion sickness | dimenhydrinate | Dramamine, Goodsense Motion Sicknes |

| Problem | Generic Medicine Name | Common Brand Names |
|---|--|---|
| Nasal/Sinus Congestion or Dry Nose | Nasal sprays containing: sodium chloride, oxymetazoline, or phenylephrine Do not use pseudoephedrine or phenylephrine. | Ocean Spray, Afrin, Neosynephrine Do not use Sudafed or Sudafed-PE. |
| Nausea | meclizine | Antivert |
| Skin irritation, insect bites, poison ivy | loratadine, cetirizine, fexofenadine, diphenhydramine, chlorpheniramine, topical hydrocortisone | Claritin, Zyrtec, Allegra, NasalCrom, Benadryl, Chlortrimeton, Cortisone-10 |
| Sore throat | menthol, benzocaine | Luden's, Vicks, Chloraseptic, NICE, Halls |
| Sleep | melatonin, doxylamine, diphenhydramine | Simply Sleep, Unisom, Benadryl |

Safe Handling of Hazardous Body Fluids and Waste

Your body fluids and waste such as urine, stool, blood, semen, vaginal fluids, sweat, and vomit can be hazardous after taking some medicines. These can be hazardous for 2 days after your last dose. Special care must be taken to prevent your body fluids and waste from coming into contact with other people.

- Any clothes, towels, bed sheets, or fabrics that are soiled with body fluids or waste should be washed separately from other laundry and handled with disposable gloves.
- If you are not going to wash the soiled items right away, place them in a plastic bag until they can be washed.
- Your dishes do not need to be cleaned separately.
- After using the toilet, put the lid down and flush 2 times.
- Wash your hands well with soap and water after using the bathroom.

- If you use a bedpan, urinal, or are vomiting into a sink or bowl, you or your caregiver should wear disposable gloves when emptying the basin.
 - These items should be rinsed with water after each use and washed with soap and water every day.
- Put on disposable gloves and soak up any fluid with disposable pads such as paper towels.
- Clean the area with soap and water using disposable pads.
- Put used pads and gloves in a plastic bag, then place into another plastic bag.
- You can put the double bagged trash with your regular garbage.
- Wash your hands well with soap and water after cleaning up the spill.
- Contact such as touching, hugging, and kissing are safe.
- Friends or family members that are pregnant, breastfeeding, or planning on becoming pregnant should take extra care to avoid contact with your body fluid or waste.
- It is safe to be sexually active. Discuss birth control options with your doctor.

What Can You Eat After Kidney Transplant?

Good Nutrition

- Good nutrition is important both before and after transplant because it can lessen the chances of complications after surgery. Keeping your body strong with good nutrition will protect you and your new kidney. Be sure to eat well-balanced meals and follow the diet that has been recommended to you.
- Your diet may be different after transplant, especially if you had many food restrictions from being on dialysis. You will find that you can eat more variety as long as your labs are within range. In some cases, you may have to eat more or less of certain foods to maintain your labs. You may also gain unwanted weight from the medicines and less diet restrictions. Be sure to follow a heart healthy diet and include exercise into your daily routine.
- In general, here are some nutrition guidelines to keep in mind after getting a transplant.
- Limit the amount of sugar you eat after transplant. The body cannot use sugar correctly with some medicines. This can cause the blood sugar to increase in the body.

- Limit or avoid concentrated sugar foods and simple sugars. This includes sugar, desserts, pie, pudding, regular soft drinks, cookies, candy, ice cream, fruit ice, honey, syrup, donuts, sweet rolls, jams, sherbet, and Jell-O.
- Limiting these items will also help with weight control and triglyceride levels.
- Limit sodium (salt) in your diet. Sodium can cause fluid retention with some medicines and make it difficult to control blood pressure.
 - High sodium foods include: table salt, seasoning salts, olives, pickles, salty snacks (chips, crackers, pretzels), cured meat (bacon, sausage, ham), deli meats (salami, bologna, summer sausage), canned soups, convenience foods (macaroni and cheese, frozen or boxed dinners), and condiments.
- Avoid grapefruit or pomegranate as it interferes with some medicines you may be taking.
- Eat or drink 2-3 servings of dairy each day, unless your dietitian or doctor has told you not to. This will help keep your bones strong and healthy.
- Include foods rich in phosphorus and magnesium in your daily intake. Examples: low fat dairy products; low sodium nuts and seeds; beans; whole grains; lean meats.
- Fluid needs increase after transplant. Make sure you are drinking enough fluid with a goal of about 3 liters per day, or per doctor advice.
- Talk with your dietitian or pharmacist about any herbs or herbal remedies you are taking or are thinking about taking. Some of these can interact with medicine or cause harm to your new kidney.
- Be sure to practice food safety for the rest of your life after transplant. Because your immune system is not as strong, you have an increased risk of getting a food-borne illness.
 - Cook meat and eggs to the proper temperature.
 - Store food promptly
 - Eat leftovers within 1 or 2 days
 - Be aware that buffets, salad bars, and potlucks may be a source of food contamination
 - Drink from safe water supplies
- Avoid the following:
 - Raw and undercooked meats, poultry, fish, game, eggs, and sushi
 - Unpasteurized milk and dairy products, unpasteurized juices and ciders
 - Fresh bean sprouts or alfalfa sprouts

What Physical Activity Can You Do?

Physical Activity

You can increase your activity slowly. Some basic exercise will improve your muscle tone and circulation (blood flow). It will also increase your general sense of well-being. Ask your transplant doctor which type of exercise is right for you.

Here are some things to remember for the first 4 to 6 weeks:

- Do **not** lift more than 10 pounds.
 - This is to prevent pain or pressure at your surgical incision site.
 - Your provider will let you know when you can lift more.
- Do **not** do push-ups, sit-ups, or contact sports
- Do **not** swim or take tub baths.

Check with your doctor before driving a car and returning to work.

There are no special restrictions for restarting sexual activity. When the soreness from your surgery goes away and you are comfortable, you may resume sexual activity. Discuss birth control with your doctor.

What Should You Watch for?

Immunosuppression medicines and prednisone can make your skin more sensitive to sunlight.

- Do **not** be out in the sun for long periods of time.
- Wear a sunscreen with a high sun protection factor (at least SPF 15).

Some fluid retention in your arms and legs can occur after your transplant and may take 2 to 4 weeks to go away.

Complications to Manage

The main risks involved with any transplant are infection and rejection. If you do have a complication, this does not mean you are going to lose your new kidney.

Your Immune System

Your body's immune system fights harmful bacteria and viruses that cause disease. Your immune system cannot tell the difference between a harmful germ and your newly transplanted organ. **Rejection** occurs when your immune system attacks the organ and tries to get rid of it.

To prevent rejection:

- You must take medicine that suppresses (lowers) your immune system for the rest of your life.
- It is extremely important that you take this medicine every day exactly as you are told.
- If you do not take the medicine correctly, your body may attack (reject) your new organ.

Warning Signs of Rejection

You may not have any symptoms, but your kidney-function tests may be abnormal. This may show that rejection is starting to happen. This is why getting lab tests done is so important.

Signs of Rejection

Let the Transplant Team know right away if you have any of these signs of rejection:

- Pain, tenderness or swelling over your transplanted kidney area
- Fever over 100 degrees F (38 C)
- Decreased urine (pee) output
- Pain or burning during urination (peeing)
- Discolored, bloody, or foul-smelling urine
- Fluid retention or swelling (beyond the immediate post-operative period)
- Rapid weight gain
- Increased blood pressure
- “Flu-like” symptoms – chills, aches, tiredness, headache, dizziness, nausea or vomiting
- You simply may not feel “normal”

DD-cfDNA (donor derived cell free DNA) is a blood test done routinely to screen for rejection or injury to the transplanted kidney. If you need to do a DD-cfDNA test, a lab kit will be sent to you to have the blood drawn at your local lab.

In most cases, rejection is reversible if diagnosed and treated promptly. Your medicines may be increased or you may be switched to different anti-rejection medicines.

If rejection is suspected, you may need a kidney biopsy. A biopsy means tissue samples are taken directly from your new kidney.

- A needle is inserted through the skin of your abdomen.
- A small piece of tissue is removed from your kidney.
- This tissue is sent to the lab for testing.

A biopsy, along with blood tests, will let the Transplant Team know if your body is trying to reject your new kidney.

How Can Kidney Disease or Transplant Affect Your Health in the Future?

Anxiety and Depression

A serious operation such as a transplant can put a lot of stress on you and your family. It is common for transplant recipients to have anxiety and perhaps depression after their surgery, stays in the hospital, and return home.

The anti-rejection medicines also may impact your emotions, especially during those early days after transplant. There are services to help you adjust to life at home and to your return to work or school. Ask your Transplant Social Worker for more information.

Diabetes

Some of your prescribed anti-rejection medicines may cause diabetes. Diabetes is an increased level of glucose (sugar) in your blood. Insulin helps your body use glucose. Your body may not be using glucose properly and or not producing enough insulin. You will be monitored for this condition by regular blood and or urine tests.

If you were diabetic before your transplant, you may have problems with blood sugar control following your surgery. This will be discussed with you on an individual basis.

Coronary Artery Disease

- Atherosclerosis (ath e ro skle-ro sis) –is a buildup of fats, cholesterol, and other substances in and on the artery walls.

These are ways to prevent and or reduce atherosclerosis:

- Regular exercise
- Proper diet
- Prescribed cholesterol lowering medicine
- Prescribed anti-clotting medicine

Report Any Problems to the Transplant Team

It is extremely important that you report any changes in your condition, no matter how small, to the Transplant Team. Make sure not to miss any of your follow-up visits or lab tests.

