GOING HOME AFTER LUNG TRANSPLANT
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INTRODUCTION

Congratulations, you have just received a new lung(s). By having a lung transplant, you have already taken the first step in gaining control of your health. Thank you once again for entrusting the Houston Methodist J.C. Walter Jr. Transplant Center with your care. We are honored to join you on your road to a healthy life and to help you learn how to care for yourself at home.

You will learn how to care for your incision, understand your medications, recognize the signs of rejection, and understand the lifestyle changes that should take place after your transplant.

You may feel a bit overwhelmed with all you need to learn before your discharge. That is a normal feeling. Don’t worry. Your transplant team is always here to answer your questions and to help you and your family as you adjust to this new life.

Remember that you are now ultimately responsible for your health. Taking charge of your health is a lifelong commitment to yourself and your new lung(s).

We believe it is important to include your caregivers in the learning process, so please encourage them to be present for discussions and to ask questions. Transplant requires a lifestyle change that impacts the whole family. It is important for them to understand what is happening and that their concerns are addressed as well.

Please read the information provided in this book with your loved ones and discuss it with your transplant team. All of your questions should be answered before you leave the hospital, so please feel free to ask us about anything that is not perfectly clear. We wish you all the best.
REQUIRED EDUCATION AFTER TRANSPLANT

POSTTRANSPLANT CARE

The inpatient posttransplant coordinator will schedule a two-hour education session in your room with you and your caregivers to teach you about posttransplant care. You may have more than one session depending on how well you are learning the information and the length of time you have before discharge. To be the most productive, you and your caregivers should read this book before the education session and take the test on pages 59 to 60.

Microspirometry Training

We will teach you how to use the portable microspirometer at home to measure your lung function. This is typically done by the transplant coordinator and often can be done on the same day as the other education session, if your chest tubes have been removed. The initial setup and teaching is ideally done with caregivers present. You will need to practice daily, and we can have follow-up training to make sure you fully understand the process before you are discharged.

Transplant Medications

A transplant pharmacist will spend at least an hour reviewing your medications with you, and helping you understand the purpose and side effects of each one. This will typically be done on the day of discharge to ensure all medications are available, to teach you how to set up your medication box, and to update your medication list before discharge. You must have at least one caregiver with you during this education.

Diet and Nutrition

A transplant dietitian will teach you about your posttransplant diet to prevent food illness as well as address any specific dietary needs you have.

If you are not yet on a solid foods diet when you are discharged (i.e., tube feed), you may have different short-term instructions. You will follow up with a dietitian for diet changes and to address any concerns.

Diabetes

A transplant diabetes educator will review diabetes care, how to check blood sugars, and how to take insulin, if applicable to you.

Reading the content in this book and attending the education sessions with your caregiver(s) are required before you can be discharged from the hospital. Your caregivers should be available for at least two days during business hours. Education is not available after hours or on weekends. Please let the inpatient coordinator know when your caregivers are available.
CARING FOR YOURSELF AT HOME

Once you leave the hospital, you will be responsible for making sure your body remains healthy, and for making necessary lifestyle adjustments that are important for optimal healing.

VITAL SIGNS

We ask you to check and document vital signs as part of your new daily routine (see page 62 for more detailed instruction and logs). You will need to bring this log with you to all clinic appointments to review with your transplant team, along with your medication list.

PHYSIOLOGY OF THE TRANSPLANTED LUNG(S)

Because the nerves in your new lung(s) were cut and possibly stretched during transplant, you may have lost your cough reflex, and the new lung(s) may not respond to irritation or secretions with normal coughing.

To prevent congestion and infection, you need to purposely cough every hour or two while you’re awake, even if you do not feel like it. Use your pillow or a rolled up blanket to hold against your chest when you cough. Any time you feel mucus or fluid in your throat, make sure you purposely cough.

PROTECTING YOUR LUNG(S)

Without even thinking about it, your body breathes in and out 15 to 25 times every minute, getting rid of carbon dioxide gas it doesn’t need and exchanging it for oxygen it does need.

The antirejection medications you take after transplant will make your immune system less able to fight off infections, which can become severe. Also, your lungs may have a difficult time getting rid of irritants. The muscle surrounding the lungs may tighten and spasm, making it difficult to breathe.

To protect your lung(s) after transplant, it is important to breathe in through your nose, as it helps filter out many of the irritants in the air. You must also do your lung exercises, such as coughing, deep breathing, walking and using the incentive spirometer.

Never suppress a cough. Do not use cough syrup or cough suppressants in the first year after transplant, unless approved by your transplant team. Your prescribed breathing treatments can help break up secretions.

Make sure you monitor your lung function with a microsprometer regularly and consistently to detect any early complications.

You must eat all meals out of bed and take your medications while in an upright position. You should remain sitting upright for at least 30 minutes after meals and medications.

Masks

You will be at highest risk for infection in the first three to six months after transplant. You will need to wear a mask in every public place you visit — from medical facilities to the grocery store to church. You should avoid large crowds — especially for the first six months, and after any treatment for a rejection episode. It is good to continue these practices every year during cold and flu season.

Avoid being around anyone who is ill. If you must be around a sick person, you and/or the sick person must wear a mask, and you should both wash your hands frequently. Wear a mask when outside at any point after transplant when:

- The air is very dry.
- The ozone level is high.
- Air quality alerts are noted.
- You are near fires or barbecue smoke.
- You are doing extracurricular activities that put you at risk for inhaling harmful substances like gardening materials, exhaust fumes, household cleaners, aerosol spray, paint fumes, dust, asbestos or other chemicals.

Types of masks

- Surgical and simple masks are used as a physical barrier to protect the user from hazards, such as splashes of body fluids. Note that surgical masks are not designed or certified to prevent the inhalation of small airborne contaminant particles, and are not designed to seal tightly against the user’s face. During inhalation, much of the potentially contaminated air can pass through gaps between the face and the surgical mask.
- Respirator masks are designed to achieve a very close facial fit and very efficient filtration of airborne particles. In addition to blocking splashes, sprays and large droplets of liquids, the respirator is designed to prevent the user from breathing in 95% of very small irritants that may be in the air.
- Particulate masks are designed to filter the air and help prevent airborne particles, such as dust, pollen, mold and animal dander from entering the breathing passages. They provide filtration against airborne oil and nonoil-based particles, bacteria, and viruses. You should use this type of mask when gardening, grilling, during lawn maintenance, cleaning, sweeping, dusting, and working around auto or shop dust and fumes.
- VOGMASK® is a reusable, cloth N95 or N99 mask. Transplant patients can purchase this mask at a discounted rate if purchased from the manufacturer’s website. Contact the company’s customer service department to request the discount.

TRAVELING

- Be careful when flying. It can take several weeks for your lung to heal. You may want to avoid flying until you have been cleared by your team.
- An acapella or flutter valve, also known as the “pickle”, to break up excessive secretions, may be ordered, if needed
- Deep breathing and coughing exercises, every two hours, to make sure you are opening up and using your lower lungs

Breathing treatments

You will need a nebulizer at home, which is a machine to give medication treatments that can help maintain a clear airway, help with cough or bronchospasm, and deliver special antibiotic solutions directly into the lung tissue, if needed. This may not be covered by some insurance plans and will need to be purchased for use at home, if not covered. Please let your transplant team know if you do not have a nebulizer.

The machine and tubing are simple to use. Your pharmacist or transplant coordinator will teach you and your family how to use this prior to discharge.

Measure oxygen levels

A pulse oximeter will measure your oxygen level through your finger. If circulation in your hands is not good or your hands are cold, this can affect the level. If you have circulation issues, you may need to get a device that will measure from your earlobe. It is important to have this device to help monitor your oxygen levels both at rest and during activities.

Home respiratory equipment from before transplant

If you used an oxygen concentrator, oxygen tanks, CPAP or BiPAP machines, or a chest VEST therapy system before transplant, talk to your transplant team before using them or returning them.

CLEANING RESPIRATORY EQUIPMENT

Respiratory equipment should be cleaned after each use. Mouthpieces should be cleaned with soapy water and air dried daily. Masks should be cleaned daily to prevent the buildup of oils and skin cells, which can impair the use. Tubing should be hung up and dried thoroughly between each use.

A diluted vinegar solution can be used periodically for a more thorough cleaning. This will help prevent spread of infection. A SoClean device may also be purchased to more thoroughly clean your respiratory devices. Please discuss this with your transplant team for more information.

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VOGMASK® is a reusable, cloth N95 or N99 mask. Transplant patients can purchase this mask at a discounted rate if purchased from the manufacturer’s website. Contact the company’s customer service department to request the discount.
INCISION CARE
When you leave the hospital, you will be responsible for your incision care. You may go home with staples in place. The staples will be removed in the clinic about four weeks after your transplant. If your incision is healing well, you may shower. Do not take a tub bath until your staples are removed. Sitting in a bathtub may increase the risk of infection in your fresh wound. Use a mild antibacterial soap and pat dry. Avoid using lotions or creams on the wound. After your staples are removed, Steri-Strips™ may be placed across the incision. You may continue to shower. Do not remove the Steri-Strips™. They will fall off on their own in about five days. Contact your coordinator if you have increased pain, redness, swelling or drainage around your surgical wound.

PEG-J TUBE
If you have a PEG-J tube (percutaneous endoscopic gastrostomy-jejunostomy tube), it may remain in place for at least three to six months after transplant, or as indicated by your doctor. A PEG-J tube is a tube with two ports. The G tube connects directly to your stomach and the J tube connects directly to your small intestine. You and your caregivers will work with the bedside nurse on techniques for use. You may shower with a PEG-J tube if you put a dressing over it, remove it and the dressing changed each day. Gently clean the dressing over the site. The site should be cleaned and dry. Avoid using lotions or creams on the wound. The seatbelt will not hurt your new lung(s). If you have a partially healed wound, then you may place a small towel or pillow under the seatbelt for protection. You must be released to drive by the transplant team.

Daily Care
1. Every day, inspect the skin around your PEG-J tube (if you have a dressing over it, remove it for inspection). Call your transplant doctor or coordinator if you see any redness, swelling, pus, bright red ooze, bleeding or pain that doesn’t get better with medication.
2. Wash the area with soap and water.
3. Gently pat it dry.
4. Follow discharge instructions given dressing changes.

Meals and Medications
The J tube is for feeding. The G tube is for medications. Check for leftover liquid or food before you start a new feeding or administer medications. Make sure you crush pills and dissolve them in water before you administer them in your G tube. You can also open your G tube momentarily (venting) to relieve nausea, bloating and gas caused by gastric secretions and undigested foods accumulated in your stomach. Try to wait two hours after giving your medications before you vent.

Troubleshooting
If you have trouble flushing your PEG-J tube, follow these instructions.
1. Draw up a small amount of warm water with your syringe.
2. Use a back and forth motion to see if the clog can be dislodged.
3. If not, put in a small amount of warm water and wait 20 minutes.
4. Stubborn clogs may require use of a soda or special enzymes. Use a 30 to 60 mL syringe to avoid excessive pressure when pushing fluid through the G-tube.

Flushing Your Tube
Be certain to flush both the G and J port before and after each use to prevent clogging. It is important to flush it using a “turbulent” flow to help keep the line open. If it gets clogged, use warm water or a soda.

Gather your supplies:
– 60 mL of water (room-temperature or warm, plain tap water) in a cup
– 60 mL syringe with catheter tip
– Paper towels
– 60 mL of water (room-temperature or warm, plain tap water) in a cup
– Paper towels
2. Wash your hands with warm water and soap, or use an alcohol-based hand sanitizer.

3. Draw up 60 mL of water into the syringe.
4. Place paper towels under the Y-port at the end of the tube to absorb any drainage.
5. Clamp the tube.
6. Insert the syringe into the Y port.
7. Unclamp the tube and gently push the plunger to inject the water.
8. Reclamp the tube.
9. Remove the syringe from the Y port.

View shared image: Patient with transplant tube. See page 55 to know when to call your transplant team.

Back pain is very common after transplant. The best treatment is to avoid lying down for long periods. Walking and other activities will help. Leg swelling after lung transplant may be due to your transplant medications and other factors. It is best to keep your legs elevated while sitting, wear compression stockings, and avoid standing still for extending periods of time.

Exercise is the best way to gain strength after surgery. You may begin light exercise at home. The best form of exercise after transplant is walking. We recommend starting at a slow pace and increasing your tolerance to a mile a day. Exercise should be a gradual process. If you experience pain, shortness of breath, dizziness or irregular heartbeats during exercise, stop immediately. Avoid lifting anything heavier than five to eight pounds for the first month after lung transplant. After surgery, your sternum (breastbone) will be weak. It will be held together by a wire to allow for full fusion and healing of your bones. If, during your recovery, you have lost your strength and need to regain your mobility, we may refer you to pulmonary rehabilitation three months after your transplant.

Exercise
You should not drive a car for at least eight to 12 weeks after lung transplant. This is to protect your incision and new lung(s) from injury if you are in a crash and the steering wheel or airbag hits your chest. Also, your vision and depth perception may be impaired due to higher doses of antirejection medication. If you ride in a vehicle, wear a seatbelt. The seatbelt will not hurt your new lung(s). If you have a partially healed wound, then you may place a small towel or pillow under the seatbelt for protection. You must be released to drive by the transplant team.

Driving
You may begin daily activities such as cooking, bathing, driving and light exercise at home after transplant. You may begin light exercise at home. The best form of exercise after transplant is walking. Walking will help with your heart rate and blood pressure. A small towel or pillow under the seatbelt for protection. You must be released to drive by the transplant team.

PAIN AND SWELLING
Back pain is very common after transplant. The best treatment is to avoid lying down for long periods. Walking and other activities will help. Leg swelling after lung transplant may be due to your transplant medications and other factors. It is best to keep your legs elevated while sitting, wear compression stockings, and avoid standing still for extending periods of time.

Be careful to flush both the G and J port before and after each use to prevent clogging. It is important to flush it using a “turbulent” flow to help keep the line open. If it gets clogged, use warm water or a soda.

Gather your supplies:
– 60 mL syringe with catheter tip
– Paper towels
– 60 mL of water (room-temperature or warm, plain tap water) in a cup

1. Draw up a small amount of warm water with your syringe.
2. Use a back and forth motion to see if the clog can be dislodged.
3. If not, put in a small amount of warm water and wait 20 minutes.

Back pain is very common after transplant. The best treatment is to avoid lying down for long periods. Walking and other activities will help. Leg swelling after lung transplant may be due to your transplant medications and other factors. It is best to keep your legs elevated while sitting, wear compression stockings, and avoid standing still for extending periods of time.

ACTIVITY
Each transplant recipient recovers at a different pace, based on the extent of illness before transplant, recovery time and complications. We may alter guidelines for activity specifically for you.
Sexual Activity
You may resume sexual activity when you and your partner are ready. You should avoid positions that pull or put excessive pressure on your chest incision until it is fully healed. Condoms are vital to prevent the spread of diseases. Birth control is recommended for all patients. For more information on pregnancy, please see page 19.

Many men become impotent as a result of lung disease. After transplant, sexual function typically returns. However, some medications can prolong periods of impotency. If you experience these side effects, speak with the transplant team for recommendations.

Work
You may return to work or school after six months if you feel you are ready and have been cleared to do so by your transplant team. Remember, you will have regular appointments and lab tests included in your schedule. The goal is to get you back to a normal, productive life after transplant.

DISABILITY STATUS, FAMILY MEDICAL LEAVE ACT (FMLA)
If you are on disability or using FMLA through your employer after transplant, it is important for you to understand when you will be expected to return to work. You will need to notify your transplant team so we can confirm that you are cleared to return to work.

If you or your caregiver plan to use FMLA for follow-up care, make sure you talk to your employer’s human resources department and that your forms are completed, so you have job protection for doctor visits and illnesses related to your transplant.

FOLLOW-UP APPOINTMENTS
Before you are discharged from the hospital, your transplant coordinator will discuss your follow-up visits. We will schedule your first appointment with the transplant clinic on the 26th floor of the Houston Methodist Outpatient Center. We will also schedule lab tests for you. You are responsible for keeping your appointments. If you cannot make an appointment, please call the Transplant Center so we can reschedule.

Clinic visits
You will have appointments in the transplant clinic every two to four weeks for the first year. If you are doing well after the first year, we’ll see you approximately every three months in your second year and every four months in your fourth year. After that, we’ll see you at least twice a year for the rest of your life.

Any time that you are hospitalized for any reason, we will see you in the clinic one to six weeks after discharge to make sure your health is improving.

Lab tests
You will need to have regular lab draws for the rest of your life to monitor your electrolytes, kidney function, blood counts and antirejection medication levels. For the first few months after lung transplant, you’ll have your blood drawn once or twice a week, and the frequency will eventually decrease to once a month.

Initially, it is critical for you to have your blood drawn at Houston Methodist Hospital in the Texas Medical Center. We typically get results the same day and we will contact you no later than the next day if you have abnormal results that require a change in medications. If you do not hear from your coordinator by noon the day following blood draws, please call the Transplant Center.

If you are hospitalized for any reason, we may ask you to do extra blood testing after discharge, in case we need to adjust your transplant medications.

Remember, the lab tests can show the first sign of organ rejection. Getting lab tests is vital to managing your care.

Bronchoscopies
Most lung transplant patients undergo bronchoscopies to test lung function one, two, four, eight and 12 weeks after transplant, then at six, eight, 10 and 12 months. You may get a bronchoscopy every three to six months for the rest of your life. If you are doing well, we may defer bronchoscopies occasionally. If you need airway clearance or we suspect infection or rejection, we may schedule an additional bronchoscopy.

On the day of your lab tests, DO NOT take your morning dose of immunosuppressive medications: tacrolimus (Astagraf XL or Envarsus), mycophenolate mofetil, sirolimus, cyclosporine, prednisone, azathioprine or everolimus until after your blood is drawn.

We use your lab work to monitor your blood counts and antirejection medication levels. Your lab tests must be done in the morning, no more than one hour before the time you typically take your medications. This allows us to get the most accurate information, and gives us time to review them during your clinic visit. It also allows you time to repeat the lab work the same day, if necessary.

Wait until after your labs are drawn to take your antirejection medications.
POTENTIAL COMPLICATIONS AFTER LUNG TRANSPLANT

POTENTIAL SURGICAL COMPLICATIONS

• Bleeding from chest cavity, requiring reoperation
• Anastomosis problems, requiring reoperation
• Acute lung injury (reperfusion injury)
• Prolonged endotracheal intubation and mechanical ventilator assistance, which may require tracheostomy
• Prolonged chest tube drainage or air leak
• Swallowing issues

After transplant, your swallowing will be tested. Sometimes you may need to modify the way you eat and drink to help prevent aspiration of foods or drinks. This may include tilting your head or other head position changes. You may also need vocal cord injections or to perform special exercises if the issue is related to injury to the vocal cords.

ASPIRATION PRECAUTIONS

You will be at increased risk for aspiration, which involves foods, drinks, saliva or stomach content being inhaled into the lungs. To prevent aspiration, which can lead to lung infection or breathing problems, your team may develop a prevention plan that includes:

• Eating all meals out of bed, sitting upright for 30 to 60 minutes after eating or taking medications
• Eating small, frequent meals
• Cutting food into small bites and chewing thoroughly
• Tucking your chin while swallowing
• Performing mouth care after meals
• Sleeping with the head of your bed at a 30-to-45 degree angle, or propped on pillows at the same angle
• Not eating after 7 p.m.

Notify your transplant team if you experience coughing, choking or difficulty swallowing while eating or drinking.

POTENTIAL COMPLICATIONS AFTER LUNG TRANSPLANT

CHEST PAIN OR PRESSURE

Chest pain or pressure is a medical emergency. You may be having a heart attack. Call 911 immediately if you experience chest pain.

ATRIAL FIBRILLATION

Normally, your heart contracts and relaxes to a regular beat. In atrial fibrillation, the upper chambers of the heart (atria) beat irregularly (quiver) instead of beating effectively to move blood into the ventricles. Also called AFib or AF, this can lead to stroke and other heart-related complications.

Signs and symptoms

• Fluttering or “thumping” in the chest
• Rapid and irregular heartbeat
• Dizziness, shortness of breath and anxiety
• Fatigue when exercising
• Weakness
• Faintness or confusion
• Sweating

BRONCHIAL AIRWAY STENOSIS

Occurring in less than 20% of transplant patients, this is a narrowing of the airway where surgeons sutured your new lung(s) to the bronchus. The area can develop scar tissue and you can become short of breath. Low blood pressure, low oxygen levels and poor blood flow to the airway, as well as rejection, are thought to contribute to this. It is diagnosed during a bronchoscopy. Treatment is bronchial dilatation and stent placement. This is similar to a coronary stent placement. You may be admitted to the hospital after the procedure for observation.

Signs and symptoms

• Shortness of breath
• Decrease exercise tolerance
• Wheezing
• Drop in spirometry readings

Other, less common anastomotic airway complications after lung transplant include bronchomalacia, anastomotic infection and...
dehiscence, which typically occur in the first month; and those that develop later, such as excess granulation tissue or fistulas.

**BLOOD CLOTS**
Venous thromboembolism disease, which includes deep venous thrombosis and pulmonary embolism, has an increased incidence in lung transplant recipients. Blood thinners may be given if you are at high risk or if you develop a blood clot after transplant. Sometimes, a filter may need to be placed to prevent the clot from moving to your lungs.

**GASTROPARESIS**
Gastroparesis is a condition where the stomach is very slow to empty. When this happens, there is an increased risk of refluxing or vomiting stomach contents, which then can be aspirated into your new lung(s). Depending on the severity, treatment may range from eating a special diet or having a temporary feeding tube placed in the stomach, which means no eating or taking medications by mouth until the condition improves.

**GASTROESOPHAGEAL REFLUX DISEASE (GERD)**
To help you prevent GERD, your team may recommend that you:
- Avoid carbonated beverages, caffeine, alcohol, chocolate, peppermint and fatty foods
- Avoid acidic foods
- Do not smoke
- Avoid bending or stooping after eating
- Avoid clothing that fits tightly across the midsection
- Eat smaller, more frequent meals — do not overeat
- Avoid eating within three hours of bedtime
- Sleep with the head of your bed at a 30-to-45 degree angle
- Exercise on an empty stomach
- Eat all meals out of bed, sitting upright, and do not lie down for at least 30 minutes after eating or taking medications

Some patients may require an antireflux stomach surgery (fundoplication or other procedure).

**EMOTIONAL CHALLENGES**
Antirejection medications may make you more susceptible to anxiety disorders. Psychotherapy and relaxation methods can help control anxiety. Depression results from a combination of factors, including genetics, psychological issues and certain types of medications. Treatment with antidepressive medication and therapy are effective for treatment, though some medications can take four to eight weeks to be fully effective. Mood swings and personality changes may be caused or changed by some posttransplant medications. Please report changes so you can see a transplant psychiatrist to help manage these symptoms.

**REJECTION**
It is natural for your immune system to see your new lung(s) as foreign, and try to attack it (them). Your body is designed to destroy foreign objects or germs to prevent you from getting sick. To help your body accept your new lung(s), we prescribe antirejection (or immunosuppressive) medications. These medications weaken your immune system so it will not fight your new lung(s) and cause rejection.

To protect your new lung(s) from rejection, you must always take your antirejection medications exactly as directed and report any changes in your health as soon as possible.

Rejection does not always mean you will lose your new lung(s). Early detection and prevention are essential to reversing the process of rejection. Rejection can occur at any time. Most patients experience at least one episode of rejection after transplant. If you stop or decrease your antirejection medication without guidance from your transplant team, your new lung(s) may be rejected quickly.

**Signs of Rejection**
- Fever over 99.5 F
- Shortness of breath
- Persistent cough
- Drop in spirometry readings of more than 10%
- Decreased exercise tolerance
- Fatigue, weakness or general malaise
- Flu-like symptoms, including chills, aches, pains, headache, nausea and vomiting

Sometimes you may experience rejection without having any symptoms at all. That is why it is critical to keep your follow-up appointments. In addition to symptoms, your regular lab tests and daily vital readings may reveal the first signs of rejection. We may ask that you get pulmonary function testing, chest X-ray, other imaging or a bronchoscopy to confirm rejection.

If tests detect rejection, you will probably be admitted to the hospital for treatment and receive medication through an IV. Most rejection is reversible if it is found and treated early, so you must report any signs of rejection to your transplant team as soon as possible.
### INFECTION

The antirejection medications you take to protect your new lung(s) will make your immune system weak. Since your immune system is weak, you are at risk for developing infections, such as colds and flu. You must be very careful to avoid infections. Even simple infections can be serious to a transplant patient. As your antirejection medications are decreased, you will be better able to fight off infections. You will take antirejection medications for the rest of your life, so you will need to be careful to avoid potential infections.

#### Signs of Infection
- Fever over 99.5 F
- Redness, pain or drainage at your incision site
- Sore or scratchy throat
- Cough or shortness of breath
- Flu-like symptoms, including chills, aches, pain, headache, fatigue, nausea and vomiting
- Diarrhea
- Burning, painful and/or frequent urination

#### Reduce Your Risk of Infection
You can decrease your risk of infection by following the guidelines below:

- **Wear mask:** Wear a mask the first several months after transplant and following any rejection episodes.
- **Hand washing:** Wash your hands using warm water and soap. Scrub vigorously for one minute, scrubbing the backs of your hands, between your fingers and under your nails. Rinse your hands well and dry with a clean towel. Wash your hands before and after cleaning your PEG/J tube dressing, before eating and preparing food, after using the restroom, after changing diapers, and after playing with pets. Hand sanitizers that contain at least 60% alcohol can be used when soap and water are not available.
- **Avoid contact:** Avoid close contact with people who have obvious illnesses, such as colds and flu. Avoid crowds, particularly in enclosed areas, such as shopping malls. Do not walk barefoot in public places.
- **Clean all door handles and frequently touched objects in your home daily with bleach wipes or a diluted bleach solution.**
- **Practice safe food handling.** See page 48 for more details.

#### Types of Infection
- **Bacterial infections** in the upper and lower respiratory tract are very common following lung transplant. While many are possible, the most likely to occur are pseudomonas aeruginosa and staphylococcus.
- **Fungal infections** in the genital tract, caused by yeast, are common and easily treatable. Yeast can also cause pneumonia. Inhalating mold spores can cause fungal infections, like aspergillus, histoplasma and others. These may lead to bronchitis, pneumonia or even disseminated fungal infections, which can be dangerous if not identified and treated early.
- **Viral infections** may be primary, meaning you’ve never been exposed, or secondary, meaning you’ve been exposed and the virus as reactivated in your suppressed immune system. Respiratory viral infections, such as different strains of the flu, cold viruses, RSV, COVID-19 and many others, are easily transmitted by droplets. They need to be identified and treated immediately to prevent pneumonia, which can be serious in a lung transplant recipient. Most people have had exposure to cytomegalovirus (CMV) at some time in their lives. If you have not been exposed to the virus in the past and you receive a lung(s) that has been exposed, you have an increased risk of acute infection. Depending on the location of the infection, symptoms may include fever, low white blood cell count, low platelet count, cough, shortness of breath, decreased spirometry readings or gastrointestinal symptoms, such as nausea, vomiting, diarrhea, abdominal pain or bloody stools. CMV diagnosis is confirmed through a blood test and sometimes a lung biopsy or lung washing. All patients take antiviral medication for at least 12 months after lung transplant to prevent CMV, or as directed by the transplant team.

#### Most Common Infections
- Chest or lung infection
- Urinary tract infection
- Intestinal infection
- Fever blisters or herpes infection
- Infection in the mouth
- Infection in or near the incision
- Cytomegalovirus (CMV)

### Notes

Children under eight have developing immune systems, and carry bacteria and viruses that can be easily transmitted to a lowered immune system. Avoid kissing young children on the lips or sharing food or drinks with them for at least the first three months after transplant.
KEEPING HEALTHY AT HOME

HEALTHY HOME ENVIRONMENT
Your living area should be in good condition for the best possible outcomes after transplant. If you did not consider the following before your transplant, you should ask a caregiver to make sure all are completed before you return home.

Air ducts – It is not mandatory to clean air ducts, but if they need to be cleaned, it should be done prior to discharge so there is time for the air to settle.

Air filters – Change filters on a monthly basis.

Air purifiers – It is not required to have an air purifier, but these can help clean and filter the air in the bedroom and other areas.

Carpet cleaning or removal – If your carpets haven’t been cleaned for some time, or if you have pets, we strongly recommend that you get them cleaned. Old carpet may need to be removed completely. Cleaning drapes and blinds as well as cloth furniture, is also recommended.

Smoke detectors – Check to make sure your smoke detectors are in good working order with new batteries and consider adding a carbon monoxide detector.

Surfaces – Using a diluted bleach or other cleaning solution, wipe down all surfaces and things that are touched frequently, including remote controls, door knobs, handles, etc. This should be done before discharge and at least once weekly to help prevent infection.

Visible mold – Remove or have removed all visible mold.

PREGNANCY
Pregnancy is considered high-risk after transplant. Childbirth while taking immunosuppressants is associated with an increased risk of birth defects. If you have a desire to become pregnant, please talk to your transplant team, as we may need to change some of your medications.

Women may not menstruate normally for some time after surgery, but ovulation (the time when women are most fertile) will continue. It is important to use birth control and to discuss concerns about childbearing with your transplant doctor or coordinator. We recommend that all women use condoms, diaphragms or spermicides. IUDs are not recommended due to increased risk of infection. Check with your transplant team before considering birth control pills.

If you or your partner does become pregnant, we encourage you to register with Transplant Pregnancy Registry International at transplantpregnancyregistry.org or 877.955.6877.

ROUTINE HEALTH CARE MAINTENANCE
After your transplant, it is very important to have regular checkups with your primary care doctor for routine health care maintenance and cancer screenings. You might also return to your pulmonologist six months to one year after your transplant. Talk to your transplant team about the best timing.

Specialist Visits
You should see your primary care doctor at least once a year, get an annual eye exam with an ophthalmologist, and get an annual skin check with a dermatologist. If you have a history of skin cancer, you should get checked at least every three to six months, and more if you notice new lesions. We recommend that you wait at least three months after your transplant before scheduling an eye exam or changing your eyeglasses prescription because of the effect prednisone may initially have on your eyesight.
You are responsible for maintaining these visits, along with your visits to the Transplant Center.

You may also need regular visits with an endocrinologist to manage blood sugars; a cardiologist to manage blood pressure and heart rhythm; and/or a nephrologist to manage kidney function.

**Vaccines**

You cannot receive any vaccines containing live viruses after transplant. These include chickenpox, smallpox, MMR, rotavirus, oral polio, flu nasal mist (flu injection is encouraged) and the live-virus shingles vaccine. You may have the nonliving shingles vaccine, Shingrix. Avoid children who have received live vaccines within the past six weeks. We recommend a flu shot every year and a pneumovax vaccine for pneumococcal pneumonia every five years, but we recommend waiting until three months after your transplant, unless cleared by your team.

Avoid children who have received live vaccines within the past two weeks as they can shed the virus in bodily fluids.

**Dental Care**

Brush and floss your teeth at least twice a day to prevent gum disease and cavities. See your dentist twice a year, but not until six months after transplant. You may need regular visits with an endocrinologist to manage blood sugars; a cardiologist to manage blood pressure and heart rhythm; and/or a nephrologist to manage kidney function.

Cancer Surveillance

You should follow all general cancer screening guidelines. Women should have a yearly gynecological exam and mammogram. Men should have yearly prostate screenings. Women and men should get a colonoscopy every 10 years if you are at average risk, and possibly more often if your doctor determines you are at higher risk.

**THE SEVEN EARLY INDICATIONS OF CANCER:**

<table>
<thead>
<tr>
<th>C</th>
<th>Change in bowel or bladder habits</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>A sore throat that does not heal</td>
</tr>
<tr>
<td>U</td>
<td>Unusual bleeding or discharge</td>
</tr>
<tr>
<td>T</td>
<td>Thickening or lumps in the breast or elsewhere</td>
</tr>
<tr>
<td>I</td>
<td>Indigestion or difficulty swallowing</td>
</tr>
<tr>
<td>O</td>
<td>Obvious changes in a wart or mole</td>
</tr>
<tr>
<td>N</td>
<td>Nagging cough or hoarseness</td>
</tr>
</tbody>
</table>

**GENERAL WELLNESS**

**Travel**

We advise patients not to do any traveling for at least six months after transplant. After six months, it may be okay to travel within the U.S. with your transplant doctor’s approval. After one year, it may be okay to travel outside the U.S. with doctor approval.

You should talk to your transplant team before traveling, as this timeline may vary based on your recovery. Traveling to developing countries is not recommended due to the risk of exposure to serious infections. If you fly, wear a mask on the plane to avoid poorly filtered, recirculated air.

Remember to keep your medications with you while you are traveling, and never place them in a bag that needs to be checked. This will prevent you from ever being out of medicine if your luggage does not arrive at your destination. Bring extra medication with you in case your trip changes unexpectedly. Consider wearing a medical alert bracelet at home and when traveling. This will help other health care providers know your general health status in case of an emergency. Always carry a current medication list.

Remember the importance of medication compliance while you travel. Call your transplant team to discuss how to schedule your medications if you will travel to areas with significant time changes.

**Sun Exposure**

Because you are taking immunosuppressive medications, you are at an increased risk for developing certain cancers, particularly skin cancer. Early detection is the best defense. Here are some suggestions for decreasing sun exposure:

- Wear broad spectrum SPF 30 sunblock or greater every day on all uncovered skin areas as well as a lip balm with sunscreen.
- Wear protective clothing, including hats and long sleeves, when you are in the sun.
- Limit time in the sun. Avoid the sun between 10 a.m. and 2 p.m.
- Never use artificial tanning beds, tanning lotions or tanning lamps.
- Examine your skin regularly. Report any changes in moles or lesions that don’t heal.

**Gardening**

If you enjoy gardening, you can do so six months after your lung transplant. You must always wear a protective mask, work gloves and hat to protect against molds and funguses that can be found in soil and water. You must also apply sunscreen against UV rays and use mosquito repellent. You may not receive any vaccines containing live viruses while you are gardening. If you fly, wear a mask on the plane to avoid poorly filtered, recirculated air.

Remember to keep your medications with you while you are traveling, and never place them in a bag that needs to be checked. This will prevent you from ever being out of medicine if your luggage does not arrive at your destination. Bring extra medication with you in case your trip changes unexpectedly. Consider wearing a medical alert bracelet at home and when traveling. This will help other health care providers know your general health status in case of an emergency. Always carry a current medication list.

Remember the importance of medication compliance while you travel. Call your transplant team to discuss how to schedule your medications if you will travel to areas with significant time changes.

**Pets**

Transplant patients are more likely to contract diseases from animals. Most pets are okay to have in the home, with some precautions, after one month following lung transplant. All pets should have routine screenings by a veterinarian to be sure they are free of disease and up to date on all of their vaccinations. Avoid contact with animal feces and litter boxes, as they contain bacteria. Ask someone to clean your pet’s litterbox. Always wash your hands after handling your pet.

Never allow animals in your sleeping spaces, including your couch, bed or even in a crate in your bedroom. Avoid activities that could result in bites or scratches, and never allow animals to lick your face or hands. Do not kiss your animals.

Talk to your transplant team before getting any new pets. Animals that should be completely avoided...
because they are more likely to carry bacteria include birds, fish, snakes, lizards, turtles, frogs, rodents and exotic pets. If you have fish, ask someone to clean the fish tank for the first month after your transplant.

**Swimming**

We recommend that you avoid swimming in public pools for at least one year after transplant. You may begin swimming in your personal pool after six months, if you have approval from your transplant doctor. Also, you should avoid public hot tubs and whirlpools, ponds, and intercoastal or brackish water for the rest of your life.

**Smoking**

You must never smoke, including vaping and cannabis, as this damages your new lung(s) and makes you susceptible to infection. Avoid secondhand smoke as much as possible, asking loved ones to smoke outside and away from you. You should also avoid direct exposure to campfire, fire pit and barbeque/smoker pits. A mask offers some protection, but may not adequately protect you from damaging compounds the smoke releases.

Your cancer risk may be multiplied by smoking after transplant due to antirejection medications.

**Alcohol**

You should avoid alcohol after transplant, as it suppresses the immune system and can interact with your medications.

**West Nile Virus, Zika and Other Mosquito-Borne Diseases**

West Nile Virus (WNV), Zika virus and other mosquito-borne diseases can be transmitted to humans. These viruses can cause serious illness, which typically affects the central nervous system and can cause fever, inflammation of the brain (encephalitis), inflammation of the lining of the brain and spinal cord (meningitis), or even death. Transplant patients are at higher risk for developing the more severe forms of WNV or Zika virus. The most effective way to avoid these viruses is to prevent or avoid mosquito bites. Be aware of the West Nile and Zika activity in your area (local news reports of infected birds) and take action to prevent infection.

- Use an insect repellent with DEET.
- Wear protective clothing to prevent mosquito bites.
- Consider avoiding outdoor activities from dusk to dawn.
- Mosquito-proof your home by installing or repairing screens on windows and doors.
- Use the air conditioner and don’t leave windows open.
- Empty standing water from flowerpots, gutters, buckets, pool covers, pet dishes, old tires and birdbaths on a regular basis.
- Report dead birds to local authorities (the virus is often transmitted from birds to mosquitoes).

Common symptoms of WNV include:

- Fever
- Headache
- Weakness
- Muscle and joint pain
- Vomiting and diarrhea
- Transient rash (smooth, red skin rash covered with raised bumps)
- Neck stiffness
- Disorientation
- Coma
- Tremors
- Seizures
- Paralysis

Report any of these symptoms to your transplant team immediately.

**NATURAL DISASTER PREPAREDNESS**

In the event of a hurricane or other natural disaster in your area, please remember to keep an overnight bag packed with masks, medicines, medication list, spirometer, nebulizer, glucometer and any other supplies you may need.
**MEDICATIONS**

**OVERVIEW**
Some of the medications you were taking before your transplant will be discontinued, and other medications for chronic conditions may be continued. We will instruct you on which medications to take when you go home.

After surgery, you will need to take medications to help prevent organ rejection and infection. We will educate you on your new medications. We expect you to learn the name and purpose of each of your medications. Before discharge, your transplant medications will be ordered from an outpatient pharmacy that delivers to the hospital. Your transplant pharmacist will give you a pill box and a medication schedule with the doses and instructions for each medication.

It is important to note that each medication you are prescribed will have different dosage instructions and may be discontinued or adjusted at any time.

**Requesting Refills**
Before discharge, we will arrange for a one-month supply of your transplant medications to be delivered to your hospital room by a specialty pharmacy. All of these medications should have refills available and the phone number to the pharmacy is on the bottles. When you have five to seven days left of your medications, please call the pharmacy directly for refills. However if there are any issues getting refills, please call the transplant center immediately for assistance. If you want to transfer these prescriptions to your regular pharmacy, please talk to your transplant team first. There can sometimes be concerns about medication availability at community pharmacies and/or delays in getting refills.

Remember that weekends and holidays may also cause delays, so please plan ahead. Some of your transplant medications may also require special approval from your insurance company, and sufficient time is needed to complete paperwork. Please allow an additional three to five days to complete any necessary paperwork. Please plan appropriately for travel or other situations where you may have limited access to the pharmacy that dispenses your medications. Always keep your medications on-hand and in your carry-on bag to prevent missing doses if your luggage is lost. Also, carry more medication than needed in case your travel plans change unexpectedly.

Always carry a current medication list with dosages. If you are eligible or required by your insurance to obtain a three-month supply or mail-order medications, make sure you have at least a two-week supply remaining before setting up this process. When you are running low on medications, call your mail-order pharmacy to request a refill at least 14 days in advance.

Review your Medicare Part B and D medication coverage during each open enrollment period to ensure you have the best coverage for your medication needs. If you have private insurance and make any provider or coverage changes, you should review coverage of transplant medications. Contact your financial specialist before making insurance changes to avoid delays in getting your medications.

**OVER-THE-COUNTER (OTC) MEDICATIONS**
After your transplant, you may have symptoms of common illnesses, such as a cold, flu or diarrhea. Transplant patients must avoid some OTC medications typically used to treat these illnesses because they can interact negatively with transplant medications.

Following is a list of OTC medications that do not typically interfere with your transplant medications, and those you need to avoid. Please remember to call us if you have any new symptoms that may cause you to take these OTC medications, so that we can make sure the symptoms are not a result of medication side effects or an underlying infection. If any symptoms persist or worsen, contact the transplant team. Do not self-diagnose.

**OKAY**
- Acetaminophen (Tylenol) for pain or headaches; other Tylenol products are okay to take too: Tylenol PM, Tylenol Arthritis. The maximum daily dose you can take is 2,000 mg /day or four extra strength Tylenol tablets (Remember you must call the Transplant Center if you ever have a fever.)
- Chlorpheniramine plus dexchlorpheniramine (Tylenol Cold, Coricidin HBP), Mucinex and Robitussin for cough or cold (only after first year)
- Diphenhydramine (Benadryl), loratadine (Claritin), Cetirizine (Zyrtec) for allergies
- Chloraseptic spray or lozenges, or Cepacol spray or lozenges for sore throat
- Docusate (Colace), bisacodyl (Dulcolax), psyllium (Metamucil) for stool softening or constipation
- Simethicone (Gas-X) for gas pain or bloating
- Loperamide (Imodium A-D) for diarrhea once your transplant coordinator has been notified and has approved
- Pepcid, Zantac, Prilosec, Pepito-Bismonol, Mylanta or Maalox, or their generic equivalents, for heartburn (contact your transplant team immediately about this symptoms)
- Omeprazole (Prilosec OTC) for acid reflux; **DO NOT** take if you already have a prescription for Protonix, Prevacid, Nexium or Pepcid

**AVOID**
- Ibuprofen (Advil or Motrin) and naproxen (Aleve) can be harmful to your kidneys
- Any cold medications or decongestants containing pseudoephedrine or phenylephrine may cause or worsen high blood pressure (examples include any medications with D after the name, such as Tavist-D, Claritin-D, NyQuil-D, etc.)
- Herbal supplements, such as St. John’s Wart, turmeric, Echinacea and Ginko biloba, are not FDA approved and may be harmful to your transplanted organ
- Diet pills, many of which are not FDA approved and can lead to harmful side effects

**Do not take any OTC medications without first notifying your transplant team of your symptoms.**

All lung transplant patients should avoid cough and cold medications for one year after transplant. Talk to your transplant team if you develop cold symptoms.

If you develop heartburn, please contact your transplant team immediately.
MEDICATION SAFETY RULES

Do not take any medications other than those prescribed to you by your transplant team without discussing it with us first.

There are medications that can interact with your transplant medications, and some can even harm you. If one of your primary care, diabetes, infectious disease or any other doctors, who is not on your transplant team, gives you a prescription, make sure you check with your transplant team first, before starting a new medication.

Never stop taking any of your medications without notifying the transplant team.

Discuss any side effects with your transplant team. We will help you manage them. If you accidentally miss a dose of a medication, take it as soon as you remember. However, if it is almost time to take the next dose, skip the missed dose and resume your regular schedule. Missing even a few doses of your antirejection medications can lead to organ rejection.

Contact your pharmacy if you notice a difference in your antirejection pills.

It is okay to take the generic form of most medications, unless your doctor specifies otherwise. However, if you notice a change in the color, shape or form of any of your antirejection medications, please contact the pharmacy that dispensed it to make sure the correct medication was filled.

Always bring your updated medication list, with doses and schedule, to all clinic visits and hospital admissions.

Providing your updated calendar will allow the transplant team and hospital staff to make appropriate adjustments to your medications, if needed.

TYPES OF MEDICATIONS

Immunosuppressive (Antirejection) Medications

Immunosuppressants are designed to prevent your body from rejecting your new transplanted lung(s). To prevent rejection, these drugs suppress, or scale back, your immune system. It is important to take these medications exactly as prescribed for the rest of your life. Failure to take these medications can cause your immune system to attack your new lung(s).

Because your immune system is suppressed, taking antirejection medications puts you at risk for developing infections, sometimes serious. Long-term use of antirejection medications also puts you at risk for developing certain cancers.

On days when you have lab work, it is important to have your blood drawn at least 12 hours after your last dose of antirejection medications. Please note that for once-daily medications like Envarsus XR, Astagraf XL, Everolimus, or Sirolimus, blood is to be drawn 24 hours after the last dose. Always have blood drawn before taking your morning dose of antirejection medications to ensure a true level. Bring your medication with you to take immediately following your lab draw.

Your transplant team will determine your immunosuppression regimen. Some examples include:

- Tacrolimus (Prograf)
- Tacrolimus extended release (Envarsus XR, Astagraf XL)
- Cyclosporine (Neoral)
- Everolimus (Zortress)
- Sirolimus (Rapamune)
- Mycophenolate mofetil (CellCept)
- Mycophenolic acid (Myfortic)
- Azathioprine (Imuran)
- Prednisone (Deltasone)

Anti-Infection Medications

Because your immune system is suppressed by antirejection medications, your body’s ability to protect against fungal, viral and bacterial infections is lowered. Thus, you are more susceptible to certain infections. For the first year after your transplant, you will be required to take medications to prevent infections. Some examples include:

- Antifungals
  - Nystatin (Mycostatin)
  - Fluconazole (Diflucan)
  - Voriconazole (Vfend)
  - Itraconazole (Sporanox/Tolsura)
  - Posaconazole (Noxafil)
  - Isavuconazonium (Cresemba)

- Antivirals
  - Acyclovir (Zovirax)
  - Ganciclovir (Cytovene)
  - Valganciclovir (Valcyte)
  - Isavuconazonium (Cresemba)

- Antibacterials (Pneumocystis Pneumonia Prophylaxis)
  - Sulfamethoxazole and trimethoprim (Bactrim, Septa)
  - Pentamidine isethionate (NebuPen)
  - Atovaquone (Mepron)
  - Dapsone

Inhalation Therapies

- Albuterol (Accuneb)
- Ipratropium bromide (Atrovent)
- Acetylcysteine (Mucomyst)
- Sodium chloride nebulizer solution (HyperSal/Nebulasc/Proteosc)
- Amphotericin Iosomal (AmBisome)
- Tobramycin
- Amikacin
- Colistimethate sodium (Colistin)

Blood Pressure Medications

Because high blood pressure is a common side effect of antirejection medications, you may be placed on blood pressure (hypertension) medications. If you were taking medications for high blood pressure before your transplant, your dose or medication may change. Please contact your coordinator if any changes are made to your blood pressure medications by another doctor outside of the transplant team.

Gastrointestinal (GI) Agents

After transplant, you may be at risk for developing stomach irritations or ulcers caused by steroids or stress. You may be prescribed one of these medications to control acid levels in your stomach:

- Famotidine (Pepcid)
- Pantoprazole
- Omeprazole (Prilosec OTC)

Electrolyte Imbalance Medications

Antirejection medications may cause electrolytes in your body to increase or decrease. You may be prescribed a medication to help.

- Magnesium supplements: You will be given magnesium supplements for several months after your transplant to replace the magnesium lost in your urine from taking tacrolimus or cyclosporine. If your magnesium level falls too low, you are at an increased risk for seizures or nervous system side effects, such as tremors and headaches.

- High doses of magnesium may cause diarrhea, in which case we may reduce your dose. Talk with your coordinator before changing or adding any supplements.
- Multivitamins: Multivitamins are safe to take with the understanding that they are not substitutes for good nutrition through a well-balanced diet.
• Calcium: Supplements, such as oyster calcium (Os-Cal), reduce the risk for osteoporosis.
• Vitamin D will be given with calcium to help strengthen bones.

Pain Medications
We will give you a small supply of pain medication for home to help reduce incision and muscle pain from surgery. Your surgical pain should be markedly improved within four to six weeks after your transplant and should be controllable with acetaminophen (Tylenol). If it is not, you should contact your coordinator so the cause of your ongoing pain can be understood and treated properly. If you have chronic pain and are managed by the pain management team, your medications will be filled by the pain specialist. You will need to schedule outpatient follow-up appointments to get refills. If you have chronic pain and are managed by the pain management team, your medications will be filled by the pain specialist. You will need to schedule outpatient follow-up appointments to get refills.

Long-Term Pain Management
Narcotics are typically avoided for long-term pain due to potential side effects and adverse outcomes. If you have chronic pain, we will consult the pain management team to help prescribe the appropriate therapies to treat your pain as an inpatient or outpatient.

Study Medications
You may be prescribed study medications. If you are on a study medication, please remember to bring these medications with you to all clinic visits and if you are hospitalized.

SPECIFIC MEDICATIONS
Medications That Prevent Rejection

Tacrolimus (Prograf)

Purpose: Prevents rejection
How supplied: 0.5 mg, 1 mg and 5 mg capsules
Dose: Your dose will be determined by drug levels in your lab work. Your coordinator will notify you as your dose changes.
Instructions:
• Always take your dose at the same time and in the same manner, every 12 hours, between 7 and 9 a.m. and between 7 and 9 p.m. You decide the time.
• Take with or without food. (Most people tolerate tacrolimus better after a meal.)
• Do not crush or puncture pills. Take pills whole.
• On the days when you have lab work, do not take this medication until after your labs have been drawn. Bring your medication with you so you can take it immediately after your lab work has been completed.
• Do NOT drink grapefruit juice or eat grapefruits as this will elevate your tacrolimus level.

SIDE EFFECT WHAT TO DO

High blood pressure
Take your blood pressure daily and record the results. We may need to adjust your blood pressure medications. Call us if your blood pressure is elevated for two readings in a row.

Headache, hand tremors, shaking
Tremors are common. If they persist, call your coordinator. Your dose may be adjusted.

High blood sugar
Your lab work will detect this. If you are diabetic, monitor your blood sugars, as instructed.

Hair loss (alopecia)
Discuss possible treatments for hair loss with your transplant doctor.

Elevated potassium, low magnesium, low phosphorus
Your lab work will detect this. Your coordinator will discuss this with you. You may be prescribed supplements to replace magnesium or phosphorus.

Decreased kidney function
Notify your coordinator if you are experiencing a significant decrease in urine output, fluid retention, quick weight gain or dark urination.

Tacrolimus Extended Release (Envarsus XR, Astagraf XL)
This is a different formulation of tacrolimus. It is taken once a day in the morning. Do not crush or puncture pills. Take pills whole.

Notes
**Cyclosporine (Neoral, Gengraf)**

**Purpose:** Prevents rejection

**How supplied:** 25 mg and 100 mg capsules

**Dose:** Your dose will be determined by drug levels in your lab work. Your coordinator will notify you as your dose changes.

**Instructions:**
- Always take your dose at the same time and in the same manner, every 12 hours, between 7 and 9 a.m. and between 7 and 9 p.m. You decide the time.
- Take with or without food. (Most people tolerate cyclosporine better after a meal.)
- Do not crush or puncture pills. Take pills whole.
- On the days when you have lab work, do not take this medication until after your labs have been drawn. Bring your medication with you so you can take it immediately after your lab work has been completed.
- Do NOT drink grapefruit juice or eat grapefruits, as this will elevate cyclosporine levels.

**SIDE EFFECT** | **WHAT TO DO**
---|---
High blood pressure | Take your blood pressure daily and record the results. We may need to adjust your blood pressure medications. Call us if your blood pressure is elevated for two readings in a row.
High cholesterol | We will routinely check your cholesterol panel. You should maintain a low-fat, low-cholesterol diet.
Tremors, tingling in hands or feet | Tremors are common. If they persist, call your coordinator. Your dose may be adjusted. Tingling of the hands and feet may also occur. Discuss possible treatment options with your transplant doctor.
Increased body hair (hirsutism) | You may use hair removal creams to remove excess hair. Contact your coordinator before using these over-the-counter products.
High blood sugar | Your lab work will detect this. If you are diabetic, monitor your blood sugars, as instructed.
Elevated potassium, low magnesium, low phosphorus | Your lab work will detect this. Your coordinator will discuss this with you. You may be prescribed supplements to replace magnesium or phosphorus.
Decreased kidney function | Call your coordinator if you experience significant decrease in urine output, fluid retention, quick weight gain or dark urine.

**Mycophenolate mofetil (CellCept)**

**Purpose:** Prevents rejection

**How supplied:** 250 mg capsules and 500 mg tablets

**Dose:** 250 mg to 1,500 mg, every 12 hours

**Instructions:**
- Always take your doses at the same time and in the same manner, every 12 hours.
- Do not crush or cut pills. Take pills whole.
- Most patients tolerate this medication better when taken with food.

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<tr>
<th><strong>SIDE EFFECT</strong></th>
<th><strong>WHAT TO DO</strong></th>
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<tbody>
<tr>
<td>Upset Stomach</td>
<td>Take with food.</td>
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<tr>
<td>Nausea, diarrhea</td>
<td>Take with food. Call your coordinator if symptoms persist.</td>
</tr>
<tr>
<td>Decreased white blood cell, platelet count</td>
<td>Your lab work will detect this. Your coordinator will discuss this with you and make adjustments to your dose, if needed.</td>
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**Mycophenolate Sodium (Myfortic)**

This is a different formulation of mycophenolate mofetil. It comes as 180 mg and 360 mg tablets. If you are not able to tolerate mycophenolate mofetil due to nausea or diarrhea, mycophenolate sodium may be more tolerable. It is taken every 12 hours.

**Notes**

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### Prednisone (Deltasone)

**Purpose:** Prevents rejection  
**How supplied:** 1 mg, 5 mg, 10 mg and 20 mg tablets  
**Dose:** Higher doses will be used immediately after your transplant, and to treat acute respiratory illness or rejection. Your dose will slowly be decreased over time.  
**Instructions:**  
- Always take your doses at the time and manner as directed.  
- Take this medication in the morning with food.

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<th>SIDE EFFECT</th>
<th>WHAT TO DO</th>
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<tbody>
<tr>
<td>Upset stomach</td>
<td>Take medication with food in the morning.</td>
</tr>
<tr>
<td>Swollen feet or legs</td>
<td>Weigh yourself daily and call if you gain three or more pounds within 24 hours. Stay on a low-salt diet. Keep your feet elevated.</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>Take your blood pressure daily and record the results. We may need to adjust your blood pressure medications. Call us if your blood pressure is elevated for two readings in a row.</td>
</tr>
<tr>
<td>Increased appetite</td>
<td>Eat three balanced meals daily and avoid excessive weight gain. Ask to speak with your transplant dietitian.</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Take in the morning.</td>
</tr>
<tr>
<td>High blood sugar</td>
<td>Your lab work will detect this. If you are diabetic, monitor your blood sugars, as instructed.</td>
</tr>
<tr>
<td>Mood changes</td>
<td>Call us if symptoms persist. Mood changes are more likely to happen with higher doses.</td>
</tr>
<tr>
<td>Acne</td>
<td>Ask your coordinator or pharmacist to recommend a cream. This will diminish as the dose is lowered.</td>
</tr>
<tr>
<td>Loss of bone mass (osteoporosis)</td>
<td>We may ask you to take a calcium supplement to maintain an appropriate amount of calcium in your diet. Perform weight-bearing exercise to prevent bone weakness.</td>
</tr>
<tr>
<td>Sun sensitivity</td>
<td>Wear sunscreen SPF 30 or greater and protective clothing while outdoors.</td>
</tr>
</tbody>
</table>

### Everolimus (Zortress)

**Purpose:** Prevents rejection  
**How supplied:** 0.25 mg, 0.5 mg and 0.75 mg tablets  
**Dose:** You will take this medication twice a day, 12 hours apart. Your dose will be determined by drug levels in your lab work. Your coordinator will notify you as your dose changes.  
**Instructions:**  
- Always take your dose at the same time and in the same manner, every 12 hours, between 7 and 9 a.m. and between 7 and 9 p.m. You decide the time.  
- Take with or without food. (Most people tolerate everolimus better after a meal.)  
- On the days when you have lab work, do not take this medication until after your labs have been drawn. Bring your medication with you so you can take it immediately after your lab work has been completed.  
- Do NOT drink grapefruit juice or eat grapefruits while taking everolimus.  
- If you are having a surgical procedure, ask about temporarily discontinuing your everolimus ahead of time.  
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<thead>
<tr>
<th>SIDE EFFECT</th>
<th>WHAT TO DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased cholesterol</td>
<td>You may be prescribed a medication, such as omega-3 fatty acid (Lovaza) or an over-the-counter fish oil.</td>
</tr>
<tr>
<td>Low white blood cell counts</td>
<td>Your lab work will detect this. Your coordinator will discuss this with you and make adjustments, if needed.</td>
</tr>
<tr>
<td>Delayed wound healing</td>
<td>Discuss upcoming surgical procedures with your coordinator. Your everolimus may be held or switched to another antirejection medication.</td>
</tr>
<tr>
<td>Mouth ulcers</td>
<td>Call your coordinator.</td>
</tr>
</tbody>
</table>
Other antirejection medications

Sirolimus (Rapamune)

| Purpose: | Prevents rejection |
| How supplied: | 0.5 mg, 1 mg and 2 mg tablets, and as an oral liquid |
| Dose: | Your dose will be determined by drug levels in your lab work. You will take your recommended dose, once a day, in the morning. |
| Instructions: | • If you are taking this medication with cyclosporine, you should separate the two medications by four hours. For example, take cyclosporine at 8 a.m. and Sirolimus at noon.  
• If you are having a surgical procedure, ask about temporarily discontinuing your Sirolimus ahead of time. |

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Increased cholesterol</td>
<td>Your lab work will detect this. Your doctor or coordinator will discuss this with you and determine if your cholesterol medicine should be increased or changed to a different medication.</td>
</tr>
<tr>
<td>Low white blood cell count, low platelet count</td>
<td>Your lab work will detect this. Your coordinator will discuss this with you and make adjustments to your dose, if needed.</td>
</tr>
<tr>
<td>Delayed wound healing</td>
<td>If you are having a surgical procedure, ask about temporarily discontinuing your Sirolimus, ahead of time.</td>
</tr>
<tr>
<td>Mouth ulcers</td>
<td>Call your coordinator to discuss this. If the ulcers are severe, your dose may need to be adjusted.</td>
</tr>
<tr>
<td>Leg swelling</td>
<td>Compression stockings and elevating your legs may help reduce leg swelling. If the swelling is severe, your dose may need to be adjusted.</td>
</tr>
</tbody>
</table>

Azathioprine (Imuran)

| Purpose: | Prevents rejection |
| How supplied: | 50 mg tablet |
| Dose: | Once daily |
| Instructions: | • Azathioprine may take the place of mycophenolate mofetil in certain situations.  
• Talk to your transplant doctor or coordinator if you are prescribed allopurinol for gout. A significant drug interaction with azathioprine may suppress bone marrow. |
| Side effects: | Low white-blood-cell counts, nausea |

Side effects:

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Medications That Prevent Fungal Infections

Nystatin (Mycostatin)

| Purpose: | Prevents fungal infection in the mouth called thrush. Thrush is a white plaque-like substance that can form in the mouth as a result of high-dose steroids (prednisone). |
| How supplied: | 100,000 unit/mL oral suspension |
| Dose: | 5 mL (one teaspoon); swish and swallow four times daily |
| Instructions: | • Take this medication after meals and at bedtime. Do not eat or drink for 20 minutes after taking this solution.  
• Remove dentures or retainers before taking this medication. |
| Side effects: | Nausea, mouth irritation |

Fluconazole (Diflucan)

| Purpose: | Prevents fungal infection in the mouth called thrush. It also prevents blood and urine fungal infections. |
| How supplied: | 200 mg tablet |
| Dose: | 200 to 400 mg daily |
| Instructions: | This medication can interact with tacrolimus, sirolimus and cyclosporine. Be sure to take it daily and in a consistent manner, and follow your transplant team's instructions on close lab monitoring. If fluconazole is ever stopped, please be sure to ask how to change your immunosuppressive medication dose. |
| Side effects: | Nausea, headache, elevated liver enzymes |

Voriconazole (Vfend)

| Purpose: | Prevents oral fungal infections, such as thrush, and fungal infections in the lungs, blood or skin |
| How supplied: | 50 mg and 200 mg tablets |
| Dose: | 200 mg, every 12 hours |
| Instructions: | This medication can interact with tacrolimus, sirolimus and cyclosporine. Be sure to take it daily and in a consistent manner, and follow your transplant team's instructions on close lab monitoring. If voriconazole is ever stopped, please be sure to ask how to change your immunosuppressive medication dose. |
| Side effects: | Nausea, headache, visual disturbances, elevated liver enzymes |
Itraconazole (Sporanox/Tolsura)

**Purpose:** Prevents and treats fungal infections

**How supplied:** 100 and 200 mg tablets, or a 10mg/mL oral solution for the *Sporanox or 60 mg tablets for the *Tolsura

*Note these formulations are not interchangeable.

**Dose:** 200 mg twice daily for the Sporanox or 130 mg once daily for the Tolsura

Instructions: This medication can interact with tacrolimus, sirolimus and cyclosporine. Be sure to take it daily and in a consistent manner, and follow your transplant team's instructions on close lab monitoring. **If itraconazole is ever stopped, please be sure to ask how to change your immunosuppressive medication dose.**

**Side effects:** Diarrhea, nausea, headache, rash, elevated liver enzymes

**What to do:** Have blood testing as directed by your team and discuss symptoms with your physician or transplant coordinator.

Posaconazole (Noxafil)

**Purpose:** Prevents and treats fungal infections

**How supplied:** 100 mg tablets or a 40mg/mL oral suspension

**Dose:** 200 to 300 mg, three or four times daily

Instructions: This medication can interact with tacrolimus, sirolimus and cyclosporine. Be sure to take it daily and in a consistent manner, and follow your transplant team's instructions on close lab monitoring. **If posaconazole is ever stopped, please be sure to ask how to change your immunosuppressive medication dose.**

**Side effects:** Diarrhea, nausea, headache, lab abnormalities, rash

**What to do:** Have blood testing as directed by your team and discuss symptoms with your physician or transplant coordinator.

Isavuconazonium (Cresemba)

**Purpose:** Prevents and treats fungal infections

**How supplied:** 186 mg capsules

**Dose:** 372 mg daily

Instructions: This medication can interact with tacrolimus, sirolimus and cyclosporine. Be sure to take it daily and in a consistent manner, and follow your transplant team's instructions on close lab monitoring. **If isavuconazonium is ever stopped, please be sure to ask how to change your immunosuppressive medication dose.**

**Side effects:** Nausea, vomiting, diarrhea, headache, elevated liver enzymes

**What to do:** Have blood testing as directed by your team and discuss symptoms with your physician or transplant coordinator.

Medications That Prevent Viral Infections

**Valganciclovir (Valcyte)**

**Purpose:** Prevents viral infections, such as cytomegalovirus (CMV) and herpes. Signs of CMV infection include fever, night sweats, aching joints or prolonged diarrhea. Signs of herpes infections include cold sores or blisters around the mouth or genitals. Shingles (herpes zoster) can appear as a rash or small blisters on the chest, back or hip. The rash may or may not be painful. Report any of these symptoms to your transplant team.

**How supplied:** 450 mg tablets

**Dose:** 450 mg once or twice daily

**Instructions:** Take daily with food.

**Side effects:** Low white-blood-cell count

**Ganciclovir (Cytovene)**

**Purpose:** Prevents viral infections, such as cytomegalovirus (CMV) and herpes. Signs of CMV infection include fever, night sweats, aching joints or prolonged diarrhea. Signs of herpes infections include cold sores or blisters around the mouth or genitals. Shingles (herpes zoster) can appear as a rash or small blisters on the chest, back or hip. The rash may or may not be painful. Report any of these symptoms to your transplant team.

**How supplied:** Intravenous solution

**Dose:** Your dose will be determined by the transplant team based on your weight.

**Instructions:** You will be taught how to infuse this medication at home.

**Side effects:** Low white-blood-cell count

**Acyclovir (Zovirax)**

**Purpose:** Prevents viral infections, such as herpes

**How supplied:** 200 mg, 400 mg and 800 mg tablets or capsules

**Dose:** 200 mg to 800 mg, two to four times daily

**Instructions:** Take as directed without regard to meals.

**Side effects:** Nausea, headache
Medications That Prevent Bacterial Infections

Sulfamethoxazole and trimethoprim (Bactrim, Septra)

**Purpose:** Prevents pneumocystis jirovecii pneumonia (PJP; also known as PCP)

**How supplied:** Double strength (DS) or single strength (SS) tablets

**Dose:** 1 DS or SS tablet on Mondays, Wednesdays and Fridays

**Instructions:**
- Take with a full glass of water and drink plenty of water.
- Do not use this medication if you have a sulfa allergy.

**SIDE EFFECT** | **WHAT TO DO**
---|---
Itching, rash | Call your transplant coordinator immediately.
Sun sensitivity | Wear sunscreen SPF 30 or greater and protective clothing while outdoors.
Nausea, vomiting | Take with food. Call your transplant coordinator if symptoms persist.
Decreased white blood cell count | Your lab work will detect this. Your coordinator will discuss this with you and make adjustments, if needed.
Increased potassium | Your lab work will detect this. Your coordinator will discuss this with you and make adjustments, if needed.

Pentamidine isethionate (NebuPent)

**Purpose:** Prevents pneumocystis jirovecii pneumonia (PJP; also known as PCP) in patients with a sulfa allergy

**How supplied:** Vial which is used in a nebulizer for inhalation

**Dose:** 300 mg inhalation therapy every four weeks

**Instructions:**
- You will receive this treatment as an outpatient every four weeks. Treatment lasts 30 to 45 minutes and will be arranged by your coordinator.
- You will receive a dose of inhaled albuterol about 30 minutes before to prevent side effects.

**Side effects:** Nausea, wheezing, metallic taste in your mouth. If you experience trouble breathing or chest tightness, notify your transplant team.

Atovaquone (Mepron)

**Purpose:** Prevents pneumocystis jirovecii pneumonia (PJP; also known as PCP) in patients with a sulfa allergy

**How supplied:** Liquid suspension

**Dose:** 750 mg, twice a day, or 1,500 mg, once a day

**Instructions:** It should be taken with food to improve absorption

**Side effects:** Nausea, vomiting, diarrhea and headache

Dapsone

**Purpose:** Prevents and treats infections such as pneumocystis pneumonia (PCP)

**How supplied:** 25 and 100 mg tablets

**Dose:** 50 to 100 mg daily

**Instructions:** This medication can cause lab abnormalities which need to be monitored closely. Please follow your team’s advice about lab testing.

**Side effects:** Nausea, headache, abdominal pain or lab abnormalities, such as low blood counts

**What to do:** Have blood testing as directed by your team and discuss symptoms with your physician or transplant coordinator.

Inhalation Therapies

Albuterol (Accuneb)

**Purpose:** Helps relax and open airways in the lungs to improve breathing, prevents or treats bronchospasm or wheezing.

**How supplied:** 0.083% solution

**Dose:** One vial via nebulizer; every four hours or as needed

**Instructions:** Use in nebulizer machine.

**Side effects:** Nervousness, hand tremors, high heart rate, headache, sore throat, dizziness or upset stomach

**What to do:** Call your transplant team.

Ipratropium bromide (Atrovent)

**Purpose:** Helps relax and open airways in the lungs to improve breathing, prevents or treats bronchospasm or wheezing.

**How supplied:** 0.083% solution

**Dose:** One vial via nebulizer; every four hours or as needed

**Instructions:** Use in nebulizer machine.

**Side effects:**
- Nervousness, sore throat, dizziness, blurred vision or trouble seeing clearly: call your transplant team
- Rash, hives, bronchospasm

**What to do:** Notify transplant team immediately and don’t use until cleared by your team.
Acetylcystein (Mucomyst)

Purpose: Helps thin mucus secretions in the lungs so that phlegm can be coughed up more easily (mucolytic agent).

How supplied: 10 or 20% vials

Dose: 2 to 4 mL via nebulizer; two to four times daily as needed

Instructions: • Use in nebulizer machine — your transplant pharmacist will direct you in its use before discharge if you are sent home on this medication.  
• Use atrovent or albuterol nebulizer prior to or with each dose to prevent bronchospasm.

Note: Smells like rotten eggs.

Side effects: Increased heart rate, sore throat or cough

Sodium chloride nebulizer solution (HyperSal/Nebusal/PulmoSal)

Purpose: Helps thin mucus secretions in the lungs so that phlegm can be coughed up more easily (mucolytic agent).

How supplied: 3% or 7% vials

Dose: 4 to 10 mL via nebulizer; one to two times daily as needed

Instructions: • Use in nebulizer machine — your transplant pharmacist will direct you in its use before discharge.  
• Use atrovent or albuterol nebulizer prior to each dose to prevent bronchospasm.

Side effects: Sore throat or cough

Amphotericin liposomal (AmBisome)

Purpose: Prevents and treats fungal infections in the lungs

How supplied: 50 mg vial

Dose: 50 mg via nebulizer — can be daily or three times weekly

Instructions: Use atrovent or albuterol nebulizer prior to each dose to prevent bronchospasm.

Side effects: Increased heart rate, sore throat, cough, nausea or headache

Tobramycin

Purpose: Prevents and treats bacterial infections in the lungs

How supplied: 300 mg/5 mL vial

Dose: 300 mg, twice daily via nebulizer

Instructions: • This medication needs to be administered via nebulizer. You may need to mix the solution with sterile water or another solution. Your transplant pharmacist will help determine how and what to mix in the vial for proper usage.  
• Use atrovent or albuterol nebulizer prior to each dose to prevent bronchospasm.

Side effects: Sore throat or cough

Amikacin

Purpose: Prevents and treats bacterial infections in the lungs

How supplied: 500 mg/2 mL vial

Dose: 250 mg twice daily via nebulizer

Instructions: • This medication needs to be administered via nebulizer. You may need to mix the solution with sterile water or another solution. Your transplant pharmacist will help determine how and what to mix in the vial for proper usage.  
• Use atrovent or albuterol nebulizer prior to each dose to prevent bronchospasm.

Side effects: Sore throat or cough

Colistimethate Sodium (Colistin)

Purpose: Prevents and treats bacterial infections in the lungs

How supplied: 150 mg/mL vial

Dose: 150 mg twice daily via nebulizer

Instructions: • This medication needs to be administered via nebulizer. You will need to mix the vial with another solution. Your transplant pharmacist will help determine how and what to mix in the vial for proper usage.  
• Use atrovent or albuterol prior to each dose to prevent bronchospasms.

Side effects: Sore throat or cough

QUICK GUIDE: MANAGING TRANSLANT MEDICATION SIDE EFFECTS

Below are some of the common side effects, along with things you can do at home to help alleviate these symptoms. Remember, these are just guidelines. If any of the side effects persist, or if you are unsure what to do, contact your transplant coordinator.

<table>
<thead>
<tr>
<th>SIDE EFFECT / CAUSES</th>
<th>WHAT TO DO</th>
</tr>
</thead>
</table>
| High blood pressure (tacrolimus, cyclosporine, prednisone) | • Check and record your blood pressure often.  
• Take prescribed blood-pressure-lowering medications.  
• Maintain a healthy weight, lower salt intake and eliminate tobacco.  
• Incorporate fruits and vegetables into daily meals.  
• Exercise. |
| High blood sugars (tacrolimus, cyclosporine, prednisone) | • Learn how to check your sugars.  
• Check and record your sugars, if instructed to do so.  
• Maintain a healthy diet.  
• Exercise. |
<table>
<thead>
<tr>
<th>Condition</th>
<th>Advice</th>
</tr>
</thead>
</table>
| Nausea, diarrhea (mycophenolate mofetil) | • Take medicines with food.  
• Call your transplant coordinator if this persists.                                                   |
| Weight gain (prednisone)        | • Maintain a healthy diet. Snack on fruits and vegetables.                                                |
| Tremors (tacrolimus, cyclosporine, prednisone) | • Tremors are common and should go away without treatment.  
• Notify your doctor if tremors are a problem.                                                            |
| High potassium (tacrolimus, cyclosporine) | • Your lab work will detect this.  
• If instructed, limit the amount of potassium you are taking.                                             |
| Low magnesium, phosphorus (tacrolimus) | • Your lab work will detect this.  
• If instructed, incorporate more foods with magnesium and/or phosphorus into your diet.                |
| Decreased kidney function (tacrolimus, cyclosporine) | • Monitor for signs of reduced kidney function (low urine output, swelling, and high blood pressure).  
• Call the transplant clinic.                                                                               |
| Hair loss (tacrolimus) or hair growth (cyclosporine) | • Ask your coordinator about recommendations for shampoos or creams.                                       |
| Osteoporosis (prednisone)       | • Most patients will require calcium and vitamin D supplements posttransplant.  
• Stop smoking and consuming alcohol.  
• Perform weight-bearing exercises, such as walking, light weightlifting, and aerobics.                  |
| Rash (sulfamethoxazole and trimethoprim) | • Call your transplant team immediately. This could be an allergic reaction.                             |
| Swollen feet, legs (prednisone, tacrolimus, cyclosporine) | • Keep your feet elevated and maintain a low-sodium diet.  
• Ask your doctor if you need a diuretic (fluid pill).                                                      |
| Sensitive skin (prednisone, sulfamethoxazole and trimethoprim) | • Wear sunscreen SPF 30 or higher, and protective clothing outside.                                         |
DIET AND NUTRITION

Maintaining a healthy diet is an essential part of preventing posttransplant complications. We recommend a diet low in fat, cholesterol and sodium. Weight gain is a common problem after transplant. Weight gain is usually caused by prednisone, which can increase your appetite and make you retain water. Your prednisone dose will be tapered in time.

After meeting with the transplant dietitian, you will be sent home with diet instructions designed specifically for your needs. Before discharge, you will have time to ask the dietitian any questions about your diet and how to maintain your ideal body weight. After you go home, you may schedule a visit with one of our transplant dietitians at any time, should you need additional guidance.

Transplant diet recommendations and good food safety practices will help optimize your overall health and lessen the chances of complications and infections.

DAILY NUTRITION GOALS

- 5-7 servings of vegetables
- 2-3 servings of fruit
- Choose whole grains and limit refined flour products and cereals
- Adequate fiber, found in whole grains, vegetables, fruits, beans, nuts and seeds
- Lean sources of protein, such as meats, fish, eggs, beans and nuts
- Adequate calcium for bone health, such as milk, yogurt, broccoli and tofu
- Choose healthy fats (unsaturated fats found in olive oil, canola oil, avocado and almonds) and limit unhealthy fats (saturated fats found in fatty cuts of meat, butter and processed meats)
- Less than 2,300 mg of sodium
- No more than 6 fluid ounces of sugary beverages, such as juice and flavored waters; avoid sports drinks and sodas
- Generally, 6-8 cups of fluid a day; please confirm daily fluid needs with your transplant doctor

Short-Term Goal: Preserve lean muscle mass, promote wound healing, prevent infection, and control glucose levels.

Long-Term Goal: Reach and maintain a healthy weight, consume a balanced diet, and remain physically active.

FLUIDS

It is important to stay adequately hydrated after your transplant. Diarrhea, vomiting, fever, excessive heat and decreased intake of food and fluid can lead to dehydration and kidney injury. Call your transplant doctor or coordinator if you develop symptoms of dehydration, including extreme thirst, headaches, tiredness and decreased urine output.

You should also avoid excessive hydration. This may lead to fluid overload and other medical complications.

To help determine if you are under or over hydrated, you should weigh yourself at the same time every day. Ask your doctor or coordinator if you should increase your fluid intake after transplant or remain on fluid restriction.

Lung transplant patients should avoid carbonated beverages.

IMPORTANT MINERALS

Immunosuppressant medications can decrease phosphorus and magnesium levels in your blood, especially in the first few weeks after transplant. We recommend adding foods rich in these minerals to your diet. Your transplant team will check your phosphorus and magnesium levels with your regular lab work.

Foods Rich in Phosphorus

- Organ meats
- Cheese, yogurt, milk, soymilk, custard and ice cream
- Whole-meal and whole-grain breads and cereals
- Wheat and oat bran; whole-meal pasta and flour
- Lean meats, chicken, eggs and fish
- Dried beans, peas, nuts and seeds
- Dark colas, such as like Coca Cola or Pepsi (use sparingly)

Foods Rich in Magnesium

- Whole-meal or whole-grain breads and cereals; wheat and oat bran
- Cooked black beans and legumes; nuts and seeds; tofu and soymilk
- Seafood, especially fresh water
- Green vegetables, such as spinach, broccoli, green Chinese vegetables, leeks, zucchini, peas, cabbage and asparagus

Ideas for Meals or Snacks High in Magnesium and Phosphate

- Granola cereal (with nuts, seeds, wheat germ) with milk or yogurt
- Whole-grain toast with peanut butter
- Canned sardines added to egg salad or tuna salad and served on whole-grain toast or crackers
- Grilled ham and cheese sandwich on whole-grain bread

High Potassium After Transplant

Potassium helps your muscles and heart work well. Antirejection medications may cause high potassium levels in your blood, in which case your doctor may prescribe a low-potassium diet. Always ask your doctor or coordinator before you modify your potassium intake.

Tips:

- If your potassium levels are high, your doctor may restrict your intake to 2,000 mg or 2 g of potassium a day.
- Avoid salt substitutes.
- Measure food portions with measuring cups. Low-potassium foods may turn into high-potassium foods if large amounts are consumed.

Water is an important part of a healthy diet. You may drink from your regular water supply, unless it is well water. Well water must be boiled before drinking.
### Low or Moderate Potassium Foods

Serving size 1/2 cup unless otherwise noted.

#### Fruits: 3 servings allowed per day
- Apple (1), apple sauce, blackberries, blueberries, fruit cocktail, lemon (1), lime (1), plums, pears, cranberries, grapes, pineapple, strawberries, cherries, peaches
- Nectars: peach, pear, plum
- Juice: grape, apple, cranberry, lime

#### Vegetables: 3 servings allowed per day
- Asparagus, bean sprouts, broccoli, carrots, cabbage, cauliflower, cucumbers, eggplants, green or wax beans, endives, kale, lettuce (1 cup), okra, onions, mushrooms, mixed vegetables, garlic, bell peppers, radishes, summer and zucchini squash, lima beans

#### Milk Substitutes
- Nondairy whipped topping, liquid nondairy creamers, rice milk

#### Starch, fats and other foods
- Rice, pasta, bread, bread products (no bran), cream of rice, grits, cream of wheat, Malt-O-Meal, oatmeal, cookies (animal, vanilla wafer), sorbet, popsicles

### High Potassium Foods

Serving size 1/2 cup unless otherwise noted. Avoid if labs indicate higher potassium levels.

#### Fruits
- Avocados, apricots (3), cantaloupe, dried fruit (1/4 cup), honey dew melon, bananas (small), kiwi, mango, nectarines, oranges (1), papaya, pomegranate, prunes (5), raisins (1 1/4 cup)
- Juice: prune, orange

#### Vegetables
- Artichoke, beets (fresh), brussels sprouts, chard, collard or mustard greens, lentils, soy beans and tofu, okra, parsnips, pumpkin, rutabaga, spinach
- Tomatoes, tomato sauce or paste, V-8 juice
- Potatoes, sweet potatoes, yams: instant, mashed, chips, fried, baked, casseroles
- Winter squash or acorns
- Beans: red, white, navy, pinto, Lima, baked beans
- Peas: chickpeas, black-eyed peas, split peas

#### Milk
- Milk, yogurt, ice cream (limit to 1 cup per day)
- Nutritional beverages (talk with your dietitian before consuming)
- Milkshakes or smoothies made with yogurt or milk

#### Starches, fats and other foods
- Whole-wheat products: bread, crackers, rye or pumpernickel bread
- Bran cereals or muffins, nut breads, fruit cake, seeds and nuts
- Chocolate
- Avoid all sports drinks, such as Gatorade

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### How to Lower Salt/ Sodium Intake

Sodium occurs naturally in foods. Transplant medications can cause fluid retention and increased blood pressure when too much salt is present in the body.

- Eat less than 2,300 mg sodium per day.
- Choose food items with less than 300 mg sodium per serving.
- Look for the following labeling claims when buying processed foods (canned, packaged, etc.):
  - Sodium free – 5 mg sodium or less per serving
  - Very low sodium – 35 mg sodium or less per serving
  - Low sodium – 140 mg sodium or less per serving

#### Ways to limit salt intake:

- Do not use salt substitutes (potassium containing) unless approved by your transplant doctor.
- Buy fresh meats, vegetables and fruits, which are naturally low in sodium.
- Eat meals prepared at home. Restaurants and fast foods are generally high in sodium.
- Limit pickles, relish, sauerkraut and similar foods high in salt.
- Avoid TV dinners, pizza, etc. unless they have less than 700 mg sodium on the food label.
- Buy low-sodium chips, nuts, crackers, pretzels, popcorn, etc.

#### Herbs and Spices Low in Sodium

- Bay leaves
- Caraway seeds
- Celery seeds
- Chili powder
- Cinnamon
- Cloves
- Dill
- Ginger
- Lemon
- Mace
- Marjoram
- Nutmeg
- Onion or onion powder
- Oregano
- Paprika
- Peppermint
- Pepper
- Poppy seed
- Rosemary
- Saffron
- Sage
- Tarragon
- Thyme
- Tarragon
- Turmeric

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HEALTHY EATING GUIDELINES

Protein (5-8 ounces per day)

**CHOOSE THESE FOODS**
- Chicken without skin
- Cooked beans, lentils, split peas
- Eggs
- Lean beef, other lean meats
- Low-sodium cheese, cottage cheese
- Low-sodium tofu
- Shellfish
- Turkey without skin
- Tuna, salmon, mackerel, lake trout, halibut, sardines, cod, pollock, catfish

**AVOID THESE FOODS**
- Bacon
- Bologna, salami, pastrami meats, most deli lunch meats
- Hot dogs
- Fatty meats
- Organ meats
- Poultry skin
- Sausage

Remember to heat all meat and fish to proper temperature. Refer to USDA food safety guidelines.

Dairy (3 servings a day)

**CHOOSE THESE FOODS**
- Evaporated skim milk, powdered skim milk
- Lactose-free milk
- Plain, sugar-free, low fat, nonfat yogurt
- Skim milk, 1% milk
- Soy, almond, rice milk

**AVOID THESE FOODS**
- 2% milk
- Cheese spreads
- Custards
- Eggnog
- Whole milk

Fruits and vegetables (5-7 servings a day)

**CHOOSE THESE FOODS**
- 100% fruit juices
- Dried fruits
- Fresh, frozen, canned (packed in water, juice)
- Fresh, frozen, low-sodium, salt-free canned vegetables
- Low-sodium vegetable juice

**AVOID THESE FOODS**
- Canned fruit packed in syrup, regular vegetable juice
- Fried fruit, vegetables
- Vegetables prepared in butter, cream, other sauces

Remember to **avoid** grapefruit and star fruit, pomegranate juice, Seville oranges, unpasteurized juices.

FOOD SAFETY

Wash fruits and vegetables — even if bagged — thoroughly before eating. Antirejection medications put you at higher risk for foodborne illness.

The United States Department of Agriculture (USDA) food safety guidelines state:
- Always wash hands before and after handling food.
- Keep raw meats (poultry, fish, etc.) and their juices away from other food.

For more information, visit fda.gov and search “food safety for transplant recipients.” You may also call 888.SAFE.FOOD (723.3366).

FOODS TO AVOID

Read food labels carefully.

- Do not eat raw fish and meats, including sushi and raw oysters. Avoid undercooked meats. Meats should be cooked well done, with no pink. Do not eat foods containing raw or undercooked eggs, such as Caesar dressing, homemade eggnog or poached eggs.
- Do not eat refrigerated hot dogs, deli meats, bean sprouts or alfalfa sprouts unless heated to steaming.
- Do not drink or eat unpasteurized juices, milk or dairy products, such as feta cheese, brie, Camembert cheese, blue-veined cheese or queso fresco.
- Do not eat or drink grapefruit, pomegranate, Seville orange or star fruit products, including extracts used in citrus-flavored beverages. These may interfere with your antirejection medications.
- Do not eat wild honey (raw, unpasteurized).
- Do not use herbal supplements or drink herbal teas with added ingredients. They can interact with your medications.
- Avoid salad bars and buffets.
- Do not drink carbonated beverages.
Breads, Cereal, Starches, Starchy Vegetables and Crackers (6-8 servings a day)

<table>
<thead>
<tr>
<th>CHOOSE THESE FOODS</th>
<th>AVOID THESE FOODS</th>
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</thead>
<tbody>
<tr>
<td>• Black, garbanzo, kidney, lima, pinto cooked beans</td>
<td>• Biscuits</td>
</tr>
<tr>
<td>• Brown rice</td>
<td>• Commercial muffins</td>
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<tr>
<td>• Lentils</td>
<td>• Crossants</td>
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<tr>
<td>• Split peas</td>
<td>• Donuts</td>
</tr>
<tr>
<td>• Reduced fat, low-sodium crackers</td>
<td>• French fries, fried hash brown potatoes, fried tater tots</td>
</tr>
<tr>
<td>• Reduced fat muffins, granolas, baked chips</td>
<td>• Fried rice</td>
</tr>
<tr>
<td>• Potatoes</td>
<td>• High-fat microwave buttered popcorn</td>
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<tr>
<td>• Whole grains</td>
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<tr>
<td>• Whole-grain pasta</td>
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</table>

Fats and Oils (5-6 tablespoons per day)

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<thead>
<tr>
<th>CHOOSE THESE FOODS</th>
<th>AVOID THESE FOODS</th>
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</thead>
<tbody>
<tr>
<td>• All-natural, low-sodium almonds, walnuts, pistachio nuts, hazelnuts, Brazil nuts, pecans, peanuts</td>
<td>• Bacon</td>
</tr>
<tr>
<td>• Avocados</td>
<td>• Coconut, macadamia nuts, cashews</td>
</tr>
<tr>
<td>• Ground flaxseed</td>
<td>• Coconut, palm, palm kernel oil</td>
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<tr>
<td>• Low-sodium, low-fat salad dressings, tub margarines (transfat free)</td>
<td>• Cream sauces</td>
</tr>
<tr>
<td>• Mayonnaise made with unsaturated vegetable oils listed below</td>
<td>• Dressings made with egg yolk, cheese</td>
</tr>
<tr>
<td>• Peanut butter and other nut spreads</td>
<td>• Gravy from meat drippings (unless fat is removed)</td>
</tr>
<tr>
<td>• Sesame, pumpkin, sunflower seeds</td>
<td>• Lard</td>
</tr>
<tr>
<td>• Unsaturated vegetable oils: olive, canola, peanut, sunflower, soybean, corn, safflower, sesame seed, flaxseed</td>
<td>• Olives in moderation (due to high sodium)</td>
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<td>• Stick margarine, butter</td>
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</tbody>
</table>

Desserts and Sweets (keep to a minimum)

<table>
<thead>
<tr>
<th>CHOOSE THESE FOODS</th>
<th>MINIMIZE THESE FOODS</th>
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</thead>
<tbody>
<tr>
<td>• Angel food cake</td>
<td>• Commercially prepared pies, cakes, pastries, cookies, other baked goods</td>
</tr>
<tr>
<td>• Frozen or fruited low-fat yogurt, low-fat ice cream</td>
<td>• Hard candy, jelly beans, sugar, marshmallows, chocolate candy</td>
</tr>
<tr>
<td>• Fruit bars</td>
<td>• Honey, syrup, jam, molasses</td>
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<tr>
<td>• Fruit ice</td>
<td>• Sherbet, sorbet, popsicles</td>
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<tr>
<td>• Gelatin</td>
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<td>• Jelly (jell)</td>
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Beverages (6-8 cups a day)

<table>
<thead>
<tr>
<th>CHOOSE THESE BEVERAGES</th>
<th>AVOID THESE BEVERAGES</th>
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</thead>
<tbody>
<tr>
<td>• Decaffeinated coffee and tea</td>
<td>• Alcohol*</td>
</tr>
<tr>
<td>• Diet, decaffeinated beverages</td>
<td>• Beverages high in sugar, fat</td>
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<tr>
<td>• Filtered, boiled, bottled water</td>
<td>• Carbonated beverages</td>
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<tr>
<td>• Sugar-free drink mixes</td>
<td>• Commercial smoothies</td>
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<td></td>
<td>• Energy drinks</td>
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<td></td>
<td>• High-calorie carbonated beverages</td>
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<td>• Sports drinks, such as Gatorade</td>
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<td></td>
<td>• Sweetened commercial coffee drinks</td>
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<td></td>
<td>• Vitamin waters **</td>
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<td>• Well water</td>
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</table>

Please confirm daily fluid needs with your transplant doctor.

Limit caffeine to two servings (16 ounces) per day.

Remember to avoid unpasteurized juices or juice beverages that contain grapefruit or pomegranate.

* Alcohol: Talk to your transplant doctor or coordinator before drinking any alcohol.

** Vitamin waters: Check with a transplant dietitian to discuss possible interactions with your medications.

Servings

Look at serving size and servings per container first. Calorie and nutrient information applies to one serving. Eating more than one serving will increase calories.

Total Fat

Total fat per serving should be less than 30% of calories saturated fat per serving should be less than 2 grams — no more than 15 g saturated fat per day. Trans fat per serving should be 0 g.

Added Sugar

Choose less than 25 grams of added sugar per day — no more than 10% of total daily calories.

Carbohydrate

• 15 g total carbohydrate = one serving

Choose foods with 5 g of fiber or more to meet your overall goal of getting 25-30 g of fiber a day.

Daily Value

When comparing food items, choose items with more protein and fiber.

If you want to consume less of a nutrient, such as saturated fat or sodium, choose foods less than 5% daily values. If you want to consume more of the nutrient, such as fiber, choose foods more than 20% daily value.
SAMPLE MEAL PLAN

**Breakfast**
- 1/2 cup steel cut or slow-cooking oatmeal
- 1/2 cup fresh fruit
- 1 egg white, scrambled
- 1/2 cup fat-free milk
- 1 cup coffee (optional)

**Lunch**
- 1 large mixed green salad with vegetables
- 1 tablespoon vinegar-and-oil salad dressing
- 3 oz. grilled salmon
- 1/3 cup cooked pasta with olive oil sauce
- 1/4 cup low-sodium, low-fat Parmesan cheese
- 1 medium piece fresh fruit

**Afternoon Snack**
- 4 cucumber sticks
- 1 tablespoon fat-free ranch dressing

**Evening Meal**
- 3 oz. grilled chicken
- 1/2 baked sweet potato or yam
- 1/2 cup steamed broccoli
- 1 ciabatta dinner roll (optional)
- 2 teaspoons reduced-fat margarine
- 1 cup fat-free milk

**Evening Snack**
- 1 cup Greek, sugar-free, nonfat yogurt
- 1/2 cup sliced strawberries

Adjust the calories and high-carbohydrate foods based on your weight and blood sugar levels.

Notes
WHEN TO CALL

EMERGENCIES
For any life-threatening or other serious emergencies, such as chest pain, shortness of breath or other injuries, call 911 or go to the nearest emergency room. If you visit an emergency room for any reason, please call your primary coordinator or the on-call coordinator to tell us you are on your way.

CONCERNS
You may feel overwhelmed by all the information you receive after your transplant. All your concerns are important to us. Please call us immediately if you experience any of the symptoms below. If your transplant coordinator is not available to answer your call, you may call the Transplant Center at 713.441.5451, select your language, and select 3 for lung. Ask to speak to the on-call lung transplant coordinator if your coordinator is not available.

• Shortness of breath or wheezing
• Decrease in microspirometry readings by 10% or more
• New or persistent coughing
• Decreased exercise tolerance
• Symptoms similar to flu or cold
• Change in sputum from clear to any other color
• Temperature over 99.5 F
• Chills
• Any sign of infection or nonhealing wound
• Burning with urination or foul smelling urine
• Redness, swelling or drainage around your incision or any wound
• Nausea, vomiting or diarrhea for at least 24 hours, or coupled with a fever, abdominal pain or bloody stools
• Dizziness
• Fatigue, weakness or general malaise (feeling tired and weak)
• Irregular or fast heart beat
• Changes in blood pressure (high or low) outside the normal ranges
• Any new medication prescribed by another doctor
• Missed doses of medications
• Any hospitalization outside of your transplant center

If you are calling because you are ill, please have the following information readily available:
• Temperature
• Weight
• Spirometry and oxygen saturation readings
• Blood sugar, if applicable
• Blood pressure and heart rate
• List of current medications
• Pharmacy name and phone number
COMMUNICATING WITH YOUR DONOR FAMILY

A LETTER OF THANKS

Many transplant recipients choose to write a letter of thanks to their donor family. These letters are anonymous. Neither the donor family nor the recipient is identified by full name. You decide when the time is right for you to send a letter. Donor families usually appreciate a simple letter of thanks, and they like to know how your transplant has impacted your life. Occasionally, the donor families may choose to respond to your letter. All letters remain confidential and are mediated by the local organ donor center. If you need help writing this letter, your transplant social worker can help you.

What should you include in your letter?

Introduction

- Your first name, not your last name
- Job or occupation
- State, not city, in which you live
- Family status
- Carefully consider whether to include religious or spiritual comments

Talk about your transplant experience

- Use simple language.
- Recognize the donor family and thank them for their gift.
- Discuss your illness and how long you waited for a transplant.
- Explain how your transplant has improved your health and changed your life.
- Include details about activities you could not participate in before your transplant.
- Describe key life moments you have experienced since your transplant.

Conclude your letter

- Sign your first name only.
- Do not reveal the name or location of your transplant hospital.

Send your letter

- Place your letter in an unsealed envelope.
- Include a separate sheet of paper with your full name and date of transplant.
- Give the letter to your transplant coordinator or social worker.
TRANSPLANT TEST

Please complete this test and review it with your transplant coordinator.

1. It is 4 p.m. and you realize you forgot to take your morning dose of your medicines, including your antirejection medicines. What should you do?

2. Your stomach has been upset. You vomit immediately after taking your medications and all the pills come up. What do you do?

3. You are scheduled for lab (blood) testing. Where do you need to go and what time should you arrive?

4. You have a clinic appointment for testing and to see your transplant doctor. What four items must you bring?

5. How long is it recommended that you wait before driving a car?

6. When and who should you call for refills on your medications?

7. You open a new bottle of medication and you notice the pills look different. What should you do?

8. You have a dental appointment to have your teeth cleaned. What should you do?

9. It is important to have a local primary care physician (PCP).

   □ True □ False

10. You see your local doctor and he or she prescribes a new medicine. Do you need to notify your transplant team? Why or why not?

11. Rejection is common and can happen at any time after transplant.

   □ True □ False
12. Rejection always leads to loss of the transplanted organ.
   - True  - False

13. What are some signs of rejection?

14. What are some signs of infection?

15. It is okay for you to be around smoke after transplant.
   - True  - False

16. After eating or taking medication, it is important to stay upright and not lie down for what period of time?

17. Carbonated beverages, such as sodas, are okay to drink.
   - True  - False

18. You begin to have a runny or stuffy nose. You see that Benadryl and Claritin are listed as medications that are safe to take. Do you still need to call the team?

19. You have significant pain and you have ibuprofen in your medicine cabinet. Is this safe or not safe to take?

20. How long should you wear a mask in public after your transplant?
TRACK YOUR HEALTH WITH DAILY LOGS

Once you leave the hospital, you will be responsible for making sure your body remains healthy. Check your vital signs daily at home to ensure they are within normal limits. Document them in the log provided so we can track your progress. Be sure to keep a blank log at all times so you can make copies. Your coordinator will let you know what needs to be recorded and for how long.

Bring your daily logs with you to all appointments.

WHAT TO LOG

Temperature
Take your temperature at least daily. Don’t eat or drink for 15 minutes before taking your temperature. If you feel chilled, have flu-like symptoms, have any sign of infection, or if your temperature is higher than 99.5 F, call us.

Blood Pressure
Check your blood pressure and pulse (heart rate) every morning and evening. Call us if you have two readings in a row that are elevated.

If you have a significantly elevated or decreased reading, take your blood pressure in both arms and call us. We may need to adjust your medication. Your coordinator will tell you what “elevated” means in your case.

If you take blood pressure medication and you get a systolic (top number) reading less than 100, DO NOT take your medication. Call your coordinator.

<table>
<thead>
<tr>
<th>Systolic (Top Number)</th>
<th>Morning Weight</th>
<th>Diastolic (Bottom Number)</th>
<th>Blood Pressure Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 120</td>
<td>and</td>
<td>Less than 80</td>
<td>Normal</td>
</tr>
<tr>
<td>120-139</td>
<td>or</td>
<td>80-89</td>
<td>Prehypertension</td>
</tr>
<tr>
<td>140-159</td>
<td>or</td>
<td>90-99</td>
<td>Hypertension stage 1</td>
</tr>
<tr>
<td>160 or higher</td>
<td>or</td>
<td>100 or higher</td>
<td>Hypertension stage 2</td>
</tr>
<tr>
<td>Higher than 180</td>
<td>or</td>
<td>Higher than 110</td>
<td>Hypertensive crisis (seek emergency care)</td>
</tr>
</tbody>
</table>

Source: American Heart Association

Note: Systolic number measures the pressure in the arteries when the heart beats (contracts). Diastolic number measures the pressure in the arteries when the heart is resting (between beats).

Heart Rate
Your heart rate, or pulse, is the number of times your heart beats each minute, with a normal range of 60 to 100. If you are on blood pressure medications, you should check your blood pressure and heart rate before each dose of medication. If your heart rate is outside the normal range, call your coordinator immediately. If it’s lower than 60, you should NOT take your blood pressure medication.

How to check your pulse
Most modern blood pressure machines will also measure your pulse. If yours does not, then follow these instructions:

- You may use your wrist or your neck.
  - Wrist: Place three fingers just below your opposite wrist, at the base of your thumb.
  - Neck: Place your index and middle finger on the hollow of your neck, between your windpipe and the large muscle on the side.
- Press lightly until you can feel blood pulsing under your fingers.
- Using a watch or clock with a second hand, count how many times you feel the pulse beat in 15 seconds.
- Multiply the number of beats times four.

Do not use your thumb to check your pulse.

Weight
Weigh yourself first thing every morning after urination. If you have a weight gain of three to five pounds overnight, call us immediately.

Blood Sugar
If you have diabetes or high blood sugar, check your blood sugar before each meal and at bedtime. If you need to check your blood sugar at home, a diabetes educator will teach you how to do it while you’re in the hospital.

Microspirometry
Your microspirometry exercises will test your lung function and are critical to keeping you in good health. If you have issues with your machine, call your coordinator.

How to use your microspirometry machine:

- Sit straight up in a chair.
- Take a deep breath and blow into the tube as hard as you can.
- Repeat three times, taking a break between each test.
### DAILY LOG

<table>
<thead>
<tr>
<th>Date</th>
<th>Morning</th>
<th>Weight</th>
<th>Morning</th>
<th>Noon</th>
<th>Evening</th>
<th>Bedtime</th>
<th>Blood Pressure and Heart Rate</th>
<th>Temp.</th>
<th>Blood Sugars (before meals and bedtime)</th>
<th>Spirometry</th>
<th>Oxygen Saturation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Morning</td>
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### TRACK YOUR HEALTH

Notes

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# DAILY LOG

<table>
<thead>
<tr>
<th>Date</th>
<th>Morning Weight</th>
<th>Blood Pressure and Heart Rate</th>
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<th>Spirometry</th>
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<td></td>
<td></td>
<td>Rest</td>
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</tbody>
</table>

**Columns:**
- Date
- Morning Weight
- Blood Pressure and Heart Rate
- Temp.
- Blood Sugars (before meals and bedtime)
- Spirometry
- Oxygen Saturation
<table>
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## SOURCES OF SUPPORT

### AMERICAN TRANSPLANT ASSOCIATION
Provides patient-oriented education, support and resources.
980 N. Michigan Ave., Suite 1400
Chicago, IL 60611
800.494.4527
americantransplant.org

### ORGAN TRANSPLANT SUPPORT
Nonprofit organization that provides support to transplant recipients and their families.
PO Box 471
Naperville, IL 60566
630.527.8640
organtransplantsupport.org

### TRANSPLANT RECIPIENTS INTERNATIONAL ORGANIZATION, INC.
Nonprofit organization committed to improving the quality of life for transplant recipients.
trioweb.org

### AMERICAN DIABETES ASSOCIATION
1660 Duke St.
Alexandria, VA 22314
800.232.3472
diabetes.org

### HEART AND LUNG TRANSPLANT SUPPORT GROUP
Please talk to your social worker or coordinator for details.

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### DAILY LOG

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