

**POST-KIDNEY
TRANSPLANTATION**

EDUCATION

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CONGRATULATIONS ON YOUR NEWLY TRANSPLANTED ORGAN

Now that you have received your newly transplanted organ and are about ready to go home, it is important to understand that having a transplanted organ brings new responsibilities.

Your transplant team will continue to care for you; however, the most important member of the health care team is YOU. Without your active support, the team's best efforts cannot succeed.

As the lifetime caretaker of your newly transplanted organ, you'll need to:

- Adopt healthy daily habits that include a good diet and regular exercise
- Follow your medication schedule
- Communicate regularly with your transplant team
- Keep to your schedule for laboratory tests and checkups
- Communicate information about your medication and your care between your primary care physician, your dentist, your local pharmacist, and your transplant team

PURPOSE OF THE HANDBOOK

This handbook has been designed to give you a basic overview of your daily healthcare routine, medications, monitoring, and other activities. It also contains information on detecting complications that may need medical attention.

INFORMATION ABOUT YOUR NEWLY TRANSPLANTED ORGAN

Let's first review some facts about the kidney.

The kidney is a bean-shaped organ about the size of an adult's fist. An adult-sized kidney weighs about one quarter of a pound.

Each kidney is supplied by an artery and a vein. The renal artery brings blood to the kidney and the renal vein returns blood from the kidney to the main circulation.

The ureter carries the urine produced by the kidney to the bladder. The bladder is a holding tank where urine is stored until it is voided.

Important functions of the kidney are:

- Removal of waste products
- Control of blood pressure
- Control of fluid
- Production of hormones
- Production of red blood cells

SYMPTOMS OF KIDNEY DISEASE

When the kidneys no longer perform these important functions, waste products and fluids build up. This leads to uremia. Signs of uremia may include:

- Muscle cramps
- Headaches
- Weakness
- Blurred vision
- Sleep problems
- Nausea and vomiting
- Joint aches and pains

Transplantation is one option to treat end-stage kidney disease.

KIDNEY TRANSPLANT SURGERY

An incision is made on either the right side or left side of your lower abdomen. This area is used because it offers a good blood supply. Also, the kidney will have some protection in the pocket created by the large hip bones. Because of this location, your own kidneys may not need to be removed.

During surgery, the kidney is connected to an artery and vein for blood supplies. The ureter is connected to the bladder for the urine to drain. Often the kidney begins making urine immediately while you are still in surgery.

The surgery can last anywhere from two to four hours.

The incision will be closed with either stitches and steri-strips (special tape) or staples. After surgery, you will have a dressing covering the incision. This will be removed by the transplant surgeon one to two days after surgery.

COMPLICATIONS AFTER KIDNEY TRANSPLANT SURGERY

A number of postoperative complications are possible. There is no way to predict which patients will have problems. Your transplant team will do their best to reduce your likelihood of complications and to treat them promptly if they occur. Following your instructions carefully and keeping your transplant team informed of any difficulties will help you return quickly to a normal, active life.

Some of the potential complications include:

- **Acute Tubular Necrosis (ATN):** This is usually a temporary loss of kidney function. It is caused by an injury to the kidney. An example would be very low blood pressure. Although ATN is most likely temporary, sometimes the injury to the kidney can be so great that recovery does not occur. In some cases, your physician can predict that ATN will occur, but other times it may happen unexpectedly. There is no specific treatment for ATN. You will just need to patiently wait for the kidney to start working. Dialysis may be needed. Although it does not usually last longer than a few weeks, it can persist for as long as three months. ATN is suspected when the creatinine level does not fall after transplant. In mild cases, the creatinine may come down only very slightly each day. If the creatinine remains high, there is no absolute way to tell whether rejection is also happening. In these cases, a biopsy of the transplanted kidney is done so your physicians can treat you appropriately.
- **Primary Non-Function:** This is a name for a kidney that never starts working. It is rare; however, it can happen. It is a very discouraging event for the patient, as well as the transplant team. Dialysis is usually required within the first 48 hours after surgery and will continue to be required on a regular basis. Patients with primary non-functioning graft will have a kidney biopsy that reveals irreversible damage. Sometimes the kidney needs to be removed. Primary non-function does not prevent you from having another transplant.
- **Urine Leak:** The ureter is a tube that drains urine from your transplanted kidney to the bladder. An incision is made to connect the ureter to the bladder. Occasionally the ureter can become weak and then disconnect from the bladder if the bladder becomes too full with urine. If a urine leak occurs, the urine draining from your catheter will stop. Usually this occurs quickly. The only treatment for this problem is an operation to reconnect the ureter. One of the reasons you will have a Foley catheter draining your urine is to keep the bladder from becoming too full. Once your Foley catheter is removed, it is important for you to go to the bathroom every hour during the first few days to prevent the bladder from becoming very full. Most patients feel the urge to go to the bathroom frequently. When the transplanted kidney produces large amounts of urine, you may feel like going to the bathroom often.
- **Infection:** A concern for any patient having surgery is for the incision to become infected. If you have a fever, redness and warmth over the incision, pain over the incision, swelling of the incision, discolored drainage from the incision, or the incision is not healing, please call the transplant office immediately.

INFECTIONS

Infections are a constant risk to a transplant recipient. The immunosuppressive medication that you take to prevent rejection leaves you at increased risk for infections. If you develop any of the symptoms listed under the various infections, you are encouraged to contact your transplant team immediately. The following are some of the most common infections:

VIRAL INFECTIONS:

Cytomegalovirus (CMV): CMV is one of the viral infections that occurs most frequently in transplant patients. The risk of CMV is highest in the first months after transplantation. Signs include fatigue, high temperature, aching joints, headaches, visual disturbances, and pneumonia. Treatment may include hospitalization.

Herpes-simplex virus types I and II: These viruses most often infect the skin but can also occur in other areas, such as the eyes and lungs. Type I typically causes cold sores and blisters around the mouth, and type II causes genital sores. Herpes is an infectious disease and can be transmitted sexually. Herpes infections in transplant patients are not necessarily transmitted sexually. Most herpes simplex infections are mild, but occasionally they can be severe. Although there is no cure for herpes, it can be treated. Depending on the severity of the infection, the treatment is either topical cream, oral medication or intravenous medication. Symptoms of herpes include feeling weak and having painful fluid-like sores in your mouth or genital area. Women should be aware of any unusual vaginal discharge.

Herpes zoster (shingles): Shingles appear as a rash or small water blisters, usually on the chest, back, or hip. The rash may or may not be painful. Treatment for shingles is with medication given intravenously or by oral medication.

FUNGAL INFECTIONS:

Candida (yeast): Candida is a fungus that can cause a variety of infections in transplant patients. It usually appears in the mouth and throat but may also be in the surgical wound, eyes, or respiratory and urinary tract. Candida is most severe in the blood stream. If infection occurs in the mouth or throat, it is called *thrush*. Thrush produces white, patchy, lesions (raw areas), pain or tenderness, a white film on the tongue, and difficulty swallowing. Candida can also infect the esophagus (the tube from your mouth to your stomach) or, in women, the vagina. Vaginal infections usually produce an abnormal discharge that may be yellow or white. Treatment is with creams or medication given in pill form, liquid solution, or intravenous.

BACTERIAL INFECTIONS:

Wound infections: Bacterial wound infections usually occur at the surgical site. If you have a fever or notice redness, swelling, tenderness, or drainage at your incision, notify your transplant team. After a wound culture (a test for bacteria) is taken, an antibiotic will be prescribed if infection is present.

OTHER INFECTIONS:

Pneumocystitis carinii is a germ similar to a fungus, and is normally found in the lung. In people whose immune systems are suppressed, it may cause a type of pneumonia. Early in the illness, a mild, dry cough, and a fever may occur. If you suspect that you have a cold or flu-like illness, contact your transplant team immediately.

Signs and symptoms of infection may include some of the following and should be reported to the transplant center immediately:

- Chills or fever
- Cough with yellow, green or bloody sputum
- Persistent headaches
- Shortness of breath
- Pain or burning with urination, bloody urine
- Persistent itching in groin area
- Any foul discharge from vagina or penis
- Loose or bloody stool, diarrhea
- Any redness, tenderness, open areas or drainage from the incision
- Swollen lymph nodes (found by self-exam)
- Chest pain, hip pain, any new or unusual pain
- Sore throat
- Stiff neck
- Sores in the mouth or on the tongue
- Any unusual or abnormal symptom that appears

A transplant coordinator can be reached 24 hours a day and has direct contact with a transplant physician.

Because of the increased risk of infection, it is recommended that you try to avoid crowded areas, such as movie theaters, airports, for the first two months after your transplant.

REJECTION

Your body has a strong defense system known as your immune system. This main line of defense works to destroy foreign invaders such as viruses and bacteria. Sometimes the immune system cannot distinguish between an unwelcome invader and the welcome invader, your transplanted organ.

When your immune system recognizes your transplanted organ as foreign and begins to attack it successfully, this is known as rejection. When treated early, rejection can usually be reversed. It is very important that you take the medications (immunosuppressants) that are used to “fool” your immune system into thinking your newly transplanted organ isn’t foreign.

Rejections can be classified into three general types:

1. **HYPERACUTE:** This type of rejection occurs within minutes or hours after the transplant. It results in immediate and irreversible damage to the newly transplanted organ, which must be removed. Fortunately, this type of rejection is very, very rare.
2. **ACUTE REJECTION:** This is the most common form of rejection. It is most frequent during the first three months post-transplant, but may occur after many months or years. This is why immunosuppressant medications must be continued as long as the transplanted organ is functioning. Treatment of acute rejection varies, depending on the individual circumstances. Some mild episodes may be controlled on an outpatient basis, while some more severe rejections require hospitalization. Early detection and prompt treatment will be in your favor when treating acute rejection.
3. **CHRONIC REJECTION:** This is the continuous tendency on the part of the body to reject the transplanted organ. There are few signs and symptoms of chronic rejection other than changes in your laboratory work. Patients suffering from chronic rejection can lead normal lives. As chronic rejection progresses, it becomes necessary to readjust medication doses and begin dietary restrictions similar to those required when the kidneys were failing before. At some point, dialysis would resume. It is not uncommon for individuals to undergo more than one transplant in their lifetime.

Learn to recognize the signs and symptoms of rejection. Call the transplant office immediately if you notice any of the following:

- Weight gain of greater than two pounds in one day or four pounds in a week
- Fever over 100° F (38° C)
- Decrease in urine output
- Tenderness over the transplant site
- Flu-like symptoms, chills, aches, tiredness, headache, nausea, vomiting

Remember, you may not notice any of these symptoms. This is why having routine lab work and follow-up with your transplant physicians is so important.

DEHYDRATION:

As a dialysis patient you were trained to avoid extra fluid. Now that you have a normal functioning kidney, restricting fluid can lead to dehydration. It is important to drink at least six 8 ounce glasses of fluid each day unless told otherwise. Remember, during the summer, drink plenty of fluids as it is common to lose water due to taking part in outdoor activities. Being dehydrated can cause the creatinine to rise and you may need to be admitted to the hospital for evaluation.

ANXIETY AND DEPRESSION:

Undergoing a transplant can create many personal and family stresses. It is not uncommon for transplant patients to experience anxiety and perhaps depression following the surgery, hospital confinement, and return home. To help you adjust to life at home, and your eventual return to work or school, a social worker is available. Consult your transplant team for further information if you are unable to resolve your anxiety or depression.

You might want to meet other people who have been through the same experience you have. Ask your transplant social worker or transplant coordinator for names of support groups in your local area.

MEDICATIONS:

This section is intended to be a general guide to each medication's function, proper use, dosage, precaution, and side effects. The information does not cover all aspects of each medication and is not intended as medical advice for individual problems. Its purpose instead is to give you a general overview. Always follow the instructions of the transplant team. You probably won't experience all of the side effects listed for each medication. Also, side effects usually decrease with time.

You will be on many new medications once you leave the hospital. The transplant coordinators will be available to assist you in developing a system that will aid you in taking your medications. It is important to remember several key things when taking these medications:

- Take the right medication, in the right dose, at the right time.
- If you cannot remember whether you have taken your pills, do not double up on them. Call the transplant coordinator.
- If you are unable to take your medications because of illness or have just vomited up your medications, call the transplant coordinator.
- You must take the immunosuppressant medications for the entire time the transplanted organ is functioning. If you do not take these medications, you will have a rejection episode. Do not change these medication dosages on your own. Call a transplant coordinator immediately if you run out of the medications and will not be able to take them for a period of time.
- Be prepared to ask the transplant physicians for a prescription of medications at your outpatient clinic appointment. Try to keep a one to two week supply of medication on hand at all times to prevent running out of these important medications.
- Call the transplant coordinator before you take any medication prescribed by any other physician.
- Do not take any over-the-counter medications without approval by the transplant team.

IMMUNOSUPPRESSANT MEDICATIONS

The medications you will be taking after your transplant are called immunosuppressants. These are medications that will keep your body from rejecting your newly transplanted organ. You will have to take these medications every day for the life of the transplanted organ.

PREDNISONE (deltasone):

Purpose: To prevent or treat rejection of transplanted organs.

How to take: Tablets are available in various strengths. You will be given 5 mg and 10 mg tablets. You will be asked to break your 5 mg tablet in half to make your 2.5 mg dosages at times.

It is best to take Prednisone with food.

If you are taking Prednisone once a day, it is recommended you take it once in the morning with breakfast.

Side effects:

- Changes in physical appearance: round cheeks, protruding abdomen, fat deposits over the upper back, increased growth of facial and body hair, acne, weight gain
- Increased appetite
- Susceptibility to infection
- Excess stomach acid and increased risk of developing ulcers
- Skin easily bruised and injured, slow wound healing, sensitivity to sun, pigment changes
- Degeneration of bones usually affecting the hip and backbone
- Muscle weakness
- Steroid-induced diabetes (high blood sugars)
- Cataracts
- Emotional mood swings
- Fluid retention

CYCLOSPORINE 0R NEORAL (sandimmune):

Purpose: To prevent rejection of transplanted organs.

How to take: Available in 100 mg and 25 mg capsules. If you take this medication twice daily, doses should be 12 hours apart.

Liquid medication is available. Mix in chocolate milk or orange juice. Never use a plastic glass or straw. Mix medication at room temperature with liquid. Use a metal spoon to stir.

Your medication dosage will be determined by the blood levels drawn. It is important to have you blood drawn 12 hours after your evening dose of this medication.

Precautions:

Keep the capsules in the blister package until dose is to be taken.

An open bottle of this medication is good for two months. You should date the bottle when you open it.

On the day you are having your cyclosporine blood level monitored, arrive at the laboratory 12 hours after your evening dose was taken. Do NOT take this medication until AFTER the blood work is drawn.

Store capsules below 77° F. Store liquid below 86° F. Do not leave this medication in the car or store in a refrigerator or a bathroom medicine cabinet or exposed to direct light. Appropriate places to store this medication include the kitchen or your bedroom away from heat, cold, moisture, and children.

Side effects:

- Toxic to the kidneys
- Toxic to the liver
- Increased growth of hair and nails
- High blood pressure
- Mild hand tremors
- Increased risk of infection
- Headache
- Increased risk of developing cancer
- Sleep disturbances

PROGRAF (tacrolimus, FK506):

Purpose: To prevent or treat organ rejection.

How to take: Capsules available in 1 mg and 5 mg. If you take Prograf twice daily, you should take it 12 hours apart.

The transplant team will determine the appropriate dosage based on your weight, your blood levels, other laboratory tests, and the possible side effects of Prograf.

Precautions:

On the day you are having your Prograf blood level monitored, arrive at the laboratory 12 hours after your evening dose was taken. Do NOT take this medication until AFTER the blood work is drawn.

Store Prograf at room temperature (59° to 86° F)

Side effects:

- Headaches
- Nausea
- Diarrhea
- Tremor
- High blood sugar
- Abnormal kidney function
- Hair loss
- Sleep disturbances
- Numbness and tingling of your hands and feet

IMURAN (azothiaprine):

Purpose: To prevent organ rejection.

How to take: Tablets are 50 mg each.

The transplant team will determine the appropriate dosage based on your laboratory values and weight.

Precautions: Imuran can lower white blood cells and platelets Report any unusual bleeding or bruising.

Take in the evening with food to prevent stomach irritation.

Side effects:

- Low white blood count
- Increased risk of infection
- Nausea and vomiting
- Hepatitis-like syndrome
- Fatigue

CELLCEPT (myophenolate mofetil):

Purpose: To prevent organ rejection.

How to take: Available in 250 mg tablets. If you take this medication twice daily, it should be taken 12 hours apart.

Precautions: **(None listed)**

Side effects:

- Diarrhea
- Increased risk of infection
- Vomiting
- Blood abnormalities

INFECTION FIGHTING DRUGS

The medications you take to suppress your immune system also reduce the normal ability of your body to fight bacteria, viruses, and other germs. As a result, you are at increased risk of getting an infection. You may be on one or more of the drugs listed below to protect you from infection or to control infection. These medications are usually given for a specific period of time and then discontinued. If you were to develop an infection at another time, the medication may again be resumed for a certain period of time

SEPTRA (Bactrim): To prevent infection especially in the urinary tract and lungs.

NYSTATIN: To prevent or treat oral fungus infections, thrush. This liquid medication is to be swished in the mouth and then swallowed. Do this after oral care and do not eat or drink anything for 20 minutes after taking this.

ACYCLOVJR (Zovirax): To prevent or treat viruses such as herpes, shingles, and CMV.

DRUGS TO HELP PROTECT YOUR DIGESTIVE SYSTEM

Because some medications you take can cause irritation and even ulcers in your stomach and upper intestine, you may need to take other medications to help protect your digestive system.

ANTI-ULCER MEDICATIONS: These are given to protect your stomach from irritation and ulcer development caused by Prednisone. Examples are Pepcid, Prilosec, Zantac, and antacid.

ANTIHYPERTENSIVE MEDICATIONS: You may develop high blood pressure due to the medication you are taking to prevent rejection. If you have high blood pressure, it will be necessary to take a medication to lower your blood pressure, called an antihypertensive medication. The transplant physician will determine which one is best for you. Your transplant physician may also place you on a diuretic medication to help get rid of excess fluid which can cause high blood pressure.

HEALTH CARE AFTER YOU LEAVE THE HOSPITAL

Monitoring your health at home: After you are discharged from the hospital, you will be asked to monitor your:

- Temperature
- Pulse
- Blood pressure
- Weight
- Intake and output

Temperature: Check and record your temperature first thing in the morning. Record this in your transplant journal. Also check your temperature any time you feel chilled, hot, achy, or ill. This may be the first sign of infection. If your temperature is higher than 100 degrees at any time, notify the transplant coordinator immediately. Do not take an over-the-counter product to lower the temperature as it can mask the symptoms of infection or rejection unless instructed by your transplant team.

Pulse: When you take your blood pressure in the morning and evening, your automatic blood pressure equipment will display your pulse rate. Record this in your transplant journal. If you are taking medication that will lower your pulse rate, the transplant coordinator will discuss with you when to notify the transplant team.

Blood pressure: You will be asked to monitor your blood pressure at least once a day and sometime more frequently. The top number (systolic) indicates the highest pressure your heart has to pump against. The bottom number (diastolic) indicates the lowest number you heart has to pump against. It is important to know what your normal blood pressure is and when to be concerned. You should notify your physician if your blood pressure is:

Systolic - more than _____ or less than _____
Diastolic - more than _____ or less than _____

Weight: You should weigh yourself on a standard bathroom scale at the same time each morning, after you have gone to the bathroom. Be consistent with how you weigh yourself - with clothes on or off. Record your weight in the transplant diary. If you gain more than two pounds overnight or four pounds in a week, please notify your physician.

Intake and output: This is a measurement of how much fluid you drink (intake) and how much urine you make (output) over a 24-hour period. This allows for a good indicator of how your transplant organ is functioning. You are not required to measure this but need to monitor it closely. If your output is decreasing daily, notify your transplant office.

OUTPATIENT CLINIC VISITS:

Upon leaving the hospital, you will have a schedule of follow-up appointments for lab tests and clinic visits to see the transplant physician. The purpose is to track your progress and detect potential complications as early as possible.

On the day when you are scheduled for a clinic visit, bring your medication list and your transplant diary with you. Be sure to check your medications as this is a good time to get prescriptions refilled.

You will be seen by either a transplant surgeon or transplant nephrologist. During this appointment you will be weighed, have your vital signs taken (blood pressure, pulse, temperature, respiratory rate), see a nurse coordinator/social worker/dietitian as needed, and reschedule your next appointment and lab date.

If you are unable to make it to the clinic, please call the transplant coordinator to discuss rescheduling this appointment. You will be seen at least weekly for the first month, every other week the second month, and every two weeks the third month. Depending on your progress, your clinic appointments will become less frequent as time goes by.

LAB TESTS:

Lab tests monitor your blood count, kidney function, pancreas function, electrolytes, and medication levels in your body. Other tests may be ordered as necessary.

Tests for blood count:

WBC: indicates if your white blood count (WBC) has increased (usually a sign of infection) or decreased (indicating a potential side effect of Imuran, Cellcept).

HCT: measures the hematocrit, which is the percentage of red blood cells in your blood. Red blood cells carry oxygen to all parts of the body. When your HCT is low, you may feel tired or have little energy. If the HCT is too low, a blood transfusion may be recommended. If the HCT is too high, it may be recommended to have the blood removed by a procedure called a phlebotomy.

Tests for kidney function:

Creatinine and BUN: tell how well the kidney is working by measuring the levels of creatinine and blood urea nitrogen, waste products normally removed from the body by the kidney.

Tests for pancreas function:

Amylase: tells how the pancreas is functioning. For most patients that have a pancreas transplant, a urine sample will be collected for 5 hours to determine how much amylase is present in the urine. The urine will have amylase in it if the pancreas is connected to the bladder for drainage of amylase. Note: this may not apply to all patients.

Tests for electrolytes:

CA: measures the calcium, which is necessary for strong bones and teeth, blood clotting, and heart and nerve function.

MG: measures magnesium, which is necessary for normal functioning of muscles and for blood clotting.

K: measures potassium, which is necessary for normal functioning of the heart and muscles.

NA: measures sodium, which helps maintain the balance of salt and water in the body.

Phos: measures phosphorous levels which helps store energy in the muscle when contraction takes place.

Bicarbonate: measures bicarbonate, which is necessary in maintaining the balance of acid in the body.

Other blood tests:

Drug levels measure the amount of medication 12 hours after your evening dosage. This is done to measure Neoral, Cyclosporine and Prograf levels. You will be asked to have your blood drawn 12 hours after your evening dose and not to take your morning medication (Neoral, Cyclosporine or Prograf) until after this blood level is drawn. This is very important as too high blood levels can injure your transplanted organ and too low blood levels can put you at risk for a rejection episode.

Glucose: measures the glucose, levels of blood sugar, in the blood. Some medications can cause the glucose level to be elevated and medication to lower the glucose level may need to be given.

RESUMING NORMAL ACTIVITIES:

Diet and nutrition:

You will be on a regular, no-added-salt diet unless your transplant physician orders a special diet for you. The dietitian will talk with you if a special diet is ordered. Prednisone will cause you to retain salt, and if that happens, you will retain water. This is why you must not add salt to your foods or eat foods containing large amounts of salt. Prednisone also gives increases your appetite. You will not be able to satisfy this feeling of hunger with food. Do not get into the habit of overeating. To limit weight gain, transplant recipients are usually encouraged to eat a well-balanced meal that is low in salt, cholesterol, fat, and sugar.

Activities:

After you go home, participate in a regular exercise program. Walking is an excellent way to begin your exercise program. Gradually increase the amount of physical activity as you gain strength and endurance. Ask the transplant physicians about specific restrictions for you, if any. Exercise will result in increased energy, reduced stress, improved sleep, better emotional health, better digestion, and improved posture.

Your incision needs time to heal; therefore, you will not be able to do any heavy lifting or bending for four weeks after surgery. Before resuming push-ups or sit-ups, contact sports or other activities that may put pressure on your incision, get clearance from your transplant physician.

Usually you can drive a car three to four weeks after discharge from the hospital. During your clinic appointment is a good time to get clearance from the transplant surgeon to drive.

Speak with the transplant physician if you wish to return to work. Some may return to work within two to four weeks after surgery depending on the kind of work you do.

Sexual activity:

Sexual activity will not harm the transplanted organ. As is the case after any major surgery, wait at least six weeks (or when it is comfortable) before engaging in sexual intercourse. If you are sexually active and do not have a steady sexual partner, it is essential to use condoms to reduce the risk of sexually transmitted diseases such as AIDS, syphilis, herpes, hepatitis, or gonorrhea. We advise all sexually active women to have a routine gynecological examination yearly. This includes a pap smear.

Pregnancy:

The decision to have a child is a personal one. It is recommended by the transplant team that all women of childbearing age who are sexually active use some form of birth control. Pregnancy is an additional risk to the transplanted organ. If you are thinking of having a child, feel free to talk with the transplant team and your obstetrician. It is recommended you wait one year after transplantation before becoming pregnant. Some women have become pregnant and delivered normal, healthy children.

Dental care:

Prior to having dental work (which includes a routine cleaning), it will be necessary for you to receive a short course of antibiotics. This is because of your increased risk of infection. Your transplant physician will prescribe these for you. A routine check-up by a dentist and teeth cleaning is recommended every six months.

Immunizations:

Do not take a flu shot, vaccination, or immunization unless approved by the transplant team. You never want to take a shot that is made from a live virus. It is recommended you have a yearly flu shot after your first year of transplant and only if you are healthy (not experiencing a major infection or rejection).

Skin and hair care:

You will not need any special skin care unless you develop acne or dry skin. Generally, you should shower or bathe as often as necessary to keep your skin clean. Most soaps are appropriate. Some problems with your skin and hair can develop because of the medications you take to prevent rejection. The specific problems are discussed below:

Acne: Prednisone can cause acne on your face, chest, shoulders, or back. Cyclosporine or Neoral can make your skin more oily. If acne develops, wash the area more frequently with a mild soap, scrubbing gently with a clean, wet washcloth. Rinse the soap completely from your skin to leave the pores open and clean. If the acne is not responding to the above, discuss other medications with the transplant physicians.

Dry skin care: If you have problems with dry skin, use a mild soap and apply body lotion after bathing.

Cuts and scratches: Wash minor cuts and scratches daily with soap and water. For treatment of large cuts, contact your physician immediately. Notify your transplant team if you discover any unusual skin growths, rash, or discoloration.

Unwanted hair growth: If facial hair increases, use a hair removal cream (depilatory). Be sure to follow directions carefully to avoid eye or lip irritation. It is recommended to not use a hair removal product designed for your legs as this can be too harsh on your facial skin. Even if hair growth is excessive, do not alter your medications. Contact your transplant team.

Sun exposure: Transplant patients have an increased chance of developing skin and lip cancer. Since the risk increases with time, you must always protect your skin from ultraviolet rays of the sun that causes skin cancers. Here are some tips for protecting your skin:

- Avoid midday (10 a.m. to 3 p.m.) sun when ultraviolet rays are strongest.
- Wear a hat, long sleeves, and slacks when outdoors unless you are using sunscreen.
- Use a sunscreen lotion with protective factors rated at least 15.
- Sunscreen lotions will wear out; reapply as necessary especially after swimming.

Avoiding infections: Because the immunosuppression medications interfere with your natural immune system, you may need to protect yourself from infection after your surgery by taking the following precautions:

- Wash your hands often.
- Keep your hands away from your face and mouth.
- Stay away from people with colds or other infections.
- Ask friends to visit only when they are well.
- If you have a wound and must change your own dressing, wash your hands before and after.
- If someone in your family becomes ill with a cold or flu, have that individual follow normal precautions (use separate drinking glasses, cover their mouth when coughing, etc.).
- Avoid handling animal waste and contact with animals that are not up to date on their shots. Do not clean bird cages, fish or turtle tanks, or cat litter. The cat litter box should be covered and taken outside of your home before it is changed.
- Avoid vaccines that include a LIVE virus. The live virus can cause infections. If you or a member of your family is to receive a live virus vaccination, please contact your transplant coordinator for advice.

Vacations and Travel: If you are planning a trip to a foreign country that requires immunization for smallpox, measles, German measles, or any other vaccine containing a live virus, ask your transplant coordinator to send a letter to your local passport bureau stating that you cannot receive these vaccines. Because you are not immunized, however, travel to these countries may not be safe for you.

If you travel to another state, ask your transplant coordinator for the name and telephone number of the closest transplant hospital. Remember to always hand carry your medications with you on your airplane as baggage can get lost. If you do lose your medications while traveling, please contact your transplant coordinator immediately.

You may feel overwhelmed with all the information you need to learn about your transplanted organ. Remember, a transplant coordinator is available for routine calls during office hours (Monday through Friday, 8:30 a.m. to 5:00 p.m.). A transplant coordinator is always on call, 24 hours a day, 7 days a week, for concerns, problems, and questions. Our office telephone number is 733-8133 or 1-800-556-8133.