

# METHODIST SPECIALTY AND TRANSPLANT HOSPITAL

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*A member of the Methodist Healthcare System*

[www.SAHealth.com](http://www.SAHealth.com)

A Methodist Hospital facility

## Post Kidney Transplant Education Manual

**TEXAS TRANSPLANT INSTITUTE\***

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**KIDNEY TRANSPLANT DEPARTMENT**

(210) 575-8425

or

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# ABOUT METHODIST HEALTHCARE

The Methodist Healthcare System is one of the most respected healthcare providers in South Texas. The Methodist Specialty and Transplant Hospital is a part of this system and was created to specialize in the care of transplant patients.



Since the beginning of our transplant program in 1984, we have been dedicated to providing the highest quality care to our patients and their families. We have performed over 3,000 kidney transplants since we started. Methodist Specialty and Transplant Hospital & the Texas Transplant Institute are committed to excellence in transplant patient care, education, and research. Having performed transplants at this facility for over two decades, a team of dedicated transplant physicians and other transplant professionals have accumulated a significant amount of clinical experience resulting in the organ transplant programs being nationally recognized for their contributions to transplant medicine.

Our transplant hospital has experienced staff & focused resources for the mission of improving life through transplantation. Patients tell us that they choose Texas Transplant Institute because of the “team” approach to transplantation and the kind and compassionate care they receive. Our “team” approach has allowed us to give individualized attention to ensure recipient and donor comfort, satisfaction, and the best possible outcome of transplantation.

Patients & their families become part the transplant team by taking an active part in their own health care. As a member of the transplant team, you will be responsible for learning as much as you can about the post transplant process. The next step in your journey through a successful transplant is to learn about the post transplant guidelines and ways to optimize your health after transplant.

We are committed to quality patient care and being available for both patients and their families. We dedicate our services here at the Texas Transplant Institute to our organ donors and donor families for their generous gift of life. We encourage you to contact us with questions or concerns related to your healthcare needs.

# INTRODUCTION

Receiving a kidney transplant is a major event in one's life. This is a time to be excited but you may also feel a little bit scared. At first, everything will seem overwhelming. This is a very normal and common feeling. Just take it one step at a time and remember to ask questions and voice your concerns.

This Post Kidney Transplant Education Manual is yours to keep. This manual is designed to help teach you what you will need to know in order to care for yourself. If you have friends or family members that are helping you care for yourself, have them read this manual too.

You will be expected to read and study this manual on a daily basis.

It is recommended that you attend the required classes to review the material with the Transplant Coordinator. The classes will last an hour each. The Transplant Coordinator will teach the class at your level of understanding so that you can meet the goals discussed on the next page.

You will be learning about the following:

- Medication
- Infection
- Rejection
- Complications
- Discharge plans & follow-up care

**Feel free to take notes in this manual. Keep this manual as a resource so that you can look up information if you have questions or concerns in the months to come.**

## *PATIENT GOALS*

We work as a team to help you have the best outcome after your transplant. **You** are the most important member of the team. We want to make sure you participate in your care and speak up regarding any particular needs. We also encourage your family members and caregivers to participate with the team members.

These are the goals we will help you to work toward before discharge.

You can check them off as you feel you have completed each one.

- State the name, dose, and actions of your medication
- Discuss the importance of always taking your medication
- How to prevent infection/rejection; List the signs/symptoms of infection; List the signs/symptoms of rejection
- State the importance of your role on the team
- Discuss possible long term complications
- Discuss the importance of:
  - Keeping your appointments
  - Following your diet
  - Communicating changes in your body
  - Calling with changes to your insurance, address, or phone number
  - Calling in for medication refills in a timely manner

## ***TRANSPLANT TEAM MEMBERS***

<b>Members</b>	<b>Roles</b>
You and the family members that help with your care	<ul style="list-style-type: none"> <li>● Participate in education classes</li> <li>● Discuss needs &amp; concerns with team.</li> </ul>
Transplant Surgeons: Dr. Francis Wright Dr. Preston Foster Dr. Adam Bingaman Dr. Luke Shen Dr. Juan Palma-Vargas	<ul style="list-style-type: none"> <li>● Operate</li> <li>● Make daily visits to see you while you are in the hospital</li> <li>● The doctors work as a team so, you may be seen by more than one doctor while you are hospitalized.</li> </ul>
Transplant fellow and/or Transplant resident(s)	<ul style="list-style-type: none"> <li>● These doctors assist in your surgery and recovery during your hospital stay.</li> </ul>
Nephrologist	<ul style="list-style-type: none"> <li>● A kidney doctor. If you live out of town, a doctor from San Antonio will see you during your hospital stay.</li> </ul>
Transplant Coordinators	<ul style="list-style-type: none"> <li>● Licensed Nurses that teach you &amp; work with the team to coordinate your care and discharge plan.</li> </ul>
Social worker	<ul style="list-style-type: none"> <li>● Educates, informs, refers, supports &amp; coordinates your discharge plan.</li> </ul>
Case manager	<ul style="list-style-type: none"> <li>● Communicates with your insurance company &amp; plans for home health or extended nursing care if needed.</li> </ul>
Dietitian	<ul style="list-style-type: none"> <li>● Reviews nutritional information that you will need to recover and maintain good health after transplant.</li> </ul>

# PLAN OF CARE

It is important for you to know what the plan is for your care. Here are some guidelines regarding what to expect during your hospitalization:

## **Recovery Room**

- Some patients will go from the operating room to the recovery room and others will go straight to the intensive care unit (ICU). Your surgeon will determine who will go to each area depending on your overall health prior to surgery.
- If you go to the recovery room, you will be there 4 - 6 hours for your vital signs to become stable.
- You will then be transferred to the 2nd floor intermediate unit called the TICU.
- You will stay here 24 - 48 hours before being transferred to a room in the transplant unit where you will stay until you are discharged.

## **ICU (Intensive Care Unit)**

- Some patients will go from the operating room to the ICU.
- Expect to be in the ICU 24-48 hours, or until stable.
- You will then be moved into the transplant unit where you will stay until you are discharged.

## **Blood Testing**

- Your blood will be drawn daily at 4:00 a.m. until you are discharged.
- Creatinine levels will be drawn and discussed with you. (Creatinine measures how well the kidney is functioning.)
- Medication levels will be monitored. This will give the doctor the level so he can adjust your medicine.

## **To Avoid Infection**

- Avoid contact with people who are sick.
- Ask family members or friends that are sick to call instead of visiting.
- Children cannot visit in the transplant unit, but arrangements can be made to see them elsewhere once you are stable.
- Wash hands before eating and after using the bathroom.

## **Getting out of bed**

- You will be getting out of bed with assistance the 1<sup>st</sup> day in the transplant unit.
- You must walk around the nursing unit as much as possible.
- Try to sit up in the chair for your meals.
- These activities will help your lungs and body get back into shape and will help prevent complications that are caused by inactivity (constipation, pneumonia, blood clots).

## **The dressing (bandage)**

- You will have a dressing over your incision line.
- Your dressing will be checked often by the nurses and doctors.
- You cannot get your bandage wet until it is changed the first time.
- Once it is changed the first time, it will be changed daily or as needed.

## **Showering**

The staff will assist you with getting into the shower. They will cover the urine bag and your I.V. tubes to prevent them from getting wet. After your shower, the nurse will remove the old dressing over your incision and put on a new one.

## **Measuring your Intake and Output**

It is very important to measure what you drink and how much you urinate to see how well your new kidney is functioning. At first the nurses will measure this for you, and then you will be taught how to do this on your own. Usually your foley catheter and urine bag are removed on the fifth day after surgery. It will be important that you pay attention to your urine output after that.

## **Dialysis**

You may need to have dialysis temporarily after the transplant. Sometimes the new kidney does not function right away, or does not function well enough to clean your blood.

Dialysis will help you feel better. Additionally, if you are having a rejection episode, the kidney may not be able to clean your blood well enough and dialysis may be necessary.

# ***POSSIBLE TESTS THE DOCTOR MAY ORDER TO CHECK YOUR KIDNEY***

## **Nuclear med scan**

This test is done in the X-ray department. You will lie on a table and have a small amount of dye injected into a vein in your arm. A “scanner” (similar to a camera) will be positioned over your new kidney and will take pictures of how the dye flows through and out of your kidney. This test may be done the day after your transplant and may be done several times during your hospital stay so that the doctors can compare the results.

## **Renal ultrasound/sonogram**

This is a procedure that uses sound waves to develop the pictures of the kidney. A small, rounded instrument is gently rubbed across your skin above the kidney transplant. It can show us the size and shape of the kidney and the way the urine drains into the bladder.

## **Renal biopsy**

This may be done if rejection is suspected. This procedure involves taking a tiny piece of the transplanted kidney through a needle. This little piece of kidney is then examined under a microscope. The area will be numbed before the needle is inserted into the kidney. This test will be done in the X-ray department. After this test is done, you will need to stay flat in bed for several hours until you are told you can get up. This is very important in order to prevent bleeding.

## **Going home**

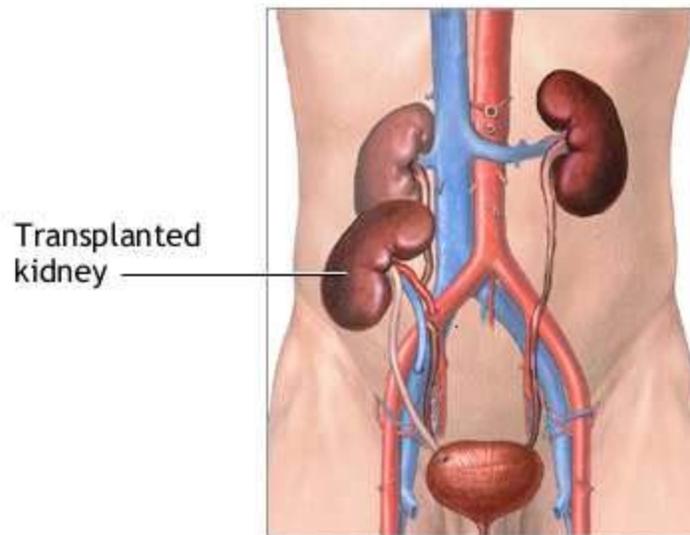
The Transplant Coordinator will work with you to prepare for your discharge. Both of you will:

- Discuss how to order your medications from a pharmacy. Enough medication will be ordered to last you 1 - 3 months. After that you will refill them yourself.
- Make sure all your medications get delivered to you before you leave.
- Review the medications you will be taking at home. You must know how to take all of them correctly.
- Review the list of medication names, doses and schedules for you to use at home.
- Review when your lab is to be drawn. The first time will be setup by your coordinator.
- Discuss and schedule your follow up appointments with your kidney doctor and the transplant doctors.
- Discuss the follow up with your kidney doctor and how to coordinate your care with him.
- 24 hour answering service for questions, concerns, or symptoms.

# YOUR NEW KIDNEY

## *PLACEMENT OF YOUR TRANSPLANTED KIDNEY*

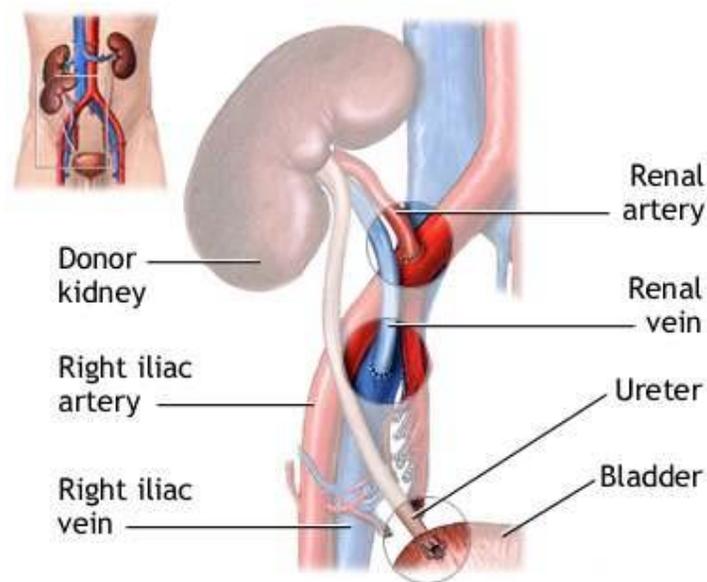
Your new transplanted kidney is usually placed in the right lower part of your abdomen. If you have had a previous transplant (s) or other major operations, your transplant surgeon may choose to put your kidney on the left side or in the middle of your lower abdomen. Your own kidneys will be left in place unless there is a medical reason to remove them.



The artery and vein of the donor kidney are connected to your artery and vein. This provides the kidney with its blood supply. Because these connections are very delicate, we will not want you to do anything strenuous for the first 4-8 weeks after surgery. These restrictions include:

- Driving
- Heavy lifting (anything greater than 10- 15 pounds)
- Strenuous physical exercise
- Frequent bending at the hips and twisting
- Excessive amount of stair climbing
- Sexual activity

The ureter of the donor kidney is connected to your bladder or to one of your own ureters. As your new kidney makes urine, the urine flows through the ureter into the bladder. You will have a urine catheter and bag (called a foley) for a minimum of 5 days. It helps prevent your bladder from getting too full with urine, and gives your bladder time to heal.



You will have an incision with stitches that will dissolve on their own, or you may have staples, which will be removed a few weeks after your surgery by the transplant doctor. You will probably have some pain at your incision area; but it should lessen each day. Usually, by the time patients go home, their discomfort can be controlled with regular strength Tylenol.

While in the hospital, there is medication ordered to help control your pain; but you will need to ask the nurse for it when needed.

It is common to feel some numbness and tingling sensation to your thigh area on the side of your transplant surgery. This may take several months to go away. When you go home it will be very important that you look at your incision daily. Watch for signs of infection such as: redness, swelling, warmth to the area, drainage or tenderness. Call your doctor if you notice any signs of infection and/or if you develop a fever of 100° or greater.

Usually you will not need to do any dressing changes once you go home. However, you can cover it with clean gauze daily if you want to protect your incision line from rubbing against your clothing.

You may shower when you go home. No baths are allowed until your incision is completely healed. When showering, let the water run over your incision. Do NOT wash the incision. Pat the incision dry when you are done.

## ***PLACEMENT OF A URETERAL STENT***

During surgery, a stent (a thin, hollow plastic tube) is placed inside your ureter (the tube that connects your kidney to the bladder.) The purpose of this stent is to make sure the urine made by your new kidney is not blocked as it flows into your bladder. This stent is not connected to you. You may pass this stent on your own when you go to the bathroom; however, each patient is different, so we cannot tell you exactly when or if this will happen.

When the stent is ready to come out on its own, you may have the following symptoms:

- Poking or discomfort low in your bladder area
- Blood in your urine
- Urine dribbling out without the ability to control it

If your stent comes out, call the Transplant Clinic to let us know. Dial (210) 575-8425 or toll free 1-800-888-0402 and ask for the Post-Transplant Kidney Clinic.

If your stent does not come out on its own, it will need to be removed by a Urologist. The removal of the stent will be scheduled at the same time as one of your follow up visits approximately 6-8 weeks after surgery. This is an outpatient procedure called a cystoscopy.

# MEDICATIONS

## *GENERAL INFORMATION ABOUT MEDICATIONS*

- **Never stop taking your medication!**
- Take the right dose.
- Keep your medication list updated.
- Take your medication at the correct time, as prescribed.
- Notice if it should be taken with or without food.
- **Don't run out of medication;** order 7-8 days before you run out. If all else fails, call the Transplant Clinic for help.
- Don't take any new medications (prescription or over the counter) without checking with the Transplant Clinic or your kidney doctor.
- Beware of vitamins, fish oil and other supplements. Again, check with your doctor or transplant clinic before starting anything new.
- Do NOT take any type of herbal supplement.
- Do not take your medication if you are scheduled to have your blood drawn. Bring your medicine with you and take it **AFTER** the blood is drawn.
- Don't leave your medication in a hot car!
- Always ask the pharmacist if you are not sure about a medication you are given, some medications have more than one name (generic or brand.)
- NO grapefruit or grapefruit juice allowed. These can change the action of your medications.

The following are examples of different names for the same medication:

Brand Name	Generic Name
Bactrim DS	Sulfamethoxazole/TMP DS
Pepcid	Famotidine
Deltasone	Prednisone
Surfak	Docusate calcium
Acyclovir	Zovirax

## *TRANSPLANT MEDICATIONS*

Once you have received your kidney transplant, you will begin to take medications that will protect your new kidney and that protect you from complications. The Transplant Coordinator will teach you and the person who will help you at home to learn about each medicine you are taking.

There are four types of medicines you may be taking:

1. Immunosuppressant's - Lower your immune system to prevent rejection of your new kidney
2. Preventative medicines - Reduce your chance of complications from infections and medication
3. Antihypertensive medicines\* - To control your blood pressure
4. Insulin\* - To control your blood sugar/diabetes

\* You may be on blood pressure or insulin medication already, or you may need to start on these medicines as a result of side effects of the new transplant medication.

**When you leave the hospital, you should know all of your medications and be able to describe how and when to take them.**

**If someone else in your family usually takes care of your medication, they should attend a class and meet with the Transplant Coordinator before you go home.**

# ***IMMUNOSUPPRESSANTS***

(Anti-Rejection)

Your body will see the transplanted kidney as NOT being yours and will try to fight and reject it.

The immunosuppressant medication lowers your body's immune system so that it does NOT reject the kidney. Immunosuppressant medications are also called anti-rejection medications.

## IMMUNOSUPPRESSANTS:

- Are the most important medicines you will take for your transplant
- May be a combination of 2 or 3 anti-rejection medications
- Need to be taken EVERY DAY in order to prevent rejection
- May be given through an IV (intravenous) tube.
  - ~ These include the drugs: Zenapax, Simulect, Thymoglobulin, Campath, Prograf, Cellcept, Rapamune, Prednisone, Cyclosporine.
  - ~ The Transplant Coordinator will explain the details regarding these medications.

## ***PREVENTATIVE MEDICATIONS***

In addition to the immunosuppressant's, you will be given other medication to prevent some of the side effects or complications of your body's immune system from being low. These medications are usually taken for the first three to six months after transplantation.

<b>NAME</b>	<b>FUNCTION</b>
Mycelex Bactrim DS Acyclovir or Valcyte	Prevent infection Anti-fungal Anti-bacterial Anti-viral <i>See the Chapter on Infection</i>
Surfak	Stool softener to prevent constipation
Pepcid or Protonix	Prevents stomach irritation and stomach ulcers

## ***BLOOD PRESSURE***

Some patients may need to take blood pressure medicine if their blood pressure remains high after the transplant. This can result from having a history of high blood pressure or it can be caused by the anti-rejection medications. If you were on blood pressure medications before the transplant, you may be changed to a different dose or even a different medication after the transplant. The nurse will give you a final list of your medications before you go home and then your kidney doctor will manage your blood pressure when you are discharged.

## ***INSULIN***

The anti-rejection medications may make your blood sugar go up. Some patients may need insulin injections to control their blood sugar. If you have been on insulin you will continue to take it, but the type of insulin or the dose might change.

If you have NOT been on insulin but have a history of diabetes, or have a family history of diabetes, you may need to take insulin. Your blood sugar will be monitored closely. If you need to begin taking insulin or your insulin medications change, a diabetes nurse educator will meet with you.

# **PROGRAF**

*(TACROLIMUS)*

**TYPE:** Immunosuppressant (prevents rejection)

**USE:**

- Take twice a day at 7:00am and 7:00pm
- Take on an empty stomach

**DOSE:**

- Your dose will change depending on lab values that show how much medicine is in your body. They come in 0.5 mg, 1.0 mg, and 5.0 mg capsules.

**This medicine is now available in several generic forms. We do NOT recommend switching from one to another because the drug levels may not be the same and your dose may not be correct. Consult with your doctor regarding a change.**

**Notify your nephrologist and the Transplant Clinic if you receive a different medication (210-575-8425)**

**LAB:**

Your blood must be checked frequently so that the proper dose can be ordered for you.

**ON THE MORNING OF A LAB DRAW:**

- Do NOT take the medicine until AFTER the lab is drawn.
- Bring the medicines with you to the lab, so you can take them after your blood is drawn.
- Continue to take your usual dose.

# PROGRAF

(TACROLIMUS)

<i>Possible side effects</i>	<i>Advice</i>
Increased risk of infection	<ul style="list-style-type: none"> <li>● Avoid people with infection</li> <li>● Report any signs/symptoms of infection to your doctor immediately</li> </ul>
Increased risk of cancer	<ul style="list-style-type: none"> <li>● <i>See Long Term Complications Chapter</i></li> </ul>
Increased creatinine	<ul style="list-style-type: none"> <li>● Too much Prograf in your body can be harmful to your kidney</li> <li>● Do NOT miss your lab appointments</li> <li>● Report any changes in urine output</li> <li>● Report any swelling</li> </ul>
Headache	<ul style="list-style-type: none"> <li>● Use Tylenol as directed</li> <li>● Notify doctor if headache is not relieved.</li> </ul>
High blood pressure	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Limit salt in diet</li> <li>● Report increases to doctor</li> </ul>
Tremors	<ul style="list-style-type: none"> <li>● Slight is normal, but call if tremors increase</li> </ul>
Increased blood sugar	<ul style="list-style-type: none"> <li>● Get blood drawn as ordered</li> <li>● <i>See Long Term Complications Chapter</i></li> </ul>
Increased potassium (usually only temporary)	<ul style="list-style-type: none"> <li>● Get blood drawn</li> <li>● Follow low potassium diet if recommended</li> </ul>
Hair loss	<ul style="list-style-type: none"> <li>● Avoid getting a permanent or using a permanent hair color for the first six months</li> </ul>
Burning or tingling of hands or feet Rash Blurred vision Difficulty sleeping Nightmares	<ul style="list-style-type: none"> <li>● Call doctor immediately</li> </ul>

# **CELLCEPT**

*(MYCOPHENOLATE MOFETIL)*

**TYPE:** Immunosuppressant (prevents rejection)

**USE:**

- Take twice a day at 7:00am and 7:00pm
- Take on an empty stomach

**DOSE:**

- Medication comes in 250 mg capsules and 500 mg tablets.

**This medicine is now available in several generic forms.  
We do NOT recommend switching from one to another because the drug  
levels may not be the same and your dose may not be correct.  
Consult with your doctor regarding a change.**

**Notify your nephrologist and the Transplant Clinic  
if you receive a different medication (210-575-8425)**

# CELLCEPT

(MYCOPHENOLATE MOFETIL)

<i>Possible side effects</i>	<i>Advice</i>
Increased risk of infection	<ul style="list-style-type: none"> <li>● Avoid people with infection</li> <li>● Report any signs/symptoms of infection to your doctor immediately</li> </ul>
Increased risk of cancer	<ul style="list-style-type: none"> <li>● <i>See Long Term Complications Chapter</i></li> </ul>
Nausea and/or Vomiting Diarrhea	<ul style="list-style-type: none"> <li>● Report to your doctor immediately</li> </ul>
Anemia (low blood counts)	<ul style="list-style-type: none"> <li>● Report sudden tiredness to your doctor</li> </ul>
Mouth sores	<ul style="list-style-type: none"> <li>● Brush teeth often</li> <li>● Notify doctor</li> <li>● Visit dentist regularly</li> </ul>

# PREDNISONONE

**TYPE:** Immunosuppressant (prevents rejection)

**USE:**

- Take with food at 9:00am

**DOSE:**

- Your dose will change & may gradually decrease.
- Prednisone comes in several doses, we will be ordering you the 10 mg pills.

# PREDNISONE

<i>Possible side effects</i>	<i>Advice</i>
Increased risk of infection	<ul style="list-style-type: none"> <li>● Avoid sick people</li> <li>● Report any sign/symptom of infection to your doctor immediately</li> </ul>
Emotional mood swings	<ul style="list-style-type: none"> <li>● Explain to family/friends that mood swings will improve as dose decreases</li> </ul>
Diabetes	<ul style="list-style-type: none"> <li>● May cause non-diabetics to become diabetic</li> <li>● Diabetics' sugar may be difficult to manage at first</li> <li>● Insulin may be needed</li> <li>● Follow diabetic diet</li> <li>● Must check blood sugars before insulin dosage</li> </ul>
Decreased ability for wounds to heal Slow wound healing	<ul style="list-style-type: none"> <li>● Expect healing to take longer</li> <li>● Do not lift or push anything over 10 pounds</li> </ul>
Increased appetite	<ul style="list-style-type: none"> <li>● Watch weight!</li> <li>● Choose low fat/low calorie food options</li> </ul>
Puffy cheeks Fullness of abdomen or back of neck	<ul style="list-style-type: none"> <li>● These symptoms will decrease as dose decreases</li> </ul>
High blood pressure Fluid retention	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Report increases in B/P</li> <li>● Limit salt in your diet</li> </ul>

## PREDNISONE *(continued)*

<i>Possible side effects</i>	<i>Advice</i>
Stomach irritation or ulcers	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Take prednisone w/food!</li> <li>● Report heartburn or stomach pain</li> </ul>
Increased hair growth on face, trunk, arms, legs	<ul style="list-style-type: none"> <li>● Can use safe bleaching products for hair</li> <li>● Can use hair removal products</li> <li>● Women- <u>DO NOT</u> shave face</li> </ul>
Sensitivity to sun Skin cancer	<ul style="list-style-type: none"> <li>● Avoid being in sun too long</li> <li>● Wear sunscreen</li> <li>● Report skin changes</li> </ul>
Acne on face/back/chest	<ul style="list-style-type: none"> <li>● Keep skin areas clean</li> <li>● Use acne medicine</li> <li>● Acne will decrease as dose decreases</li> </ul>
Bruising & thin skin	<ul style="list-style-type: none"> <li>● Wear gloves &amp; long sleeves when doing work that could scratch or bruise skin</li> </ul>
Thrush (yeast infection of the mouth)	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Call doctor if you get a white coating on tongue or sides of mouth</li> </ul>
Increased sweating especially at night	<ul style="list-style-type: none"> <li>● If diabetic, check your sugar, don't assume it's low</li> </ul>
Weakening of bones Muscle weakness especially in the legs	<ul style="list-style-type: none"> <li>● <i>See chapter on Long Term Complications</i></li> <li>● Eat balanced diet rich in calcium</li> <li>● Do muscle strengthening exercises; such as walking, weight training, aerobics 2-3 times per week</li> </ul>

## **PREDNISONONE** (*continued*)

<i>Possible side effects</i>	<i>Advice</i>
Potential growth concerns for children	<ul style="list-style-type: none"><li>• Growth progress will be monitored &amp; doses adjusted if necessary</li></ul>
Cataracts/glaucoma	<ul style="list-style-type: none"><li>• See eye doctor regularly</li></ul>

# **NEORAL**

*(CYCLOSPORINE)*

**TYPE:** Immunosuppressant (prevents rejection)

**USE:**

- Take twice a day at 7:00am and 7:00pm
- Take on an empty stomach

**DOSE:**

- Medication comes in 25 mg and 100 mg capsules. You will use one or both of them to make the correct dose. The dose may change depending on your lab values.

**This medicine is now available in several generic forms. We do NOT recommend switching from one to another because the drug levels may not be the same and your dose may not be correct. Consult with your doctor regarding a change.**

**Notify your nephrologist and the Transplant Clinic if you receive a different medication (210-575-8425)**

**LAB:**

- Your blood must be checked frequently so the proper dose can be ordered for you.

**ON THE MORNING OF A LAB DRAW:**

- Do NOT take the medicine until AFTER the lab is drawn.
- Bring your medicine with you to the lab so you can take them as soon as possible afterwards.

**STORAGE:**

Store Neoral (Cyclosporine) at room temperature in the original container which is usually a foil packet. Once opened, it must be used within 7 days.

# NEORAL

(CYCLOSPORINE)

<i>Possible side effects</i>	<i>Advice</i>
Increased risk of infection	<ul style="list-style-type: none"> <li>● Report any signs or symptoms of infection to your doctor immediately</li> </ul>
Increased risk of a tumor or cancer	<ul style="list-style-type: none"> <li>● <i>See Long Term Complications Chapter</i></li> </ul>
High blood pressure	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Limit salt in your diet</li> </ul>
Hair growth – face, trunk, arms & legs	<ul style="list-style-type: none"> <li>● Can use safe bleaching products for hair</li> <li>● Can use hair removal products</li> <li>● Women-<u>DO NOT</u> shave face</li> </ul>
Hand tremors or seizures	<ul style="list-style-type: none"> <li>● Report any shaking, trembling or seizures to doctor</li> </ul>
Growth of gums over teeth	<ul style="list-style-type: none"> <li>● Brush teeth often &amp; floss</li> <li>● See dentist regularly</li> </ul>
Increase in liver enzymes	<ul style="list-style-type: none"> <li>● Keep scheduled doctors appointments and labs</li> <li>● Report to doctor if your skin or eyes look yellow</li> </ul>
Increased Creatinine	<ul style="list-style-type: none"> <li>● Too much Neoral in your body can be harmful to your kidney</li> <li>● Get lab drawn as scheduled</li> <li>● Report any changes in urine output or weight</li> <li>● Report any swelling</li> </ul>

# **RAPAMUNE**

*(SIROLIMUS)*

**TYPE:** Immunosuppressant (prevents rejection)

**USE:**

- Take once a day at 7:00am
- Take on an empty stomach

**DOSE:**

- This medication comes in 0.5 mg, 1 mg, and 5.0mg pills.
- Your dose will change depending on lab values that show how much medicine is in your body.

**This medicine is now available in several generic forms. We do NOT recommend switching from one to another because the drug levels may not be the same and your dose may not be correct. Consult with your doctor regarding a change.**

**Notify your nephrologist and the Transplant Clinic if you receive a different medication (210-575-8425)**

**LAB:**

- Your blood must be checked frequently so the proper dose can be ordered for you.

**ON THE MORNING OF A LAB DRAW:**

- Do NOT take the medicine until AFTER the lab is drawn.
- Bring your medicine with you to the lab so you can take them as soon as possible afterwards.

# RAPAMUNE

(*SIROLIMUS*)

<i>Possible side effects</i>	<i>Advice</i>
Increased risk of infection	<ul style="list-style-type: none"> <li>● Avoid sick people</li> <li>● Report any signs or symptoms of infection to your doctor immediately</li> </ul>
Increased risk of tissue growth or tumors	<ul style="list-style-type: none"> <li>● <i>See Long Term Complications Chapter</i></li> </ul>
High blood pressure	<ul style="list-style-type: none"> <li>● Take meds as ordered</li> <li>● Limit salt in diet</li> <li>● Exercise &amp; control weight</li> </ul>
Abnormal blood tests that can affect your health	<ul style="list-style-type: none"> <li>● Keep lab appointments</li> <li>● Take medication as ordered</li> </ul>
Muscular weakness Muscle cramps/spasms	<ul style="list-style-type: none"> <li>● Usually affects the long muscles in your legs</li> <li>● Report symptoms to your doctor</li> </ul>
Rash	<ul style="list-style-type: none"> <li>● Report to your doctor</li> </ul>
Joint pain	<ul style="list-style-type: none"> <li>● Report to your doctor</li> <li>● Do not take over the counter meds without your doctor's approval</li> </ul>
Slow wound healing	<ul style="list-style-type: none"> <li>● Do not lift or push anything over 10 lbs.</li> <li>● Notify doctor if wound opens or drains</li> </ul>
Acne	<ul style="list-style-type: none"> <li>● Keep skin clean</li> <li>● Use medicine for acne</li> </ul>

# INFECTION

Transplant patients are at risk for infection because the anti-rejection medicines suppress their immune system. This means that your body cannot fight off infection as well as it did before the transplant. The risk is highest during the first few months after your transplant because of the higher doses of anti-rejection medication. During this period you will be given some medication to help prevent infection.

You will need to be careful and avoid infections; recognize symptoms early and report them to your doctor immediately.

## Symptoms to Report:

- Fever over 100° F
- Sore throat
- Persistent cough
- Yellow/green phlegm
- Painful urination
- Burning urination
- Open wounds that don't heal
- Flu-like symptoms
- Any pain that does not go away

## *TIPS FOR PREVENTION OF INFECTION*

- Take the anti-infective medication as ordered.
- Practice good hygiene.
- Proper **hand washing** is vital.
- Avoid people with infections.
- Don't eat or drink after anyone.
- Use caution with animals and pets-
  1. Keep house animals clean.
  2. Wash your hands after touching them.
  3. Do NOT clean cat litter, bird cages or fish tanks.
- Use caution with children who may have infection. If you live or work in an area that has small children, you are at a higher risk for infection.
  1. Wearing a mask may be needed to protect you
  2. Wash hands after each contact with children that may have an infection
- Do not eat food-
  1. That is not thoroughly cooked
  2. That is raw (i.e. oysters, seafood)

- Avoid contact with anyone who has Chicken Pox-
  1. If you have NOT had chicken pox or are not sure if you have had it, do NOT go near anyone that has it.
  2. TELL your DOCTOR if you have been around someone that breaks out with chicken pox.
  
- Practice safe sex-
  1. If your partner has an infection, it can spread to you.
  
- Practice good mouth care-
  1. Brush teeth often with fluoride paste & soft brush.
  2. Floss gently with soft dental floss.
  3. Watch for red, tender gums that bleed.
  4. Tell the dentist that you are a transplant patient and will need antibiotics before any dental work is done.
  
- Use caution with vaccinations-
  1. Only after consulting your kidney doctor or transplant physician, flu and pneumonia vaccines are okay to take.
  2. Ask the doctor about other vaccines-you cannot receive a vaccine if it is a “live” virus.
  3. Do NOT change the diaper of a child that has received a “live” virus vaccine for as long as the vaccine is in a child’s system.
  
- Note and report changes in your body-
  1. Report any unusual lumps, swelling and/or pain especially at the jaw-line, under the arms, or in the groin area.
  2. Report any bloody or black bowel movements.

## ***ANTI-INFECTIVES***

Medication to help prevent or reduce infection

<p><b>BACTRIM DS</b></p> 	<p>Take at 9:00am <b>ONLY</b> on Mon, Weds, &amp; Fri</p>	<p><b><u>ANTIBACTERIAL</u></b></p> <p>Prevents some pneumonias and bladder infections</p>
<p><b>ACYCLOVIR (ZOVIRAX)</b></p> 	<p>Take one to two capsules two times a day 9:00am &amp; 9:00pm</p>	<p><b><u>ANTI-VIRAL</u></b></p> <p>Helps to reduce Herpes simplex and shingles. Also decreases CMV infection.</p>
<p><b>CYTOVENE</b></p> 	<p>Take three times a day 9:00am, 1:00pm, 9:00pm</p>	
<p><b>VALCYTE</b></p> 	<p>Take one caplet every day at 9:00am</p>	
<p><b>MYCELEX</b></p> 	<p>Dissolve in your mouth at 9:00am and 9:00pm <i>(Nothing for 30 minutes after)</i></p>	<p><b><u>ANTI-FUNGAL</u></b></p> <p>Prevents mouth sores and thrush</p>

# PROBLEMS WITH KIDNEY FUNCTION

This chapter will discuss some of the terms that are used when the kidney is having problems functioning properly:

Rejection

Dysfunction

Acute Tubular Necrosis (ATN) and Delayed Graft Function

## **TIPS to REDUCE PROBLEMS** **and/or** **GET an EARLY DIAGNOSIS of PROBLEMS**

1. Keep your doctor's appointments
2. Get your lab drawn as scheduled
3. Take your medication as ordered
4. Watch for the signs & symptoms and report them early.

# ***REJECTION***

Once you have received a kidney, there is a possibility that you will have a rejection episode. This does not mean that you will lose your kidney. It means your body has realized that your new kidney was not a part of your body and it is trying to fight it off, like your body does with an infection.

## **ACUTE Rejection:**

It is not uncommon to have a rejection episode within the first few weeks after your transplant. This is called acute rejection and if caught early, is often treatable. The treatment is usually IV (intravenous) medication and it will require that you stay in the hospital longer.

## **CHRONIC Rejection:**

This type of rejection does not occur right after your transplant. This type of rejection occurs over a long period of time. The function of the kidney gradually declines. There are treatments that can prolong the function of the kidney if the problem is noted early.

No one can predict how long your new kidney will last but if you stop taking your medications, your body will begin to reject the kidney.

## ***DYSFUNCTION***

Dysfunction means that the kidney is not functioning the way it normally should. If a problem with the kidney is not noticed or treated it may lead to a bad outcome. Often the first warning sign of a problem is that the creatinine is elevated. If your creatinine is elevated, the doctors will need to find out what is causing the problem.

The problem could be caused by:

- Rejection
- An Infection
- Dehydration (more output than intake – an example is when you have a lot of diarrhea or vomiting and you do not drink enough water)
- A blockage or a problem with your urine being able to pass down & come out, etc.

# ***SIGNS & SYMPTOMS OF PROBLEMS***

(For Rejection or Dysfunction)

- **Increased creatinine (the lab test of kidney function)**
- Decreased urine output
- Increased weight
- Swelling to hands and feet
- Increased blood pressure
- Swelling or tenderness to new kidney
- Flu-like symptoms (*body aches*)
- Increased temperature (*over 100°*)

\*\*Report any of these symptoms to your doctor as soon as possible.

# ***WHAT TO EXPECT IF YOUR CREATININE IS RISING***

Since a rising creatinine may indicate a problem with your kidney, the doctor may order:

- Lab tests
- Medication levels
- Ultrasound of your kidney
- Nuclear med scan of your kidney
- Kidney biopsy

If dysfunction is found, the treatment may include:

- IV fluids to re-hydrate you
- Changing your medication dose
- Switching you to different medication
- Antibiotics if an infection is found
- Removal of stent or blockage

If rejection is found, the treatment may include:

- IV steroids for a couple of days
- Special IV immunosuppressant's
- Temporary dialysis

## ***ACUTE TUBULAR NECROSIS/DELAYED GRAFT FUNCTION***

Acute tubular necrosis or “A.T.N.” and delayed graft function are conditions that may happen right after your transplant operation. These conditions are when a kidney does not start functioning right away.

They are not uncommon and does not mean that your kidney will not function. It may take a few days or even a few weeks for the kidney to start functioning. Sometimes, you may need dialysis for a while. The transplant doctors will be adjusting your medication to help the new kidney to start functioning.

Once the kidney does start functioning, your creatinine level will begin decreasing and your urine output will increase.

# LONG TERM COMPLICATIONS & OTHER CONCERNS

## *Hypertension* (High Blood Pressure)

High blood pressure may occur because of increased weight and water retention. It also may increase as a side effect of the anti-rejection medication. It is important that you check your blood pressure once a day and report any significant changes. Generally a reading higher than 130/90 should be reported to your kidney doctor.

### **Ways to Control Blood Pressure:**

- Take your blood pressure medication as prescribed
- Take the correct immunosuppressant dose
- Restrict the salt in your diet
- Control your weight
- Stop smoking
- Exercise regularly
- Reduce stress

## ***POST TRANSPLANT DIABETES***

As discussed in the medication chapter, a possible side effect of your anti rejection medication is a new onset of diabetes in a non-diabetic patient. Patients at risk for developing this type of diabetes are those with a family history of diabetes, previously high blood sugars and excessive weight. Diabetes is a condition in which the body cannot control the level of sugar in the blood. Therefore, a person who has diabetes will have a high level of sugar in the blood.

### Symptoms of Diabetes:

- High blood sugar
- Increased urination
- Excessive thirst, dry mouth
- Weakness
- Fatigue or being tired
- Weight loss
- Changes in vision
- Increased appetite
- Slow healing infections
- Pain or tingling in hands or feet
- Numbness

Treatment- Eating right, exercising, controlling weight and taking necessary medications are the keys to treating high blood sugar and preventing long term complications. Insulin is the most frequently used medication. Occasionally an oral medication may be used.

# *CANCER*

Your immune system constantly works to detect and remove abnormal cells within your body. This function is also used to remove cancer cells. These abnormal cells can occur spontaneously or may be induced by certain viruses and chemicals. When the function of removing these cells fail, cancer can develop.

The immunosuppressant medications you take to prevent rejection can affect the function of your immune system and reduce its ability to remove cancer cells. Therefore, you are at a greater risk for developing cancer. It is important that you know the signs and symptoms of cancer and monitor for the disease. The earlier cancer is detected and treated, the greater the chance for successful treatment.

## **Signs and Symptoms of Cancer:**

The American Cancer Society lists five general symptoms and seven specific common symptoms.

## **The 5 General Symptoms of Cancer Are:**

- Fatigue
- Pain
- Changes in the skin
- Unexplained weight loss
- Fever

**The 7 specific symptoms that could lead to a diagnosis of cancer are:**

- A change in bowel habits or bladder function
- Sores that do not heal
- Unusual bleeding or discharge
- Thickening or lump in the breast or other parts of the body
- Indigestion or difficulty in swallowing
- Recent change in a wart or mole
- A nagging cough or hoarseness

**Ways to minimize certain cancers or get an early diagnosis:**

1. Stop smoking
2. Observe skin precautions:
  - Try to prevent or limit sun exposure during the peak hours from noon to 5pm.
  - Wear protective clothing, hat and sunglasses
  - Wear sunscreen with a Sun Protection Factor (SPF) of 30 or greater. Apply sunscreen on all exposed areas including hands, face, ears and scalp.
  - Know your skin. Inform doctors of any changes in existing moles or any new skin problems.
3. Undergo cancer screening and schedule doctor's appointments as advised.

## **Women:**

### **Breast -**

- Examine breasts monthly and report any abnormalities to your doctor immediately.
- Get mammograms as often as your doctor recommends.

### **Cervical -**

- Schedule an appointment for a pap smear with your gynecologist 6 months after transplant and then every year thereafter.

## **Men:**

### **Prostate -**

- Have your prostate examined every year after transplant.

### **Breasts & Testicles -**

- Examine these areas monthly and report any abnormalities to your doctor immediately.

## **BOTH Men & Women Over 50:**

- Sigmoidoscopy/Colonoscopy

# ***OSTEOPOROSIS***

Osteoporosis is a condition of the bones where there is less bone density and therefore the bone can break more easily. There are many factors that increase the risk of developing osteoporosis such as age, sex, and heredity. Being a kidney failure patient also adds to the risk of developing osteoporosis. In addition, the side effects of immunosuppressant medication can also increase the risk of bone loss.

Early screening and prevention are recommended.

## **Screening:**

Laboratory blood and urine tests

Bone density scans

## **Prevention and treatment:**

Calcium supplements

Medications to inhibit bone re-absorption

Weight-bearing exercise such as walking

Talk to your kidney doctor about what would be best for you and your bone health.

# ***OTHER ISSUES AFTER TRANSPLANTATION***

## **Sexual Satisfaction/Dysfunction**

Questions about sexuality are common among transplant patients. Please let us know if you would like additional printed material or if you have particular questions you would like to discuss.

Changes in sexual function, sexual satisfaction, or actual impotence can be caused by many factors:

- Medical conditions (diabetes, high blood pressure, heart disease, etc.)
- Psychological factors (fear of infection or rejection, body image concerns, etc.)
- Side effects of medications

Transplant patients usually have a combination of the factors listed above and therefore may have concerns regarding their sexuality. Some patients benefit from medication, therapy, or a referral to a Urologist or Gynecologist. Let your doctor or Transplant Coordinator know if you notice any changes or have any concerns.

Sex should be avoided during the first several weeks after surgery until your incision is well healed and you feel physically and psychologically ready. When you do resume sexual activity you will need to take precautions regarding infection and if applicable, pregnancy.

**\*\*Prior to initiating sexual activity,  
consult with your physician for clearance.**

## **Menstruation and Pregnancy**

Kidney failure patients are prone to have problems with their reproductive functions. Menstrual abnormalities are very common while the patient has a failing kidney. However, after transplantation, many women begin to have regular menstrual periods again as early as one month after their transplant. Therefore, the risk of getting pregnant must be addressed and precautions must be taken. (condoms, diaphragmas, spermicide jellies, contraceptive pills, etc.)

We recommend waiting at least one year after the transplant before considering a pregnancy. At that time several factors would need to be considered before the doctor could advise you about the safety of a pregnancy. There is a National Transplantation Pregnancy Registry that has data about the outcomes of transplant patients and their offspring. Ask your Transplant Coordinator for more information if you want to consider a pregnancy.

**This chapter discussed several possible complications and concerns after transplantation. By keeping your appointments, getting your blood work drawn as ordered, and communicating changes and concerns, your doctor can help you to have the best outcome.**

# DISCHARGE INSTRUCTIONS

How to reach us:

Kidney Transplant Clinic

Call (210) 575-8425 or (800) 888-0402

*Monday-Friday 8:00- 4:30*

**\*\*Ask for the Post Kidney Clinic**

*(After hours or on the weekend, the answering service will contact the Transplant Coordinator that is “on call” & they will call you back)*

Call your kidney doctor or the Transplant Clinic if you experience any of the following:

- Redness or drainage from the transplant site
- Pain or swelling to the transplanted kidney
- Incision pain not relieved with Tylenol
- Fever over 100° or signs of Infection (Chapter 5)
- Any signs or symptoms of Rejection (Chapter 6)
- Nausea, vomiting, or diarrhea

Remember the following:

- Get your labs drawn regularly
- Do NOT take your medication until AFTER the lab is drawn
- Complete your daily flow sheets & bring to your clinic visit
- NO driving, NO strenuous exercise, NO lifting 10 pounds or more until approved by the transplant surgeon , NO sexual activity

# *CARING FOR YOUR INCISION*

## **Normal wound care:**

Once you are at home, you may remove your bandage. It is no longer necessary to keep the incision covered. Shower everyday; pat incision dry with a clean towel. No tub baths.

## **If your incision has some drainage:**

You may cover it with a clean bandage.

If it continues to drain, change the bandage every day, or more often if necessary.

Once the drainage stops, you no longer need to have it covered.

You may also cover the incision if your clothes are rubbing the incision and causing discomfort.

## **Call the doctor if you have:**

- Redness of the incision
- Increased amount of drainage
- Change in color of drainage
- Pus-like drainage
- Bad smelling drainage
- Separation of wound edges
- Opening of the incision

If you develop a wound infection or a problem with your wound and need special wound care, your doctor and transplant coordinator will review the instructions with you.

## ***LONG TERM FOLLOW-UP***

Transplant patients need to be monitored closely, especially for the first few months after the transplant. You will have frequent lab visits and appointments with your kidney doctor and the transplant doctor.

### **Lab:**

- Twice a week for months 1 & 2 following transplant
- Once a week for month 3 following transplant
- Twice a month for months 4 & 5 following transplant
- Once a month for the remainder of the first year
- Every 3 months, then 6 months, etc.

*(This will vary according to your health history and your kidney doctor's orders)*

### **Lab REMINDERS:**

- Be on time
- Do not eat before your blood is drawn
- Do not take your anti-rejection medication before the blood is drawn. Bring it with you and take it right after the blood is drawn.

## **Doctor's Appointments**

- Nephrologist (Kidney doctor)- usually once a week at first
- Transplant doctors at Texas Transplant Clinic-
  - ~ Usually 2 weeks after discharge
  - ~ Then 6 weeks after transplant (including stent removal-if necessary)
  - ~ Then at 3 months, 6 months, 9 months, and then at 1 year
  - ~ Then every 6 months for one year
  - ~ Then 1 time per year

*(This is the general plan but it may vary depending on your health history and post-operative recovery)*

- ~ If you need assistance with transportation or lodging for your appointments, please call the Social Worker a week before your appointment so that they can help you with your transportation.

## ***WHAT TO EXPECT ON YOUR FIRST FOLLOW-UP VISIT AT THE TRANSPLANT CLINIC***

- Bring your updated medication list and ALL of the actual bottles of medicine
- Bring your flow sheets (the “homework” records)
- Come fasting (no breakfast, no anti-rejection meds)
- Go up to the clinic on the 2nd floor at your scheduled time
- Register and get blood drawn at the clinic
- Take your medicine after your blood is drawn
- The Transplant Coordinator, a licensed nurse, will see you first and address any questions/concerns
- If the nurse says it is okay, you can go eat breakfast
- Return to the clinic to see the rest of the Transplant Team (the Social Worker, Dietitian and the Surgeon)
- Clinic visits can last several hours.

*(It is important that you know what your creatinine level has been and if any adjustments have been made on the dose of your anti-rejection medication.)*

# SOCIAL SERVICES

## *THE TRANSPLANT SOCIAL WORKER*

During your hospitalization, the Transplant Social Worker will meet with you and/or your family for support and encouragement, as well as to begin planning for your discharge. You will be able to ask questions, talk about your feelings, and discuss any issues related to your transplant. Insurance coverage will also be reviewed and discussed. The Transplant Social Worker will help you and your family to maintain a positive attitude toward transplantation and your responsibilities for compliance with the medical care. After you are discharged, the Transplant Social Worker will be available to you and your family for counseling, intervention, and assistance at each post transplant clinic visit.

## ***IMPORTANT INFORMATION***

1. Medicare covers immunosuppressant medication (the anti-rejection medication) at 80%, for at least 3 years after your transplant.
2. During your outpatient post transplant clinic visits you will have the opportunity to talk with the transplant social worker about funding issues related to your medication, especially beyond the 3-year period covered by Medicare.
3. Texas Kidney Health Care is a state renal program that will assist with the medications including the immunosuppressant's after the 3-year Medicare benefit ends, if you have no other insurance.
4. Your Employee Group Health Insurance may cover your immunosuppressant medication. It is important for you to know your insurance benefit for these medications. There may also be a case manager assigned to transplant cases through your insurance carrier. Please contact this individual with questions regarding your coverage. The transplant social worker can be a link between you and your insurance.

# ***POSSIBLE OPTIONS FOR COVERAGE OF MEDICATIONS***

## **Medicare Part B**

Pays 80% of your immunosuppressant medication for at least 3 years post transplant; You are responsible for the remaining 20% unless one of the following conditions applies to you:

1. You have MQMB or QMB Medicaid that picks up the 20%
2. You have a Medicare supplement that picks up the 20%
3. You have secondary insurance/group health plan that picks up the 20%

## **Group Health Plan**

Pays for your medications at the normal co-pay rate as determined by your plan (Example: \$5.00 generic brand/\$10.00 brand).

## **Champus/Tricare**

For qualified retired and active duty military members and their dependents, medications may be obtained at a military pharmacy or a participating pharmacy with a co-pay.

## **Medicaid**

Covers 3 prescriptions per month

**YOU MUST COMPLETE THE NECESSARY PAPERWORK AT YOUR LOCAL TEXAS DEPARTMENT OF HUMAN SERVICES** office to see if you are eligible and qualify for these benefits. Your Transplant Social Worker can advise and assist you as needed.

## **Texas Kidney Healthcare**

Available to residents of Texas who meet the guidelines.

If you do not have this benefit, please talk with the Transplant Social Worker about filing an application.

**If you did not qualify for Medicare benefits, you will need to have the letter of denial from Medicare before using Texas Kidney Health care and/or Medicaid for your transplant medications.**

The transplant social workers are available to help you throughout your transplant experience.

# DIETARY INFORMATION

## *NUTRITION*

What you eat can play an important part in helping you to get well, avoid complications, and reduce the side effects of medications. As discussed in Chapter 4, medications can affect the levels of potassium, cholesterol, sugar and other substances in your body. Your diet may need to be modified to help control these levels.

The side effects of medications can also cause problems with appetite, nausea, diarrhea, fluid retention and/or overgrowth of gums. If you experience any of these side effects listed above, you can make changes in your diet to minimize the effects of the medications. This chapter will discuss the types of foods that fall into the different categories that you may be advised to adjust.

Your dietitian or doctor will tell you if you have specific diet instructions or restrictions. In general, transplant patients have less food restrictions than when they were dialysis patients. However limiting salt and controlling cholesterol & triglyceride levels will still be important to reduce your risk of heart disease which is the leading cause of death for transplant patients. Also if you are diabetic, you will need to continue to follow a specific diabetic diet.

Your diet for home is:

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## ***FLUID & FLUID RETENTION***

Fluid is anything that will melt at room or body temperature. Fluid prevents the body from dehydrating. If the body becomes dehydrated, your creatinine level will increase.

A fluid restriction is no longer necessary unless your doctor recommends it.

**Your recommended fluid intake is \_\_\_\_\_.**

Fluid needs often increase with warm weather and physical activity.

### FLUID RETENTION (swelling)

There is a difference between actual weight gain and a gain in water weight. Real weight gain occurs over a period of time. On the other hand, fluid weight gain can increase very quickly. You may hear it called “fluid retention.” This is the type of weight gain that is more of a concern and needs to be reported. An increase in weight caused by fluid retention may be accompanied by:

- Swelling in the feet, ankles, legs, hands, abdomen or face (also known as edema)
- An increase in blood pressure
- Shortness of breath
- Trouble sleeping flat

Call your doctor if you notice these problems.

## ***FLUID & FLUID RETENTION***

Recording your daily intake and output of fluid is important for at least the first two weeks after discharge from the hospital.

Keeping records will help you to remember to drink enough to meet your goal for fluid intake. Your records will also help you to notice and report in your output decreases.

This chart may be helpful in recording your fluid intake.

1 ounces =	2 Tbls =	30 cc	
4 ounces =	½ Cup =	120 cc	
8 ounces =	1 Cup =	240 cc	
16 ounces =	2 Cups =	480 cc =	1 Pint
24 ounces =	3 Cups =	720 cc	
32 ounces =	4 Cups =	960 cc =	1 Quart
		1000 cc =	1 Liter

## *SALT & SODIUM*

In order to help reduce fluid retention and to control your blood pressure, it is important to follow a Low Sodium Diet.

Salt contains sodium. One teaspoon of salt contains approximately 2000 milligrams of sodium. Your diet should be limited to 1½ teaspoons, which would equal 3000 milligrams. Many canned and packaged foods already contain high amounts of sodium, so even though you may not use salt at the table, you could still get too much. Follow these guidelines:

- Follow a low sodium diet (3000 milligrams)
- Read labels for sodium content. Try to choose items that are lower in sodium.
- Do not use salt at the table.
- Do not use salt when cooking.
- Season food without using salt. Try using herbs, spices, or juices.
- Avoid or limit your intake of eat high sodium foods (some listed below).

Seasoned Salt

Canned Vegetables

Canned or Packaged Soup

Meat Tenderizers

Garlic Salt

Salted Crackers

Salted Popcorn

Soy Sauce

Onion Salt

Worcestershire Sauce

Salted Chips and Nuts

Bacon, Chorizo, Sausage

Lemon Pepper

# *FLAVORING WITHOUT SALT*

You can use herbs and spices to add flavor without adding any salt. Use these general guidelines:

- When preparing a dish that serves four people, use no more than ¼ teaspoon of dried herbs or ¾ teaspoon of fresh herbs
- Add ground herbs toward the end of cooking
- Add whole spices at the beginning of cooking

Here are some suggestions of herbs and spices you can use instead of salt, to add flavor to your meals:

## **Baked Goods -**

- Almond extract
- Mace
- Ginger
- Caraway Seeds
- Lemon Juice
- Cinnamon
- Fennel Seeds

## **Cheese -**

- Caraway Seeds
- Fennel Seeds
- Sage
- Chili Powder
- Onion Powder
- Thyme

## **Chicken -**

- Chili Powder
- Sage
- Saffron
- Dill
- Mustard Powder
- Savory
- Garlic
- Tarragon
- Mace
- Nutmeg
- Thyme
- Marjoram
- Onion Powder

## **Cottage Cheese -**

- Caraway Seeds
- Curry
- Chives

# *FLAVORING WITHOUT SALT*

## **Eggs -**

- Allspice
- Parsley
- Tarragon
- Basil
- Pepper
- Thyme
- Chives
- Rosemary
- Tumeric
- Curry
- Saffron
- Fennel
- Savory

## **Fish -**

- Allspice
- Garlic
- Saffron
- Basil
- Ginger
- Sage
- Bay leaf
- Green Pepper
- Tarragon
- Cloves
- Lemon Juice
- Thyme
- Curry
- Mace
- Tumeric
- Dill
- Paprika

## **Fruit -**

- Allspice
- Curry
- Mace
- Cinnamon
- Ginger
- Nutmeg
- Cloves
- Lemon

## **Meats -**

- Allspice
- Garlic
- Parsley
- Basil
- Ginger
- Pepper
- Caraway
- Marjoram
- Sage
- Celery Powder
- Mustard
- Savory
- Chili Powder
- Onions
- Tarragon
- Dill
- Paprika
- Thyme

# *FLAVORING WITHOUT SALT*

## **Rice -**

- Basil
- Saffron
- Onion or Garlic Powder
- Tumeric
- Savory
- Green Pepper
- Chives

## **Salads -**

- Celery Powder
- Marjoram
- Dill
- Garlic
- Vinegar
- Parsley
- Tumeric
- Coriander
- Chives
- Onions

## **Soups -**

- Celery Powder
- Pepper
- Garlic
- Green Pepper
- Chili Powder
- Onion

## **Vegetables -**

- Allspice
- Ginger
- Oregano
- Cloves
- Marjoram
- Vinegar
- Garlic
- Onions
- Chili Powder
- Mace
- Tumeric
- Nutmeg
- Caraway
- Lemon juice
- Thyme
- Dill
- Basil
- Horseradish
- Paprika
- Curry Powder
- Mustard

# ***POTASSIUM***

You will need to follow a \_\_\_\_\_ potassium diet for the \_\_\_\_\_.

## **High Potassium Foods**

### **Fruits**

Apricots	Oranges
Apricot Juice	Orange Juice
Dried Apricots	Papaya
Bananas	Prunes
Cantaloupes	Prune Juice
Honeydew Melon	Raisins
Mangos	Tamarinds

### **Vegetables**

Artichokes	Nopales
Avocados	Potatoes
Brussels Sprouts	Spinach
Guacamole	Tomatoes

### **Other Items**

Dried Beans	Nuts
Milk	Yams
Juice	

# ***PHOSPHORUS***

You are no longer on a Low Phosphorus Diet.

You now can eat high phosphorus foods. Your phosphorus may actually become low over these first couple of months. Some examples of foods, which are high in phosphorus, are listed below.

## **Fat and Cholesterol**

### **Dried Beans**

Black Beans  
Black-eyed Peas  
Chickpeas  
Garbonzo Beans  
Kidney Beans  
Lentils  
Lima & Navy Beans  
Pinto & Red Beans  
Refried Beans  
Soybeans  
White Beans

### **Starch Items**

Biscuits  
Bran Muffins  
Granola Bars

### **Other Items**

Oatmeal  
Wheat Germ  
Raisins  
Nuts (Peanut, Pecan, Walnut, etc.)  
Seeds (Sunflower, Pumpkin)  
Salmon  
Sardines

### **Dairy Items**

Cheeses  
Cottage Cheese  
Dried Milk  
Fluid Milk (Whole, 2%, Skim, Butter, Goat)  
Milkshakes  
Yogurts

It is important to understand about fat and cholesterol in your diet because high levels in your blood will increase your chances of heart disease. What you eat can make a difference in your levels. Follow these general guidelines:

**Limit foods that are high in cholesterol** - red meats, processed meat (sausage, hot dogs, cold cuts), egg yolks, shellfish, and organ meats (liver, kidneys, sweetbreads)

**Avoid fried foods** - especially if prepared with lard, shortening, or other saturated and trans fats.

**Avoid fast food restaurants and commercial baked goods** that use *Trans*-fats to make the food last longer

**Choose low fat dairy products** - milk, cheese, cottage cheese

**Remove skin** from chicken and trim fat from meat before cooking

**Use polyunsaturated and monounsaturated fats** (oils made from sunflower, corn, soybeans, safflower, canola, and olive)

**Eat more fruits, vegetables, and fish**

**Ask your dietitian for more information**

## ***DIETARY ADJUSTMENTS TO REDUCE POSSIBLE PROBLEMS***

### **If you have problems with diarrhea:**

- Try small, frequent meals.
- Make sure you still drink a lot of fluids since diarrhea can dehydrate your body.
- Limit caffeine, alcohol, and prune juice.
- Restrict fiber- raw vegetables with skins, whole grain breads or cereals, brown or wild rice, popcorn, ground or whole seed herbs.
- Limit milk and milk products.
- Notify your doctor if the diarrhea continues.

### **If you have problems with nausea:**

- Sip fluids frequently in between solid food, to help make sure you stay well hydrated.
- Try small, frequent meals or snacks.
- Avoid high-fat, spicy, or gas-producing foods.
- Wear loose comfortable clothing at meal times.
- Try not to lie down right after eating.
- Avoid foods with strong odors.
- Notify your doctor if you have continued nausea or vomiting (especially if you can't keep your pills down)

**If you have problems with mouth sores:**

- Use good oral hygiene to increase comfort and stimulate appetite.
- Avoid crisp or rough-textured foods.
- Discourage tart, acidic, spicy, or salty foods & fluids.
- Avoid very hot or very cold foods & fluids.
- Try dunking food in liquid to moisten it.
- Notify your doctor. He may need to change your medications or add new medications to prevent the sores from spreading.

## ***FOOD SAFETY***

**Since infectious germs can enter your body in the food you eat, these general rules are important to follow:**

- **Wash your hands** with soap and warm water before and after handling food.
- **Promptly wash cutting boards, plates and counter tops** that come in contact with meat juices or raw meat. Use hot, soapy water. To sanitize after cleaning, put items through the automatic dishwasher or rinse them in a solution of 1 teaspoon of chlorine bleach and 1 quart of water.
- **Avoid Contamination** - Handle raw meat, poultry, seafood and eggs as if they were contaminated with bacteria. Even if they do not start out with enough bacteria to make you sick, if mishandled, they could.

## When Shopping and Preparing...

- **Look out for dented or damaged cans** - Do not eat foods from dented or damaged cans.
- **Look at freshness dates** - Do not use food products after their freshness date has expired. Exception is milk which has a sold by date and is still good for another week.
- **Avoid raw eggs** - Do not eat raw eggs or uncooked dough which contains raw eggs.
- **Wash produce thoroughly with water** - Use a scrub brush to remove dirt from potatoes, carrots, and turnips. Peel and discard outer leaves and rinds. Wash prepackaged salad mixes and vegetables, even if the label says they are prewashed. No soap or detergent is needed.
- **Purchase fresh produce** - Do not buy any produce which is bruised, shriveled, moldy or slimy. Buy only what you can use within a few days.
- **Thaw frozen foods in the refrigerator** - not on the counter.
- **Separate your cutting boards** - Use one board for raw meat, poultry and fish and use another board for salads and other foods.
- **Buy fresh fish** - Seafood should have a clean smell. The fish eyes should be clear, shiny and bulging (not sunken).

## When Cooking...

- **Always cook thoroughly.** Only thorough cooking will destroy any harmful bacteria in the food. Freezing or rinsing foods in water will not kill the bacteria.
- **Avoid interrupted cooking.** Meat and poultry products must be cooked thoroughly the first time. Afterward, they can be refrigerated and reheated safely.
- **Be cautious when you microwave your food,** follow manufacturers' instruction carefully. Use microwave safe containers, rotate them during the cooking process and let the food stand for the recommended time.
- **Marinate raw meat, poultry and fish in the refrigerator;** not on the counter. Discard the marinade after use. If you want to use the marinade as a baste or sauce, reserve a portion of it before you add the raw food or boil it.
- **Use a meat thermometer** to check meat and poultry. Cook roasts and steaks to at least 145°, ground beef and pork to 160° and whole poultry to 180°.
- **Make sure meat, poultry and fish are cooked thoroughly.** Fish should be opaque and flake easily with a fork. Beef should look gray or brown inside. Chicken and pork should look white or tan. Beef, chicken and pork juices should be clear, not pink.
- **Avoid eating any raw protein foods** such as sushi, raw oysters, ceviche, seared tuna, steak tartar, and foods with raw eggs.

### Handling leftovers...

- **Divide large quantities into small units** and store them in shallow containers for quick cooling before refrigerating.
- **Refrigerate leftovers promptly.** Discard foods that have been left out longer than two hours.
- **Reheat leftovers thoroughly** to 165° or until hot and steamy. Bring soups and gravies to a rolling boil.

### Refrigeration & Freezer Storage Guidelines...

- **Store your food properly.** This can reduce your risk of food poisoning.
- **Clean out your crisper bin** once a week and discard items that are no longer fresh. Fruit and vegetables that become shriveled, moldy, or slimy should be thrown out.
- **Store raw meat, poultry and fish** on the bottom shelf of the refrigerator so juices do not drip onto other foods.
- **Pay attention to the dates on packages.** Do not eat foods that have changed color or smell or that are past the expiration date.

### Soaps, sponges and sprays...

- **Read labels carefully on antibacterial sponges, soaps and sprays** that may be used to help clean your kitchen. Don't assume the item will fully protect you from all germs. These items should be used in combination with all the other food safety suggestions listed above.
- **Beware of harmful bacteria that can grow in your dish- rag or sink sponge.** Rinse these items well between uses and change to a clean one frequently. You can put your sponge or dish-rag in the microwave on high for 30 to 60 seconds to help kill harmful bacteria.

# IMPORTANT PHONE NUMBERS

**Texas Transplant Institute**  
8201 Ewing Halsell Drive  
San Antonio, TX 78229  
*\*A Methodist Hospital Program*

**Kidney Transplant Department**

Telephone: 210-575-8425

Fax: 210-575-8420

**Toll Free Phone Number: 800-888-0402**

**My Transplant Surgeon:** \_\_\_\_\_

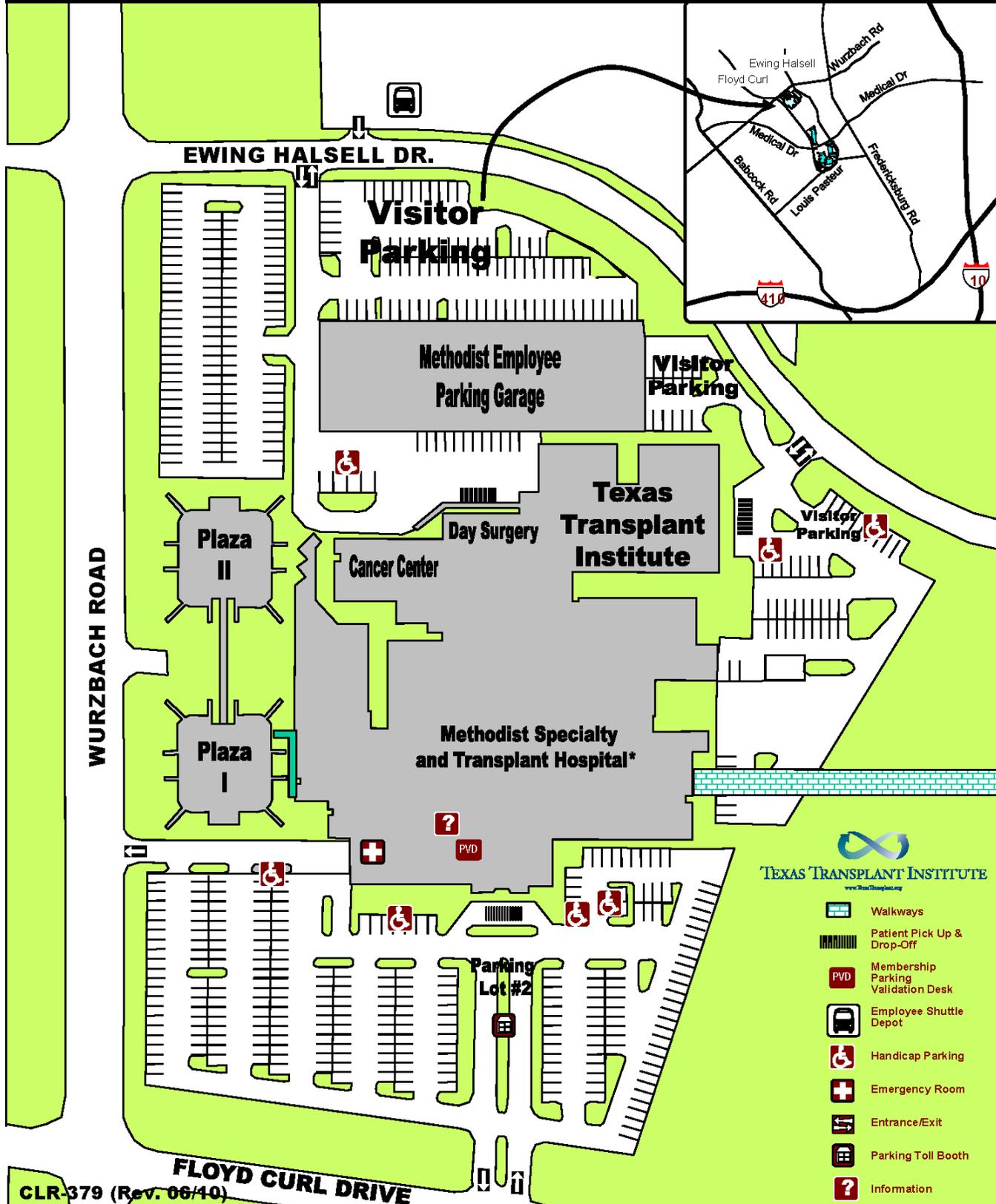
**My Transplant Nurse:** \_\_\_\_\_

**My Social Worker:** \_\_\_\_\_

**My Pharmacy:** \_\_\_\_\_

**My Dietitian:** \_\_\_\_\_

# Texas Transplant Institute



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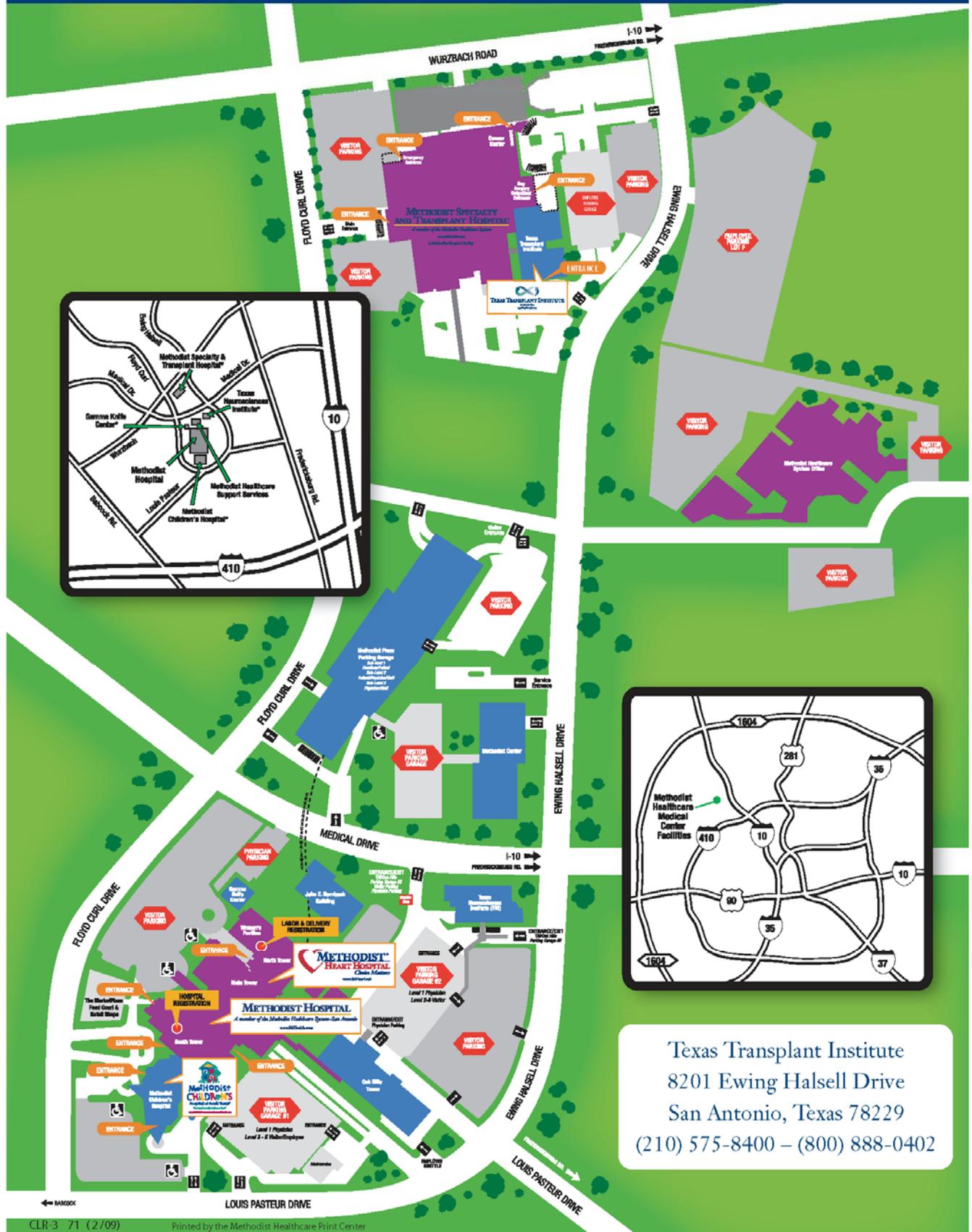
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