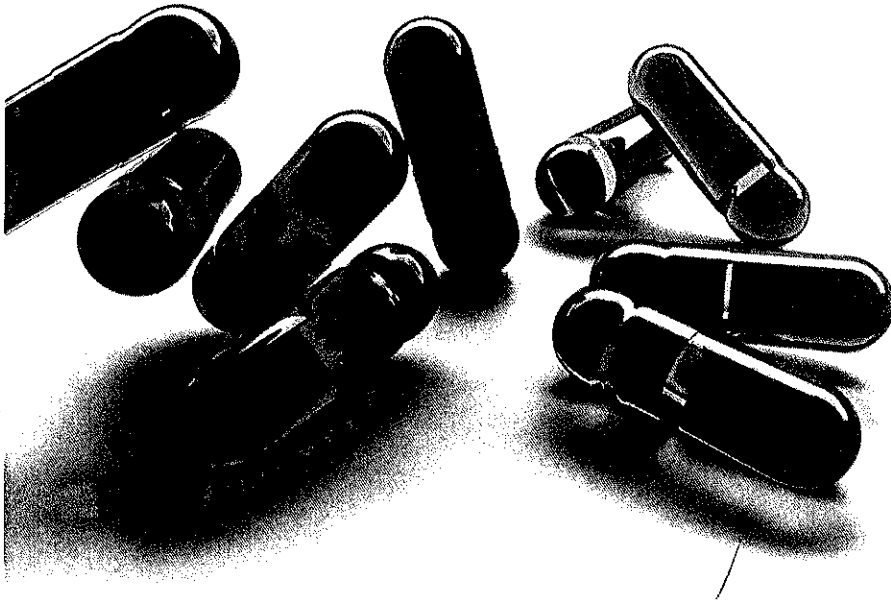


Section 6



Medications

After transplant it is very important that you follow your doctor's instructions. You have waited a long time for this new organ! It offers you a new chance at life, to spend time with friends and family and to do the things you enjoy doing.

You will want to take good care of yourself and the new organ, so that it will last a long time.

Table of Contents

| | |
|----------------------------------|----|
| MEDICATION IMPORTANT INFORMATION | 52 |
|----------------------------------|----|

| | |
|----------------------------|----|
| OVER-THE-COUNTER MEDICINES | 56 |
|----------------------------|----|

Allowed for Transplant Patients

Antacids

Docusate Sodium (Colace®)

Multivitamin

| | |
|--------------------------|----|
| ANTI-REJECTION MEDICINES | 60 |
|--------------------------|----|

Tacrolimus (Prograf®)

Mycophenolate products

Sirolimus and Everolimus

Steroids

Belatacept (Nulojix®)

Basiliximab (Simulect®)

Thymoglobulin® (anti-thymocyte globulin – rabbit)

| | |
|--------------------------|----|
| ANTI-INFECTIVE MEDICINES | 68 |
|--------------------------|----|

Bactrim® [sulfamethoxazole- trimethoprim-
(SMZ- TMP)]

Dapsone

Nystatin

Valganciclovir (Valcyte®)

| | |
|---------------|----|
| MISCELLANEOUS | 72 |
|---------------|----|

Epoetin (Procrit®)

Fludrocortisone acetate (Florinef®)

Furosemide (Lasix®)

Insulin

Proton-pump inhibitors

Medication Side Effect Fact Sheet

□

Medications



Important Information

It is important that you follow the instructions of your transplant team. The information in this journal should be used to help you become familiar with your transplant medicines but should not replace the instructions provided by your transplant team.

Be sure to take all of your medicines as prescribed. In addition to taking your prescribed medications, to prevent rejection of the new organ, you will likely need to take other drugs to help prevent infection, control pre-existing conditions and/or new conditions such as high blood pressure or high blood sugars. This will help keep you and the new organ healthy.

You should talk to your doctor right away if any of the drugs you take make you feel bad, or if you have trouble paying for them. **If another prescriber gives you a new medicine to take or changes your transplant medications (prescription or over-the-counter), do not start taking it until transplant team tells you it is ok.** There are many drug-drug interactions, especially with your anti-rejection medicines, which could cause you harm.

Medications To Avoid

Your transplant team will inform you of medications you should avoid. The most common is a class of medications called nonsteroidal anti-inflammatory drugs (NSAIDs). These are available over the counter and generally used to control pain or inflammation. Below is a list of common medications to avoid. Talk to your transplant team before taking any of the following:



- Ibuprofen (Advil)
- Naproxen (Aleve)
- Meloxicam
- Celecoxib
- Indomethacin



Medications



Why do you need anti-rejection medicine?

Anti-rejection or immunosuppressant medicines help to prevent your immune system from attacking your new kidney by lowering your immune system. Many times, more than one drug is needed to prevent (or treat) rejection. You will need to take the anti-rejection drugs for the rest of your life. The dose of the anti-rejection medicine(s) may go down over time, but your doctor or coordinator will talk to you first about any changes. **Never change the dose without talking to your coordinator or doctor first.**

What to do I do if I miss taking one of my medications?

Every time you miss or skip a medication you could be increasing your risk of rejection, and taking too much may cause more side effects. If you do miss a medication, **DO NOT double the next scheduled dose.** Talk to your transplant team on what action you should do. Most of the time, if you remember within a few hours of your scheduled dose you can take it and resume your normal dose as scheduled. If you remember closer to your next scheduled dose, you should skip the missed dose and take your scheduled dose as prescribed. Make sure to let your team know since this may affect your levels in your blood work.

Avoid taking herbal remedies

Some herbal products (such as those seen in Chinese and Ayurvedic medicine), may contain heavy metals (lead, mercury and arsenic) or other unlisted ingredients/drugs that could be harmful to the kidney. Additionally, there are unknown interactions between those herbals and your anti-rejection medication which could cause unwanted effects, and even rejection. **These products should be avoided unless cleared by your transplant team.**



Medications



Brand vs Generic anti-rejection medicines?

Many of the anti-rejection medicines are available as generic products. It is very important that you always take the same medicine. Choose between brand name drug or the generic drug and always try to be consistent.

Switching between the brand name drug and a generic drug, or switching between generic versions, could change the levels of medicine in your blood. This could increase your risk for rejection or side effects. Always make sure that your anti-rejection medicines look the same with each refill. If the size, color or shape changes, talk with your pharmacist and your transplant coordinator. If you have to switch between brand name and generic anti-rejection drugs for cost or insurance reasons, talk to your doctor or coordinator first.

Plan Ahead For Travel or Natural Disasters

If you take a trip or go on vacation, be sure to pack enough medicine for the entire time you will be away from home. If there is a natural disaster such as a hurricane, make sure you have enough for 2 weeks. Pack the medicines in your carry-on bag, so you will be able to take them when it is time for your dose and so they do not get lost. If you will be traveling to a different time zone, you may need to change the time of day when you take your medicine. It is important to keep taking the anti-rejection medicines every 12 hours, or as instructed.

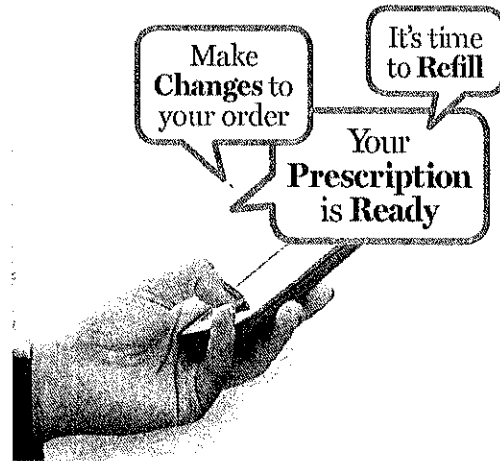


Medications



Ordering Your Refills

Many of these medications can be expensive or difficult to find at local pharmacies, do not wait until the last minute to refill your anti-rejection medicines. You are responsible for making sure that you never run out of your medications.



- You must call the pharmacy at least 7 days in advance to receive your medication, do not wait until you are almost out of your medication.
- If you notice that you have no refills left on that prescription bottle, call your coordinator at least 3 weeks in advance to allow time for labs and talking with your doctors, if needed.
- Many medications require prior approval from your insurance company. This could cause a delay in your receiving your medication. You may need to talk with your insurance provider to help you plan for how much your out-of-pocket cost will be each year.
- Notify your transplant coordinator and pharmacy if your prescription coverage changes.





Over the Counter Medications

They following medications are allowed for transplant patients. Remember, you should always check with your provider before taking any medications that he/she has not prescribed.

Pain Relief

- Tylenol®
(acetaminophen) for headaches, fever, body aches

Allergies/itching

- Zyrtec® (cetirizine), Claritin® (loratidine),
- Allegra® (fexofenadine),
- Benadryl® (diphenhydramine) for sneezing, itching, runny nose

Sinus/Congestion

- Ocean Spray® (sodium chloride)
- Afrin® (oxymetazoline) for nasal and sinus congestion

Cold/Cough

- Robitussin® for chest congestion and cough
- Delsym® (dextromethorphan) for dry cough
- Chloraseptic Spray® or lozenges for sore throat
- Mucinex® (guaifenesin) for chest congestion
- Avoid multi symptom products that contain NSAIDS (eg, ibuprofen, naproxen, diclofenac, high dose aspirin, etc.)

Constipation/Diarrhea

- Miralax®, Metamucil®, Colace®, Senna (Senokot®), Glycerin suppositories or Dulcolax® (Bisocodyl) suppositories
- Avoid Fleet enemas
- Imodium® (loperimide) for diarrhea (talk to your nurse before starting)

Sleep Aids

- Benadryl®, Unisom® (diphenhydramine)
- Melatonin

Stomach Upset

- Maalox®, Tums® (calcium carbonate) for gastric upset (do not take near anti-rejection medicines; separate by at least 2 hours)

Gas relief

- Gas X® (simethicone) for gas

Magnesium Supplementation

- MagOX (Magnesium Oxide) take with food to avoid diarrhea. Do not take close to anti-rejection medicines.



Over the Counter Medications — Antacids

Why am I taking antacids?

You are taking antacids because they react with the acid in your stomach and neutralize it to prevent irritation of the stomach lining. There are many different types of antacids – some cause diarrhea, others cause constipation. As a general rule, avoid taking any antacids with or near your anti-rejection medicines as this could lower their effects.



What are the side effects?

- Diarrhea or constipation
- Nausea
- Unpleasant taste
- **Maalox®** - Can cause diarrhea
- **Tums®** (calcium carbonate) - Can cause constipation

How do they come?

They come in many different strengths that can be bought over-the-counter.

What are any special things I should know?



- Avoid taking with or near anti-rejection medicines.
- Notify the clinic nurse of any side effects.
- Separate administration of antacids by at least two hours from most other medicines, especially antibiotics.
- Talk to your transplant team if you find you're needing antacids on a regular basis to control your heartburn.



Over the Counter Medications — COLACE® (DOCUSATE SODIUM)

Why am I taking Colace?

You are taking docusate sodium to help keep stools soft for easy, natural passage. It is not a laxative.



What are the side effects?

- Bitter taste in mouth with the liquid form
- Diarrhea

How do they come?

Comes in 50 mg or 100 mg gel caps. Also available in liquid form. Surfak® 240 (docusate calcium) may be ordered instead.

What are any special things I should know?



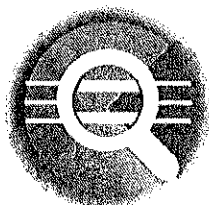
- Increase fluid intake, especially if constipated. Check with your doctor for any fluid limits.
- If constipation remains a problem after two days, notify your transplant coordinator. Additional agents may be needed.
- Tell clinic nurse of watery stools or excessive diarrhea.
- These medicines can be purchased over-the-counter.



Over the Counter Medications — Multivitamin

Why am I taking a multivitamin?

You are taking multivitamins to provide additional vitamins and minerals to your daily intake. This is sometimes needed to help improve your blood counts, but may not be needed long-term.



What are the side effects?

- Upset stomach or nausea

How do they come?

They come in tablets or liquid form in many different brands.

What are any special things I should know?



- A balanced diet will provide you with the best nutrition.
- This medicine can be purchased over the counter. Try to use a USP verified product.
- Avoid herbal additives or agents in general, and especially those that may boost or enhance the immune system as these additives can work against your anti-rejection medicines.



Anti-Rejection Medicine—

Why am I taking Tacrolimus?

You are taking Tacrolimus, a potent anti-rejection drug that prevents organ rejection by lowering your immune system.

What are the side effects?



- Tremors, headaches, or trouble sleeping
- High blood pressure
- High blood sugar

How

It comes

comes in 0.5 mg,

twice a day, 12 hours apart. Newer ONCE-DAILY formulations are also available of tacrolimus and may come in the same or different strengths.

does it come?

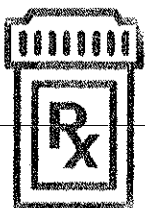
in multiple brand and generic versions. Prograf®

1 mg and 5 mg capsules, which are usually taken

NOTE CAREFULLY the formulation you are taking, and notify your transplant center if your capsules look different from the prior fill.

What are any special things I should know?

- This is one of the most important medicines you are taking. It may be used with other agents to avoid rejection.
- Best taken on an empty stomach, but may be taken with a small snack if not well tolerated. Consistency is key!
- It can increase your risk of infections.
- The dose of Tacrolimus may change often, according to blood level results. On labs days, **DO NOT take the morning dose of drug until after labs are drawn.**
- Avoid grapefruit and pomegranate for as long as you are taking Tacrolimus.
- Minimize sun exposure and remember wear sunscreen SPF greater than 50 when out in peak daylight hours.
- Make sure your pills do not change from refill to refill. Contact your pharmacy if they look different and notify your coordinator if they cannot be switched back to the same manufacturer.
- switched back to the same manufacturer.



□

Anti-Rejection Medicine— Mycophenolate

Why am I taking Mycophenolate?

- You are taking mycophenolate to suppress your immune system and decrease the body's response to your newly transplanted organ.
- This medicine helps to prevent rejection, and may also help prevent recurrence of certain autoimmune disorders.

What are the side effects?

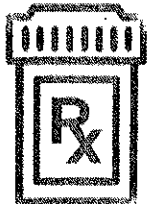


- Nausea and vomiting
- Diarrhea
- Low white blood cell count

How does it come?

- Cellcept® in 250 mg capsules and 500 mg tablets and suspension 200 mg/mL
- Myfortic® in 180 mg or 360 mg enteric coated tablets. DO NOT split or crush

What are any special things I should know?



- Try to take this medicine on an empty stomach. If you cannot tolerate it this way, it may be taken with a small snack. Consistency is key.
- Double check you are taking the same formulation and correct dose, since there are multiple strengths available. Take as many tablets needed to get to your prescribed dose.
- This drug is usually used with other anti-rejection medicines to prevent rejection.
- Due to the risk of miscarriage and fetal malformation, women of child-bearing potential should **avoid getting pregnant** while taking this medicine and consult with your doctor regarding appropriate family planning.
- Minimize sun exposure and remember to wear sunscreen SPF greater than 50 when out in peak daylight hours.
- Make sure your tablets do not change from refill to refill. Contact your pharmacy if your tablets look different and notify your coordinator if they cannot be switched back to the same manufacturer. □
- Do not stop taking your medicine unless directed by your transplant

Anti-Rejection Medicine — Sirolimus & Everolimus

Why am I taking these Drugs?

These drugs are anti-rejection medicines. They work together with the other medicines you are taking to help prevent rejection.



What are the side effects?

- High cholesterol, high triglycerides
- Skin rash and acne
- Protein in the urine (foamy urine)
- Low white blood cell counts

How does it come?

- Sirolimus (Rapamune®) comes in 0.5 mg, 1 mg, 2 mg tablets and a solution 1 mg/mL.
- Everolimus (Zortress®) as 0.25 mg, 0.5 mg and 0.75 mg tablets.
- Everolimus (Zortress®) as 0.25 mg, 0.5 mg and 0.75 mg tablets.

What are any special things I should know?



- On lab days, do not take your morning dose until after lab draw (Similar to Tacrolimus).
- Take consistently either with food or without the same time every day. Do not crush or split tablets.
- You will need to have periodic blood tests to check your blood cholesterol and triglycerides. Your doctor may recommend treatment if your blood cholesterol and triglycerides become too high.
- Avoid grapefruit or pomegranate juice for as long as you are taking either of these drugs.
- Talk to your doctor if you are a woman and are thinking of becoming pregnant while taking this medicine as it can cause birth defects.
- Sirolimus is usually taken daily, and Everolimus is twice daily.

□

Anti-Rejection Medicine— Steroids (Prednisone & Methylprednisolone)

Why am I taking these drugs?

You are taking either methylprednisolone (Medrol®) or prednisone, to prevent rejection or recurrence of certain conditions. These steroids are similar to a hormone that your body produces normally. Steroids suppress the immune system and influence protein, carbohydrate and fat metabolism. During episodes of rejection large doses of steroids may be given intravenously and the dose you take by mouth may be increased and then gradually lowered as the rejection episode subsides.

What are the side effects?



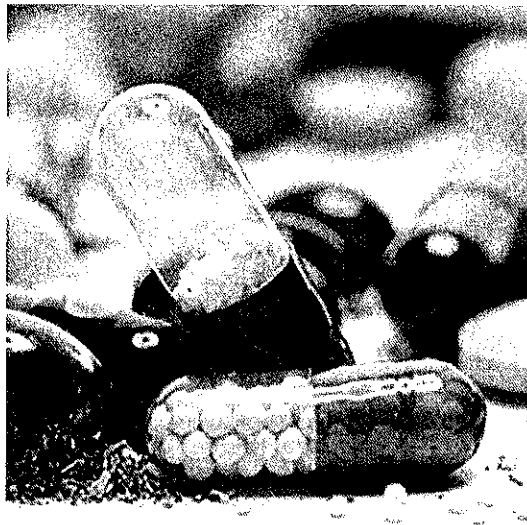
- Stomach irritation, may need to take with a meal or snack
- Swelling of the face, hands and ankles. Retaining this extra fluid may lead to high blood pressure
- Weight gain due to increased appetite, please eat healthy. Once the weight is gained, it is very difficult to lose
- Poor wound healing
- High blood sugar (diabetes) that may occur with high doses of steroids. This is called “steroid- induced” diabetes. If you have diabetes, you may need more insulin than usual to keep a normal blood sugar. This will normalize as doses are decreased
- Mood changes
- Acne, best to keep these areas clean and dry
- Fungal infection in mouth which is called thrush. If you see a thick white coating covering your tongue or throat and it is painful to swallow, let your doctor know
- Increased swelling
- Can cause osteoporosis with long-term use
- Vision problems such as cataracts or glaucoma. Notify your eye doctor if you are having vision problems.

Steroids (Prednisone & Methylprednisolone) continued on the following page. □

Anti-Rejection Medicine— Steroids (Prednisone & Methylprednisolone)

How does it come?

Comes in many different strengths. Be alert of how much you are taking. Your doctor may make changes on this medicine often.



What are any special things I should know?



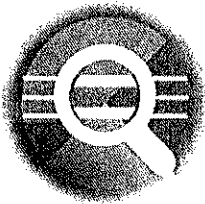
- Never stop taking this medicine by yourself; it must be reduced under doctor supervision
- Most of the time, the higher the dose, the greater the side effects. The lower the dose, the lesser the side effects
- You must eat a healthy diet and control your appetite
- May at first interfere with sleep, but you will get used to the medicine after about one to three weeks. Take it early in the day to avoid disturbing your sleep
- Always double check you are taking the correct dose. The dose, most of the time, is decreased if your blood work results are stable
- Minimize sun exposure, and remember to wear sunscreen SPF greater than 50 when out in peak sunlight hours

□

Anti-Rejection Medicine— Belatacept

Why am I taking Belatacept?

You are taking belatacept (Nulojix®) as part of your anti-rejection medications. This medicine works by lowering the immune system to prevent rejection. This medication is less toxic to your kidneys and may help you have better function long-term.



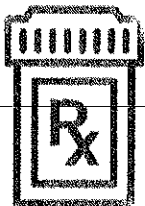
What are the side effects?

- Low white blood cells
- Fluid build up
- Headache
- Diarrhea
- Post-transplant lymphoproliferative disorder (PTLD) or Progressive Multifocal leukoencephalopathy (PML).

How does it come?

- It comes as a 30 minute infusion that can be given in the hospital, at outpatient infusion centers.
- Typical doses are 10 mg/kg and 5 mg/kg intravenously.

What are any special things I should know?



- You should also be taking other anti-rejection medicines by mouth such as mycophenolate and prednisone.
- Notify the clinic nurse of any side effects, or if you have missed any doses.
- The schedule can vary initially, but you will eventually be given an infusion every 4 weeks for as long as you have your organ.
- To minimize your risk of these potentially serious side effects, you will be screened for certain kinds of viruses and you must be Epstein-Barr Virus antibody positive in order to receive this medication.
- Minimize sun exposure and remember to wear sunscreen SPF greater than 50 when out in peak daylight hours.



Anti-Rejection Medicine — Basiliximab (Simulect)

Why am I taking Basiliximab?

You are taking basiliximab because it's a strong anti-rejection medication that helps to limit rejection after your transplant.



What are the side effects?

- High blood pressure
- Glucose intolerance (short-term)

How does it come?

- Comes as an infusion through your vein, and it runs over 20-30 minutes.

What are any special things I should know?



- You may be at higher risk of developing an infection after treatment with this medication.
- This medicine is usually given in the hospital during your initial transplant stay.



Anti-Rejection Medicine— Thymoglobulin (Anti-Thymocyte Globulin-Rabbit)

Why am I taking Thymoglobulin?

This drug is a strong medicine to prevent your body from rejecting your new organ. Thymoglobulin® works by lowering your immune system.

What are the side effects?

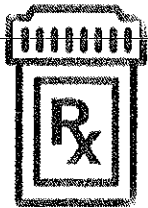


- Fever and chills
- Headaches
- Low white blood cells and platelets
- Increased risk of infection
- Rarely, difficulty breathing due to accumulation of fluid

How does it come?

You will receive this medicine while you are in the hospital and your nurse will administer it over several hours. Thymoglobulin® will be given intravenously (through a needle placed in your veins). Medications will be given to you before the infusion that might make you tired. They are to prevent any infusion related reactions.

What are any special things I should know?



- Your doctor or nurse will be taking your blood frequently so that the amount of blood cells in your body can be measured.
- You may also need to get this medication if you should develop a rejection of your organ.
- As with other strong anti-rejection medications, this medication may also increase your long-term risk of infection and cancers.
- Other drugs may be given to prevent infection after getting this drug

