

## Your Transplant Medicines

In this chapter, you will find information on the different medicines that transplant patients take. You will not take all of these medicines—only the ones that the transplant surgeon and physicians say you need to take.

The number of medicines you need to take may seem overwhelming. But, remember, we're here to help you. Before you leave the hospital, the transplant pharmacist will teach you about all the medicines you need to take. You will also receive a "medicine sheet" that will help you see at-a-glance when to take each medicine each day (see Figure 1, page 4). If you have any questions, please call the transplant pharmacist or talk to the post-transplant nurses.

### What You Need to Know about All Medicines

The drug profiles in this chapter give you details about specific drugs. But there are some important things you need to know about all your medicines:

- *Never stop taking any drug or change the dose unless your transplant doctor or nurse tells you to. It is extremely important that you take your medicines as directed.*
- Store medicines in a cool, dry place—unless you are told otherwise. Heat and light can make medicines less effective. So, too, can moisture that's found in bathrooms. You need to store your drugs in a cool, dry place away from

direct sunlight. One place might be a hall closet. You should only store medicines in the refrigerator if told to do so.

- Finally, do not take any other medicines or herbal supplements, including over-the-counter remedies, unless you check with us first. Some medicines and herbs might cause damage to your transplant or interact with your anti-rejection drugs so that they become less effective. Many common medicines cause problems in transplant patients. These include non-steroidal anti-inflammatory drugs (NSAID), such as ibuprofen or naproxen. Many over-the-counter NSAIDs are sold by their brand names (for example, Motrin, Advil, Nuprin, and Alleve). Also, some antibiotics, such as erythromycin and azithromycin (Zithromax) can drastically alter the level of some anti-rejection medicines. When in doubt, ask the post-transplant nurse, the transplant pharmacist, or your doctor.

## **Managing Your Medicines**

It helps to develop a system to keep track of your medicines. There's no right or wrong way to manage your medicines. You just need to develop a system that works for you. You also need to remember that your medicines and doses will be changing during the first year. So, you need a way to keep track of all your medicine changes. Here are a few ideas:

- Some patients use plastic pill dispensers to organize their medicines according to the date and time they

need to take them. If you're going to buy a pillbox, look for one that is organized by the days of the week with slots for different times of the day. These let you see what drugs you need to take throughout the day. Empty film canisters, empty egg cartons, or tackle boxes would work, too. You just need to write the day and time on these yourself.

- Some patients create a chart that tells them what drugs to take when and how many. If you use a chart, be sure you can make changes to it easily. Remember, your transplant physicians will be changing your medicines frequently. So, you will need to adjust your medicine chart, too.
- Some patients use a watch with a timer that helps them remember when to take their medicines.
- Some patients set up a routine to help them. For instance, they always take their morning medicines after they eat breakfast, and their nighttime pills after they brush their teeth.
- Some patients bring paper and pen to clinic so they can make notes about any medicine changes.

You'll also need to come up with a way to carry your drugs with you when you come to clinic or when you'll be away from home. Some patients put the pills in a pillbox, an empty film canister, or a baggie and stick them in a purse, a briefcase, or a fanny pack. Again, you just need to find a system that works for you.

### Figure 1. Transplant Medicine Tracking Sheet

You will be given this tracking sheet when you leave the hospital to help you manage your transplant medicines.

Below is an example of the transplant medicines one patient might take—and when. Every day, the patient can then use this form to mark off when they took each medicine.

<b>Drug Name &amp; Strength</b>	<b>Times to be taken</b>		<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>	<b>Sat</b>	<b>Sun</b>
PROGRAF (as directed)  On clinic days take after your blood draw	9am	9pm							
CELLCEPT 1000 mg  Take 2 tablets of 500 mg two times each day	9am	9pm							
PREDNISONE 20 mg  Take 4 tablets of 5 mg	9am								
MYCELEX TROCHES  Two times daily									
BACTRIM SS	9am								
VALCYTE 450 mg	9am								
PEPCID 20 mg	9am	9pm							

## Amlodipine

**What brand names does this drug go by?** Norvasc

**Why do you need to take this drug?** Amlodipine is a calcium-channel blocker. It helps lower blood pressure. It can also help reduce chest pain.

**How should I take this drug?** Amlodipine comes in 2.5 milligram (mg), 5 mg, and 10 mg doses. Your doctor will decide the best dose for you. Take this drug as often as your doctor says. You should take this drug at the same time each day.

**What side effects can this drug cause?**

- Light-headedness or fainting, when starting on this medicine.
- A fast or uneven heartbeat, when starting on this medicine.
- Swelling of legs and ankles.

**Is there anything else I should know?**

- If you miss a dose, take it as soon as you can. If it is almost time for your next dose, take only that dose. Do not take double or extra doses.
- Do not stop taking this drug unless your transplant doctor tells you to.
- When you start this medicine, get up and sit down slowly to decrease dizziness, especially if you are older or have diabetes. Talk to your doctor if you feel dizzy or lightheaded.

## **Anti-Thymocyte Globulin**

**What brand names does this drug go by?** Thymoglobulin

**Why do you need to take this drug?** To prevent rejection or to treat rejection.

**How should I take this drug?** This medicine is given intravenously (IV) after transplant to prevent rejection. You may also get this medicine to treat rejection. If you get this medicine at home, a home care nurse will come to your home to help you.

**What side effects can this drug cause?**

- Fever, chills.
- Headache.
- Abdominal pain, diarrhea.
- A decrease in your white blood cell and platelet count.
- An increase in your risk of infection.

**Is there anything else I should know?**

- The fever, chills, and headache are seen most often with the first dose or two.
- You can take Tylenol and Benadryl before your first dose or two to lessen side effects.

## Azathioprine

**What brand names does this drug go by?** Imuran

**Why do you need to take this drug?** To prevent rejection.

**How should I take this drug?** Azathioprine comes in 50 milligram tablets. Your doctor will decide the best dose for you.

Take azathioprine once a day.

**What side effects can this drug cause?**

- A decrease in your white blood cell count.
- An increase in your risk of infection.
- Thinning of hair, which grows back in time.
- Decreased liver function.
- Skin cancer.

**Is there anything else I should know?** No

## **Basiliximab**

**What brand names does this drug go by?** Simulect

**Why do you need to take this drug?** Simulect is used to prevent rejection from occurring.

**How should I take this drug?** Simulect is given as an IV medicine at the time of transplant and on the fourth day after transplant. You will need to be in clinic or the hospital to receive this medicine.

**What side effects can this drug cause?** None

**Is there anything else I should know?** No

## **Clotrimazole**

**What brand names does this drug go by?** Mycelex

**Why do you need to take this drug?** To prevent fungal infections

**How should I take this drug?** Clotrimazole comes in 10 milligram lozenges.

Take two times a day.

Do not chew the lozenge or swallow it. Let the lozenge dissolve slowly in your mouth. Also, do not eat, drink, or rinse your mouth for 30 minutes after taking this drug. This drug works by coating the inside of your mouth and throat.

**What side effects can this drug cause?** Very rarely, some patients have nausea or vomiting.

**Is there anything else I should know?**

- You will take clotrimazole for about four weeks after transplant.

## Cyclosporine

**What brand names does this drug go by?** Sandimmune, Neoral, or Gengraf

**Why do you need to take this drug?** To prevent rejection.

**How should I take this drug?** Cyclosporine comes in different doses: 100 milligram (mg) capsules, 50 mg capsules, 25 mg capsules, and liquid form. Your doctor will decide the best dose for you.

Take cyclosporine two times a day: Once in the morning, and again 12 hours later. So, if you take a pill at 9 a.m., take another one at 9 p.m. Take the pills at the same time each day. If you miss a dose, take the next dose when scheduled. Do not take a double dose.

On clinic days, wait to take your morning dose until after you have your blood drawn. Do this even if it means taking the drug later than usual. So, you will need to bring the drug with you to the clinic.

### **What side effects can this drug cause?**

- Increased hair growth. To hide the hair, try an over-the-counter hair remover or bleach. (Be sure to "test" a small area on your arm first).
- Redness, soreness, or growth of the gums.
- Slight shaking of the hands.
- High blood pressure.
- Acne.

- A burning or tingling feeling in your joints or limbs that comes and goes.
- Numbness around the mouth.
- An increase in your potassium level.
- Decreased kidney function.
- An increase in your risk of infection.

### **Is there anything else I should know?**

- When taking this medicine, avoid eating grapefruit or drinking grapefruit juice.
- Different preparations of cyclosporine are absorbed at different rates, which will affect the amount of medicine in your blood. To avoid having a too high or too low level of cyclosporine in your blood, always check that you were given the brand of cyclosporine that your doctor prescribed at the pharmacy. Do not change brands unless you check with a post-transplant nurse first.

## **Daclizumab**

**What brand names does this drug go by?** Zenapax

**Why do you need to take this drug?** Zenapax is used to prevent rejection.

**How should I take this drug?** Zenapax is given as an IV medicine at the time of transplant and 1 to 4 times after

transplant. You will need to be in the hospital or clinic to receive this medication.

**What side effects can this drug cause?** None

**Is there anything else I should know?** No

## **Enalapril**

**What brand names does this drug go by?** Vasotec

**Why do you need to take this drug?** Enalapril is an Ace inhibitor. It helps lower blood pressure. It also helps treat heart failure.

**How should I take this drug?** Enalapril comes in different doses—from 5 milligrams (mg) up to 40 mg. Your doctor will decide the best dose for you. Take this drug as often as your doctor says.

**What side effects can this drug cause?**

- Trouble breathing or swallowing.
- Dizziness, lightheadedness, or fainting.
- A fast or uneven heartbeat or chest pain.
- Fever or chills.
- Skin rash and itching.
- Swelling of your face, lips, or tongue.

- Swelling of legs or ankles.
- Increased sensitivity to the sun.

### **Is there anything else I should know?**

- Tell your doctor if you frequently consume alcohol or caffeine. You should also tell your doctor if you smoke or use illegal drugs. All of these products may affect the way enalapril works.
- If you miss a dose, take it as soon as you can. If it is almost time for your next dose, do not take your missed dose. Do not take double or extra doses. If you take only one dose a day and forget it that day, do not take a double dose the next day.
- Do not treat yourself for a fever or sore throat. Instead call your doctor. These symptoms could be a side effect of enalapril.
- Tell your doctor if you have a dry cough that doesn't go away.
- Avoid salt substitutes or other foods and drinks that are high in potassium salts. Examples include orange juice and bananas.
- Wear sunglasses or avoid sunlight as this drug can cause sensitivity to the sun.
- Tell your doctor if you experience dizziness or lightheadedness when taking this medicine. This may be a sign that your dose needs to be adjusted.

## Enoxaparin

**What brand names does this drug go by?** Lovenox

**Why do you need to take this drug?** Lovenox prevents blood clots from forming in deep veins.

**How should I take this drug?** This medicine is given as a subcutaneous (under the skin) injection. The medicine comes in pre-filled syringes. So, you do not need to measure a dose out. Lovenox is given 1 to 2 times each day.

**What side effects can this drug cause?**

- Bleeding.
- Decreased platelets.
- Bruising.

**Is there anything else I should know?**

- Do not tap bubble out of syringe before using.
- Rotate sights of injection.
- Be sure you understand all the instructions about giving yourself an injection before doing it.

## **Famotidine**

**What brand names does this drug go by?** Pepcid

**Why do you need to take this drug?** To prevent stomach ulcers and heartburn.

**How should I take this drug?** Famotidine comes in 20 milligram (mg) tablets. Take famotidine as often as your doctor says. The dose will depend on your kidney function.

**What side effects can this drug cause?**

- A decrease in your white cell and platelet count.
- Diarrhea or constipation.
- Dizziness.
- Headaches.

**Is there anything else I should know?**

- You can buy a lower dose of famotidine (10 mg) over the counter.
- Patients usually stop taking famotidine about three months after transplant. But some patients need to take it longer.

## Fluconazole

**What brand names does this drug go by?** Diflucan

**Why do you need to take this drug?** To prevent fungal infections.

**How should I take this drug?** Diflucan comes in 100 milligram (mg) and 200 mg tablets.

This medicine should be taken once daily.

**What side effects can this drug cause?**

- Nausea, vomiting, diarrhea, abdominal pain.
- Rash, itching.

**Is there anything else I should know?**

- You will take fluconazole for about 4 weeks after your transplant.

## Metoclopramide

**What brand names does this drug go by?** Reglan

**Why do you need to take this drug?** To improve stomach emptying.

**How should I take this drug?** Metoclopramide comes in 10 milligram tablets. Take four times a

day or as directed by your doctor. It's best to take metoclopramide 30 minutes before each meal and at bedtime.

**What side effects can this drug cause?**

- Drowsiness.
- Restlessness.
- Rash.

**Is there anything else I should know?** No

## **Mycophenolate Mofetil**

**What brand names does this drug go by?** CellCept

**Why do you need to take this drug?** To prevent rejection.

**How should I take this drug?** CellCept comes in two different doses: 250 milligram (mg) capsules and 500 mg coated tablets. Your doctor will decide the best dose for you.

Take CellCept two times a day: Once in the morning, and again 12 hours later in the evening. So, if you take a pill at 9 a.m., take another one at 9 p.m. Take the pills at the same time each day. If you miss a dose, take the next dose when it is scheduled. Do not take a double dose.

**What side effects can this drug cause?**

- Diarrhea or constipation.
- Nausea or vomiting.

- A decrease in your white blood cells and platelets.
- An increase in your risk of infection.

### **Is there anything else I should know?**

- Do not crush, split, or open CellCept pills. Avoid touching the pills' powder. If you touch the powder, wash the area well with soap and water. Rinse your eyes with water in case of contact.

Do not take any antacids, such as Maalox or Mylanta, at the same time you take CellCept.

## **Prednisone**

**What brand names does this drug go by?** Deltasone

**Why do you need to take this drug?** To prevent rejection.

**How should I take this drug?** Prednisone comes in 5 milligram tablets. Your doctor will decide the best dose for you and how often you should take it.

Take your prednisone in the morning with food.

### **What side effects can this drug cause?**

- Salt and water retention. This can cause swelling and raise your blood pressure.
- Acne.
- Rounded face or chubby cheeks.

- An increased desire to eat.
- Weight gain.
- An increased risk of stomach ulcers.
- Mood changes from time to time.
- An increased risk of sunburn.
- Diabetes.
- Eye problems, such as glaucoma or cataracts.
- Softening of bones with possible joint pain, especially in the hips. This may increase your risk of breaking a bone.
- An increased risk of infection.

**Is there anything else I should know?**

- Be sure to use a sunscreen with SPF 15 or higher when outdoors.
- Your doctor will lower your dose of Prednisone over time. Once you are on a lower dose, you probably won't suffer many side effects.
- If you miss a dose, take the dose later in the same day. If you realize that you missed your dose at night, do not take your dose and do not take a double dose the next day.

## Sirolimus

**What brand names does this drug go by?** Rapamune

**Why do you need to take this drug?** To prevent rejection.

**How should I take this drug?** Rapamune comes in 1 milligram (mg) and 2 mg tablets. Your doctor will decide the best dose for you.

This medicine is taken once a day. Most patients take this in the morning. If you are also taking Cyclosporine (Neoral) or Tacrolimus (Prograf), take Sirolimus 2 hours after you take those medicines.

On clinic days, wait to take your morning dose until after you have your blood drawn. Do this even if it means taking the drug later than usual. So, you will need to bring the drug with you to clinic.

**What side effects can this drug cause?**

- Slow wound healing.
- A rise in cholesterol or triglyceride levels.
- A decreased in your white blood cell or platelet count.
- Anemia
- Constipation, diarrhea, nausea
- An increase in your risk of infection.

**Is there anything else I should know?**

- Avoid eating grapefruit and drinking grapefruit juice while on this medicine.
- If you miss a dose, take the dose later in the same day. If you realize that you missed your dose at night, do not take your dose and do not take a double dose the next day.

## **Sulfamethoxazole/Trimethoprim**

**What brand names does this drug go by?** Bactrim SS or Septra SS

**Why do you need to take this drug?** To prevent urinary tract infections and pneumocystis pneumonia

**How should I take this drug?** One pill contains both drugs—both Sulfamethoxazole and Trimethoprim.

Drink lots of water each time you take Sulfamethoxazole/Trimethoprim.

**What side effects can this drug cause?**

- A decrease in your white blood cells.
- Decreased kidney function.
- Increased potassium level.
- Increased sensitivity to the sun.
- Rash.

**Is there anything else I should know?**

- Do not take Sulfamethoxazole/Trimethoprim if you are allergic to sulfa. Instead, you will need a special breathing treatment (Pentamidine) once a month.

## Tacrolimus

**What brand names does this drug go by?** Prograf

**Why do you need to take this drug?** To prevent rejection

**How should I take this drug?** Tacrolimus comes in different doses: 0.5 milligram, 1 milligram (mg) and 5 mg capsules. Your doctor will decide the best dose for you.

Take Tacrolimus two times a day: Once in the morning, and again 12 hours later. So, if you take a pill at 9 a.m., take another one at 9 p.m. Take the pills at the same time each day.

On clinic days, wait to take your morning dose until after you have your blood drawn. Do this even if it means taking the drug later than usual. So, you will need to bring your Tacrolimus with you to clinic.

**What side effects can this drug cause?**

- Increased blood sugar, diabetes.
- Headaches, tremors.
- High blood pressure.
- An increase in your risk of infection.
- An increase in your potassium level.
- Decreased kidney function.

**Is there anything else I should know?**

- Do not take Cyclosporine when taking Tacrolimus.
- Avoid grapefruit and grapefruit juice.
- If you miss a dose, take the next dose when you are supposed to. Do not take a double dose.

## **Valganciclovir**

**What brand names does this drug go by?** Valcyte

**Why do you need to take this drug?** To prevent viral infections, specifically cytomegalovirus (CMV), from developing.

**How should I take this drug?** Valcyte comes as a 450 milligram tablet. Your doctor will decide the best dose for you.

**What side effects can this drug cause?**

- Anemia, a decrease in your white blood cell or platelet count.
- Nausea, diarrhea.
- Rash.

**Is there anything else I should know?**

- You will take Valcyte for 2 to 6 months after your transplant.