Chapter 4: Medicines

Medicines

Taking your medicines as directed is important for your new heart and general health. The following pages have information about each of your medicines, including their use, dose and side effects.

Read through these and get to know how to safely take each of your medicines.

General information

You will be taking medicines to keep your body from rejecting your new heart (immunosuppressants). You will also need to take vitamins and minerals.

Your medicines will be prescribed to meet your needs. You will not be taking every medicine listed in this chapter. You may also need other medicines that are not listed.

Talk with your transplant coordinator, doctor or pharmacist if you have any questions or concerns about your medicine.

What not to do

- Do not stop taking any of your medicines without the approval of your transplant surgeon, cardiologist or transplant coordinator.
 - Even if you are feeling well or had your transplant many years ago, stopping your medicines could cause rejection or other serious problems.
- Do not take medicines that are not prescribed by your transplant surgeon or cardiologist. If anyone else prescribes a medicine, check first with your transplant surgeon, cardiologist, transplant coordinator or transplant pharmacist.
 - Many medicines can interact with your immunosuppressive medicines and change the levels in your blood after just one dose.
 - All new prescriptions must be approved before you take your first dose.
- Do not change the doses of your medicines on your own.

- Do not share your medicines with others.
- Do not take antacids (such as Tums® or Rolaids®) within 2 hours of taking your medicines. Antacids may decrease how well your body takes in the medicines.
- Do not run out of your medicines. If you were to run out late in the evening or on a weekend, it may be hard to find a pharmacy that can fill your prescriptions.
 - Talk with your pharmacist about setting up a refill schedule.

What to do

- Stick with the same routine for taking your medicines. This will help you remember when to take your medicines. The levels of medicine in your blood will be consistent.
- If you forget to take a dose of medicine, take it as soon as you remember. If it is more than 2 hours, call the transplant coordinator for instructions.
- If you want to take any other medicine including overthe-counter medicines, herbal or "natural" products, or dietary supplements — check with your transplant surgeon, cardiologist, transplant coordinator or transplant pharmacist.
- Have all of your prescriptions refilled at the same pharmacy.
- Using acetaminophen (Tylenol®) is generally safe. If you take too much or take it on a regular basis, you can get side effects.
 - Do not take nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Advil® or Motrin®) or naproxen (Aleve®).
- All medicines may have side effects. But just because a side effect is noted on the package does not mean you will have any of them.
 - If you have any side effects, please tell your regular doctor or transplant coordinator.
- The chance of getting a side effect goes down when the amount of medicine you take is lowered. The side effects will also become less severe.
- When you travel, always keep your medicines with you. If you are traveling by plane, place them in a carry-on bag, not your checked luggage.
- Store your medicines away from children and pets.
- Keep your medicines in their original bottles.

- Unless your doctor gives you other directions, keep your medicines at room temperature.
 - Do not leave medicines in your car or trunk during hot or cold weather. If any of your medicines freeze, throw them away and start a new bottle.
 - Do not keep your medicines in the kitchen or bathroom.
 The humidity could affect how well they work.

When to call your transplant coordinator

Please call your transplant coordinator right away if you have any of these symptoms:

- blurred vision
- trouble breathing
- seizures
- unusual bruising or bleeding
- fainting
- problems urinating
- severe diarrhea
- blood in urine or stool
- fast or irregular heartbeats
- yellowing of your skin or eyes
- severe skin rash or hives
- fever of 101.5 F or higher.

Tip

Abbott Northwestern Hospital has 3 pharmacies that can serve you:

- Heart Hospital, second floor skyway
- Piper Building, 913 E. 26th St.
- Medical Office Building, at the corner of 26th Street and Chicago Avenue.

Where to get your medicines

You may pick up your medicines from the pharmacy of your choice. Check with your insurance provider to see if you need to stay within a network of approved pharmacies.

Some local pharmacies do not routinely have immunosuppressive medicines, but can special order them for you. You may want to call the pharmacy first to make sure it has your medicines before you place an order.

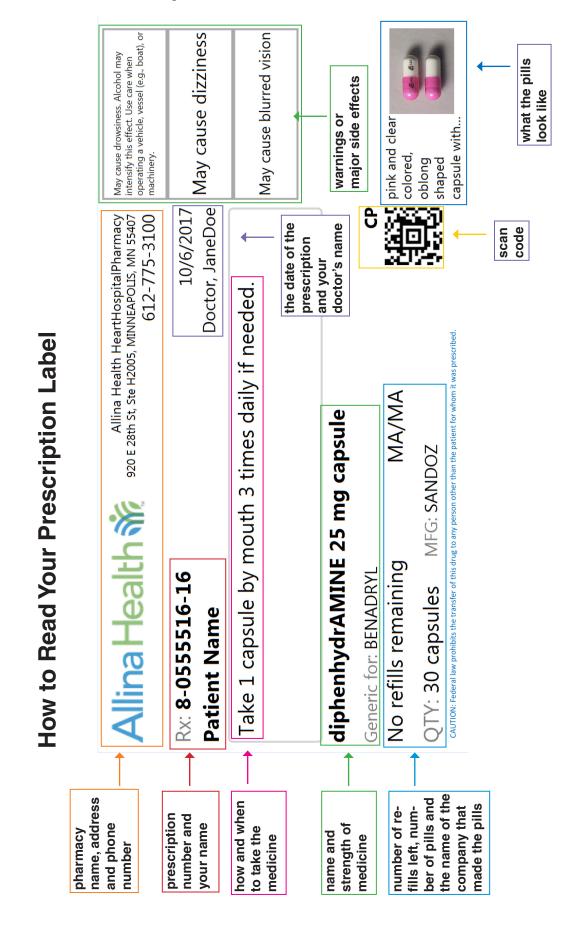
There are several mail-order pharmacies that serve the needs of transplant patients. For a list of these pharmacies, ask your transplant coordinator or pick up a brochure in the transplant clinic waiting room.

No matter where you have your prescriptions filled, always check your medicines when you get them.

- Verify the medicine's strength.
- Check the dosage instructions.
- If you note a change in the medicine's packaging, name, pill size or color, tell your pharmacy and call the transplant office to verify that you received the correct medicine.

Check with the transplant office before the pharmacist switches a "generic" medicine for a "name brand" medicine that you have been prescribed. This is especially important with your anti-rejection (immunosuppressive) medicines. Many generics are approved, but others are not recommended.

How to Read a Prescription Medicine Label



Your Medicines

Check the box in front of each medicine that you are taking.

☐ Cyclosporine (Sandimmume®: capsules or liquid)

or

☐ (Neoral®, Gengraf®: capsules or liquid)

What it does

■ It is an immunosuppressant. It helps to keep your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- The 2 types of cyclosporine are **not** the same. Do not mix them. Make sure your refill is the same medicine each time.
- Your doctor will likely change your dose often.
- Take this medicine every 12 hours.
 - For example, if you take the first dose at 7 a.m., take the second dose at 7 p.m.
- Take this medicine at the same time every day.
- Either take this medicine with or without food. But be consistent. If you start taking it with your evening meal, keep doing so.
- Do not take this medicine with grapefruit, grapefruit juice or pomegranate juice. Grapefruit juice changes the way your body takes in this medicine.
- Directions for taking the liquid cyclosporine:
 - Carefully measure the liquid dose. Use the syringe you were given.
 - Mix the liquid dose with milk, chocolate milk or orange juice in a glass or hard plastic container.
 - Drink right after you mix it.
 - Rinse the glass with more milk or orange juice and drink it.
 - Once the bottled of liquid is opened, it is good for 2 months.

Precautions

- Never skip a dose of cyclosporine.
- Do not start taking any new prescription or over-the-counter medicine until your transplant doctor, coordinator or transplant pharmacist says it's OK. This includes antibiotics and pain medicines.
- Your transplant doctor will monitor the level of cyclosporine in your blood. He or she may change your dose to prevent side effects (if levels are too high) or to prevent risk of rejection (if levels are too low).
- Keep this medicine at room temperature. Do not keep it in the refrigerator or in your car.
- Take good care of your teeth and gums. Cyclosporine can cause swollen gums.

- increased risk of infection
- kidney problems
- high blood pressure
- increased cholesterol
- increased risk of cancer
- headaches or seizures
- upset stomach or diarrhea
- trouble sleeping
- high blood glucose
- increased hair growth
- shaking, numbness or tingling in your hands or feet
- swollen gums

☐ Tacrolimus (Prograf/FK-506®)

What it does

■ It is an immunosuppressant. It helps to keep your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Your doctor will likely change your dose often.
- Take this medicine every 12 hours.
 - For example, if you take the first dose at 7 a.m., take the second dose at 7 p.m.
- Take this medicine at the same time every day.
- Either take this medicine with or without food. But be consistent. If you start taking it with your evening meal, keep doing so.
- Do not take this medicine with antacids (such as Tums® or Rolaids®).
- Do not take this medicine with grapefruit, grapefruit juice or pomegranate juice. Grapefruit juice changes the way your body takes in this medicine.

- Never skip a dose of tacrolimus.
- Do not start taking any new prescription or over-the-counter medicine until your transplant doctor, coordinator or transplant pharmacist says it's OK. This includes antibiotics and pain medicines.
- Your transplant doctor will monitor the level of tacrolimus in your blood. He or she may change your dose to prevent side effects (if levels are too high) or to prevent risk of rejection (if levels are too low).
- Keep this medicine at room temperature. Do not keep it in the refrigerator or in your car.

- increased risk of infection
- kidney problems
- high blood pressure
- increased cholesterol
- increased blood glucose
- increased risk of cancer
- headaches, dizziness or feeling tired
- upset stomach or diarrhea
- trouble sleeping or anxiety
- increased hair growth
- shaking, numbness or tingling in your hands or feet
- if you have gout, it may get worse
- blurred vision or light sensitivity
- ringing in the ears

□ Azathioprine (Imuran®)

What it does

■ It is an immunosuppressant. It helps to keep your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine at the same time every day.
- Take Imuran with food to decrease stomach upset.

- Never skip a dose of azathioprine.
- Keep this medicine at room temperature.
- Keep this medicine in its original container.
- Tell your transplant doctor or coordinator before you start any new medicines. This includes any over-the-counter medicines.
- Tell your transplant doctor, coordinator or transplant pharmacist if you have any unusual bruising or bleeding.

- increased risk of infection
- upset stomach
- heartburn
- lowered white blood cells
- increased risk of cancer

■ Mycophenolate Mofetil (CellCept/MMF®)

What it does

■ It is an immunosuppressant. It helps to keep your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine at the same every day.
- Take this medicine every 12 hours. For example, if you take the first dose at 7 a.m., take the second dose at 7 p.m.
- Do not open, break, crush or chew this medicine before swallowing it.
- If you take antacids (such as Tums® or Rolaids®) or medicine that has "aluminum" or "magnesium," take them 1 hour before or 2 hours after taking your mycophenolate motefil.

- Never skip a dose of mycophenolate motefil.
- Your transplant doctor will monitor the level of this medicine in your blood. He or she may change your dose to prevent major side effects or if you have many rejection episodes.
- Keep this medicine at room temperature. Do not keep it in the refrigerator or in your car.
- Tell your transplant doctor, coordinator or transplant pharmacist if you have any unusual bruising or bleeding.
- Tell your transplant doctor or coordinator before you start any new medicines. This includes any over-the-counter medicines.
- Keep this medicine in its original container.
- Keep this medicine at room temperature.

- increased risk of infection
- lowered white blood cells, platelets or both
- upset stomach, vomiting or diarrhea
- loss of appetite
- stomach pain
- increased risk of cancer

☐ Sirolimus (Rapamycin®, Rapamune®)

What it does

■ It is an immunosuppressant. It helps to keep your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Your doctor will likely change your dose often.
- Take this medicine at the same every day.
- Either take this medicine with or without food. But be consistent. If you start taking it with your evening meal, keep doing so.
- Take sirolimus at least 4 hours after taking cyclosporine. It is OK to take it as the same time as tacrolimus.
- Do not take sirolimus with grapefruit, grapefruit juice or pomegranate juice. Grapefruit juice and pomegranate juice changes the way your body takes in this medicine.

- Never skip a dose of sirolimus.
- Tell your transplant doctor or coordinator before you start any new medicines. This includes any over-the-counter medicines.
- Keep the sirolimus tablets in their original container. Keep them at room temperature.
- Keep the sirolimus liquid in the refrigerator. Use it within 1 month of opening the bottle.

- increased risk of infection
- increased cholesterol (especially triglycerides)
- headache
- shakiness
- sleeping problems
- skin rash or acne
- high blood pressure
- upset stomach, vomiting, diarrhea or constipation
- lowered white blood cells, red blood cells, platelets or both

☐ Prednisone (Deltasone®)

What it does

■ It prevents your body from rejecting your new heart.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine at the same every day.
 - If you are taking only one dose a day, take it in the morning.
- Take this medicine every 12 hours.
 - For example, take the first dose at 7 a.m., take the second dose at 7 p.m.
- Do not take prednisone within 1 hour of taking antacids (such as Tums® or Rolaids®).
- Take prednisone with food.

- Never skip a dose of prednisone.
- Do not stop taking prednisone suddenly without your transplant doctor or coordinator's supervision.

- increased risk of infection
- upset stomach, heartburn, ulcers, stomach bleeding
- red or dark tarry stools
- water and salt retention
- weight gain
- puffiness in the face
- increased appetite
- muscle weakness or cramping
- mood changes, anxiety or depression
- weak, brittle bones (osteoporosis)
- problems with wounds healing
- skin infections
- increased blood glucose
- cataracts (cloudy vision)

□ SoluMedrol®

What it does

■ **It is a steroid.** It is given in high doses to reverse an episode of rejection.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Your nurse will give you 1 dose a day.
- It is given through an intravenous (IV) line in your hand or arm.

☐ Trimethoprim Sulfamethoxazole (Septra®, Bactrim®)

What it does

■ It is a sulfa. It is given to help prevent infection.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Drink a lot of liquids when you take this medicine.
- Most people will take this medicine for 1 year after a transplant.

Precautions

- Tell a member of your transplant team if you have any of the below side effects.
- You are at an increase risk for bleeding if you take warfarin (Coumadin® or Jantoven®).

- headaches, confusion or shaking
- upset stomach, vomiting, diarrhea, stomach pain
- loss of appetite
- kidney problems
- increased sensitivity to sunlight
- blood in urine
- skin rash, itching

☐ Acyclovir (Zovirax®)

What it does

- It helps prevent or treat herpes simplex (cold sores) and shingles. Both are diseases caused by viruses.
- It helps prevent the CMV (cytomegalovirus) infection. This is a virus that is a member of the herpes family.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Drink a lot of liquids when you take this medicine.
- Most people will take this medicine for 4 months after a transplant.

Precautions

■ Tell a member of your transplant team if you have any of the below side effects.

- headaches, confusion or shaking
- skin rash, itching
- fever of 100.5 F or higher
- chills
- kidney problems
- lowered white blood cells
- upset stomach, vomiting, diarrhea, stomach pain

□ Voriconazole (Vfend®)

What it does

■ It is an anti-fungal medicine. It helps prevent infections from fungus (such as athlete's foot).

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine every 12 hours.
- Take this medicine at the same time every day. Take it 30 to 60 minutes before you eat meals.
- Do not take this medicine with grapefruit, grapefruit juice, pomegranate seeds or pomegranate juice. They change the way the medicine works in your body.

Precautions

- Never skip a dose of voriconazole.
- Keep this medicine at room temperature. Do not keep it in cold, warm or humid areas (such as the refrigerator, bathroom sink or your car.)

- headache
- dizziness
- blurred vision
- light sensitivity
- ringing in your ears
- having hallucinations (seeing things that are not real)

□ Clotrimazole	(Mycelex®	Troche):	lozenges
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or

■ Nystatin: liquid

What it does

■ It is an anti-fungal medicine. It helps prevent or treat thrush (candidiasis), a yeast infection in your mouth.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Mycelex Troche: This is used only with cyclosporine.
 - Let the lozenge slowly melt (dissolve) in your mouth after meals.
 - Do not chew the lozenge.
 - Do not swallow the lozenge whole.

■ Nystatin:

- Rinse your mouth and swallow.
- Hold the liquid in your mouth for 10 to 15 seconds before you swallow it.
- Do not eat or drink for 15 minutes after you take it.
- Most people take this medicine for 3 months after a transplant.

Precautions

- Take good care of your teeth and gums.
- If you are taking tacrolimus, you will only be able to take nystatin.

- upset stomach, vomiting
- mouth irritation
- diarrhea
- bad or odd taste in your mouth

□ Aspirin

What it does

■ It is a salicylate medicine. It acts as a "blood thinner" to keep platelets from clumping together.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take aspirin once every day.
- If you need surgery, call the transplant clinic to ask if you should stop taking aspirin before your surgery.
- You do not need to stop taking aspirin before you have an angiogram.

Precautions

- Do not take more aspirin than your transplant doctor says.
- Take aspirin with food or by coated aspirin the keep from getting an upset stomach.

Possible side effects

- upset stomach
- bleeding problems

□ Valganciclovir (Valcyte®)

What it does

■ It helps prevent and treat the CMV (cytomegalovirus) infection.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine once a day.
- Take this medicine with food.
- Do not break or crush the tablets.
- Most people will take this medicine for 6 to 9 months after a transplant.

Precautions

■ Tell a member of your transplant team if you have any of the below side effects.

Possible side effects

- decreased number of blood cells
- upset stomach, vomiting, diarrhea, stomach pain
- headaches
- trouble sleeping

□ Basiliximab (Simulect®)

What it does

■ It helps reduce your risk for rejection.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- You will receive this medicine in the hospital.
- It will be given by an intravenous (IV) line.

Precautions

■ A member of your heart team will talk with you.

- nausea
- diarrhea
- constipation

☐ Anti-thymocyte globulin (Thymoglobulin®)

What it does

■ It helps reduce your risk for rejection.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- You will receive this medicine in the hospital.
- It will be given by an intravenous (IV) line.

Precautions

■ A member of your heart team will talk with you.

Possible side effects

- while you receive it:
 - mild fever
 - chills
 - itching or hives
- increased risk for infection

■ Medicine to Lower Cholesterol: Pravastatin (Pravachol®), Simvastatin (Zocor®), Atorvastatin (Lipitor®), Rosuvastatin (Crestor®)

What it does

■ It is a medicine that reduces the amount of cholesterol your liver makes.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine at bedtime. (Your liver makes more cholesterol at night.)

Precautions

- Tell a member of your transplant team if you have any of the below side effects.
- You will have blood tests while on this medicine to make sure your liver is working well and to test your creatinine level.

Possible side effects

- muscle aches or pains
- rash, itching
- chest pain
- upset stomach, diarrhea, stomach pain
- Medicine to Prevent Stomach Ulcers: Ranitidine (Zantac®), Famotidine (Pepcid®), Pantoprazole (Protonix®), Lansoprazole (Prevacid®), Omeprazole (Prilosec®), Esomeprazole (Nexium®)

What it does

■ It is a medicine that helps prevent stomach ulcers.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- If you take 1 dose 1 time a day, take it at night.
- Most people take this medicine as long as they take prednisone.

Precautions

■ Do not take any other over-the-counter antacids or heartburn medicine. Talk with your transplant doctor or nurse first.

- headache
- dizziness
- drowsiness (feeling sleepy)
- upset stomach, diarrhea or constipation
- rash

■ Medicine (Diuretics) to Reduce Swelling: Furosemide (Lasix®), Torsemide (Demadex®), Bumetanide (Bumex®)

What it does

■ It is a medicine used to reduce blood pressure and swelling (edema). It causes you to urinate more to get rid of extra fluids.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine in the morning or early afternoon so you do not have to get up at night to go to the bathroom.
- Take this medicine exactly as prescribed.
- Do not take extra medicine unless you are told to do so by a member of your health care team.

Precautions

- Your kidneys will be tested to make sure the medicine does not affect them.
- Your electrolyte level will be checked often to make sure your body has enough potassium, salt and other minerals.
- Tell a member of your transplant team if you have any of the below side effects.
- This medicine may make your skin extra sensitive to sunlight. Wear sunscreen and protective clothing when you are outside.

- upset stomach, vomiting
- stomach cramping
- low blood pressure
- feeling dizzy or lightheaded
- headache
- thirst (more than normal)
- dry mouth
- rash
- hearing problems

■ Medicine to Lower Blood Pressure: ACE Inhibitors: Enalapril (Vasotec®), Lisinopril (Prinivil®)

What it does

■ It is a medicine used to lower blood pressure.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine exactly as prescribed.
- Take this medicine at the same time each day.
- Do not use salt substitutes while you are taking this medicine. They contain potassium and the medicine can cause your body to hold onto it.

Precautions

- Tell a member of your transplant team if you have any of the below side effects.
- Use caution in hot weather and while you exercise. Be sure you drink enough water and do not overdo it.

- low blood pressure
- headaches, dizziness
- drowsiness (feeling sleepy)
- upset stomach, vomiting, diarrhea, stomach pain
- dry cough that will not stop
- kidney problems
- increase in potassium level
- rash
- change in taste

■ Medicine to Lower Blood Pressure: Calcium Channel Blockers: Diltiazen (Cardizem®), Nifedipine (Procardia®), Nicardipine (Cardene®), Amlodipine (Norvasc®)

What it does

■ It is a medicine used to lower blood pressure.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine exactly as prescribed.
- Take this medicine at the same time each day.
- For tablet or capsule: do not crush or chew it. Swallow it whole.

Precautions

- Tell a member of your transplant team if you have any of the below side effects.
- This medicine may increase your levels of cyclosporine and tacrolimus. When you start taking this medicine, your level will be checked often.
- Do not stop taking this medicine without your transplant doctor or nurse's OK.

- low blood pressure
- headaches, dizziness
- upset stomach, constipation, stomach cramps
- swelling in your ankles

■ Medicine to Lower Blood Pressure: Angiotensin II Receptor Antagonists: Losartan Potassium (Cozaar®), Candesartan Cilexetil (Atacand®), Irbesartan (Avapro®), Valsartan (Diovan®)

What it does

■ It is a medicine used to lower blood pressure.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Take this medicine exactly as prescribed.
- Take this medicine at the same time each day.
- Take this medicine with or without food.

Precautions

- This medicine may make your skin extra sensitive to sunlight. Wear sunscreen and protective clothing when you are outside.
- Tell a member of your transplant team if you have any of the below side effects.

- low blood pressure
- feeling dizzy or lightheaded

□ Alendronate Sodium (Fosamax®), Ibandronate Sodium (Boniva®)

What it does

■ It is a medicine used to keep your bones strong.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Fosamax: Take with 6 to 8 ounces of plain water 30 minutes before you have your first food, beverage or medicine of the day.
- **Boniva**: Take with 6 to 8 ounces of plain water 60 minutes before you have your first food, beverage or medicine of the day.
- Take either with a calcium with vitamin D supplement. (Follow your transplant doctor's directions.)

Precautions

- Fosamax: Do not lie down for at least 30 minutes after taking it.
- Boniva: Do not lie down for at least 60 minutes after taking it.
- Tell a member of your transplant team if you have any of the below side effects.

- ulcer in your esophagus (the tube that carries food and fluids from your mouth to your stomach)
- acid reflux (when stomach contents food or liquid leak from the stomach into the esophagus)
- muscle pain

■ Magnesium Oxide (Mag-Ox®, Uro-Mag®), Magnesium Chloride (Slow-Mag®)

What it does

■ It is a medicine used to increase your magnesium level.

How to take it

- Follow the directions carefully from your transplant doctor, transplant coordinator or transplant pharmacist.
- Do not take more of this medicine than prescribed.
- Take this medicine with or without food.
- Take this medicine at least two hours before or after taking mycophenolate mofetil (CellCept/MMF).

Precautions

■ Be sure to drink enough liquids each day.

Possible side effects

- diarrhea
- flushing

Track Your Medicines

Your transplant coordinator will give you a medicine plan before you leave the hospital. You will receive an updated plan with every visit for the first 6 months.