

Chapter 5: Complications (Problems)

Coronary Artery Disease

One possible long-term problem of a heart transplant is coronary artery disease. This means that the arteries that supply oxygen to your heart can become narrowed. You may hear members of your health care team call this CAD.

Usually, the lack of blood supply causes chest pain (angina). However, your new heart may have no nerve connections that would carry the pain signal to your brain.

The cause of coronary artery disease is unknown. It is widely believed to be caused by an immune system process, often called “chronic rejection.” Other known risk factors are high cholesterol, diabetes and high blood pressure.

How to prevent coronary artery disease

- Live a heart-healthy lifestyle.
 - Eat healthful foods.
 - Get regular exercise.
 - Avoid smoking.
- Maintain normal cholesterol levels.
- Maintain a healthy blood pressure.
- Take a small dose of aspirin every day. Follow your doctor’s directions.
- You may need to take other medicines to keep your arteries from getting too narrow.

Rejection

One major risk is rejection. Rejection is your body's natural response to the new heart.

Your immune system protects you from infection, but it also identifies your new heart as foreign tissue. Special white blood cells invade the tissue in an attempt to destroy it. The immunosuppressive medicines you are taking work against this response.

More than one half of all people have a rejection episode during the first 3 months after surgery.

Signs and symptoms of rejection

Rejection can happen even if you do not have symptoms. Signs and symptoms of a rejection episode can include:

- heart palpitations (abnormal or irregular heartbeats, unusually fast or slow)
- shortness of breath
- increased weight gain or swelling (edema)
- flu-like symptoms (chills, aches, headache, dizziness, upset stomach or vomiting)
- temperature of 100.5 or higher
- difficulty sleeping while lying on your back
- decreased appetite, abdominal "bloating"
- any heart failure symptoms.

Call the transplant office if you have any of the above symptoms.

Tip

To confirm that you have rejection, your transplant doctor will do a heart biopsy. (See Chapter 6, pages 73-74.)

How to prevent rejection

- Take all of your medicines as directed.
- Keep all lab appointments and checkups.
- Check your vital signs.
- Call your regular doctor when you are not feeling well such as a cold, allergy or the flu.
- Call the transplant office if you have any medicine changes or new prescriptions. Even over-the-counter medicines can weaken your immunosuppression medicines. This includes vitamin and herbal supplements.

Your chance of a rejection episodes decreases over time, but it is a lifelong risk. Severe rejection can weaken your heart, cause disease in your blood vessels, and cause death.

It is important to take your immunosuppressive medicines as directed for the rest of your life.

How to treat rejection

Treating an episode of rejection includes increasing anti-rejection medicine. You may also need to stay in the hospital for a few days. Your doctor will prescribe a treatment plan based on the biopsy, your history of rejection episodes, and if you have any symptoms.

Medicine treatments

Your cardiologist will choose one of the treatments below to treat the rejection:

- intravenous (IV) prednisone (Solu-Medrol®)
You will need to stay in the hospital for 3 days so the medicine can be given directly into the vein. After the IV course is finished, you will take prednisone by mouth.
You will be given a taper schedule.
- change in your immunosuppressive medicines
- other treatment options, if needed.

Infection

Your skin naturally has many germs on it. Several people can live with these germs without ever becoming sick. Because of the medicines you take, your immune system isn't easily able to keep those germs from making you sick.

Your immune system identifies foreign proteins, fungi or germs and then makes extra white blood cells to destroy the invaders. This is how your body builds up immunity to certain diseases. To your immune system, your new heart is a foreign object.

The immunosuppressive medicines and steroids decrease the ability of the white blood cells to do their work.

You need to take the immunosuppressive medicines to prevent rejection of your new heart. In preventing rejection, these medicines also decrease your body's ability to fight off infection.

Symptoms of infection

Symptoms of infection can include:

- temperature of 100.5 F or higher
- sore throat
- cough
- aching muscles
- unusual tiredness
- painful or burning urination
- urine that is bloody or cloudy
- redness, drainage or swelling around cuts, scrapes or puncture sites (such as from blood draws)
- upset stomach, vomiting or diarrhea
- white patches in your mouth or throat
- earache.

Tip

See Chapter 3, page 26 for a list of vaccines you should receive.

How to prevent infections

- **Wash your hands. This is the most important thing you can do to prevent infections.**
- Keep your home clean and dust free.
- Try to avoid being in the same room with people who have colds and influenza. Members of your care circle who are sick should wash their hands after blowing their noses. They should cover their mouth when they cough and sneeze. Avoid kissing or having close contact with anyone who is sick.
- Avoid contact with anyone who has a cold sore.
- Wear a mask when you are in the hospital or in dusty environments. This is important for the first 3 months after surgery.
- You may have pets, but not birds or reptiles.
- If you have a cat, do not handle the cat litter.
- Avoid all farm animals.
- Hunters should not dress their animals.
- Avoid caves or other areas that may have bats.
- You need to take antibiotics before you have any dental work, medical procedures or surgery. Call your transplant coordinator for a prescription.
- If you use well water, use a 1 micron filter, even if the water tested negative.
- Get plenty of rest.
- Eat a healthful diet.
- Take good care of your body.
- Cook meat medium rare to well done to destroy harmful bacteria.

Cytomegalovirus (CMV) Infection

CMV is a common virus that infects many people. It is a member of the herpes virus group.

Once you become infected, the virus stays in your body for the rest of your life without causing damage or illness. You will not get sick with CMV again unless your immune system is weak.

CMV is spread through close contact with an infected person's body fluids (such as saliva, urine, semen or blood). It is also common in people who have had an organ transplant.

Symptoms include:

- fever
- loss of appetite
- feeling tired
- upset stomach
- diarrhea.

If you think you have CMV, your doctor may do a blood test or take a culture.

You will have an antiviral medicine to prevent or treat CMV.

Cancer

Your risk for cancer rises because your immune system is unable to work as well as it should.

- Skin cancer is the most common type of cancer in people who have had transplants. Skin cancer tends to grow more aggressively in people who take immunosuppressive medicines.

Check your body often for any skin growth, sore or mole. See your primary care provider or a dermatologist right away if you notice something unusual.

- There are special cancers that can occur in people who have weakened immune systems. Lymphoma is a cancer that starts in your body's lymph system.

How to prevent cancer

- Check your body often for unusual lumps, moles that change shape or color, discharge, drainage or both.
- Tell your transplant doctor right away if you notice anything unusual. Do not wait until your next appointment.
- Have a yearly physical exam with your regular doctor.
- Follow the cancer screening tests in Chapter 3, page 26.

How to treat cancer

Cancer can be treated by any of these:

- surgery
- chemotherapy
- radiation therapy
- other medicines
- reducing your immunosuppressive medicines. (Your risk of rejection will go up. Your transplant doctor may want you to have more biopsies to check for rejection.)

Weak Bones (Osteoporosis)

Osteoporosis is a disease that causes loss of bone density, or bone mass, leaving bones thin and weak. These bones may break easily.

Bone is growing, living tissue. Old bone cells break down and new cells replace them. Bones are made of calcium, phosphorus and several other minerals. Calcium gives bones their strength and stiffness.

Without enough calcium, your bones become thin and fragile. Most people are not aware they have osteoporosis until they have pain or break a bone.

Prednisone therapy increases your chances of developing this condition.

How to prevent osteoporosis

- Have a bone mineral density test. This is an X-ray that can help your regular doctor tell if you are losing bone mass. This will help him or her tell if you are at risk for a bone fracture (break) and when.
- Eat a healthful diet that focuses on fruits, vegetables, whole grains and fat-free or low-fat milk and milk products. A healthful diet:
 - includes lean meats, poultry, fish, beans, eggs and nuts
 - is low in saturated fats, trans fats, cholesterol, salt and added sugars.
- You may need to take a calcium supplement. Talk with your regular doctor about what is right for you.
- Do weight-bearing exercises (such as walking, lifting weights, aerobics or climbing stairs). These exercises help spur bone growth.
 - Try for at least 30 minutes of exercise most days.
 - If you are not used to exercise, talk with your regular doctor before starting an exercise program.
- There are medicines that can help to “rebuild” bones. Talk with your regular doctor about what’s right for you.