

Infection

To protect your new organ(s), you are taking immune-suppression or anti-rejection medicines to keep your body's immune system from rejecting the new organ(s). These anti-rejection medicines lower your natural immune system (white blood cells that fight infection) so the new organ(s) are not seen as foreign objects by your body. However, these same important medicines increase your risk for infection.

Most transplant patients handle colds and flu like other non-transplant patients. If you develop an infection your doctor will tell you about the kind of infection you have and the treatment options. The most common types of infections are discussed below.

Preventing Infections

You need to make sure to protect yourself from infection after your surgery by taking the following precautions:

- Wash your hands carefully and frequently. This is the single most effective way to decrease the spread of germs and to prevent infection.
- Keep your hands away from your face and mouth.
- Wash your hands after coughing or sneezing, and throw tissues into the trash immediately.
- Take good care of your skin. No matter how small, carefully clean cuts and scrapes with soap and water. If you are taking prednisone, your skin will not heal as quickly as before your transplant and may bruise more easily.

- Practice good dental hygiene.
- Eat a healthy, well-balanced diet and follow safe food preparation guidelines.
- Limit your visitors for the first several weeks.
- If your visitors have cold or flu symptoms, ask them to return when they are well.
- If someone in your family becomes ill with a cold or flu, have that person follow normal precautions (using separate drinking glasses, separate towels, covering mouth when coughing, frequent hand washing, etc.).
- Keep your house clean.
- Stay active
- Be careful with sharp objects and use protective gloves if needed
- Enjoy your pets, if possible have someone else handle animal wastes such as cleaning bird cages, fish or turtle tanks or cat litter boxes. The feces of some animals contain parasites and can cause infections. If you cannot avoid contact with pet waste, use gloves and excellent hand washing afterwards. Keep pets' vaccinations up-to-date.

Bacterial Infections

Bacterial infections frequently occur after transplant. Bacteria are normally found throughout the body and on the skin. Normally these bacteria do not typically cause a problem. However, they may lead to infections because of the anti-rejection medicines you are taking. Immediately after surgery, wound infections can occur.

Infections, continued

Care of Your Incision or Wound Care

Check your incision every day until it is healed for signs of infection:

- Redness
- Drainage
- Odor
- Increased pain
- Tenderness
- Skin warm to the touch around the incision

Call the Transplant Center if you notice any of these changes.

- You may shower. Wash the incision daily with soap and water. Pat dry with a clean towel.
- Do not soak in the tub or swim until your skin incision is fully healed. This usually takes about one month.
- You may put a dry gauze dressing over the incision to soak up any drainage.
- Always wash your hands before and after treating your incision.

Fever is the most common sign of a bacterial infection. If you have a fever you must call the Transplant Center. You may be asked to go to your local doctor or come to the Transplant Center to give blood, urine and/or sputum samples. Infections can be caused by many types of bacteria. They can occur at any place in the body, including lungs, bloodstream, and urinary tract and as noted above, your wound.

If the bacteria causing your fever, is found you may be started on an antibiotic. It is very important to finish all the antibiotics as ordered, even if you feel better before all antibiotics are finished. Bacteria can become resistant to an antibiotic if all of the bacteria have not been killed. If the same infection recurs, the same antibiotic may not work for you.

Viral Infections

During the pre-transplant workup, you were tested for previous exposure to CMV, herpes simplex virus (HSV), hepatitis viruses and HIV (AIDS virus). Having infection with CMV or HSV is common. These viruses are acquired in childhood and stay dormant in the body for a lifetime. They can reactivate after a transplant when you are on anti-rejection medicine and cause illness.

Cytomegalovirus (CMV)

CMV is a common infection following organ transplantation. You are at greatest risk in the first three months after transplant because of the high doses of anti-rejection medicines. More than half of all Americans have had previous exposure to CMV, an illness which causes flu-like symptoms in the average population. Reactivation of an old dormant or new infection with CMV can cause serious infection after transplant. So, if you or your donor had prior CMV exposure, you may be placed on an anti-viral medicine.

Infections, continued

Signs of CMV Infection Include:

- Weakness
- Fever
- Night sweats
- Aching joints
- Headaches
- Upset stomach
- Throwing up
- Loose stools
- Shortness of breath

You may simply feel 'lousy' or flu like. It is very important you call your transplant coordinator if any of these symptoms occur. If you get an infection due to CMV, you may need to be admitted to the hospital. You also may need to take intravenous medicine for treatment. You may even go home either taking an oral medicine or IV medicine to fight the CMV.

Other Infections

Other infections you may acquire after transplant are listed here. Additional information on any of these infections will be provided by your doctor, if you are diagnosed.

- Herpes Simplex Virus (HSV) Type 1 And 2
- Varicella-Zoster (Chicken Pox) – (VZV)
- Herpes Zoster (Shingles) – (VZV)
- Pneumocystis Carinii Pneumonia
- Fungal Infections (Candida/Yeast)
- Aspergillosis
- Histoplasmosis
- Toxoplasmosis
- Tuberculosis (TB)

Immunizations

Ask your transplant team when you may resume your vaccination schedule. Usually we recommend you wait at least 6 months.

We recommend:

- Pneumonia vaccine every 5 years
- Flu shot yearly (not FluMist®)
- *See letter below to share with your local doctors
- Tetanus booster (Dtap) every 10 years

Live vaccines should be avoided including varicella zoster (shingles) and FluMist® immunizations. Ask your transplant team before you or any of your family members living in same household need to receive any vaccinations.

As a precaution, you should tell visitors – especially parents of young children and babies – of your increased susceptibility if any of them has had recent live vaccines.

Infections, continued

Flu Vaccine Recommendations



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Once again, we are entering the flu season. The flu virus may cause serious illness, especially in patients who take anti-rejection medicine, such as transplant patients. Therefore, we are recommending that all transplant patients, and people who live with them, receive the seasonal flu vaccine when it becomes available this month. The H1N1 (swine flu) vaccine will be built in to the seasonal flu vaccine so you will only need to get one vaccine.

The vaccine is very effective in preventing illness from influenza (seasonal flu) and H1N1 (swine flu). If people get the vaccine it DOES NOT cause them to get either seasonal flu or H1N1. Some people may get muscle aches and/or fever for a day or so after the shot. This is caused by the body's natural response to getting the vaccine.

People who have allergic reactions to eggs SHOULD NOT receive the vaccine. People who have fever, aches, or a cough should not receive the vaccine until after those symptoms go away. Tylenol, NOT ASPIRIN, should be taken for fever or pain caused by the vaccination.

Nasal influenza vaccine (FluMist) is a live virus and may not be taken by transplant patients. Close contacts of patients who have been transplanted **may** receive the live vaccine.

Any transplant patient who is in close contact with someone who has a confirmed case of the flu should first call their local doctor's office. The doctor may want to order a medicine for the flu like Tamiflu™. The doctor's office should also be called if the patient has 2 or more of the following symptoms: sore throat, fever higher than 100 degrees, or cough. In these cases, flu medicine is recommended. The transplant office should also be called with the plan of care.

It is important to remember to wash your hands thoroughly and often and avoid people who you know are sick or have the flu. You should also try to stay away from other people if you are sick.

If you see a UNMC hepatologist on a regular basis, you can call the Internal Medicine Clinic at 402-559-4015 and schedule a nurse visit to receive the vaccine. If you are an adult patient and are staying in the Omaha area, you can call the Multi-Organ Transplant Clinic at 402-559-4988 and schedule a time to receive the vaccine. All other patients should receive vaccines through their local, primary care doctors.

If you have questions or concerns regarding this information, please contact the transplant office at 1-800-401-4444, Monday through Friday, 8 a.m. to 4 p.m. CST or you can go to the Center for Disease Control Website at: <http://www.cdc.gov/flu/about/season/>.

Sincerely,
The Transplant Team

Infections, continued

Dental Exams

We recommend good routine dental care. Daily teeth and mouth care are important because your mouth can also be a source of infection. Wait 3 months after your transplant before scheduling a dental appointment except in cases of emergency.

Taking antibiotics prior to a dental exam or cleaning is not necessary. However, you may require antibiotics for more difficult procedures like pulling a tooth and there are many other medical conditions that require antibiotics before seeing the dentist.

Please contact your primary care doctor, transplant team, or other specialty doctor before your dentist appointment to decide if you will need antibiotics before your appointment.