

# Precautions for Neutropenic Patients at High Risk for Infections

## **IMPORTANT!**

These precautions are for adult patients whose neutropenia is severe enough to put them at high risk for infections. This would include patients with blood cancers who are expected to be severely neutropenic for more than 10 days.

Most patients receiving treatment for solid tumors (e.g., breast, colon) will only have neutropenia for short time, and will not need to follow many of these strict precautions.

**Your doctor will advise you what neutropenic precautions, if any, you need to follow during your treatment.** Thank you.

## **Overview**

Neutrophils are a type of white blood cell that helps your body fight infections. When your neutrophil count drops below a certain level, you are considered to have neutropenia or be neutropenic. When you have neutropenia, you are at higher risk for infections.

A number of things can cause neutropenia, including drug therapy for cancer. Not everyone with neutropenia has the same level of risk for getting an infection. Neutropenia can range from mild to severe.

Several factors can affect your risk level, such as:

- the type of cancer you have
- the kind of anticancer treatment(s) you are receiving
- any other medical problems you may have
- how low your neutrophil count has fallen (severity)
- how long you have had neutropenia

These recommendations are a general guide to help protect you from infection until your own immune system can go back to doing its job. Talk to your doctor about your risks of infection and the specific precautions you need to follow.

## General Recommendations

- Take your temperature, by mouth, 4 times a day. **Call your doctor immediately if your oral temperature is above 100.4°F (38°C).**
- Try to do some low-impact exercise, such as walking, every day.
- Always talk with your doctor before receiving any vaccines. Some, such as those with live viruses, are not appropriate for certain patients receiving chemo.
- Naturopathic and other alternative medicines are generally not advised for patients receiving chemotherapy. If you have questions about any of these products, discuss them with your doctor.
- Discuss any travel plans with your doctor.

### Do Not...

- ✓ use a rectal thermometer or a rectal suppository
- ✓ get close to people who have a cold or any contagious disease such as chicken pox or flu
- ✓ participate in activities that may cause injury such as biking, rollerblading, skiing, or skating

### Avoid

- ✓ fresh flowers, plants, and freestanding water
- ✓ public transportation, when possible (If you can't avoid it, use it when it is less crowded.)
- ✓ areas where there may be a lot of dust or mold such as construction sites, damp basements, etc.

## Medications

Depending on your medical history and the type of drug therapy you will receive, your doctor may prescribe an injection of a Colony-Stimulating Factor, or CSF, such as filgrastim/Neupogen® or pegfilgrastim/Neulasta®. This injection can to shorten the time that you have neutropenia. Many people now leave their drug therapy wearing an on-body injector that dispenses the medication at the right time. The on-body injector means you do not have to return for an injection.

Your doctor may also prescribe antibiotics to prevent infections.

### Do Not...

- ✓ **use aspirin, acetaminophen, or any other medicine to reduce a fever without checking with your doctor first.**

## Avoiding Infection and Injury

- ✓ Always wear shoes when outside and shoes or slippers when indoors to prevent cuts on your feet.
- ✓ Take care to avoid cuts or nicks when using scissors, needles, or knives.
- ✓ Women should use sanitary napkins, not tampons.
- ✓ When possible, call your doctor before you have dental work. If you have emergency dental work, you must tell your dentist that you are receiving drug therapy and give them your most recent white blood cell count.

### Do Not...

- ✓ share utensils (forks, spoons, and knives), glasses, or dishes with anyone
- ✓ share towels with anyone. Use a fresh towel every time you bathe or shower.
- ✓ use straws more than once. Be careful not to scrape or cut the inside of your mouth with the straw.
- ✓ provide direct care for any type of pet. You must not clip their nails, groom them, or bathe them.  
Have someone else clean birdcages, litter boxes, or fish tanks.
- ✓ vacuum or dust (Leave the room while someone else performs these tasks.)
- ✓ use any personal care or health products that could damage mucous membranes including tampons, rectal or vaginal suppositories, enemas, douches, rectal thermometers, etc.

## Mouth and Oral Care

- ✓ Use a soft toothbrush and run it under warm water to make it even softer. If you need something softer, use an oral sponge (toothette), which is like a Q-tip, but it has a sponge on the end instead of cotton.
- ✓ Take good care of your teeth and mouth – brush your teeth gently before and after meals (about 3 to 4 times per day).
- ✓ You may gently floss your teeth daily if you can do so without injuring your gums.
- ✓ Use an alcohol-free, peroxide-free, antiseptic mouthwash such as Biotene® every day.

## Skin Care

- ✓ **Washing your hands with soap or an antimicrobial product is the single most important action you can take to prevent infection.** Wash your hands often, before and after eating, and after using the restroom.
- ✓ Wash daily. Gently pat your skin dry – do not rub.
- ✓ Clean your genital and rectal areas well after urination, bowel movements, and sexual activity. Women should clean the area from front to back.
- ✓ Protect your hands. Wear rubber gloves when doing dishes, oven mitts when cooking/baking, and protective gloves in any situation where you may be scratched or cut. (Gardening is not recommended for patients who are neutropenic).
- ✓ Use deodorant instead of antiperspirant. Antiperspirants can block your sweat glands, which could increase your risk of infection.
- ✓ Use an electric razor instead of a razor with a blade to avoid breaks in the skin.
- ✓ Avoid sunburns. Use a sunscreen with an SPF of 30 or higher.
- ✓ If you get a cut or scrape, clean it right away with soap and water. Use an antiseptic cream and then keep it covered with a bandage until the area is healed. Keep the bandage clean and dry. Replace the bandage if it gets dirty or wet.

## Do Not...

- ✓ chew, cut, or pick at the cuticles around your nails

- ✓ have cosmetic work done on your nails that could injure your cuticles or skin
- ✓ wear artificial fingernails or nail extenders
- ✓ squeeze or scratch pimples

## Food and Digestion

- ✓ Wash all fresh fruits and vegetables before you eat or drink them.
- ✓ Municipal tap water is fine to drink. If you do not have access to municipal tap water, use boiled water or bottled water that is labeled distilled, or that has been treated with reverse osmosis or an absolute one-micrometer filter.
- ✓ Prevent constipation. Drink plenty of fluids and consider using a stool softener to help prevent straining.
- ✓ Refer to Roswell Park's Low Microbial Diet booklet for specific food guidelines, a list of bottled waters that are safe to drink, and food safety guidelines for dining out.

### Do Not...

- ✓ drink from public water fountains
- ✓ take a suppository or enema unless you have discussed it with your doctor first
- ✓ eat expired or spoiled foods
- ✓ eat raw or undercooked meat, eggs, or fish
- ✓ eat milk or cheese that is not pasteurized
- ✓ uncooked herbs and spices

## Sexual Activity

If your doctor has told you that sexual activity is allowed, please follow these guidelines to lower your risk of infection:

- ✓ Unless you are in a long-term monogamous relationship, consider avoiding sexual activity while neutropenic.
- ✓ Avoid sexual practices that could result in oral exposure to stool or that could cause injury to tissue, such as anal sex.
- ✓ Consider using a latex condom to reduce the risks of getting an infection.
- ✓ If you need lubrication during sexual activity, use a water-soluble lubricant like K-Y® jelly.
- ✓ Report any signs of infection such as discharge, itching, odor, bleeding, or pain during intercourse.

## When to Call Your Doctor

If you have any of the following symptoms, please call your doctor immediately.

- **Fever of 100.4°F (38°C) or higher**, shaking chills, or sweats (sometimes, fever is the only sign of infection)
- Redness, pain, tenderness, swelling, or drainage:
  - at an IV or central line site
  - on irritated skin, including the armpit, buttocks, mouth, genitals, or anal area
  - from any tube (feeding tube, urinary catheter, drainage tube), cut, or sore
- Pain or burning with urination
- Urine with an unusual odor; or vaginal itching or discharge
- Sores, white patches, or swelling in your mouth; your gums change color
- Difficulty breathing, a feeling of pressure in your chest, congestion, or productive cough (coughing up mucus or phlegm)
- Diarrhea or changes in odor, texture, or frequency of bowel movements
- Feeling as if you are coming down with the flu, even if you have none of the other symptoms listed

## More Information about Neutropenia

- White blood cells (WBC), red blood cells (RBCs), and platelets are produced by your bone marrow.
- Neutrophils are the “first responders” of your immune system when you are injured or when a bacteria, virus, or other foreign substance invades your body.
- Neutrophils only live for 7-12 hours. Your bone marrow must continually make more to replace the older neutrophils that have died.
- Some cancer treatments may temporarily slow down the activity in your bone marrow and prevent your body from making new blood cells.
- Being neutropenic means you are more susceptible to infections.
- Taking basic precautions can reduce the chance of developing an infection during neutropenia.
- Your physician factors in any other health problems you have when deciding whether neutropenic precautions are needed and how strict those precautions should be.
- **Signs of infection may be reduced or absent during neutropenia.** For example, you could get an infection in your skin or in your lungs (pneumonia), but not have any pus or sputum. Sometimes, fever is the only sign of infection. Common sites of infection in people with neutropenia include the digestive tract (sores or ulcerations, diarrhea), lungs (cough, shortness of breath), urinary tract (painful or frequent urination, cloudy or bloody urine), skin, and mucus membranes.
- Always check with your doctor about your white blood cell count and your current risk of infection. If you do have neutropenia, follow the precautions recommended by your doctor for the greatest benefit. Ask your doctor how long you should follow these recommendations.