

White Blood Cells and Neutropenia

Neutrophils are a specific type of white blood cell that our bodies use to fight infection. Many types of chemotherapy cause white blood cells to decrease, with the lowest level occurring about 7-14 days after each chemotherapy treatment. When this occurs, you are at greater risk for infection because your immune system is compromised. Sources of infection include other people you come in contact with, as well as your own body. Bacteria and other organisms that cause infections can also be found in food and water. The following are general precautions that should be taken by all patients to prevent infection.

- Use good handwashing techniques (this includes your family members as well). ***Handwashing is your best defense against infection!***
- Avoid people with illness.
- Do not share utensils or drinking glasses.
- Do not handle animal waste, such as changing litter boxes or cleaning bird cages.
- Do not dig in the dirt (gardening activities) or sweep outdoors. The reason for this is organisms that can cause infection are commonly found in soil.

When your immune system is compromised it is important to notify your provider of any signs and symptoms of infection:

URGENT signs and symptoms – please contact your doctor immediately with the following:

- Shaking chills, with or without fever.
- New onset of severe pain.
- Temperature greater than 100.4 degrees Fahrenheit orally.

Important signs and symptoms – please contact your doctor with the following:

- Cough or shortness of breath.
- Nasal drainage that is not clear.
- Sore throat.
- Painful or frequent urination, change in urine color and/or odor.
- Pain with bowel movements.
- Pain, redness, swelling, or heat around an IV site, incision, or wound.

Ways to assist with your care:

- Look in your mouth for signs of infection. Perform frequent mouth care.
- Keep your skin clean. Avoid cuts and scratches. Report any changes in skin including rashes, sores, and cuts.
- Wash your hands frequently and use antibacterial agents (hand sanitizer) when washing is not possible.
- Shave with an electric razor.
- Use a moisturizing lotion.
- If you have hemorrhoids, ask your doctor for advice before treating.
- Check with your doctor before having dental work.
- Monitor your temperature daily. Avoid large crowds and people who are infectious.
- Call your doctor **before** taking medications to reduce fever.

Water Safety

If your drinking water at home is not from a city water supply or a municipal well serving highly populated areas, it is not considered safe to drink by persons who are immunocompromised. Safe water can be made by boiling tap water for one minute then stored in the refrigerator and used within 3 days. Bottled water should be labeled reverse osmosis treated, distilled, or filtered through an absolute 1 micron or smaller filter.

Food Safety

- Wash hands frequently while preparing food.
- Replace dishcloths and dishtowels daily.
- Wash counter tops, utensils, cutting boards, and can openers with hot soapy water. After washing, they can be sanitized with a solution of 1 teaspoon of chlorine bleach in 1 quart of water.
- Keep raw meat, fish, and poultry and their juices away from other food. After cutting these foods, wash the cutting board, utensils, and countertop with hot soapy water, then sanitize with a bleach solution as above.
- Always wash fresh fruits and vegetables under cool running tap water before eating.
- Cut away bruised or damaged areas on fruits and vegetables.
- Use a scrub brush on potatoes or carrots if the skins are to be eaten.
- Cook eggs until they are firm, not runny. Do not eat foods that include raw or partially cooked eggs.
- Cook poultry until the juices run clear and it is white in the middle, fish until it is opaque or white and flaky, and ground meat until it is brown inside.
- Use leftovers within 4 days.
- Do not choose packages that are damaged, cans that are dented, or jars that are cracked. Check that packaged and boxed foods are properly sealed.
- Do not purchase foods if “sell-by” or “best used by” date has passed.
- Choose only pasteurized milk, cheeses, or juices
- Place meat, poultry, and fish in plastic bags. Ask to have these items placed in separate bags from all other foods.
- Avoid deli-style food, bulk food, and free store samples