

HEALTH TIP SHEET



UNDERSTANDING THE EFFECTS OF A LOW WHITE BLOOD CELL COUNT

White Blood Cells

Your body has different types of blood cells that work in a number of ways to keep you healthy. It's important for you to understand how your white blood cells protect you against infection by attacking germs that enter your body. This is why your doctor or nurse will check your white blood cell count throughout your treatment.

Chemotherapy and White Blood Cells

Chemotherapy is a commonly used treatment for cancer. These powerful cancer-fighting drugs work by killing the fastest-growing cells in the body—both good and bad. This means that along with killing cancer cells, your healthy white blood cells, called neutrophils, are killed too.

When the number of neutrophils is reduced, a condition called neutropenia occurs and your risk for getting an infection is increased. Between 7 and 12 days after you have received each chemotherapy treatment—and possibly lasting up to one week, your white blood cells are at their lowest numbers. This period of time is often called your nadir, meaning “lowest point”. This is when you are more likely to develop neutropenia. This period varies slightly depending upon the chemotherapy drug, or combination of drugs, used. Your doctor and/or nurse will let you know exactly when your white blood cell count is likely to be at its lowest.

You should watch very carefully for signs and symptoms of infection during this time. During these high-risk days, you should take your temperature any time you feel warm, flushed, chilled, or not well.

What is Nadir?

Chemotherapy treatment will usually involve a number of chemotherapy doses (sometimes called cycles). The period of time beginning 7–12 days after you finish each chemotherapy dose—and possibly lasting up to one week—is when you have the fewest white blood cells in your body. Because of this, it will be extra hard for your body to fight off germs during this time.

This period of time is sometimes referred to as nadir, which means “lowest point”. For example, if you have chemotherapy on August 7, you are at highest risk of picking up an infection between August 14 and August 19. This period varies slightly depending upon the chemotherapy drug, or combination of drugs, used.

What Can You Do During Your Nadir?

- Find out from your doctor and/or nurse exactly when your white blood cell count will be at its lowest.
- Be extra careful during this time.
- Try to remember to take your temperature every evening, and call your doctor if you have a temperature of 100.4°F or higher for more than 1 hour, or a one-time temperature of 101°F or higher.

Low White Blood Cell Count

To help show what we mean, take a look at the picture below. You will notice that the figure on the right features a person who is going through chemotherapy and has fewer white blood cells than the healthy person on the left. As a result, the person on the right has an immune system that is not as strong. This means they are less able to fight against germs that may enter the body and are at higher risk for getting an infection.

If you are receiving chemotherapy, you may be at risk for getting an infection. Take the right steps toward preventing infections during cancer treatment by visiting www.PreventCancerInfections.org



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