

# Neutropenia (Low White Blood Count)

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Your blood is made up of many solid particles, cells and fluid. One type of cell is your white blood cells. Neutrophils (new-tro-phil-s) are a specific type of white blood cell.

White blood cells fight infection and neutrophils start the fight.

Neutropenia (new-tro-pee-ne-a) happens when you do not have enough neutrophils. If you have this problem you are neutropenic. You are at a greater risk of infection when you do not have enough neutrophils.

The lower your white blood cell count (WBC) the higher your risk of infection. It is very important that infections are caught early and treated quickly.

A normal white blood cell count is between 4,500 -11,000 (or 4.5-11). Your white blood cell count may go as low as 100 (or .1).

Absolute Neutrophil Count (ANC) is the term used to describe the number of neutrophils in your blood. A normal ANC is about 2500-7500 (or 2.5-7.5).

## What causes neutropenia?

Neutrophils, like other blood cells, are made in your bone marrow and released into the blood stream. Some cancer treatments, certain types of cancer and other illnesses can affect the bone marrow so not enough neutrophils are made.

Stem Cell Transplant and cancer systemic therapy (sometimes called chemo) may lower your white blood cell count temporarily. Usually, your blood counts will be at their lowest 10-14 days after cancer treatment. Usually, your counts will return to normal over the next 2 weeks. Your blood counts will be checked before each treatment.

Your doctor, nurse, or pharmacist can tell you how much of a problem neutropenia is with your type of cancer and your treatment.

**What are your questions? Please ask.**

**We are here to help you.**

## **When would my doctor prescribe medication to prevent neutropenia?**

Your doctor may prescribe a growth factor to prevent neutropenia. Growth factors like GCSF<sup>®</sup>, Neupogen<sup>®</sup>, or Neulasta<sup>®</sup> are used to reduce the risk of neutropenia. Growth factors cause the bone marrow to release neutrophils into the blood.

Growth factors are prescribed in the following situations:

- The chemotherapy you are having is known to cause neutropenia more than 20% of the time
- You have previously developed febrile neutropenia after chemotherapy
- You have had a delay in your chemotherapy because of neutropenia

## **What are the signs and symptoms of an infection?**

Often the only sign of an infection is an increase in your temperature. Make sure you have a digital oral thermometer at home, that you are able to easily read.

Take your temperature when you feel warm, chilled or unwell. Your doctor or nurse may ask you to take your temperature more often.

Unless directed by your doctor or nurse, do not take acetaminophen (Tylenol<sup>®</sup>), ibuprofen (Advil<sup>®</sup>, Motrin<sup>®</sup>) or naproxen (Aleve<sup>®</sup>). These drugs can prevent a fever from being noticed. Please talk to your doctor or nurse if you need pain medication.

An infection can occur anywhere. Most infections occur in the mouth, blood, lungs, bladder, kidneys and skin.

It is very important that infections are caught early and treated quickly. If you have any of the following symptoms, call your nurse or doctor, right away:

- A new sore mouth or throat
- Pain or difficulty passing urine
- New diarrhea
- Swelling, redness, rash, or drainage on your skin
- New cough or shortness of breath
- “Flu-like” feelings

**Contact your doctor or nurse with any other questions or concerns.**

## **What is the Fever Card?**

You will get a yellow card that tells you and the Emergency Department staff what to do if you have a fever.

The yellow card alerts Emergency Department staff that you are a Cancer, Hematology or Stem Cell Transplant Patient with a fever, who should be treated within 60 minutes.

Although your care is a priority, you may still have to wait while other patients, with more urgent concerns, are treated.

You should only use the yellow card if you have a fever. If you need to go to the Emergency Department for another reason, you do not need to show your yellow card; just tell the staff you are a cancer patient and give them a list of your medications.

## **When should I go to the Emergency Department?**

It is very important that infections are caught early and treated quickly.

If you have a temperature of 38°C (100°F) or higher, or uncontrolled shivering go to your nearest Emergency Department right away.

Give the Emergency Department staff your yellow card, a list of your medications and tell them the date and type of your last cancer treatment.

In the Emergency Department, you do not need to be kept away from other patients.

## **How can I prevent infections?**

- Wash your hands often.
  - › Wash your hands with soap and water for at least 15 seconds.
  - › Consider carrying hand sanitizer with you.
- Avoid crowds and sick people.
- Keep your mouth moist and clean.
  - › Use a soft toothbrush.
  - › Do not use mouthwashes that contain alcohol.
- Keep your skin moist and clean.
  - › Be careful not to burn or cut your skin.
  - › Wear gloves when working with plants and flowers.

- › Use a clean electric shaver instead of a razor.
- Do not use nose sprays, suppositories, enemas, or rectal thermometers.
- Use a water based lubricant during sex.
  - › Urinate before and after sex to prevent bladder infections.
  - › Do not have oral or anal sex.
- Women should use sanitary napkins, not tampons.
  - › Do not douche.
- Have someone else clean up after your pets or livestock.
  - › Do not handle animal waste.
  - › Do not change litter boxes or birdcages.
- Do not use a humidifier.
- Talk to your cancer doctor or nurse before you get any vaccinations, like the flu shot.
- Talk to your cancer doctor before you have any dental work.
- Tell your dentist you are having cancer treatment.
- Smoking increases your risk of a lung infection.
  - › If you smoke and want help to quit, talk with your doctor or nurse.
- Follow Canada's Food Guide for healthy eating.
  - › Wash fruits and vegetables well before eating.
  - › Avoid raw food such as fish/shellfish.
  - › Drink 6-8 glasses of fluid a day, unless your doctor gives you other advice.
- Exercise regularly.

### **What if I cut or scratch myself?**

For minor cuts or scratches, clean the wound well with an antiseptic and put on a Band-Aid®. The Band-Aid® should be changed everyday until the cut is healed.

Call your doctor or nurse if the wound does not heal or becomes red, swollen, sore or has drainage.

## **Questions to ask your cancer care team**

- What is my white blood cell count (WBC)?
- What is my Absolute Neutrophil Count (ANC)?
- Will my cancer or my cancer treatment lower my white blood cell count (WBC)?
- How often should I have my white blood cell count (WBC) checked?
- What do I do if I have a fever?
- How often should I take my temperature at home?
- When should I go to the Emergency Department?

**This information does not take the place of the care and advice of your doctor or health care team.**

Talk to your doctor or health care team about your health concerns, treatment options and any questions you have about your cancer treatment.

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