**What Are My Counts?**

Blood cells are produced in the bone marrow and is the spongy tissue filling the centre core of your bones. One of the major side effects of chemotherapy is that it temporarily decreases the bone marrow’s ability to make blood cells. As a result, during your treatment you will have a slight to severe decrease in your blood cells. In order to monitor changes in your blood, a complete blood count [CBC] will be ordered by your physician.

There are three major types of blood cells:
- **RED BLOOD CELLS** (erythrocytes) which carry oxygen to the tissues of the body.
- **PLATELETS** which aid in the clotting of blood.
- **WHITE BLOOD CELLS** (leukocytes) which help fight infection.

**Red Blood Cells**

Red blood cells carry oxygen to the tissues in your body. When your red blood cell count is low, your body tissues do not get enough oxygen to do their work.

The blood count test that measures red blood cells is called **hemoglobin** and/or **hematocrit**.

When these measures are low it is called anemia. If you are anemic, you may feel:
- Tired and/or weak
- Dizzy
- Short of breath
- Pounding in your head or ringing in your ears

Be sure to report any of these symptoms to your nurse or doctor.

What to do when you are anemic:
- Get plenty of rest.
- Save your energy by having short periods of activity and by resting between activities.
- To avoid getting dizzy, move slowly. When getting up from a lying position, sit up for several minutes before standing. Stand up slowly to avoid getting dizzy or even fainting.

Sometimes a red cell transfusion is necessary to bring your hemoglobin up.

**Normal hemoglobin is between 115 - 160 g/L.**

**Platelets**

A low platelet count is called thrombocytopenia. Platelets are the cells in our bodies that help with the clotting of blood. Therefore, if your platelet count is low you may bleed more easily and for a longer period of time. You may also notice signs of bleeding such as:
- Nosebleeds
- Easy bruising
- Prolonged bleeding from a cut
- Black or bloody stools
- Brown or red urine
- Petechiae (tiny pinpoint-sized, red or purplish spots on your skin especially around the ankles)

Be sure to notify your nurse or doctor of any of these symptoms.

Here are some guidelines for you to follow if your platelet count is low:
- Avoid activities that can cause physical injury - especially contact sports.
- Use only an electric razor.
Clean your nose by gently blowing.
Take necessary actions not to become constipated.
Do not floss your teeth and use only a soft toothbrush for brushing.

If you cut yourself or if bleeding occurs, apply pressure using a clean cloth for at least 5 minutes. If you should have a nosebleed, apply pressure or ice over the bridge of your nose for several minutes.

You should call your doctor if you bleed anywhere for more than 10 minutes or if you notice blood in your vomit, urine, sputum or bowel movements.

Sometimes a platelet transfusion is necessary to stop the bleeding or to prevent bleeding.

A normal platelet count ranges from 125,000 to 400,000 $10^9$/L.

**White Blood Cells**

White blood cells help fight infection. Their function is to protect your body against the germs that cause infection.

Although there are several kinds of white cells, the most common are lymphocytes and neutrophils.

**Lymphocytes** (pronounced Lim-foh-sites) are the cells used to fight against viral infections.

**Neutrophils** (pronounced New-troh-fils) are the cells which attack and destroy bacteria, and are your main defense against infections. When your neutrophil count is low, you are at risk for getting an infection.

Most infections occur in the mouth, throat, sinus, lungs, anal areas and skin. If you have a central venous catheter in place they can also be a source of infection.

The following symptoms can be associated with a low white count and infection:

- A sore throat
- Shaking, chills
- A cough
- Eye/ear discharge
- Sweating
- Pain
- Nasal congestion
- Burning while urinating
- Redness/swelling
- Painful ‘burn’

**Guidelines to decrease your risk of infection:**

- Wash your hands frequently especially after using the washroom and before eating.
- Maintain good body hygiene by bathing or showering every day.
- Women should use sanitary pads instead of tampons for menstruation, and avoid douches.
- Avoid people with pneumonia or open sores.
- Do not use suppositories.
- Avoid vaccinations until and unless approved by your Hematologist. Avoid people recently vaccinated with live vaccine. This would most likely be infants 12-15 months of age who have received their MMR. Do not visit until 6 weeks after the needle.

It is very important for you to watch for signs of infection. Fever is often an early sign of infection. When your white blood cell count is low you should take your temperature regularly at least 4 times/day. In addition, if you feel warm or have chills take your temperature then. If you have a fever greater than 38° C, **YOU MUST CONTACT YOUR CNE OR THE HEMATOLOGIST ON CALL.**