

# Bone Marrow Depression From Radiation Therapy

There are three kinds of cells in your bone marrow:

- White blood cells (WBCs), which fight infection
- Red blood cells (RBCs), which carry oxygen throughout your body
- Platelets, which help your blood to clot

The cells in your bone marrow are sensitive to radiation therapy. The number of WBCs, RBCs, and platelets in your body may decrease, depending on the part of your body being treated and the dosage of radiation. This decrease is usually temporary, but in some cases it may be permanent.

Because the number of your blood cells may decrease, you will need to follow special instructions. You may need to have blood tests while you are receiving radiation treatments and for some time after your treatments have ended. Your nurse will check the boxes below to indicate what special information you need. Your nurse or doctor will also give you other instructions as needed.

**When your white blood cell count is lower than usual, you have an increased chance of getting an infection.**

- Take your temperature: \_\_\_\_\_
- Do not take aspirin (such as Bufferin), aspirin substitutes (such as Tylenol or ibuprofen), or any other over-the-counter medications without your doctor's advice, because it could mask a fever or signs of infection.
- Avoid people who have colds, the flu, or other infections.
- Avoid crowds or areas where there may be more people with contagious disease.
- Brush your teeth with a soft bristle toothbrush after every meal and at bedtime.
- Drink at least six to eight 8 ounce glasses of water daily throughout your radiation therapy, unless your doctor has restricted the amount of fluids you can drink because of another medical condition.
- Cook food thoroughly. Do not eat uncooked meat, fish, fruits, vegetables, or eggs.
- Wash hands, utensils, cutting boards, and counters after each contact with raw food.

Call your nurse or doctor if you:

- Have a temperature of 101°F (38.3°C) or higher or chills
- Show signs of catching a cold or the flu
- Have any sores or cuts that show redness, warmth, or tenderness, or have new or unusual drainage
- Develop any new area(s) of pain or tenderness
- Develop sores or white spots in your mouth or on your lips

**When your red blood cell count is lower than usual, your skin may be pale, you may feel tired, need to rest more often, or have trouble catching your breath.**

- Eat a balanced diet.

- Space your activities throughout the day.
- Rest and relax as often as you need.
- Plan mild exercise or an activity you enjoy, such as walking, bowling, or gardening.

Call your nurse or doctor if you:

- Have trouble catching your breath
- Become dizzy
- Develop chest pain
- Develop a rapid or irregular heartbeat (palpitations)

**When your platelet count is lower than usual, you may notice that you bruise and/or bleed more easily.**

- You also may develop small red dots under your skin that look like a rash. They are called petechiae [peh-TEE-kee-eye]. Check your skin daily for bruises and petechiae and call your nurse or doctor if they occur. When your platelet count is low, it is very important to prevent minor cuts and injuries.
- Use pads or gloves to handle hot pots and pans or while gardening. When using knives or tools, be careful to avoid injury.
- Do not play contact sports, such as football, hockey, or wrestling.
- Use a soft bristle toothbrush. Check with your nurse or doctor to find out whether you should floss your teeth.
- Blow your nose gently, one nostril at a time, while keeping your mouth open.
- Do not take aspirin or ibuprofen without your doctor's approval.

### Things to Report to Your Nurse or Doctor

Call your nurse or doctor if you have any unusual or prolonged bleeding. This may include bleeding from your gums or mouth, nose, vagina, or rectum. It may also include blood in your urine or stool. Blood may cause the stool to appear black and resemble tar.

### In an Emergency Call:

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