



Bone Marrow Harvest for Pediatric-Aged Donors

What is Bone Marrow?

Bone marrow is the flexible tissue found in the center of your bones. New blood cells form in your blood marrow every day. Some blood cells remain in the marrow and some are released into the bloodstream to replace worn out cells. Bone marrow makes stem cells, red blood cells, white blood cells, and platelets.

- Red blood cells carry oxygen to all parts of the body.
- White blood cells help fight infections.
- Platelets help blood clot and prevent bleeding.

What is a Bone Marrow Harvest?

A **bone marrow harvest** is the removal and collection of bone marrow. The collected marrow is filtered and then is either given to the patient or stored until it is re-infused during a bone marrow transplant (BMT).

Bone marrow is collected by inserting a needle through the skin into the inner cavity of the bone. The back of the hip bone (iliac crest) is commonly used.

Before the Bone Marrow Harvest

- Do not take aspirin or any products containing aspirin for 7 days before the harvest procedure.
- We will do a complete medical history, a physical exam, and take blood for testing. Blood tests include screening for hepatitis and HIV.
- Tell your health care professional if you are breast feeding, pregnant, or attempting to conceive a child.
- You will see an anesthesiologist before the procedure.
- You may be asked to donate blood for a transfusion (autologous blood transfusion) that you will receive after the procedure.
- Do not eat or drink anything after the time instructed by your pediatric clinician. The time to stop eating and drinking will depend on your procedure time.

Bathing Instructions: Night Before and Morning of Your Bone Marrow Harvest

Studies show that repeated use of antiseptic/antimicrobial skin solution reduces bacterial counts on the skin, not only immediately after the shower, but also for a number of hours afterward. To help reduce the risk of surgical site infection, we strongly recommend 2 days of treatment before your bone marrow harvest.

- Do not use the antiseptic soap solution if you are allergic to CHG (chlorhexidine gluconate). **If you have any type of skin reaction such as burning, itching, redness, or rash, stop using the solution. If the symptoms do not go away, call 716-845-4447 and choose the nurse option and tell them you are a Pediatric TCT patient scheduled for a harvest.**
- During your Pediatric Center appointment, we gave you a bottle of antiseptic/antimicrobial skin solution. Please use ½ bottle of the bottle when you shower the night before the harvest. Use the other half of the bottle when you shower on the morning of your harvest.

How to Shower with CHG Antiseptic Solution

It is important that you follow all of these steps when you shower the night before your harvest and again on the morning of your harvest.

- Start by washing your hair, face, and body with your usual shampoo and soap. Rinse off completely.
- Turn off your shower.
- Apply the antiseptic to a wet clean washcloth and lather your entire body from the neck down. **Never use antiseptic solution on your face or genital area!**
- Gently wash your body for 3 minutes and focus on your lower back, hips, abdomen, buttocks, and legs. Do not scrub the skin too hard. Avoid your eyes, ears, nose, mouth, and genitals.
- Turn the water back on and rinse thoroughly with warm water.
- Do not rewash with regular soap after antiseptic solution.
- Pat yourself dry with a clean towel
- Do not apply powders, deodorants, lotions, creams, hair products, or make-up.
- Dress in freshly washed clothing.

During the Bone Marrow Harvest

After the anesthetic has taken effect, a special needle is inserted through the skin 1 to 3 times on each side of the rear hip bones and possibly the front hip bones. For each skin puncture, there are many bone punctures. The volume of marrow collected is based on the size of the patient who will be receiving the transplant. People have large amounts of bone marrow within their bones, and we will be careful to calculate not taking more bone marrow from you than you can tolerate. The bone marrow cells removed during a harvest will grow back over the following weeks after your harvest. . If your doctor determines that it is necessary, we will give you a blood transfusion. The bone marrow harvest procedure takes 2- 3 hours.

After the Bone Marrow Harvest

- Bandages will be applied to the sites after the harvest, with steri-strips under the dressing.
- You will be taken to the recovery room until you are stable.
- Afterwards, you will be moved to another location in the hospital until your doctor feels you are ready for discharge. Typically, you will be discharged by late morning or early afternoon.
- **You must arrange to have someone drive you home after the procedure.** (Because you have been sedated, you will need to wait until your doctor clears you before you can drive a car. It is dangerous to drive a car or other vehicle after you have been sedated. Your nurses will ask you to confirm that have a ride home before you are discharged.)

Home Instructions

- **Pain:** You will be sore and may have some pain at the harvest sites. You may take Tylenol® and/or use a heating pad. Your doctor may also prescribe medication for pain relief, if needed. Take it as directed. Do not take Tylenol® with other pain medicines unless approved by your doctor. You should not take aspirin, ibuprofen (Motrin®, Advil®), naproxen (Aleve®), or similar medications for 48 hours after surgery. These medications may increase the risk of bleeding.
- **Driving:** Do not drive for the rest of the day. Your doctor will let you know when you can drive again.
- **Dizziness:** To avoid dizzy spells, move slowly when changing your position for 48 hours after the harvest. When getting out of bed, sit on the side a minute or two before standing up.
- **Bandages and Dressings:** Do not remove the dressing for 24 hours after the procedure. Do not remove any of the steri-strips.
- **Bathing and Showering:** You may take a shower 24 hours after the procedure, after removing the bulky outer dressing. Leave the steri-strips in place and allow them to fall off on their own. **No tub baths are allowed for 48 hours after your procedure.**
- **Activity and Exercise**
 - ✓ No strenuous activity or heavy lifting for at least 1 week
 - ✓ No heavy exercise for 2 weeks
 - ✓ You may walk as tolerated
- **Nausea:** If you are experiencing side effects associated with anesthesia, your doctor may prescribe medication to help manage nausea and prevent vomiting.
- **Work/School:** If strenuous activity such as lifting or carrying is required, your doctor will give you a medical certification suggesting only light duty activities for a period of 1 to 2 weeks.
- **Iron supplements** may be prescribed. Avoid taking iron supplements with dairy products. Orange juice is a good option to take with iron. The iron supplements may cause constipation and you may need stool softeners.
- **Prescriptions:** Pick up your prescriptions before you get home. This will help you have better symptom control.

When Should I Call the Doctor?

A member of our clinic staff will call you within 48 hours of your procedure to check your progress and answer any questions you may have. If, however, you have any of the following problems, please call the Pediatric Center at **716-845-4447** and tell them that you are a patient who recently had a bone marrow harvest done by the pediatric TCT team.

- ✓ Drainage, bleeding, redness, or swelling at the procedure site
- ✓ Uncontrolled pain
- ✓ **Fever of 100.4 F (38° C) or higher**
- ✓ Nausea and/or vomiting