

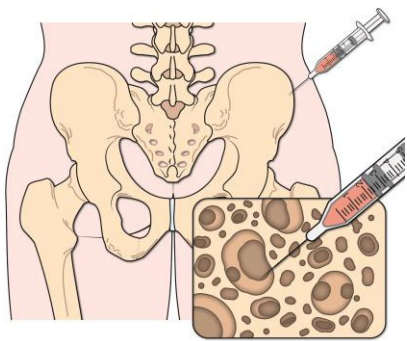
Marrow Stem Cell Collection

You or your child had blood drawn to figure out that you are a human leukocyte antigen (HLA) match to someone who needs marrow stem cells. When marrow stem cells are removed from a donor and given to another person, it is called an allogeneic marrow stem cell transplant.

This handout will explain how we collect your marrow stem cells. It will also tell you how to care for yourself after some of your marrow stem cells are removed. If you have any questions, please ask your doctor or nurse.

Bone Marrow

Bone marrow is a spongy, liquid tissue that is found inside bones such as the breastbone, skull, ribs, spine, and hipbones. The bone marrow contains many types of cells including stem cells. Stem cells are “parent” cells that produce the blood cells: red cells, white cells, and platelets. The safest place to collect marrow stem cells is from the hip bone.



Before the Collection

You will need to be assessed in the Oncology Clinic. You will meet with a stem cell transplant doctor or nurse practitioner for a “donor evaluation”.

This visit will include:

- **Lab work.** You will have a blood and a urine test. This may include a pregnancy test. Not all results are ready right away. We will call you in a few days with the results.
- **Chest x-ray and/or ECG.** You may need this test depending on your age and health history.
- **Health history and brief physical exam.** The nurse practitioner (NP) or doctor will talk over your test results and explain the marrow stem cell collection process. If you have a low hemoglobin or you are anemic, we may tell you to take iron tablets.
- **Consent forms.** Once we answer all your questions, you will need to sign two consent forms.
- **Donor questionnaire.** You will complete a series of questions about health habits.

Once the clinic visit is complete, you will go home. All the information from the clinic visit will be used to figure out if you can donate bone marrow. We will call you with test results and the date for collection.

You/your child might not be able to donate if you/your child have:

- Cardiopulmonary (heart/lung) disease
- Uncontrolled hypertension (high blood pressure)
- A psychosocial disorder

You/your child **cannot** be a donor if you have HIV or active hepatitis (liver infections).

Do not get any tattoos or body piercings before day of collection as it could affect your eligibility for donation. Do not drink excessive alcohol or use illegal drugs. It is highly advised to not smoke cigarettes, e-cigarettes, or marijuana. If there are any concerns about your health, including high risk habits or behavior, please tell the doctor, nurse practitioner, or transplant coordinator.

Night Before the Collection

A nurse from First Day Surgery will call you the day before the procedure. They will remind you what to do and where and when you should arrive. If you do not get a call by **3 pm**, call First Day Surgery at **(608) 265-8857**.

You will need to shower and scrub your back and hipbones with soap to clean your skin. We will give you a package of antiseptic soap at your clinic visit. Please tell your nurse if you have a soap allergy. Pack loose fitting clothes to wear after the marrow collection.

You may want to bring a pillow to place behind your back for the drive home.

After midnight, do not eat or drink anything. You can take your usual medicine with a small sip of water. You can brush your teeth, but do not swallow the water.

Collection Day

Your day may begin early. You will come into the hospital and go to the First Day Surgery Unit located on the 2nd or 3rd floor. A nurse will ask you to put on a hospital gown. We will ask you to remove any jewelry, glasses, or dentures. We will start an IV that we can use to give fluids and medicines. Once the operating room (OR) is ready, we will move you onto a cart into the OR.

In the OR we will give you medicine through your IV to put you fully asleep. You will have a tube in your throat to help you breathe. We will turn you onto your stomach. We will cover you to keep you warm. Only your lower back will be uncovered.

We will make a nick mark on your skin over each hipbone. We will put a needle through the nick mark into the hipbone. Inside the bone is the liquid bone marrow, which contains stem cells. We will remove about one quart (one liter) of marrow. This process is the “harvest.” We will use the same nick marks during the harvest with the needle angled each time to a new site on the bone. This process takes about 1-2 hours.

After we remove enough stem cells, small pieces of tape, called steri-strips, will hold the skin together at nick mark sites. A large dressing will cover the whole area. We will take you to the recovery room. You might spend 4-6 hours here. You can have one support person with you.

After the Collection

In the recovery room you may feel tired, sleepy, stiff, and sore around the harvest sites. You may have a sore throat from the breathing tube. You will receive IV fluids until you are able to drink. Your nurse will help you get out of bed for the first time in case you are lightheaded. The nurse will help you walk to the bathroom and around your room. Getting up and moving about helps you heal faster. Patients say walking often feels better than sitting or lying down.

If you had general anesthesia, you may have nausea. The nurses can give you medicine to help. You may have trouble passing urine right away. This should get better within a few hours. You will have the IV until you can take in enough food and fluids.

You will feel some pain at the harvest sites. You may receive pain medicine through your IV if the pain is severe. Let your nurse know if you have pain. You may use acetaminophen or ibuprofen at home.

Going Home

You will need someone to drive you home. Before leaving, you will need to be eating, drinking, and urinating. The marrow harvest sites need to be dry.

Home Care

You will have a dressing over each harvest site. Keep the dressings in place for 24 hours after the harvest. You may shower 24 hours after the harvest. Keep the dressings on while you shower. After you shower the dressing will be easier to remove.

You will have steri-strips under the dressing. Leave them in place. They will fall off over the next few days. Check the nick marks daily for signs of swelling, redness, or increased pain.

We will send you home with gauze dressings, tape, and an ice pack. Place the gauze over the steri-strips. Secure with tape. It is very common for the sites to ooze blood for 1-2 days after the harvest. It will stop with pressure.

You can use an ice pack for the first two days after the harvest. The ice will limit bruising and help with pain.

You might find it hard to sit in a chair for long amounts of time or to climb stairs. Slowly increase your activity without doing too much. You can resume any activity that does not make your back hurt. Most patients say it feels better to keep moving rather than to sit or lie in bed. To decrease muscle stiffness, walk often.

Avoid any activity that puts stress on the lower back and hips. Avoid jogging, heavy lifting or turning, for about one week. Resume your normal routine after 3-4 days.

You can resume driving when you are not taking pain medicines and you are not dizzy or light-headed.

Resume your normal eating and drinking. Drink one to two quarts of fluid daily for 3-4 days. The extra fluids will help with any dizziness. If you are taking iron tablets, take for about two weeks after the harvest.

If you have pain, take the pain medicine sent home with you as directed. Most people use acetaminophen (regular or extra-strength), or ibuprofen, 2 tablets every 4 hours as needed.

If you feel tired, take time out to rest during the day. It takes about 2 weeks to feel the same as you did before the harvest.

Your bone marrow will take a few days to recover from the harvest. The red blood cell count will lower after the harvest. By taking iron tablets, the count should return to your baseline within two weeks. Your white blood cell count and platelet count will not be lowered by the harvest. Bone marrow is like blood – if some is removed, you will only make more. Your doctor or nurse will talk to you about taking iron tablets and the side effect which can be constipation.

You will not need to see a doctor unless you have problems. You will have a follow-up telephone call to see how you are doing.

What happens to the stem cells after they are collected?

The marrow stem cells are taken to the stem cell lab to be processed. In the unlikely event that they cannot be used, the cells can be frozen and stored for future use. This is decided by the donor. If at any point the recipient cannot use the stored cells, UW Health will dispose of them. UW Health will try to contact you and the recipient or recipient's doctor. They will use the most current address on file in UW Health's computer system before disposal or release for research.

Costs

The recipient's health insurance covers the cost of the bone marrow harvest. If you have any questions about cost, you should ask the transplant coordinator.

When to Call

Call if you have any questions or problems.

Who to Call

UW Cancer Clinics
(608) 265-1700

Nurse Coordinator
(608) 263-0501

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 3/2021 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#5207