Marrow Stem Cell Donor

You/your child had blood drawn earlier to determine 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 to prepare for donating your marrow stem cells. It will discuss what the process will be like. It will also discuss what care you will need to follow after some of your marrow stem cells are removed. If you have any questions about this handout, 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.

Before marrow stem cell collection

You will need to come to UW Hospital for an assessment in the Oncology Clinic. The appointment will include:

1. Outpatient Lab – You will have blood and urine tests. Not all results are available immediately. You will be called in a few days with the results.

2. Chest x-ray and/or ECG – If needed, depending on your age and health history.

3. Health history and brief physical exam – The doctor will talk over your test results and explain the marrow stem cell collection process. The doctor will give you an exam and ask questions about your health history. Once all your questions are answered, you will need to sign two consents for the procedure.

4. Do not get any tattoos or body piercings before the marrow stem cell collection.

5. Once the clinic visit is complete, you will go home. The date for the marrow collection will be scheduled. You will be called with that date and time.

The night before the Collection

1. A nurse from our First Day Surgery area 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 3pm, please call First Day Surgery at (608) 265-8857.

2. You will need to shower and scrub your back and hipbones with soap to clean your skin. Use any body soap that you normally use.
3. After midnight, do not eat or drink anything. You will be able to take your usual medicine with a small sip of water. You can brush your teeth, but do not swallow the water.

4. Bring a current list of the medicines you are taking.

5. After the stem cells are collected, you will spend one night in the hospital. Bring the items you will need for a one-night stay. You will be discharged sometime the next day after the procedure. Some patients are able to leave the same day as the collection if eating, drinking, and have a ride home.

6. There is no set discharge time. You will need to be seen by the doctors and have the dressing removed from your back. You also need to feel well enough to leave. You may want to bring a pillow with you for the ride home. Some patients have said a pillow placed in the lower back makes the ride home more comfortable.

**Stem Cell Collection Day**

The day may begin early. You will come into the hospital and go to the First Day Surgery Unit. From the second (Main) floor, follow the floor path to the “D” elevator. Take the elevator to the 3rd floor and turn left. You will see the entrance to the First Day Surgery Unit. A nurse will ask you to put on a hospital gown. You will also be asked to remove any jewelry, glasses, or dentures. You will have an intravenous line (IV) started that can be used to give fluids and medicines.

Once in the operating room, you will receive your anesthesia through an IV. After the anesthesia has taken full effect, you will be turned onto your stomach. You will be covered to keep warm. The only uncovered area will be your lower back. A nick mark is made on your skin over the hipbone: one over the right hip and one over the left hip. A needle is put through the nick mark into the hipbone. Inside the bone is the liquid bone marrow, which contains stem cells. About one quart (one liter) of marrow is removed. This is called the “harvest”. The harvest will continue through the same nick marks with the needle angled each time to a new site on the bone. You will be in the operating room about 1-2 hours.

After enough stem cells are removed, small pieces of tape, called steri-strips, will hold the skin together at nick mark sites. A large dressing will cover the whole area. You will be taken to the recovery room. When you are awake, you will be taken to a hospital room. If you are donating marrow to a relative, you will likely be on the same nursing unit as your marrow recipient.

**After Stem Cell Collection**

You may feel tired, sleepy, stiff, and sore. Your nurse will help you get out of bed for the first time because you might be lightheaded. The nurse will help you to walk to the bathroom and around in your room. It is important to get up and move about to help you recover faster. Patients say walking often feels better than sitting or lying down.
If you had general anesthesia, you may have an upset stomach. Your nurses can give you medicine to help with the nausea. You may have trouble passing urine right away. This should resolve within 6-8 hours. The IV will be left in place until you can take in enough food and fluids.

You will feel some pain at the sites where the stem cells were removed. You may receive pain medicine through your IV if you have severe pain. Pain pills will be given for mild to moderate pain. Always let your nurse know if you are having pain.

If you are donating marrow to a relative, you will be encouraged to be with the marrow transplant recipient when she/he is receiving marrow stem cells. This is a happy and hopeful time.

Your bone marrow will take a few days to recover from the harvest. The red blood cell count will lower after marrow stem cell harvest. By taking iron tablets, the count should return to your baseline within two weeks after the harvest. 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.

**Going Home**

When you leave the hospital you will have some guidelines to follow.

- The doctors will remove the dressing before you go home. Steri-strips will be in place. They will peel off over the next few days. Check the nick marks daily for signs of swelling, redness, or increased pain. Inform your doctor if you develop chills or a fever.

- Once home, 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 jogging, heavy lifting or turning, horseback riding, prolonged bed rest, or inactivity.

- You will not be able to drive yourself home from the hospital. You can resume driving when you are not taking pain medicines and you are not dizzy or light headed.

- You can shower or bathe anytime.

- Drink one to two quarts of fluid (water, soda, juice) daily for three to four days. The extra fluids will help with any dizziness. Take your iron tablets (ferrous sulfate) for about two weeks after the donation. You can resume your normal diet.

- If you are having pain, take the pain medicine sent home with you as directed or you may take Tylenol® (regular or extra-strength), 2 tablets every 4 hours as needed.

- If you feel more tired than is normal for you, take time out to rest during the day. It takes about 2 weeks to feel the same as you did before the stem cell collection.

- Once you leave the hospital you will not need to see a doctor unless you have problems.
You will have a follow-up telephone call from the Stem Cell Transplant coordinator to see how you are doing. If you have any questions or problems, call the UW Cancer Clinics at (608) 265-1700 or Janelle McMannes, RN at (608) 263-0501.