About Bone Marrow

Bone marrow is the soft, spongy tissue found in the center of the larger bones in your body (such as your hip, breastbone, and pelvis). Bone marrow contains a large number of stem cells. Stem cells are immature cells that make all of the blood cells in your body: the white blood cells that fight infection, red blood cells that carry oxygen, and platelets that stop you from bleeding.

About Bone Marrow Harvesting

Bone marrow harvesting is a procedure to harvest (collect) stem cells from your bone marrow. The stem cells are then used for a stem cell transplant. They can be used for either an autologous or an allogeneic transplant.

- For an autologous stem cell transplant, your stem cells will be given back to you on the day of your transplant.
For an allogeneic stem cell transplant, your stem cells will be given to the person who’s getting the stem cell transplant. Your body will replace the stem cells over 2 to 3 months after your procedure.

Bone marrow can be removed from different places on your body, such as the front and back of your hips and your breastbone. These are called harvest sites. The most common harvest site is the back of the hips.

Before Your Procedure

Ask about your medications
Make sure your doctor knows all the medications you’re taking, including prescription and over-the-counter medications, patches, and creams. Ask if you should stop taking any of your medications before your procedure. Some medications may suppress bone marrow and will need to be stopped.

Some medications can cause bleeding problems during or after your procedure. Examples include:

- Aspirin and medications that contain aspirin
- Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Motrin®, Advil®) and naproxen (Aleve®)
- Vitamin E
- Blood thinners (anticoagulants)

Tell your doctor or nurse if you’re taking any of these medications. Don’t take them unless your doctor says it’s okay.
Your nurse will give you information about what medications you can’t take and what you can take instead.

**Allergies**
If you have any allergies, speak with your doctor or nurse before your procedure.

**Arrange for someone to take you home**
You must have a responsible care partner take you home after your procedure. Make sure to plan this before the day of your procedure.

If you don’t have someone to take you home, call one of the agencies below. They will send someone to go home with you. There’s usually a charge for this service, and you will need to provide transportation.

**Agencies in New York**
Partners in Care: 888-735-8913
Caring People: 877-227-4649

**Agencies in New Jersey**
Caring People: 877-227-4649

**Have blood drawn, if needed**
If you’re donating stem cells for someone else (for an allogeneic stem cell transplant), you may need to have 1 unit (about 1 pint) of blood drawn before your procedure. This will be done at least 1 week before your procedure.

The blood will be given back to you after your procedure if the doctors caring for you think you need it. It will help raise your
blood counts (the number of blood cells in your bloodstream). Your doctor or nurse will talk with you about this.

The Day Before Your Procedure

**Instructions for eating and drinking before your procedure**

- Do not eat anything after midnight the night before your procedure. This includes hard candy and gum.
- Between midnight and up until 2 hours before your scheduled arrival time, you may drink a total of 12 ounces of water (see figure).
- Starting 2 hours before your scheduled arrival time, do not eat or drink anything. This includes water.

The Day of Your Procedure

Your procedure will be done in the operating room at Memorial Hospital (MSK’s main hospital).

You will get general anesthesia (medication that will make you sleep) before your procedure starts. Once you’re asleep, you will be positioned so your doctor can reach your harvest site(s). If your harvest site is the back of your hip bone, you will be moved so you’re lying on your stomach.
Once you’re in the right position, 2 doctors will put a needle through your skin and into the harvest site(s) to take out the marrow. They will do this several times to collect enough marrow.

The procedure usually takes about an hour to an hour and a half.

**After Your Procedure**

When you wake up, you will be in the Post Anesthesia Care Unit (PACU). While you’re in the PACU, you might:

- Be sore at your harvest sites. Your nurse will give you pain medication to help with any discomfort.
- Feel nauseous (like you’re going to throw up). Your nurse will give you anti-nausea medications to help with this.
- Need intravenous (IV) fluids. You will have an IV line that will be used to give you fluids, if needed.
- Need a blood transfusion (when blood is put into your body through a needle in your vein). If your blood was drawn before your procedure, that blood will be given back to you.

You will go home once you’re awake and able to eat and drink. You will get a prescription for pain medication to take home with you.

**Caring for yourself at home**

- Don’t shower for 24 hours after your procedure. After 24
hours, shower and then remove your dressings.

- Take your pain medication as prescribed. This will help with pain or stiffness.

- Follow your doctor’s instructions for starting to take aspirin, medications containing aspirin, NSAIDs, or vitamin E again.

- Drink at least 6 to 8 glasses of liquids every day for 4 days after your procedure.

- Don’t do any strenuous exercise (such as running, jogging, and aerobics) or play any contact sports (such as football, soccer, and basketball) for 1 week after your procedure. You can do light exercise such as walking.

- Don’t soak in a pool, bath tub, or hot tub for 1 week after your procedure.

- Eat a well-balanced diet high in iron (such as red meat and spinach) for 2 months after your procedure. Ask your doctor about taking iron supplements and other vitamins. For more information, read the resource *Iron in Your Diet* ([www.mskcc.org/pe/iron_diet](http://www.mskcc.org/pe/iron_diet)). You can find it online, or you can ask your nurse.

**Call Your Doctor or Nurse if You Have:**

- Bleeding from your harvest sites.

- Redness or drainage at your harvest sites.

- Pain at your harvest sites that’s getting worse or not
getting better after 1 day.

- Chills.
- A fever of 100.4 °F (38 °C) or higher.
- A cough that doesn’t go away.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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