Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

About Bone Marrow Harvesting

This information explains what to expect before, during, and after your bone marrow harvesting at MSK.

In this resource, the words “you” and “your” refer to you or your child.

About bone marrow

Bone marrow is soft, spongy tissue. It’s found in the center of the larger bones in your body (such as your hip, breastbone, and pelvis). Bone marrow has many stem cells in it. Stem cells are immature cells that make all the blood cells in your body. This includes:

- White blood cells that help your body fight infections and other diseases.
- Red blood cells that carry oxygen from your lungs to the rest of your body.
- Platelets that stop you from bleeding and help your wounds heal.

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 (aw-TAH-luh-gus) or an allogeneic (A-loh-jeh-NAY-ik) transplant.

- In an autologous stem cell transplant, your stem cells are harvested and then given back to you on the day of your transplant. The stem cells that are put back into your body will grow and mature into new blood cells.
- In an allogeneic stem cell transplant, your stem cells are harvested and then donated (given) to the person who’s getting the transplant. Your body will naturally replace the stem cells you donated within 2 to 3 months after your

procedure.

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

Before your bone marrow harvesting procedure

Ask about your medicines

Make sure your healthcare provider knows all the medicines you're taking. This includes prescription and over-the-counter medicines, patches, and creams.

Ask if you should stop taking any of your medicines before your procedure. Some medicines may suppress bone marrow (reduce the number of stem cells in your bone marrow). If you're taking one of these medicines, you'll need to stop taking it for a short time.

Some medicines can cause bleeding problems during or after your procedure. Examples are:

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

Tell your healthcare provider if you're taking any of these medicines. Don't take them unless your healthcare provider says it's OK. They'll give you information about what medicines you can take instead.

GLP-1 medicines for weight loss

It's important to tell your healthcare provider if you take a GLP-1 medicine. You must follow special eating and drinking instructions before your surgery or procedure. **It is very important to follow these instructions if you have taken a GLP-1 medicine at any time in the last 30 days. If you do not follow them, your**

surgery or procedure may be delayed or canceled.

- **Start following a clear liquid diet at 6 a.m. the day before your surgery or procedure.** Do not eat any solid food. Read *Clear Liquid Diet* (www.mskcc.org/pe/clear-liquid-diet) to learn more.
- **Stop drinking 8 hours before your arrival time.** Do not eat or drink anything after this time, including clear liquids. You can have small sips of water with your medicines.

To learn more, read *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1).

Here are some examples of GLP-1 medicines. There are others, so be sure your care team knows all the medicines you take. Sometimes, these are prescribed to help manage diabetes or other conditions. Other times, they're prescribed for weight loss.

• Semaglutide (Wegovy®, Ozempic®, Rybelsus®) • Dulaglutide (Trulicity®)	• Tirzepatide (Zepbound®, Mounjaro®) • Liraglutide (Saxenda®, Victoza®)

Allergies

If you have any allergies, talk with your healthcare provider before your procedure.

Arrange for someone to take you home

You must have a responsible care partner take you home after your procedure. A responsible care partner is someone who can help you get home safely. They should be able to contact your care team if they have any concerns. Make sure to plan this before the day of your procedure.

If you don't have a responsible care partner to take you home, call one of the agencies below. They'll send someone to go home with you. There's a charge for this service, and you'll need to provide transportation. It's OK to use a taxi or car service, but you still need a responsible care partner with you.

Agencies in New York
VNS Health: 888-735-8913
Caring People: 877-227-4649

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

The day before your bone marrow harvesting procedure

Instructions for eating

Important: If you take a GLP-1 medicine, do not follow these instructions. Follow the instructions in *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1) instead.



Stop eating at midnight (12 a.m.) the night before your surgery or procedure. This includes hard candy and gum.

Your healthcare provider may have given you different instructions for when to stop eating. If so, follow their instructions. Some people need to fast (not eat) for longer before their surgery or procedure.

The day of your bone marrow harvesting procedure

Instructions for drinking

Important: If you take a GLP-1 medicine, do not follow these instructions. Follow the instructions in *Eating and Drinking Before Your Surgery or Procedure When Taking GLP-1 Medicines* (www.mskcc.org/pe/eat-drink-glp1) instead.

Between midnight (12 a.m.) and 2 hours before your arrival time, only drink the liquids on the list below. Do not eat or drink anything else. Stop drinking 2 hours before your arrival time.

- Water.
- Clear apple juice, clear grape juice, or clear cranberry juice.
- Gatorade or Powerade.
- Black coffee or plain tea. It's OK to add sugar. Do not add anything else.
  - Do not add any amount of any type of milk or creamer. This includes plant-based milks and creamers.
  - Do not add flavored syrup.

If you have diabetes, pay attention to the amount of sugar in your drinks. It's easier to control your blood sugar levels if you include sugar-free, low-sugar, or no added sugar versions of these drinks.

It's helpful to stay hydrated before surgeries and procedures, so drink if you're thirsty. Do not drink more than you need. You'll get intravenous (IV) fluids during your surgery or procedure.



Stop drinking 2 hours before your arrival time. This includes water.

Your healthcare provider may have given you different instructions for when to stop drinking. If so, follow their instructions.

What to expect

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

You'll get general anesthesia (medicine that makes you sleep) before your procedure starts. Once you're asleep, your doctors will position your body so they can reach your harvest site(s). If your harvest site is the back of your hip,

they'll move you so that 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 bone marrow. They'll do this a few times to collect enough marrow.

The procedure usually takes about 60 to 90 minutes.

After your bone marrow harvesting procedure

When you wake up, you'll be in the Post Anesthesia Care Unit (PACU). While you're in the PACU, you may:

- Be sore at your harvest site(s). Your nurse will give you pain medicine to help with any discomfort.
- Feel nauseous (like you're going to throw up). Your nurse will give you anti-nausea medicine to help with this.
- Need intravenous (IV) fluids. Your nurse will give you fluids through an IV line placed in your vein.
- Need a blood transfusion (when blood is put into your body through a needle in your vein).

You'll go home once you're awake and able to eat and drink. You'll get a prescription for pain medicine to take home with you.

Caring for yourself at home

- Do not shower for 24 hours after your procedure. After 24 hours, shower and then take off your dressings.
- Take your pain medicine as directed. This will help with pain or stiffness.
- Follow your healthcare provider's instructions for when you start taking aspirin, medicines containing aspirin, NSAIDs, blood thinners, or vitamin E again.
- Drink at least 6 to 8 (8-ounce) glasses of liquids every day for 4 days after your procedure.

- Do not do any strenuous exercise (such as running, jogging, or aerobics) or play any contact sports (such as football, soccer, or basketball) for 1 week after your procedure. You can do light exercise, such as walking.
- Do not soak in a pool, bathtub, 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 healthcare provider about taking iron supplements and other vitamins. Read the resource *Iron in Your Diet* (www.mskcc.org/pe/iron-diet) to learn more.

When to call your healthcare provider

Call your healthcare provider if you have any of these:

- Any redness, bleeding, drainage, or pain at your harvest site(s) 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 questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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