

Bone Marrow Harvest

QE II

Bone Marrow Harvest

- A bone marrow harvest is a surgery to take stem cells from the bone marrow in the back of your hip bones.

What are stem cells?

- Your blood has 3 types of blood cells. These cells each do something different in the body:
 - › **White blood cells** protect you from infection.
 - › **Red blood cells** carry oxygen.
 - › **Platelets** prevent bleeding by helping your blood clot (stick together).
- All blood cells start out as stem cells. A stem cell can turn into a white blood cell, a red blood cell, or a platelet depending on your body's needs.

How is a bone marrow harvest done?

- This surgery is done in an operating room (O.R.).
- You will be given a general anesthetic (medication to put you to sleep during surgery) through an intravenous (I.V.) tube injected into your bloodstream.

- Two (2) doctors will use needles to take out the bone marrow.
- You will have a breathing tube in your throat. When you wake up after your surgery, your throat may feel sore.

If you are donating bone marrow, you must have:

- › a donor clearance appointment with the transplant team.
- › an assessment by an anesthesiologist (a doctor who puts you to sleep for your surgery).
- Donors meet with the anesthesiologist on the morning of the surgery, before going to the O.R.
 - › If your Cell Therapy and Transplant (CTTP) doctor has any concerns at your first visit, they may plan for you to meet with the anesthesiologist sooner.
- The anesthesiologist will explain what will happen when you have a general anesthetic, including the risks and possible side effects.

Getting ready for your surgery

- A pre-operative (pre-op) team member will call you with your appointment date and time. Your appointment will be early in the morning.

You must have a responsible adult drive you home and stay with you for 24 hours (1 day) after your surgery.

For 7 days before your surgery:

- **Do not take:**
 - › Aspirin® or any medications that contain Aspirin® (like Alka-Seltzer®, Anacin®, Bufferin®, Percodan®)
 - › ASA or any medications that contain ASA (like Dristan®, Entrophen®, Midol®, Robaxial®)
 - › Anti-inflammatory medications (like ibuprofen, Advil®, Aleve®, Motrin®)
- **Do not** drink alcohol.
- It is OK to take Tylenol® (acetaminophen).
- Have ice packs or bags of frozen vegetables ready to use after your surgery.

The night before your surgery

- **Do not** eat or drink anything after midnight the night before your surgery.
- Take a bath or a shower the evening before or the morning of your surgery. Wash all parts of your body, including your hair.
 - › **Do not** use scented products. Nova Scotia Health is scent-free.

Day of surgery

- Go to the Victoria General (VG) site, Victoria Building, 10th floor.

Remember to bring:

- Your provincial health card (MSI card)
- All of your medications in their original containers (including puffers, patches, injections, creams, and over-the-counter or herbal products)
- Loose-fitting, comfortable clothes to wear home (like a sweat suit and comfortable shoes)
 - › Anything tight may not be comfortable at the surgery site (area where you had surgery), or may not fit over a dressing

- Wear your dentures
 - › Before you go to the O.R., we will ask you to take them out and put them in a denture cup labelled with your name
- A storage case for your hearing aid, if you have one
- A storage case for your glasses, if you are wearing them
 - › We will take your glasses just before you go to the O.R.
 - › They will be returned to you in the recovery area
- **Do not** wear contact lenses
 - › If this is not possible, bring your lens container and cleaning solutions
 - › Remember to tell your nurse that you are wearing contact lenses
 - › You must take them out before you go to the O.R.
- **Do not** wear any makeup or jewelry, including toe rings. Any item used to pierce **any** body part (like the nose, belly button, tongue, or ear) must be taken out at home.

Pre-operative (pre-op)

- This is where a nurse will help you get ready for the O.R. You will be asked to:
 - › put on a hospital gown.
 - › empty your bladder (pee).
 - › remove your dentures, hearing aids, prostheses (if you have them).
- You will then be taken to the O.R. Once you have been put to sleep for surgery, we will turn you over so you are lying face down.

During surgery

- We will clean the areas on the back of your hips.
- The doctor will place a hollow needle through your skin and bone into your bone marrow. They will use a syringe to remove the bone marrow. They will do this many times on each of your hips until they have enough bone marrow.
- The amount of bone marrow taken is based on how much you weigh. It is usually about 1000 ml (4 cups). Bone marrow looks similar to blood.
- It will take about 6 weeks (1½ months) for your remaining stem cells to grow and replace your bone marrow.

- After your surgery, you will have about 5 to 6 puncture sites (where the needle went into your body) in your hips. We will put a pressure dressing on the puncture sites. The dressing will be taken off the day after your surgery.
- The surgery usually takes 1 to 2 hours.

After your surgery

- You will wake up in the Post-Anesthesia Care Unit (PACU). You will then be taken to Day Surgery for recovery.
- The nurses will check your vital signs (like breathing, blood pressure, heart rate) often.
- When you are fully awake and feeling OK, you will be discharged home or to your local accommodations.
- **You must have a responsible adult drive you home and stay with you for the first 24 hours after you are discharged. You cannot drive yourself.**

For the first 24 hours after your surgery:

- **Do not** drive a car or operate heavy machinery.
 - **Do not** sign any sign legal or important papers, or make any financial (money) decisions.
 - **Do not** drink alcohol.
 - **Do not** take any medications unless told by your doctor.
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- You will get prescriptions for:
 - › **Iron pills:** Take them with foods that are high in vitamin C (like orange juice or green, leafy vegetables). This helps your body to absorb (take in) the iron.
 - › **Pain medication (Tylenol® with Codeine No. 3):** Eat foods that are high in fibre and drink more fluids. This will help to prevent constipation (not being able to poop). If you are constipated, try using a laxative (medication to help you poop).
 - You will have a follow-up appointment with Supportive Care or the Hematology Clinic the day after you are discharged.
 - You may travel on a plane 24 hours after your surgery.

- Most people can go back to work within a few days after surgery. You may have to wait longer if your job is physically demanding or if you still have pain.

What are the possible side effects?

Common side effects include:

- Stiffness or aches in your lower back
 - › This may last for about 7 to 14 days (1 to 2 weeks). You will be given a prescription for pain medication (Tylenol® with Codeine No. 3), in case you need it.
- Nausea (feeling sick to your stomach), vomiting (throwing up), or feeling lightheaded
 - › This is from the anesthetic. It usually goes away within a few days.
- General swelling
 - › This is from the I.V. fluids you were given during surgery. It usually goes away within a few days.
- Feeling more tired than usual
 - › This is from your blood counts being lower than usual. It usually goes away within 7 days.

Call the Transplant Coordinator or your Canadian Blood Services (CBS) contact (if you are a CBS donor) if you have any of these symptoms:

- › Severe (very bad) tiredness that gets worse or does not get better after 7 days
- › Fever (temperature above 38 °C or 100.4 °F)
- › Signs of infection (like redness, pain, pus, or a bad smell) at a puncture site
- › Any other symptoms that you are concerned about

Accommodations

If you are a CBS donor:

- › CBS will plan for your accommodations. There is no cost.

If you are a related donor:

- › Your CTPP coordinator will plan for your accommodations. There is no cost.

Notes:

This pamphlet is for educational purposes only. It is not intended to replace the advice or professional judgment of a health care provider. The information may not apply to all situations. If you have any questions, please ask your health care provider.

Find all patient education resources here:
www.nshealth.ca/patient-education-resources

Connect with a registered nurse in Nova Scotia any time:
Call 811 or visit: <https://811.novascotia.ca>

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