

Bone Marrow Biopsy

What is bone marrow?

Bone marrow is the delicate tissue inside bones where blood cells are made. These blood cells include red blood cells, white blood cells, and platelets.

What is a bone marrow biopsy?

A bone marrow biopsy consists of two steps:

- Removing fluid through a needle, called an aspiration.
- Taking a tiny bit of bone and bone marrow tissue, called a biopsy.

The procedure takes about 10-15 minutes, but you may be in the office for up to 45 minutes.

The aspiration is done first. The doctor uses a needle and syringe to remove a small amount of fluid from your bone marrow. This fluid is full of blood cells.

Then the biopsy is done. A doctor uses a needle to remove a sample of bone marrow tissue from inside the bone.

These samples are sent to the pathologist, who looks at the biopsy and fluid with a microscope.

Why is this test done?

This test provides your doctor with important information about the health of your bone marrow. It shows what types of blood cells and how many of each kind your bone marrow is making.

The bone marrow is examined to:

- Find the reason for some abnormal blood tests.
- Diagnose and monitor cancer involving the bone marrow and blood clots.
Examples are leukemia, lymphoma, and multiple myeloma.
- Plan treatment for these diseases.
- Measure how treatment is working.

What are the risks to me?

A bone marrow biopsy is a common procedure and complications from it are rare, such as:

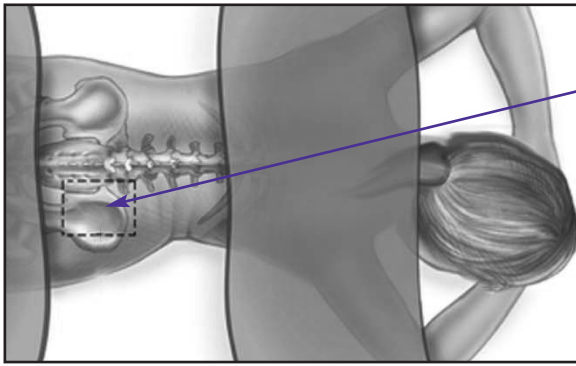
- Small risk of bleeding or infection
- Rare risk of nerve damage

Patients usually experience some mild pain or discomfort. These risks will be explained to you when you are asked to sign a consent form for the biopsy.

How do I prepare for the procedures?

- If you are on any type of blood thinner such as Coumadin, Lovenox, Fragmin, Plavix or a high dose of aspirin daily, talk with your doctor about whether or not to stop taking these medications before the biopsy.
- Try to bring someone with you to drive you home. You may have mild discomfort at the biopsy site that could make driving uncomfortable.
- You may eat and drink before this procedure.





The biopsy is taken from the pelvic bone at the back of the hip.

The Procedure:

The procedure is done in the doctor's office, a clinic or a hospital. Bone marrow is removed from the pelvic bone at the back of the hip.

- You will lie on your stomach or side on an exam table.
- The doctor will clean the skin over the bone where the biopsy will be done.
- A sterile drape will be placed around the biopsy site.
- The skin and the surface of the bone will be numbed with a local anesthetic, called lidocaine. This is similar to the novocaine that dentists use.
- After the skin is numb, your doctor will make a tiny incision in your skin. The incision is only about 1/8 inch long and does not require any stitches.

Aspiration:

- A needle is passed through the skin incision down to the surface of the bone. The needle then goes through the outer layer of the bone and into the bone marrow. You may feel pressure (but not pain) when the needle is pushed through the bone.
- A syringe attached to the needle is used to draw out a sample of the liquid inside your bone marrow.
- You will feel a sharp pain for 3 to 5 seconds, when the fluid is removed. Some people also feel a pain down the back of their leg during this part of the procedure.

Biopsy:

- The biopsy is done next. The same area of bone is used for both the aspiration and biopsy.
- The needle goes through the skin incision, onto the surface of the bone, and then into the marrow. A small sample of bone marrow tissue is taken out with the biopsy needle.
- You will feel a dull, aching pain while the biopsy is taken.

Covering the wound:

- Your doctor will put a dressing over the biopsy site and apply some pressure. The biopsy area will be covered with antibiotic ointment and a bandage.
- Keep the bandage dry for the next 24 hours.

After the procedure:

- Your hip will be sore for a day or two. You may take Tylenol (acetaminophen) as needed, or other pain medication as suggested by your doctor.
- Remember to keep the biopsy area dry for twenty-four hours.
- You may remove the dressing twenty-four hours after the procedure.

Call your doctor or nurse if you have:

- Bleeding or drainage from the biopsy site
- Fever
- Redness at the biopsy site
- Pain that is not relieved by Tylenol

When will I learn the results?

Results of a bone marrow biopsy take 5-7 days to complete. Your doctor will discuss the results with you once they are available.