

Myelogram

Patient Information

Overview

A myelogram, also known as myelography, is a diagnostic imaging procedure performed by a radiologist. A myelogram is a specialized procedure combining the use of a contrast substance with x-rays or computed tomography (CT) to evaluate abnormalities of the spinal canal, including the spinal cord, nerve roots, and other tissues.

A “contrast” substance is injected into the subarachnoid space of the spinal column before the procedure. Contrast refers to a substance that is injected into the spinal canal that causes the tissue under study to be seen more clearly. Various types of contrast substances can be used for a myelogram, such as water-soluble, and/or air-contrast. These contrast substances may be collectively referred to as contrast “dye”.

The contrast dye is injected into the spinal canal via a lumbar puncture procedure. A lumbar puncture is performed by inserting a hollow needle into the subarachnoid space in the lumbar area (lower back) of the spinal column. The subarachnoid space is the canal in the spinal column that carries cerebrospinal fluid (CSF) between the brain and the spinal cord. CSF is a clear fluid that bathes the brain and spinal cord while protecting it, like a cushion, from exterior injury. Please see the patient information sheet on Lumbar Punctures for a more detailed explanation.

After the contrast dye is injected into the CSF, it appears on an x-ray screen allowing the radiologist to view the spinal cord, subarachnoid space, and other surrounding structures more clearly than with standard x-rays of the spine.

The radiologist will also use a CT scan when performing a myelogram. A CT or CAT scan is a diagnostic imaging procedure using a combination of x-rays and computer technology to produce cross-sectional images both horizontally and vertically across the body. These images, called slices, show detailed images of the spinal canal. CT scans provide more detail than standard x-rays.

Preparation for the exam:

Do not eat any solid foods after 9pm on the evening before your procedure. You may have clear liquids until three hours before your appointment. You may take your routine medications on the day of your procedure. However, the following medications need to be discontinued prior to your exam:

- Plavix: Please discontinue 7 days prior to your exam.
- Aspirin: Please discontinue 7 days prior to your exam.
- Coumadin: Please discontinue 2 days prior to your exam. In all cases with Coumadin, consult your physician before discontinuing. Additional blood tests, such as an PT/INR (Prothrombin time/International Normalized Ratio) and PTT (Partial thromboplastin time) need to be performed before your appointment. Specifically, your INR reading needs to be less than 1.5 and your PTT reading less than 40.
- Lovenox: Please discontinue 24 hours prior to your exam.
- Heparin: Please discontinue 4 hours prior to your exam. Additional lab work such as a PTT needs to be performed prior to your appointment. Specifically, your PTT reading needs to be less than 40.

Notify your physician if you have a history of seizures or if you are taking any prescribed medications for seizures.

Notify your physician if you have a history of bleeding disorders or if you are taking any anticoagulant (blood-thinning) medications, aspirin, or other medications that affect blood clotting. It may be necessary for you to stop these medications prior to the procedure.

If back pain is a problem for you, you may take your usual pain medication in preparation for the procedure. Please make arrangements for someone to drive you home after the procedure. You may not drive home yourself.



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If you are pregnant or suspect that you may be pregnant, you should notify your physician. Radiation exposure to the fetus may cause birth defects.

Because a contrast dye is used during the procedure, there is risk of allergic reaction to the substance. Patients who are allergic to or sensitive to medications, contrast dyes, local anesthesia, iodine, shellfish, or latex should notify their physician. Also, patients with kidney failure or other kidney problems should notify their physician.

- Because this procedure involves a lumbar puncture, the following potential complications may occur:
- A small amount of CSF can leak from the needle insertion site. This can cause headaches after the procedure.
- There is a slight risk of infection because the needle breaks the skin's surface, providing a possible portal of entry for bacteria.
- A temporary numbness to the legs or lower back pain may be experienced.
- There is a risk of bleeding in the spinal canal.
- Should there be increased pressure or swelling in the brain before the procedure, a myelogram can cause fluctuations in the CSF fluid levels, resulting in brain herniation. Herniation is a dangerous event where the brain stem or top of the spinal column is compressed by swelling of the brain.

There may be other risks depending upon your specific medical condition. Be sure to discuss any concerns with your physician prior to the procedure.

Appointment time:

Your appointment will be scheduled ahead of time by your doctors' office through the hospital scheduling service. If you are unsure of your appoint time, need to reschedule, or cancel your appointment, please contact your doctors' office or the hospital scheduling service at 770-538-7666 Menu Option 1. Please arrive 15 minutes prior to your exam, as you will be required to register, visit our billing office and fill out other necessary forms. Since Northeast Georgia is a major medical center there are emergencies that could arise that might extend wait time. Please try to be patient and be assured that we will get to your study as quickly as possible.

Your Myelogram:

1. You will be asked to remove any clothing, jewelry or other objects that may interfere with the procedure. You will be given a gown to wear.
2. You will be reminded to empty your bladder prior to the start of the procedure.
3. When you arrive in the room, you will be placed on your stomach on the X-ray table with a roll underneath your abdomen. Please let us know if you feel that this position will be difficult for you. (A myelogram takes between a half hour and an hour to complete.)
4. The procedure will begin with a lumbar puncture, a sterile procedure. Therefore, your back will be cleansed with an antiseptic solution and draped with sterile towels. The radiologist will wear sterile gloves during the procedure.

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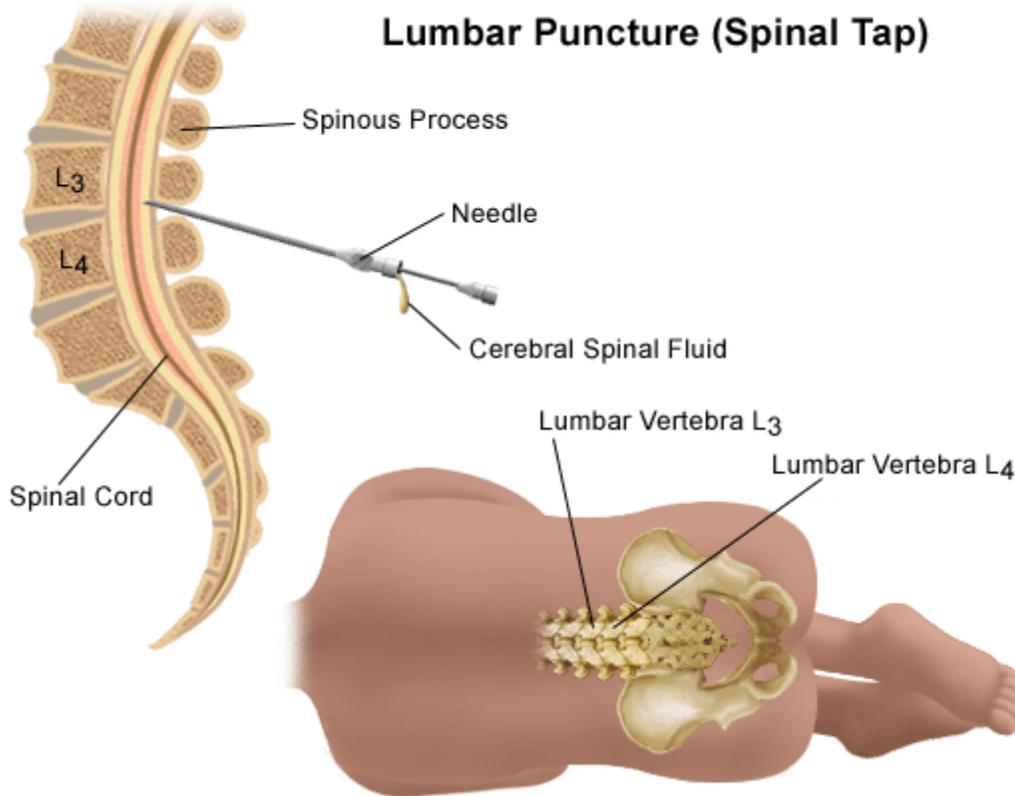


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5. The radiologist will anesthetize the skin by injecting a local anesthetic that numbs the site. This injection may sting for a few seconds, but makes the lumbar puncture less painful.
6. The hollow needle will be inserted through the numbed skin and into the subarachnoid space where the CSF is located. You will feel some pressure while the needle is inserted. You must remain absolutely still during the insertion of the needle.
7. The radiologist will remove some of the CSF from the spinal canal. Next, a portion of contrast dye will be injected into the spinal canal through the hollow needle. You may feel a warming sensation when the contrast dye is injected.
8. When the contrast dye is administered, the needle will remain in place and you will be placed in the prone position (lying face down).
9. The x-ray table will be tilted in various directions to allow gravity to move the contrast dye to different areas of your spinal cord. You will be held in place by a special brace or harness. More contrast dye will be administered during this process through the secured lumbar puncture needle.
10. The required x-rays or CT scan pictures will be taken.
11. After the images are taken, the radiologist may remove some of the contrast dye from the subarachnoid space. Removal of the contrast dye varies depending on the type that is used for the procedure.
12. When the test is completed, the needle will be removed and an adhesive bandage will be placed over the injection site.



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13. You should notify the radiologist if you feel any numbness, tingling, headache, or lightheadedness during the procedure.

You may experience discomfort during the myelogram. The radiologist will use all possible comfort measures and complete the procedure as quickly as possible to minimize any discomfort or pain.

The conclusion of your exam:

You will require at least one hour of bed rest after the procedure. Your position may vary depending on the type of contrast dye that is used for the procedure.

You will be asked to drink additional fluids to rehydrate after the procedure. This replaces the CSF that was withdrawn during the spinal tap and reduces the chance of developing a headache.

A nurse will monitor your vital signs (blood pressure, temperature, pulse, and respirations) frequently after the test. Analgesic agents may be administered if you develop a headache. The nurse/technologist will assist you with a bedpan or urinal during this time if necessary.

When you have completed the recovery period, you will be taken to your hospital room or discharged to your home.

Once you are at home, notify your physician of any abnormalities, such as numbness and tingling of the legs, blood or other drainage from the injection site, pain at or near the injection site, inability to urinate, fever, stiff neck, headaches, or a back ache. If the headaches or nausea persist for more than a few hours after the procedure, or when you change positions, you should contact your physician.

You may be instructed to limit your activity for 24 hours following the procedure. Generally, if no complications occur, you may return to your normal diet and activities.

Your physician may give you additional or alternative instructions after the procedure, depending on your particular situation.

You will receive written, take-home instructions at the conclusion of your exam. You may eat or drink as you like. When you are discharged, you must travel with a companion and may not drive. When you arrive home, we suggest that you rest and limit your activity. If you have small children, arrange for someone to care for them. If you have a headache, take two Tylenol tablets (325 mg each) every four hours as needed.

Results:

The radiologist will interpret your exam and send the results to your doctor.



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