

Myelogram

WHAT YOU SHOULD KNOW:

Myelogram, also called myelography, is a procedure that uses an x-ray to examine your spinal canal. Contrast dye is used to help caregivers see your nerves or spinal cord more clearly.

CARE AGREEMENT:

You have the right to help plan your care. Learn about your health condition and how it may be treated. Discuss treatment options with your caregivers to decide what care you want to receive. You always have the right to refuse treatment.

RISKS:

A myelogram may increase your risk for a headache, neck or back pain, nausea, or vomiting. You may have bleeding or spinal fluid may leak from the injection site. The procedure may cause injury to a disc, nerves, or your spinal cord. The dye used during the procedure may cause an allergy, seizure, or brain problems. The dye may also damage your kidneys.

GETTING READY:

Before your procedure:

- Write down the correct date, time, and location of your procedure.
- Arrange a ride home. Ask a family member or friend to drive you home after your procedure. Do **not** drive yourself home.
- Ask your caregiver if you need to stop any prescribed or over-the-counter medicine before your procedure, especially blood thinners or psychiatric medications.
- Bring your medicine bottles or a list of your medications when you see your caregiver. Tell your caregiver if you use any herbs, food supplements, or over-the-counter medicine.
- You will need an injection of contrast dye to help caregivers see your nerves or spinal cord more clearly. Tell the caregiver if you have ever had an allergic reaction to contrast dye. If you have had a mild reaction to contrast dye, your physician may prescribe you medicine to help prevent a reaction to the dye, which you would need to begin taking 3 days before your procedure. You will not be given contrast if you have had a severe or anaphylactic reaction to contrast dye.
- Tell your caregiver if there is any chance you might be pregnant.

- You may need to have blood or urine tests. You may also need other imaging tests, such as x-rays, a CT scan, or an MRI. Ask your caregiver for more information about these and other tests that you may need. Write down the date, time, and location of each test.
- Because you should not eat or drink 3 hours prior to arriving for your appointment, if you are diabetic or have other dietary requirements, consult your primary physician.
- Diabetic patients:
 - o If you are taking any medication that contains metformin, please inform your caregiver who treats your diabetes. You will need to stop taking metformin for 48 hours AFTER your procedure. Examples of metformin are, Glucophage, Glucovance, Metaglip, Fortamet, Riomet, or Avandamet. Your caregiver may need to order laboratory tests to evaluate renal function before resuming this medication.
- A creatinine blood test is required within 30 days of your examination for any patient over 70 years of age, those who are diabetic, have renal insufficiency, renal mass(es), or those who only have one kidney. If you have this test done at an outside facility, please obtain a copy of the result and bring it to the appointment with you.

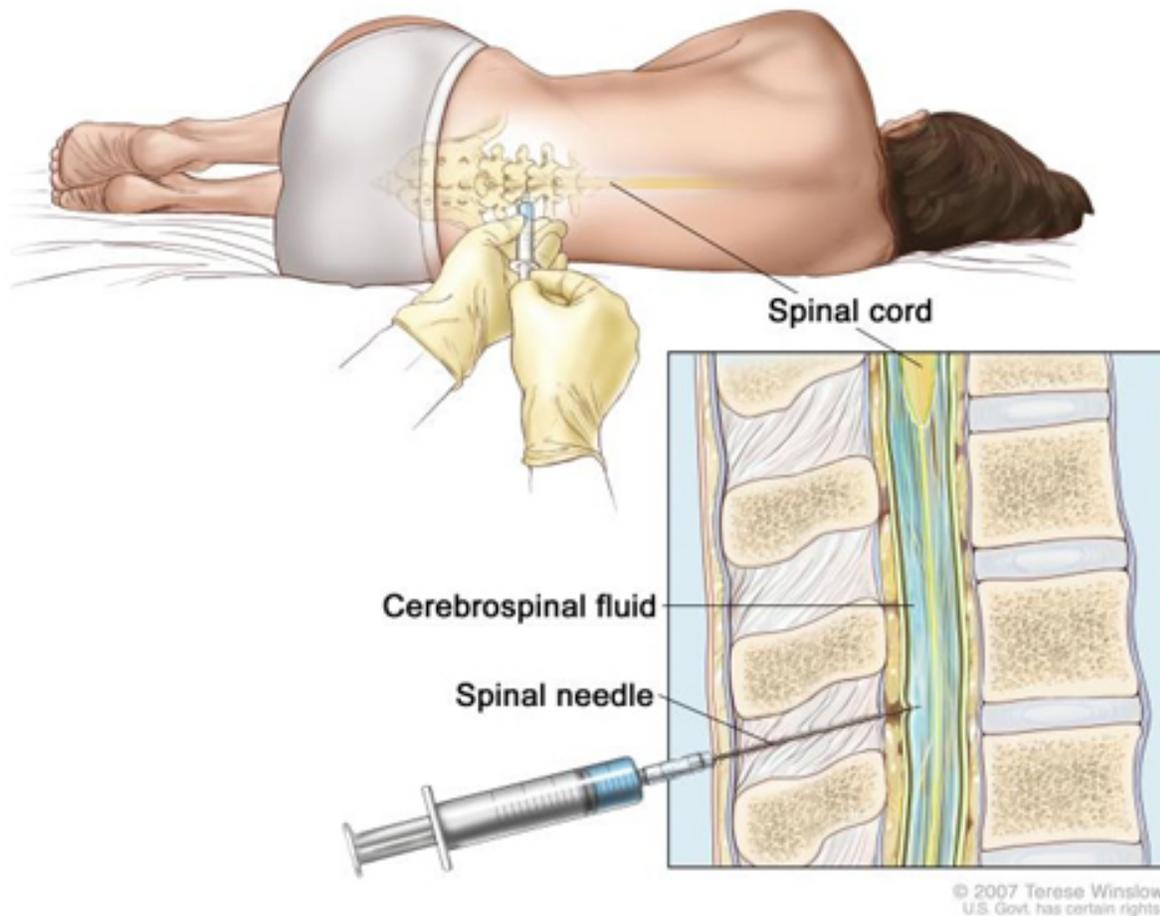
The day of your procedure:

- Do not eat or drink 3 hours prior to arriving for your appointment. You may have sips of water with medications.
- Ask your primary caregiver before taking any medicine on the day of your procedure. These medicines include insulin, diabetic pills, high blood pressure pills, or heart pills. Bring a list of all the medicine you take, or your pill bottles, with you to the Stanford Neuroscience Health Center.
- You or your power of attorney will be asked to sign a legal document called a consent form. It gives caregivers permission to do the procedure or surgery. It also explains the problems that may happen and your choices. Make sure all your questions are answered before you sign this form.
- Caregivers may insert an intravenous tube (IV) into your vein. A vein in the arm is usually chosen. Through the IV tube, you may be given liquids and medicine.
- You will need medicine to numb an area of your back during the procedure. Tell caregivers if you have had a problem with anesthesia in the past.

TREATMENT:

What will happen:

- You will lie on an x-ray table, most likely on your stomach. Local anesthesia is a shot of medicine put into the skin on your back. It is used to numb the area and dull the pain. You may still feel pressure or pushing during the procedure.
- Your radiologist will insert a needle between the bones of your spine and into your spinal canal. An x-ray with a monitor will be used to carefully guide the needle. Your radiologist will inject dye to see your nerves or spinal cord more clearly. You may feel warm after the dye is injected. The table may be tilted so the dye can move through your spinal canal.
- After the procedure is done, the needle will be removed, and the injection site will be covered with a bandage.
- You will be brought to a CT scanner to acquire CT images. You may be asked to move into a series of positions to distribute the dye in your spinal canal before the CT images are taken.



After your procedure:

- You will be taken to a room to rest for at least one hour. Caregivers will monitor you closely for any problems. Do **not** get out of bed until your caregiver says it is okay. When your caregiver sees that you are okay, you will be able to go home. You may need to drink more liquids than usual after the procedure or you may need IV fluids. Liquids will help flush the contrast dye out of your body.
- A neurologic exam will check your leg movement and sensation.
- You may develop a headache during the first few hours after your procedure. The headache may be mild to severe and may get worse when you sit up or stand. Fluid loss from your spinal column may increase your risk for a headache.

CONTACT A CAREGIVER IF:

- You cannot make the procedure.
- You have a skin infection or wound near the area where the procedure will be done.
- Your skin is itchy, swollen, or you have a rash.
- You have questions or concerns about your condition or care.

SEEK CARE IMMEDIATELY IF:

- You have a fever.
- Your signs and symptoms get worse.

AFTER YOU LEAVE:

Post procedure headache:

- You may develop a headache during the first few hours after your LP, which may last up to several days. This happens when the amount of CSF and the CSF pressure are decreased, such as with a CSF leak. The headache may range from mild to severe and may get worse when you sit or stand. You may have neck or back pain, as well. The following may help ease or prevent a post procedure headache:
 - o Drinking liquids: You may be asked to drink more liquid than usual after your procedure. For most people after this procedure, the best liquids to drink are caffeinated. Do not drink alcohol. Tell your caregiver if you cannot drink a lot of liquid because of another medical condition, such as a heart or kidney condition.
 - o Lying down: You may need to lie flat for some time after your procedure.
 - o Treatment options:
 - Medicines:
 - Caffeine: Caffeine may be used to treat a post procedure headache. As CSF pressure decreases, such as with a leak,

blood vessels in the brain will dilate (get bigger) to get more fluid to the brain. Headache pain is caused by the blood vessels getting bigger. Caffeine causes the blood vessels in the brain to get smaller, which will decrease your headache pain. Drink caffeinated drinks, such as coffee or tea, every 4 to 6 hours. If this does not relieve your headache, call your caregiver.

- Pain medicine: You may need medicine to relieve or decrease your headache pain. These medicines may include NSAIDs (non-steroidal anti-inflammatory medicine), such as ibuprofen, acetaminophen, or medicine that your primary caregiver orders for you. Your primary caregiver will decide which medicine is best for you to take for your headache. Follow your primary caregiver's instructions on how to take your medicine. Tell your primary caregiver if the pain medicine does not help or if you have any questions about your medicine.
- Procedures: You may need to have a blood patch if your headache is not relieved by the treatments above.
 - Blood patch: If your headache is caused by a leakage of CSF from the LP site, a blood patch procedure may be needed. This procedure uses a small amount of your blood, which is taken from a vein, to patch (seal) the leak. The blood is put through a needle into your spinal canal in the same way that the LP was done. You will need to lie in bed for 1 to 2 hours after this procedure. This procedure may need to be repeated if your headache is not relieved.

CALL THE NEURORADIOLOGY DEPARTMENT IF:

- You have severe pain in your back or neck that was not present before your procedure or that is much worsened after your procedure.
- You have bleeding or a discharge coming from the area where the needle was put into your back.
- You have questions or concerns about your procedure.

SEEK CARE IMMEDIATELY IF:

- You have a headache that is very bad and does not get better after lying down.
- You have a fever.
- You have a stiff neck or have trouble thinking clearly.

- Your legs, feet, or other parts below the waist feel numb, tingly, or weak and if these are new or worsened symptoms after your procedure.