

LUMBAR PUNCTURE (SPINAL TAP)

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test and invite you to participate. Please read the following information to learn about the test and how you can help.

Fast Facts About Lumbar Puncture

- The lumbar puncture test is done to remove a small amount of the fluid that surrounds the brain and spinal cord.
- A small special needle is used to remove some fluid from below the spinal cord.
- Before the needle is used, the doctor will numb the spot where the needle will go.
- Most children will be awake for this test, but occasionally the test may be done under sedation. If sedation medication is ordered for your child, there are special rules for eating and drinking that must be followed in the hours before the test.
- Your child must stay very still during the test.
- The test takes about 30 minutes.
- Your child should lie flat in bed for 30 minutes to 1 hour after the test to help avoid getting a headache.

What Is A Lumbar Puncture?

A lumbar puncture is sometimes called a spinal tap because it removes a small amount of the fluid that bathes the brain and spinal cord. This fluid, called cerebrospinal (*sir-REEB-bro-SPY-nool*) fluid or CSF then is examined by a specialist to diagnose or rule out certain illnesses and conditions.

A lumbar puncture might also be done to measure the amount of pressure in the spinal canal, to place medicine in the CSF and to remove some excess fluid in babies who have a condition called hydrocephalus (*hi-dro-SEF-a-lus*).

First, the doctor will numb the skin at the base of the spine where the needle will go using either a cream or a shot. The numbing is done so that when the test begins, your child will feel a little pressure, but not sharp pain. Then a small special needle will be used to remove the fluid. The doctor inserts the needle near the base of the spine but the needle does not enter the spinal cord or nerves.

Home Preparation

Usually, no special home preparation is needed before a lumbar puncture. Occasionally, however, the lumbar puncture may be done while your child is under sedation, meaning that your child will be given medication to make him or her very drowsy and relaxed during the test.



- Although your child will not be fully asleep, he or she will not feel any pain during the test and probably will not even remember it afterward.
- If your child receives sedation, the doctor doing your child's test will give the sedation medication through an intravenous (IV) line in his or her vein.
- Sometimes the test is done while your child is under general anesthesia, meaning that your child would be sound asleep during the test—but that is rare.

When sedation is needed, there are important rules for eating and drinking that must be followed in the hours before the test. Following are the **usual** instructions given for eating and drinking. No matter what age your child is, you should follow the specific instructions given to you by the doctor or nurse.

For children older than 12 months:

- After midnight the night before the test, do not give any solid food or non-clear liquids. That includes milk, formula, juices with pulp, chewing gum or candy.

For infants under 12 months:

- Up to 6 hours before the **scheduled arrival time**, formula-fed babies may be given formula.
- Up to 4 hours before the **scheduled arrival time**, breastfed babies may nurse.

For all children:

- Up to 2 hours before the **scheduled arrival time**, give only clear liquids. Clear liquids include water, Pedialite®, Kool-Aid® and juices you can see through, such as apple or white grape juice.
- In the 2 hours before **scheduled arrival time**, give nothing to eat or drink.

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The Test

Before your child has a lumbar puncture, tell the doctor if your child:

- Is taking any medicines.
- Is allergic to any medicines, including anesthetics.
- Has had bleeding problems.

To begin the lumbar puncture, your child will be asked to get into one of two positions. Your child might be asked lie on his or her side on a table and to curl up in a tight ball, or he or she might be asked to lean over the table.

- An assistant or a nurse will stand beside your child to help him or her stay very still and to explain what the doctor is doing. Staying still is very important and will make the test go more smoothly.
- The doctor will feel your child's back for a space between the bones of the lower part of the spine to find the place to insert the needle. The doctor will also clean your child's back with sponges and an antiseptic.
- The doctor may numb the spot for the lumbar puncture with a numbing cream or a shot. This shot will sting for few seconds, but numbing the spot makes the test less painful.
- The doctor will place the special needle through the numbed skin and into the space where the CSF is found.
- Your child will feel some pressure while the needle is being placed.
- Your child must stay very still. The assistant or nurse can help your child do that.
- The fluid will drip out from the needle and into some test tubes.
- If the doctor needs to put medicine into the spinal canal, it will be given through the same needle after the fluid is collected in the test tubes.
- The doctor will remove the needle when the test is done and a bandage will be put on the spot where the needle went in.
- This test takes about 30 minutes.
- If your child received sedation medication, he or she will be taken by a nurse to the recovery area to be watched until the medication wears off.
- If an IV was placed for sedation, it will be taken out by a nurse in the recovery area once your child wakes up from the medication.



A Parent's/Guardian's Role During the Test

We welcome your help and support during this test. One parent or guardian is invited to stay with your child during the test. Other adults and children must stay in the waiting area. If your child will be having sedation, you will be asked as the parent or legal guardian to sign a consent form before the sedation is given.

- One of the most important roles of a parent or guardian is to help your child stay calm and relaxed before and after the test. The easiest way to help your child stay calm is for you to stay calm.
- It is very important that your child stays very still during this test. You might want to practice lying still with your child for several minutes at home before the test.
- You may bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold during the test.

After the Test

- After the test, it is important for your child to lie flat in bed for 30 minutes to 1 hour to help prevent your child from getting a headache. You can help your child stay in bed by reading to and playing quietly with him or her.
- If your child received sedation medication, he or she will stay in the recovery area to be watched until the medication wears off.
- Your child may eat and drink normally after the test.
- If you have any questions, the assistant or nurse will be happy to answer them.
- After you and your child leave, the CSF will be sent to a lab and studied.
- Please contact the doctor who ordered the test for the results.
- Your child's doctor will discuss the lab report and treatment plan with you.

Special Needs

If your child has any special needs or health issues you feel the doctor or assistant performing the test needs to know about, please call the Division of Neurology at Children's Hospital of Pittsburgh **before** the test and ask to speak with a nurse. It is important to notify us **in advance** about any special needs.

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To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.