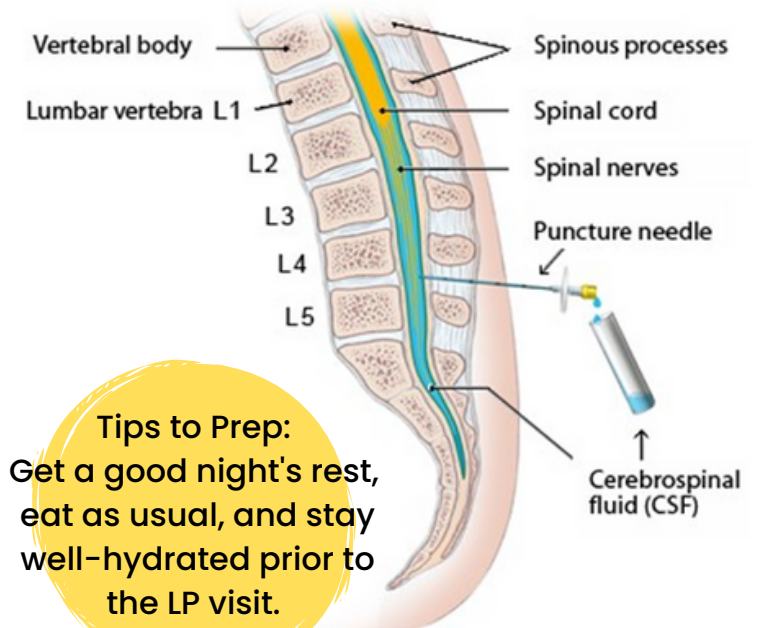


# Introduction to Lumbar Punctures

A Lumbar Puncture (LP), or Spinal Tap, is a procedure to remove a small sample of cerebrospinal fluid (CSF) from the lower spine. CSF is the fluid that surrounds the brain and spinal cord, and it contains proteins, cells, and other substances that may be important biomarkers in ALS research. During the procedure, a needle is inserted between two lumbar vertebrae (backbones) in the lower back and into the space in the spinal canal that contains CSF.

Sometimes, people feel worried that a lumbar puncture could be risky or painful. In reality, this is a safe and common procedure to collect CSF!



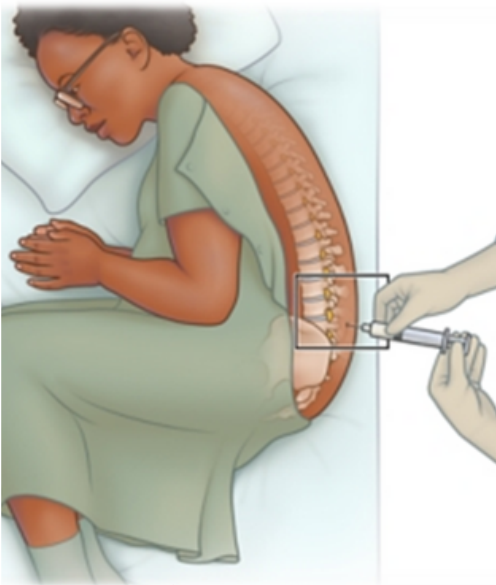
## LUMBAR PUNCTURE STEP BY STEP

1) You will be asked to sit or lie down in a position that helps widen the spaces between the bones of the lower spine.

2) The skin on your lower back will be cleansed to reduce risk of infection, then a small needle will be used to inject a local anesthetic (such as lidocaine) to numb the area.

3) A thin needle is then carefully inserted until it reaches the spinal canal. The needle may need to be readjusted if CSF cannot be drawn the first time. A special atraumatic spinal needle is used for LPs because this type of needle is less likely to cause a headache after the procedure.

4) Drops of spinal fluid are then collected into specimen tubes. This takes about 5-10 minutes. Then, the LP needle is removed, your back is cleaned, and a bandage is placed over the LP site.



## QUESTIONS?

Prior to enrolling in a clinical trial, your study team will discuss the LP procedure with you. Please ask your study team for clarification if you have any questions while reviewing the informed consent form.

# Lumbar Puncture Information Sheet

## COMMON QUESTIONS

### Q: How long does an LP take?

**A:** The procedure typically takes 20-30 minutes, with an additional rest period after the LP. It takes about an hour for the body to replace the CSF that was collected.

### Q: What does it feel like? Are there risks?

**A:** Typically, the LP procedure is not painful. Numbing medication (lidocaine) injected under the skin may sting briefly until the area is numb. You may feel pressure when the spinal needle is inserted. If the needle touches one of the nerve endings floating at the base of the spine, you may feel a brief pain or “zap” sensation down your leg. This is not dangerous. The needle is inserted well below the spinal cord, so there is no risk of paralysis.

### Q: Why are LPs important to ALS research?

**A:** Motor neurons in the brain and spinal cord constantly “bathe” in CSF, so fluid collected during LPs helps us learn important information about the nervous system. CSF contains proteins and other biological markers that help predict and track ALS disease progression. When studying an investigational drug in a clinical trial, CSF helps ALS researchers measure the effects of the drug on the body.

## WATCH VIDEO

### LP Step-by-Step:

<https://bit.ly/3zz2uQt>



## AFTERCARE TO-DO'S

As you leave your study visit and head home, it is important to remember a few things to ensure your health and safety.

- Stay well-hydrated. Drink plenty of water (6 glasses of fluid in the 12 hours after your LP). This will help your body replace the fluid removed during the procedure and may reduce the likelihood of getting a headache.
- Rest & Relax. Avoid strenuous physical activity for the rest of the day. Lying flat may help reduce the possibility of developing a headache.
- Continue with your usual diet.
- Several hours after the LP, you may remove the bandage and shower as you wish. Your study team can answer any questions about timing.
- If no complications occur and you are feeling well, you may return to your normal activities the next day.

## SYMPTOM MANAGEMENT

### Headache:

- Some people may experience a post-LP headache. If you notice a mild headache, hydrating with water, drinking a beverage with caffeine, and lying flat can help. Over-the-counter Tylenol may also help (follow dosage instructions on the bottle).
- If your headache becomes more than mild or persists longer than 24 hours and is not relieved by the above interventions **OR** if you develop a fever at any time following the LP, please contact your study team right away.

### Back Discomfort:

- If you experience back discomfort, try applying ice wrapped in a towel to the affected area for 20 minutes, 3-4 times over the course of the day.