

# Having a lumbar puncture

## Children's Ward

### Patient Information Leaflet

#### Introduction

This leaflet is for people who are going to have a lumbar puncture. It explains:

- What the lumbar puncture involves
- The benefits of it and the possible risks
- What will happen after you have had the lumbar puncture

#### What is a lumbar puncture?

It is used to get a tiny amount of fluid out of the inside the spine. The fluid is called cerebrospinal fluid, or CSF, and it covers the brain and the spinal cord.

#### What are the benefits of a lumbar puncture?

As the fluid comes into contact with the brain, spinal cord and other parts of the nervous system, we can analyse the fluid to give doctors information about medical conditions affecting these parts of the body.

It helps doctors to:

- Diagnose if you have an infection in the CSF such as meningitis. Meningitis is an infection in the layers of tissue that surround the brain and spinal cord. These layers of tissue are called membranes.
- Record pressure in the CSF.
- Measure certain chemicals in the CSF.

## How is a lumbar puncture carried out?

The doctor uses a special, hollow needle to drain a few drops of CSF from between the vertebrae. These are the bones of the spine. It is taken from the bottom of the spine as this is the easiest and safest place to take out the CSF (see figure 1). The CSF is sent to the hospital laboratory to analyse.



Picture courtesy of Great Ormond Street Hospital

Figure 1 shows where the CSF will be taken from and the position you will need to be in to have a lumbar puncture.

## Will I be put to sleep?

Usually, people are given a sedative medicine to help them relax before the lumbar puncture but are not put to sleep. This medicine is given through a cannula that is put into the back of your hand. A cannula is a thin, plastic tube (please see figure 1).

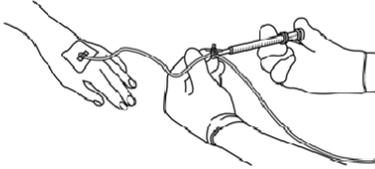


Figure 1 shows a cannula

Occasionally, people need to have their lumbar puncture carried out using a general anaesthetic. This means you will be asleep for the operation. The person who gives you the general anaesthetic is called an anaesthetist. The anaesthetic is also given to you through a cannula.

## What are the risks?

A lumbar puncture is usually safe and the risks are rare. The doctors and nurses carrying it out check your health and medical history before to make sure you can have the procedure safely.

The spinal cord cannot be damaged by a lumbar puncture that is correctly carried out as the needle goes into the spine below the lower end of the spinal cord.

The body can replace the small amount of fluid that is removed very quickly (in less than two days).

After a lumbar puncture, a little fluid may leak out and collect under the skin. You may be able to see some swelling in your lower back where the needle went in. This is not dangerous and will go away without any treatment. It is a good idea to lie flat to help stop a leak from developing.

## **Risks of the sedation**

If you have sedation, there are a few risks but these are rare.

If you are in good health, it is possible that you may get a headache, feel dizzy or be sick after having sedation. Usually, sickness only lasts a short time and we can give you medicine to help with this.

## **Risks of the general anaesthetic**

Modern anaesthetics are very safe. Most people recover quickly and are soon back to normal after their anaesthetic.

As with sedation, there can be side effects which are usually minor and usually only last a short period of time. You may get a headache, sore throat, feel sick or be sick or be dizzy.

## **What happens before the lumbar puncture?**

This will depend on whether it is planned in advance or whether it is carried out in an emergency.

### **Planned lumbar puncture**

We will send you a letter with a date for the lumbar puncture. This letter will give you information about how to prepare for the test. This may include information on whether you can eat or drink before the test.

It is important to follow these instructions, otherwise the lumbar puncture may have to be delayed or even cancelled.

On the day of the lumbar puncture, the doctor will explain the procedure in detail and discuss any worries you may have. They will then ask you (and your parent or guardian) to sign a consent form to say you are happy to have the lumbar puncture.

If you are going to have sedation or a general anaesthetic, the nurse will put a wrist band on each of your wrists and put cream on the backs of your hands.

This cream is sometimes called magic cream. It makes the back of your hands numb so that you do not feel any pain. It is used so that when the anaesthetist puts a cannula into your hand to give you the anaesthetic or sedation, you will not feel this being put in.

## Emergency lumbar puncture

Sometimes doctors want you to have a lumbar puncture quickly. This is because in some cases, they cannot give you treatment until you have had the lumbar puncture, as the treatment may cause an error in the results.

## What happens during the lumbar puncture?

Lumbar punctures are usually carried out on the Children's Ward. For planned lumbar punctures, most people have sedation for the procedure. This helps you to relax and keep calm as it is important that you lie still.

However if you are having an emergency lumbar puncture, this may not be possible.

You will need to lie on the bed on your side and curl up into a ball. The doctor will feel your lower back to find the correct space between the bones of your spine.

The doctor will then wash the skin around this area and cover the other parts of your back with a towel. They will insert a needle into your spine and collect the CSF into special containers. These will be sent to the laboratories to be analysed.

## What if it is unsuccessful?

Lumbar punctures are usually successful but sometimes:

- It is not easy for the doctor to find the exact place where the needle should be inserted. They may call another doctor to help but in some cases the procedure has to be stopped.

The doctors will talk to you about when and if the lumbar puncture needs to be repeated. Sometimes doctors need to do more than one lumbar puncture to get the information they need.

- If there is a bit of bleeding when the lumbar puncture is carried out, some of the blood may become mixed with the CSF. This can affect the results of the test and so it may need to be repeated.

## What happens after the lumbar puncture?

The doctor will use a plaster to cover the place where the needle entered the skin. It is a good idea to lie flat for about an hour afterwards. When you are fully awake, you can have a drink.

Some people get a headache after a lumbar puncture. This is because after the procedure, the pressure reduces slightly around the brain. The headache usually goes away after about 24 to 48 hours. You can have paracetamol if you need it and you are able to take it, so ask the nurse who is looking after you.

Some people are sick after a lumbar puncture. If this happens, you should rest in bed and have regular sips of drink.

If you have had a planned lumbar puncture, with a general anaesthetic or sedation, a nurse will need to check you regularly for at least two hours. You can go home when you:

- are fully awake
- can eat and drink
- feel well

If you have had an emergency lumbar puncture, a nurse will check you are OK and give you any care you need. It is likely you will need to stay in hospital until doctors have the results of the test.

## What happens when I get home?

This information is for planned lumbar punctures:

- If you are in pain at home, you can have paracetamol if you can take it. You must read the label on the container and do not take more than it says you should.

If the pain does not go away or becomes worse, please contact your family doctor or the Children's Ward for advice on:

**01384 244271**

- If you are being sick a lot, please ring the Children's Ward for advice.
- Please leave the plaster covering the lumbar puncture site on for 24 hours and then you can take it off.

- Check the lumbar puncture site. If it:
  - continues to swell
  - you see any clear fluid or blood coming out of it
  - it looks red and swollen

lie down flat and ask your mum, dad or guardian to contact your family doctor for advice.

## **What about school?**

You can go to school the day after the procedure. However, it is best that you do not take part in any sports or PE for a week after the test.

## **When will I get the results?**

The CSF samples are analysed in different laboratories. Some of the tests are very quick and results are ready within a few hours. However, some are much more specialised and the results take longer to come back.

If you have had a planned lumbar puncture, you will get the results at your next hospital appointment. If you are at hospital and you have had an emergency lumbar puncture, we will give you the results as soon as we get them.

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Children's Ward on 01384 244271

Russells Hall Hospital switchboard number: 01384 456111

**This leaflet can be downloaded or printed from:**

<http://dudleygroup.nhs.uk/services-and-wards/c2-childrens-ward/>

If you have any feedback on this patient information leaflet, please email [patient.information@dgh.nhs.uk](mailto:patient.information@dgh.nhs.uk)

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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