

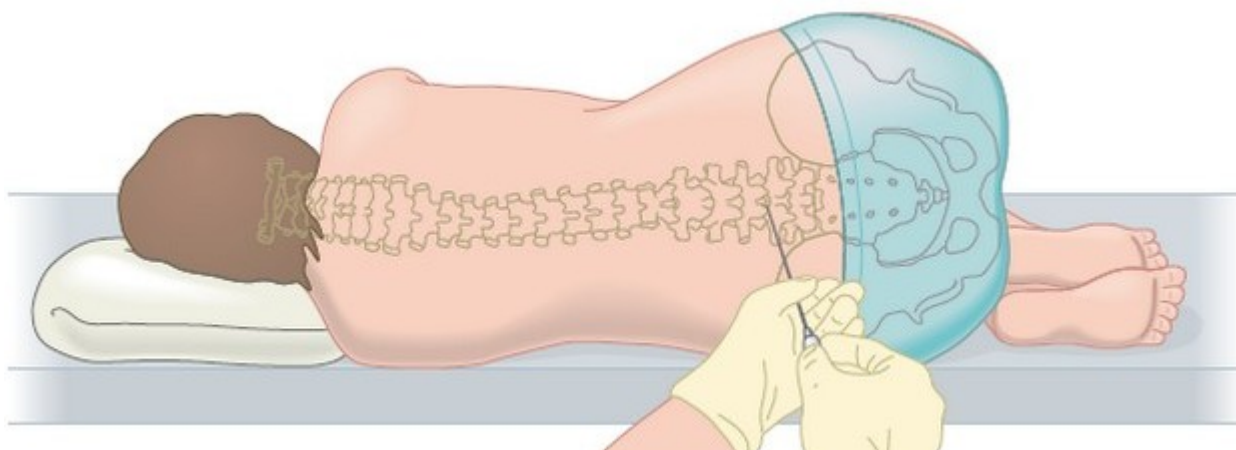
Patient information

Lumbar puncture in children

This information sheet explains what to expect when your child comes into hospital for a lumbar puncture and how to care for your child when you return home afterwards.

What is a lumbar puncture?

A lumbar puncture (LP) is a common medical procedure carried out to obtain a sample of cerebrospinal fluid (CSF). CSF covers the brain and spinal cord. When a lumbar puncture is carried out, a small hollow needle is inserted into the lower back, because this is where a sample can be obtained most easily and safely. The CSF comes out through the needle and some drops are collected and sent to the laboratory.



Why does my child need a lumbar puncture?

CSF is the fluid that comes into the closest contact with the brain itself. By analysing the CSF doctors may have more information about how the brain may be affected by a medical condition.



A lumbar puncture is generally carried out for one or more of the following reasons:

- To detect possible infection in the CSF
- To measure the levels of chemicals in the CSF
- To measure the pressure in the CSF
- To reduce the pressure in the CSF.

The exact reasons for the lumbar puncture will be explained by your doctor.

Is a lumbar puncture dangerous?

A lumbar puncture is not dangerous, as long as the doctors and nurses carrying it out follow the correct procedures. The procedures include checking that there are no contraindications (such as a sudden rise in pressure in the brain or an abnormality in the way in which the blood clots). The doctors and nurses will take precautions to prevent any infection entering the body during the procedure.

The spinal cord can not be injured by a lumbar puncture that is correctly carried out, as the needle enters the spine below the lower end of the spinal cord.

The body replaces the amount of CSF fluid that is removed very quickly (in less than two days).

What happens before the lumbar puncture?

A doctor or nurse may have informed you of a specific period of time your child is not allowed to eat or drink before the procedure (a starving time). It is important to follow these instructions otherwise your child's lumbar puncture may have to be delayed or even cancelled.

Your child's doctor will explain the procedure in detail and discuss any worries you may have.

Depending on your child's age, he or she may be given a sedative medication, to make him or her sleepy. A local anaesthetic cream will always be applied to your child's back to help numb the area.

What happens to my child during the lumbar puncture?

A lumbar puncture is usually carried out on the ward, and sometimes you may be able to stay with your child during the procedure. The doctors will let you know before if this is possible. Some children require some sedation for the procedure as it can be uncomfortable and it is important that they lie still.

Your child will be asked to lie on a bed on their side and to curl up into a ball, with their legs curled up and their knees under their chin. The nurses will help your child to get into the right position. The doctor will feel your child's lower back and locate the correct space between the vertebrae (the bones of the spine).

The doctor will then wash the skin around the procedure area and cover the rest of the back with a sterile towel. A local anaesthetic injection may then be given to help numb the area further, which may cause a slight stinging sensation.

The doctor will then insert the needle into the space between the vertebrae, and CSF will be collected into special containers and sent to the laboratory to be examined. In some cases the CSF pressure will also be measured, and some extra CSF removed to relieve high pressure.

The entire procedure normally lasts between 15 and 30 minutes.

What happens after the lumbar puncture?

The doctor will place a plaster to cover the site where the needle entered the skin. You can remove this after 24 hours. Your child will be encouraged to lie flat for about an hour afterwards, to reduce the chance of a headache developing. If your child does develop a headache, you should administer paracetamol according to the packet instructions. This usually settles down 24-48 hours after the procedure.

You should encourage your child to eat and drink normally after the procedure. Studies have shown that lying flat for up to 24 hours and keeping hydrated helps prevent some of the possible side effects.

The samples of CSF are analysed in different laboratories. Some of the tests are routine and can give answers in a few hours, but others are much more specialised and take a lot longer to come back. You will be contacted to discuss the results of the investigations with your child's doctor in the outpatient department once they have been released.

What can go wrong?

It is unusual for something to go wrong, but occasionally one of the following may occur:

- It may not be possible to get your child into the correct position for the lumbar puncture, because they are too restless or upset. If this is the case, the procedure may be postponed to be carried out under a general anaesthetic.
- Sometimes it is not easy for the doctor to locate the place where the needle should be inserted. Another doctor may be called to assist, but in some cases the procedure may have to be stopped
- If a little bleeding occurs when the procedure is done, some of the blood may mix with the CSF and affect the results of the tests. This will not cause your child any problems, but may mean that the doctor will need to consider repeating the procedure.
- Infection is a risk at the needle insertion site, but the doctors and nurses take strict precautions to reduce this risk.

When you get home

If your child is in any pain at home, give paracetamol according to the packet instructions. If the pain persists or becomes worse, please call your GP.

Keep an eye on the lumbar puncture site. If it becomes swollen and red, or if clear fluid or blood continues to leak out, please call your GP. Make sure your child lays flat to help reduce the swelling.

The plaster covering the lumbar puncture site should stay in place for 24 hours and then you can remove it.

It is fine for your child to return to school the day after the procedure, however we advise that they do not take part in any sports for a week after the procedure.

Who can I contact if I have any further questions?

Kayleigh Goddard
Paediatric Neurology Clinical Nurse Specialist
Pager: 07659160080

Patient Advice and Liaison Service

If you need general information or advice about Trust services, please contact the Patient Advice and Liaison Service (PALS) on 020 3594 2040 or visit www.bartshealth.nhs.uk/pals. Alternatively please contact staff who are providing your care if you require clinical advice.

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Reference: BH/PIN/545

Publication date: Jan 2017

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