

Patient Information Leaflet

RISKS ASSOCIATED WITH YOUR ANAESTHETIC

Nerve damage associated with a spinal or epidural injection

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What is the difference between a spinal and an epidural injection?

They are both ways of providing excellent pain relief for some operations/ labour. During a spinal injection a fine needle is inserted between the bones of your lower back and a single injection of local anaesthetic is given in the cerebrospinal fluid (a fluid that bathes the nerves). This makes you feel numb in the lower part of your body for 2-3 hours. An epidural injection involves inserting a larger needle between the bones of the lower back till just short of the cerebrospinal fluid. A fine catheter is then guided through this needle into the epidural space and the needle is then removed. Local anaesthetic can then be given over a period of time to provide pain relief for several hours/ days.

What type of nerve damage can happen?

Nerve damage is a rare complication of spinal or epidural anaesthesia. In its mildest form you may get a small numb area, an area with pins and needles or an area that may feel strange and painful. Weakness may also occur in one or more muscles. The most severe form (very rare) leads to permanent paralysis of one or both legs and or loss of control of bladder/ bowel.

How does nerve damage happen by Spinals/ Epidurals?

- **Direct Injury**- Spinals and Epidurals are blind procedures. Contact of a nerve with a spinal/ epidural needle or the epidural catheter may cause pins and needles or a brief shooting pain. This does not mean the nerve is damaged, but if the needle is not repositioned, damage can occur. If this happens you should tell your anaesthetist and try to stay still. The anaesthetist will reposition the needle and the sensations will usually improve immediately. Injecting drugs right into a nerve instead of in the area surrounding it can also cause direct damage.

- **Haematoma**- This is a collection of blood near the nerve, which collects due to damage to a blood vessel by the needle or the catheter. Small haematoma are common and do not cause damage, but larger ones can press on the nerves/ spinal cord and cause damage. If you are on blood thinning medicine e.g. heparin or warfarin, you are more likely to get a haematoma. You will need to inform your anaesthetist about these or if you have any blood clotting problems
- **Infection**- Most infections related to spinals/ epidurals are limited to skin and do not cause nerve damage. Very rarely, an infection can develop close to the spinal cord and major nerves. There may be an abscess or meningitis. These infections are very serious and need urgent attention to prevent nerve damage. If you already have an infection elsewhere, or if you have weak immune system, you are at higher risk for these infections.
- **Inadequate blood supply**-Low blood pressure is common with spinal and epidural anaesthesia. It can reduce blood flow to the nerves and very rarely cause nerve damage. Anaesthetists are aware of this risk and use drugs and fluids to prevent a large drop in your blood pressure.

What is done to prevent nerve injury?

Anaesthetists are trained to be aware of nerve damage and take appropriate steps to prevent them.

- To avoid Direct Injury- adequate training, placing spinal injections below the expected lower end of the spinal cord to prevent injury to the cord itself and performing spinals/ epidurals when you are awake so that you can warn the anaesthetist if you feel shooting pain or tingling.
- To avoid Haematoma- If you take aspirin or blood thinning medicines (e.g. warfarin), you will be asked to stop them days before surgery IF your doctor thinks it is safe to do so. A blood test on the day of surgery will determine if it is safe for you to have a spinal/ epidural injection.
- To avoid infection- All epidurals/ spinals are performed under sterile conditions to avoid any infections and your back is kept clean and checked regularly over the next few days.

[If I think I have nerve damage, what can be done about it?](#)

A neurologist may assess the nerve damage using techniques like Magnetic Resonance Imaging (MRI), Computerised Tomography (CT scan) and Nerve Conduction Studies. Suggested treatment consists of physiotherapy, exercise, pain relieving drugs or small operations to repair the nerves.

[How likely is permanent nerve damage?](#)

A major audit by the Royal College of Anaesthetists in 2009 showed that over 700,000 spinals and epidurals were performed in the UK every year. The audit report gives specific information on the risk of nerve damage associated with spinal and epidural injections. The following figures are a guide to chances of nerve damage per spinal/ epidural injections.

The risk for nerve damage was found to be between 1 in 1000 and 1 in 100,000. In the majority of these cases the symptoms improved within a few weeks or months.

The risk of permanent nerve damage is 1 in 23,500 to 1 in 50,500

The risk of paralysis or death is 1 in 54,500 to 1 in 141,500

This leaflet can be made available in alternative languages/formats on request.

For further advice please telephone

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