Royal College of Anaesthetists

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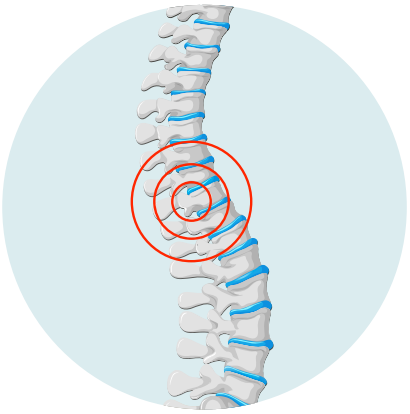

Anaesthetics – risks and side effects

Nerve damage after a spinal or epidural anaesthetic

About this leaflet

This leaflet is about **nerve damage** which can happen after a **spinal or an epidural anaesthetic**. It explains the causes and what can be done about it.

Spinal and epidural anaesthetics are types of regional anaesthetics. Regional anaesthetics are injections that numb a larger part of the body. You normally stay awake during the operation but are free from pain. For spinal and epidural anaesthetics, the anaesthetic injection is given in the spine.

More information on epidural and spinal anaesthetics can be found on our website: **rcoa.ac.uk/patientinfo/leaflets-video-resources**.

You can also find out more about having an epidural or spinal for childbirth here: **labourpains.org**.

About nerve damage after an epidural or spinal anaesthetic

Nerve damage after an epidural or spinal anaesthetic is rare and the damage is normally temporary. A single nerve or a group of nerves may be damaged, so the affected area may be small or large.

If you develop nerve damage after an epidural or spinal anaesthetic, you might experience:

- numbness in parts of your body
- a sensation of 'pins and needles'
- unusual and painful sensations at the site of the surgery
- weakness in one or more muscle groups.

The most severe (and very rare) cases can cause permanent paralysis of one or both legs (paraplegia) and/or loss of control of the bowel or bladder.

Most people make a full recovery over a period of time between a few days and a few weeks. Permanent damage is very rare.

How likely is it to happen?

Out of 20,000 people who had a spinal anaesthetic

10 developed temporary nerve damage	**19,990 did not**
1 developed permanent nerve damage	**19,999 did not**

Out of 20,000 people who had an epidural anaesthetic

8 developed temporary nerve damage	**19,992 did not**
1 developed permanent nerve damage	**19,999 did not**

These numbers come from research studies. You can see where we got our numbers on our website: **rcoa.ac.uk/patientinfo/risks/evidence**.

What can be done if I develop nerve damage?

Most nerve damage gets better on its own within days or weeks.

If you are still in hospital, you can speak to your anaesthetist or the healthcare team looking after you. If you notice symptoms when you get home, you should see your GP.

If the symptoms continue after a few weeks, you might be referred to a specialist in nerve diseases (neurologist). A neurologist might ask you to do some tests, including scans, to understand where exactly the damage is and how best to treat it.

Treatment may include physiotherapy, exercise, pain relief or, sometimes, an operation to repair the nerve or relieve pressure on the nerve.

How does nerve damage happen with epidural and spinal anaesthetics?

Damage to nerves can happen in different ways and is not always a result of the spinal or epidural anaesthetic.

Injury to the nerve or group of nerves

A needle used for a spinal anaesthetic might touch a nerve or group of nerves and cause damage. In rare cases, nerve damage can extend to the spinal cord. Sometimes nerves can be damaged by the surgery itself, for example, they can be pressed and stretched by the position or the equipment used during surgery.

What can be done to prevent it: anaesthetists take precautions to prevent the needle causing damage to the spinal cord, especially during a spinal anaesthetic.

As you are generally awake when you have an epidural or spinal anaesthetic, you should let the anaesthetist know if you feel pins and needles or pain. They will reposition the needle to avoid nerve damage.

Bleeding around the nerve

If a blood vessel gets damaged, it can bleed and cause blood to collect around a nerve. This is known as a haematoma. Haematomas can put pressure on a nerve and cause damage. A small haematoma does not normally cause serious damage. A large haematoma can cause more severe nerve damage, including to the spine. This a serious condition that will require surgery to remove the haematoma.

What can be done to prevent it: people with blood-clotting conditions and people who take blood-thinning drugs are more likely to develop bleeding and haematomas. Your healthcare team will assess your risk and discuss with you whether you need to stop taking your medication before an epidural or spinal anaesthetic. If your blood-thinning medication cannot be stopped safely or the risk is considered to be too high for you, you may not be able to have an epidural or spinal anaesthetic.

Infection

Most infections related to an epidural or a spinal injection are local skin infections and do not cause nerve damage. Very rarely, an infection can develop close to the spinal cord and major nerves. This can cause an abscess (a collection of pus) or meningitis. These infections are very serious and require urgent treatment with antibiotics and sometimes surgery to prevent permanent nerve damage.

What can be done to prevent it: epidural and spinal injections are performed under 'aseptic conditions', using special precautions to make the procedure as clean as possible. Your back should be kept clean and regularly checked in the days after the anaesthetic.

If you already have a significant infection elsewhere, or if you have a weak immune system, your risk of developing this type of infection might be higher. Your anaesthetist will talk to you and your doctors and assess your risk. If they think that you have a high risk of infection, they might suggest a different type of anaesthetic.

Reduced blood supply to the nerves

Low blood pressure is very common when you have an epidural or spinal injection. This can reduce the flow of blood and oxygen getting to the nerves. Certain medical conditions can also reduce the blood supply to the nerves.

What can be done to prevent it: anaesthetists are aware of this risk and use drugs and intravenous fluid to prevent large drops in blood pressure. Your anaesthetist will discuss with you if they think this is a specific risk for you.

This leaflet has been produced by Leila Finikarides for the RCoA, in collaboration with patients, anaesthetists and patient representatives of the RCoA.

Disclaimer

We try very hard to keep the information in this leaflet accurate and up-to-date, but we cannot guarantee this. We don't expect this general information to cover all the questions you might have or to deal with everything that might be important to you. You should discuss your choices and any worries you have with your medical team, using this leaflet as a guide. This leaflet on its own should not be treated as advice. It cannot be used for any commercial or business purpose. For full details, please see our website: **rcoa.ac.uk/patientinfo/resources#disclaimer**.

Information for healthcare professionals on printing this leaflet

Please consider the visual impairments of patients when printing or photocopying this leaflet. Photocopies of photocopies are discouraged because these tend to be low-quality prints and can be very difficult for patients to read. Please also make sure that you use the latest version of this leaflet, which is available on the RCoA website: **rcoa.ac.uk/patientinfo/risks-ra**.

Tell us what you think

We welcome suggestions to improve this leaflet.

Please complete this short survey at: **surveymonkey.co.uk/r/testrisk**. Or scan the QR code below.

If you have any general comments, please email: **patientinformation@rcoa.ac.uk**.

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This leaflet will be reviewed within three years of the date of publication.