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The website for the answer to all your Orthopaedic Questions

- **Orthopaedic Opinion Online** is a website designed to provide information to patients who have orthopaedic and musculoskeletal problems and are undergoing treatment.
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Spinal Anaesthetic

Key words: Anaesthesia, surgery, pain relief, joint replacement, anti-inflammatory medication

What is a spinal anaesthetic?

A spinal anaesthetic (or spinal) involves injecting drugs into an area called the subarachnoid space near the spinal cord. The drugs numb your nerves to give pain relief in certain areas of your body. Spinals can be used either on their own while you are awake, or in combination with sedation or general anaesthesia. They can also be used after your operation to give effective pain relief. Your anaesthetic will be given to you by an anaesthetist (doctor trained in anaesthesia). The anaesthetist is usually assisted by a specially-trained healthcare practitioner (either a nurse or an operating department practitioner).

A spinal anaesthetic has been recommended for your operation. However, it is your decision to go ahead with a spinal or not. This document will give you information about the benefits and risks to help you make an informed decision. If you have any questions that this document does not answer, you should ask your anaesthetist or any member of the healthcare team.

How does a spinal work?

A spinal works by temporarily numbing your nerves to give pain relief. The subarachnoid space is the bag of fluid that surrounds the spinal cord and the nerves that come out from it. Local anaesthetics and other painkilling drugs are injected using a fine needle into this space. The needle is removed and nothing is left in your back.

What will happen if I decide not to have a spinal?

There may be clinical reasons not to use a spinal such as having an allergy to any of the drugs or materials used, or an infection at the site where the needle will be inserted.

If you decide not to have a spinal, your anaesthetist may be able to suggest other methods of pain relief such as using a general anaesthetic alone, or other types of painkiller, such as morphine, after your operation.

What does the procedure involve?

You should not eat anything for six hours before the procedure. However, if you have diabetes, you will need special advice depending on the treatment you receive for your diabetes. Let a member of the healthcare team know as soon as possible if you have diabetes. You may drink water up to two hours before.

To insert the needle, your anaesthetist will ask you to either sit up or lie on your side. You will need to curl up and arch your back as much as possible as this makes it much easier for the anaesthetist to find the right place.

Your anaesthetist will inject local anaesthetic into the area where they will insert the needle. This stings for a moment but will make the area numb, allowing your anaesthetist to put the needle in with much less discomfort for you.

Your anaesthetist will insert the needle and when they are certain that it is in the right place, they will inject drugs through it. They will then remove the needle (see figure 1).

You can help your anaesthetist by keeping still while they insert the needle. It should not be painful, although it can be uncomfortable. If you feel pain, you should let your anaesthetist know.

What effect does a spinal have?

The effect of the spinal can be varied by changing the type and amount of drug given. A spinal has three main effects.

- **Pain relief** - The spinal numbs the sensory nerves responsible for pain and touch. This gives pain relief but can also make the area feel numb or heavy. Pain nerves are easier to block than touch nerves. This means that although you may be able to feel someone touching or pulling you, it should not hurt. Sensory nerves are more easily affected than movement nerves, so sometimes you can be numb but still able to move your legs.
- **Weakness** - The nerves supplying muscles may also be affected. This can make it difficult for you to move your legs. It may also make it difficult for you to pass urine properly.
- **Low blood pressure** - The nerves that help to control blood pressure are the most easily affected. You may not be aware of this happening, but the anaesthetist will be monitoring you closely for any problems with low blood pressure.

If you are having an operation using only spinal anaesthesia, it will not start until the anaesthetist is satisfied that the spinal is working well.

The time that the spinal anaesthetic lasts for varies, but is usually between one to three hours. The anaesthetist will put enough drugs through the needle to make sure that it lasts longer than the expected length of the operation. Occasionally surgery takes much longer than expected and the spinal starts to wear off. If this happens, the anaesthetist will discuss other forms of pain relief with you.

Spinals give good pain relief but, like other forms of pain relief, cannot guarantee that you will be pain-free.

What can I do to help make the operation a success?

- Lifestyle changes

If you smoke, try to stop smoking now. Stopping smoking several weeks or more before an operation may reduce your chances of getting complications and will improve your long-term health.

For help and advice on stopping smoking, go to www.gosmokefree.co.uk.

You have a higher chance of developing complications if you are overweight.

For advice on maintaining a healthy weight, go to www.eatwell.gov.uk.

- Exercise

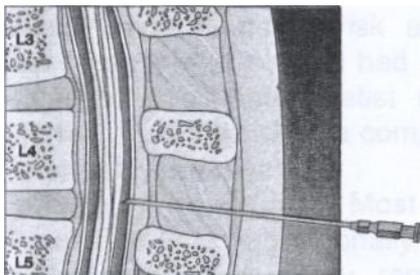


Figure 1

Spinal needle placed in the subarachnoid

Regular exercise can reduce the risk of heart disease and other medical conditions, improve how your lungs work, boost your immune system, help you to control your weight and improve your mood. Exercise should help to prepare you for the operation, help with your recovery and improve your long-term health.

For information on how exercise can help you, go to www.eidoactive.co.uk.

Before you start exercising, you should ask a member of the healthcare team or your GP for advice.

What complications can happen?

Your anaesthetist will try to make your anaesthesia as safe as possible. However, complications can happen. A serious complication happens in about 1 in every 20,000 spinals (overall risk of death: 1 in 200,000). The possible complications of a spinal anaesthetic are listed below. Any numbers which relate to risk are from studies of people who have had a spinal anaesthetic. Your anaesthetist may be able to tell you if the risk of a complication is higher or lower for you.

- **Failure of the spinal.** Most spinals work well first time. Occasionally they do not. The anaesthetist may repeat the injection or discuss with you other options such as a general anaesthetic.

- **Low blood pressure.** The risk depends on your medical condition, the drugs used and the surgery being performed. It is easily treated and you will be closely monitored by your anaesthetist. Sometimes the first sign of a fall in blood pressure is feeling sick or light-headed. It is important that you let your anaesthetist know straightaway if this happens.

- **Headache,** which is quite common after any operation. However, there is a particular type of headache that can happen due to the bag of fluid around the spinal cord being punctured (risk: 1 in 100). This headache can vary from mild to severe and can be treated if needed.

- **Itching,** if morphine or similar drugs are given. The effect is usually mild although it can occasionally be more severe. Certain drugs can be used to treat it and the itching always goes away.

- **Bladder-emptying problems, because the nerves** to the bladder are numbed. A catheter (tube) is often passed into the bladder and drains the urine for you. This will be taken out when you no longer need it.

- **Backache,** which is quite common after an operation. It is quite common to have a bruised feeling for a few days where the spinal was inserted, but this will **settle**. There is no evidence that having a straightforward spinal causes long-term backache.

- **Loss or change of hearing** (risk: 1 in 6). In most cases this is mild and gets better on its own. The risk is higher in young people.

- **Cardiac arrest** (where the heart stops working), due to the local anaesthetic (risk 1 in 3,000).

- **Unexpected high block,** if the local anaesthetic spreads beyond the intended area (risk: 1 in 5,000). This can make breathing difficult, cause low blood pressure and rarely cause unconsciousness. You may be transferred to the high-dependency unit or the intensive care unit so you can be monitored closely.

- **Nerve damage (risk: 1 in 2,000).** Usually any damage is not serious and gets better on its own. Sometimes the damage can be permanent (risk: 1 in 60,000).

- Various other more serious problems have been reported with spinals, including spinal abscess (risk: 1 in 100,000) and blood clots (haematoma) (risk: 1 in 200,000).

You should discuss these possible complications with your anaesthetist if there is anything you do not understand.

Summary

A spinal can be used for most people, usually giving a safe and effective form of pain relief both during and after your operation. However, complications can happen. You need to know about them to help you make an informed decision about your anaesthetic. Knowing about them will also help to detect and treat any problems early.

Further information

- NHS smoking helpline on 0800 169 0 169 and at www.gosmokefree.co.uk
- www.eatwell.gov.uk - for advice on maintaining a healthy weight
- www.eidoactive.co.uk - for information on how exercise can help you
- www.aboutmyhealth.org - for support and information you can trust
- Association of Anaesthetists of Great Britain and Ireland at www.aagbi.org
- Royal College of Anaesthetists at www.rcoa.ac.uk
- Royal College of Anaesthetists and Association of Anaesthetists of Great Britain and Ireland at www.youranaesthetic.info
- NHS Direct on 0845 46 47 (0845 606 46 47 - textphone)

Local information

You can get information locally by contacting the your own hospital or treatment centre.

This document is intended for information purposes only and should not replace advice that your relevant health professional would give you.

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