# Anaesthesia for Caesarean Section

There are different forms of anaesthesia available for a Caesarean section. You can decide either to go to sleep (general anaesthetic) or to stay awake (spinal or epidural anaesthetic) for the operation. 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).

Your anaesthetist will discuss the options with you and recommend the best form of anaesthesia for you. It is your decision on the type of anaesthetic to have.

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.

## Spinal Anaesthetic

### 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.

### How does a spinal work?

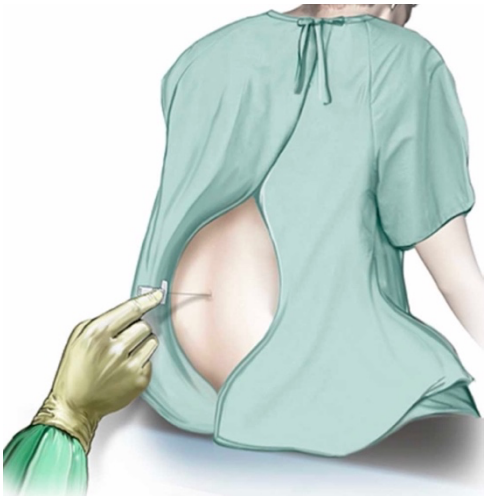
A spinal works by temporarily numbing your nerves to give pain relief. The subarachnoid space is the bag of fluid that surrounds the spinal cord and the nerves that come out from it. Local anaesthetics and other painkilling drugs are injected using a fine needle into this space. The needle is removed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

### What does the procedure involve?

Before you are given your anaesthetic, some monitors will be attached to you. These will measure your blood pressure and the amount of oxygen in your blood. Your anaesthetist will carry out some final checks and you may be given oxygen to breathe through a face mask.

Before inserting the spinal, your anaesthetist will place a cannula (small, hollow tube) into a vein in your hand or wrist. The healthcare team can give you drugs through the cannula to maintain your blood pressure if necessary.

To insert the needle, your anaesthetist will ask you either to 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.

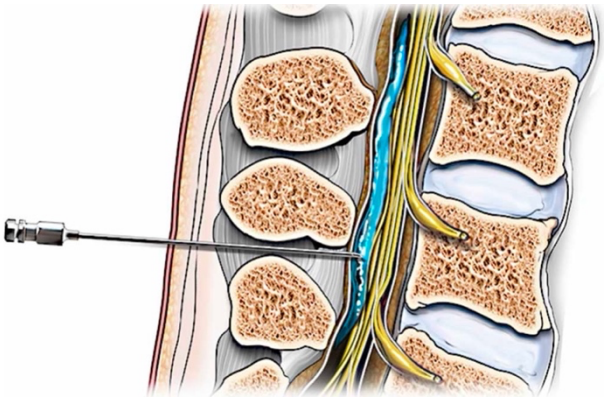


*A spinal being given*

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.

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.
During labour, if you are having an epidural that is working well and you need a Caesarean section, your anaesthetist can give an extra dose of drugs to make you numb.



*A spinal needle in the subarachnoid space*

Another technique is to insert a small tube in the epidural space at the same time as inserting the needle for the spinal (combined spinal-epidural). Your anaesthetist will discuss these options with you if needed.

## 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 or toes.

• Weakness – The nerves supplying muscles may also be affected. This will 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. Some women will not be aware of this happening but others feel sick if they have low blood pressure. Your anaesthetist will be monitoring you closely for any problems with low blood pressure. If you are having your Caesarean section using only a spinal, 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 and 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 will it feel like during the operation?

You may be aware of pulling and pushing around your tummy. You may also feel short of breath because the sensory nerves around your chest will be numb. This does not mean that there is any problem with your breathing. After the birth you may get a feeling of heaviness or pressure in your chest. This will go away after a few minutes but, if it is severe, you should let your anaesthetist know.

## What are the benefits of a spinal?

Compared to general anaesthesia, a spinal has benefits to both you and your baby.

- As you are awake, you and your partner can share in the birth and your baby can be brought to you shortly after delivery.
- You can breastfeed soon after surgery.
- A spinal is slightly safer than a general anaesthetic, although both types are safe.
- Recovery is usually more comfortable and quicker
- There are no significant side effects for you or your baby. A general anaesthetic may make the baby drowsy at first.

## What complications can happen?

Your anaesthetist will try to make your anaesthesia as safe as possible. However, complications can happen. Some of these can be serious and can even cause death (risk: 1 in 70,000). 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 alternatives such as a general anaesthetic.

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

• **Difficulty passing urine** because the nerves to the bladder are numbed. A catheter (tube) will be passed into your bladder to drain the urine. This will be taken out when you no longer need it.

• **Low blood pressure**. The risk depends on your medical condition and the drugs used. It is easily treated and you will be closely monitored by the 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 if the bag of fluid around the spinal cord is punctured (risk: 1 in 100). This headache can vary from mild to severe and can be treated if needed.

• **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.

• **Unexpected high block**, if the local anaesthetic spreads beyond the intended area (risk: 1 in 2,000). This can make breathing difficult, cause low blood pressure and, rarely, cause unconsciousness. You may be transferred to the high dependency unit or 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 80,000).

• **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.

A complication may happen after you have had a spinal or the epidural has been removed. If you experience any of the following problems, you or your doctor should contact the hospital straightaway.

- Pus, redness, tenderness or pain where the epidural was inserted
- High temperature
- Feeling unwell, even after recovering from the operation itself
- Discomfort when in a bright room or sunlight (photophobia)
- Neck stiffness
- Difficulty moving or feeling your legs
- Difficulty passing urine
- Bowel incontinence.

## General Anaesthetic

### What is a general anaesthetic?

A general anaesthetic is a combination of drugs that causes deep sleep. It is used for operations or medical procedures as it causes a loss of sensation, and you will not be aware of what is happening to you or going on around you. Afterwards you will not remember anything that has happened.

### How is the anaesthetic given?

Before you are given your anaesthetic, some monitors will be attached to you. These will measure your blood pressure and the amount of oxygen in your blood. Your anaesthetist will carry out some final checks and you may be given oxygen to breathe through a face mask.

Most people are sent to sleep by injecting the drugs through a drip (small tube) into a vein. It takes about 30 seconds to work. The injection can ache a bit at the time but any discomfort will be gone when you wake up. Before you go to sleep, the anaesthetist will ask you to breathe some oxygen through a face mask. As you go to sleep you will feel the assistant pressing firmly on the front of your neck. This is to prevent anything in your stomach from passing up into your lungs. To help protect your lungs during the operation, the anaesthetist will insert a breathing tube into your windpipe (trachea). This will be removed at the end of the operation, when you are awake.

You will be kept asleep for as long as is needed by breathing anaesthetic gases. Your anaesthetist will monitor you closely. When the operation has finished, the anaesthetic wears off, allowing you to wake up again.

## What complications can happen?

Your anaesthetist will try to make your anaesthesia as safe as possible. However, complications can happen. Some of these can be serious and can even cause death. The possible complications of a general anaesthetic are listed below. Any numbers which relate to risk are from studies of people who have had a general anaesthetic. Your anaesthetist may be able to tell you if the risk of a complication is higher or lower for you.

• **Feeling or being sick** after the operation (risk: 1 in 4). This risk increases with certain people and certain operations but can be reduced with drugs either given by the anaesthetist at the time of your anaesthetic or by the ward doctor after the operation. If you think you may be prone to being sick, let your anaesthetist know.

• **Sore throat**, which gets better quickly (risk: 1 in 6).

• **Headache** (risk: 1 in 20). This is not usually severe and will get better. Paracetamol or other simple painkillers may help.

• **Muscle and back pains** due to the drugs used or being in one position during the operation (risk: 1 in 20). If you know that certain positions are likely to cause you problems, let your anaesthetist know.

• **Dental damage** affecting the front teeth or crowns (risk: less than 1 in 100). Your anaesthetist will always ask to look inside your mouth, but let your anaesthetist know if you have any loose teeth, crowns or bridgework.

• **Difficulty passing urine**. You may need a catheter (tube) in your bladder for a day or two

• **Breathing difficulties**. Your anaesthetist may have difficulty placing the breathing tube in your windpipe (risk: 1 in 100). They may have to wake you before you have the Caesarean section and recommend an alternative technique for you (risk: 1 in 1,000)

• **Awareness during the operation**. This is more common during a Caesarean section than other operations (risk: 1 in 200).

Overall, around 4 in 10 people report some problem after a general anaesthetic. You should discuss these possible complications with your anaesthetist if there is anything you do not understand.

## What effects are there on my baby?

Some anaesthetic will pass from you to your baby. This may make your baby drowsy for a short while but there are no long-term effects. You will not be able to hold your baby or breastfeed until you are awake enough.

## How will my anaesthetist know that I am really asleep?

There is not a monitor available that can reliably say that someone is asleep. However, your anaesthetist continuously monitors the amount of anaesthetic in your body to make sure that it is extremely unlikely you are aware of what is happening. Your anaesthetist will give you as little anaesthetic as possible before your baby is born, so there is a small risk of you being aware of some sensations during the operation.

## Summary

The types of anaesthesia for Caesarean section are usually safe and effective. 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.

**Keep this information leaflet. Use it to help you if you need to talk to a healthcare professional.**

**Acknowledgements**

Author: Dr Iain Moppett DM MRCP FRCA and Dr Amelia Banks MRCP FRCA

Illustrations: LifeART image copyright 2011 Wolters Kluwer Health, Inc.-Lippincott Williams & Wilkins. All rights reserved