Department of Anaesthesia

Anaesthesia for Caesarean section

About one in four babies is born by Caesarean section and about half of these are unexpected. Even if you do not expect to have a Caesarean yourself you may like to read this information leaflet. There are several types of anaesthesia available for Caesarean section. This information outlines and explains the various choices. You can discuss the choice of anaesthetic with your Anaesthetist. Obstetric Anaesthetists are doctors who specialise in the anaesthetic care and welfare of pregnant women and their babies.

Your Caesarean section may be planned in advance; this is called an *elective Caesarean section*. In some cases, Caesarean section may be recommended in a hurry, usually when you are already in labour. This is an *emergency Caesarean section*. An Obstetrician (a doctor specialising in pregnancy and birth) will discuss with you the reasons for your Caesarean section and get your consent for the operation.

You should be seen by an anaesthetist before your Caesarean section. The anaesthetist will review your medical history and any previous anaesthetics. You may need an examination or further tests. The Anaesthetist will also discuss the anaesthetic choices with you and answer your questions.

If you have a regional anaesthetic and are awake in theatre your partner can be with you during surgery. Only one person may accompany you to theatre. If you are asleep then we do not allow this.

Types of anaesthesia

There are two main types; you can be either awake or asleep. Most Caesareans are done under regional anaesthesia, when you are awake but sensation from the lower body is numbed. It is usually safer for mother and baby and allows both you and your partner to experience the birth together.

There are three types of regional anaesthesia:

1. **Spinal** – the most commonly used method. It may be used in planned or emergency Caesarean sections. The nerves and spinal cord that carry feelings from your lower body are contained in a bag of fluid inside your backbone. Local anaesthetic is put inside this bag of fluid using a very fine needle. A spinal works fast with a small dose of anaesthetic.

2. **Epidural** – a thin plastic tube (catheter) is put next to the bag of fluid, near the nerves carrying pain from the uterus. An epidural is often used to treat the pain of labour using weak local anaesthetic solutions. It can be topped up if you need a Caesarean section by giving a stronger local anaesthetic solution. In an epidural, a larger dose of local anaesthetic is necessary than with a spinal, and it takes longer to work.

3. **Combined Spinal-Epidural (CSE)** – a combination of the two. The spinal is used for the Caesarean section. The epidural can be used to give more anaesthetic if required, and to give pain-relieving drugs after the operation.

General anaesthesia

If you have a general anaesthetic you will be asleep for the Caesarean section. General anaesthesia is used less often nowadays. It may be needed for some emergencies, if there is a reason why regional anaesthesia is unsuitable, or if you prefer to be asleep.

What will happen if you have a regional anaesthetic?

You will be asked either to sit or to lie on your side, curling your back. The Anaesthetist will paint your back with sterilising solution, which feels cold. He or she will then find a suitable point in the middle of the lower back and will give you a little local anaesthetic injection to numb the skin. This sometimes stings for a moment.

For a spinal, a fine spinal needle is put into your back; this is not usually painful. Sometimes, you might feel a tingling, like a small electric shock, going down one leg as the needle goes in. You should mention this, but it is important that you keep still while the spinal is being put in. When the needle is in the right position, local anaesthetic and a pain-relieving drug will be injected and the needle removed. It usually takes just a few minutes, but if it is difficult to place the needle, it may take longer.

For an epidural, a different needle is needed to allow the epidural catheter to be threaded down it into the epidural space. As with a spinal, this sometimes causes a tingling feeling or small electric shock down your leg. It is important to keep still while the Anaesthetist is putting in the epidural, but once the catheter is in place, the needle is removed and you don’t have to keep still.

If you already have an epidural catheter for pain relief in labour, then all the anaesthetist has to do is put a stronger dose of local anaesthetic down the catheter, which should work well for a Caesarean section. If the Caesarean section is very urgent, it may be decided that there is not enough time for the epidural to be extended in which case you will be given a general anaesthetic.

You will know when the spinal or epidural is working because your legs begin to feel very heavy and warm. They may also start to tingle. Numbness will spread gradually up your body. The Anaesthetist will check how far the block has spread to make sure that you are ready for the operation. It is sometimes necessary to change your position to make sure the anaesthetic is working well. Your blood pressure will be taken frequently.

While the anaesthetic is taking effect, a Midwife will insert a tube (a urinary catheter) into your bladder to keep it empty during the operation. This should not be uncomfortable. The tube may be left in place until next morning, so you won’t need to worry about being able to pass water. An antibiotic will also be put into the drip to reduce the risk of wound infection.

For the operation, you will be placed on your back with a tilt towards the left side. If you feel sick at any time, you should mention this to the Anaesthetist. It is often caused by a drop in blood pressure. The anaesthetist will administer appropriate treatment to help you.

The operation

A screen separates you and your birthing partner from the operation site. The Anaesthetist will stay with you all the time. Your skin is usually cut slightly below the bikini line. Once the operation is underway you may feel pulling and pressure, but you should not feel pain. Some women have described it as feeling like "someone doing the washing up inside my tummy". The Anaesthetist will assess you throughout the procedure and can give you more pain relief if required. Whilst it is unusual, occasionally it may be necessary to give you a general anaesthetic.

From the start, it takes about 10 minutes before the delivery. Immediately after the birth, the midwife quickly dries and checks over your baby. A paediatrician (doctor specialising in the care of babies and children) may do this with the midwife. After this, you and your partner will be able to cuddle your baby.

After the birth, a drug called Oxytocin is put into your drip to help tighten your uterus and deliver your placenta. The Obstetrician will take a further 40 minutes to complete the operation. Afterwards, you may be given a suppository (capsule containing a pain reliever) into your back passage to help relieve pain when the anaesthetic wears off.

When the operation is over

You will be taken to the Recovery room where you will be under observation for approximately 30 minutes. Often your baby is tucked into the bed with you and your partner can stay with both of you. If you wish, you can start breastfeeding in the Recovery room.

Your anaesthetic will gradually wear off and you may feel a tingling sensation in your legs. Within a couple of hours you will be able to move them again. The pain relieving drugs given with your spinal or epidural should continue to give you pain relief for a few hours. When you need more pain relief, ask the midwife. You will be prescribed tablets (Paracetamol and Ibuprofen) which will be given to you regularly. Oramorph, a liquid form of morphine that you can drink, will also be prescribed. You will have to ask a Midwife for this. Anti-sickness medication will also be available should you need it. One of the painkillers used in the spinal or epidural may cause itching; this should wear off within 12 hours. If it the itching is a problem a non-sedating anti-histamine drug can be given. All the medication that you will be prescribed is safe to take together and safe in breastfeeding.

What will happen with a general anaesthetic?

You will be given an antacid to drink and a urinary catheter will be inserted before your general anaesthetic. The Anaesthetist will give you Oxygen to breathe through a facemask for a few minutes. Once the Obstetrician and all the team are ready, the Anaesthetist will give the anaesthetic in your drip to send you to sleep. Just before you go off to sleep, the Anaesthetist’s assistant will press lightly on your neck. This is to prevent stomach fluids getting into your lungs. The anaesthetic works very quickly.

When you are asleep, a tube is put into your windpipe to prevent stomach contents from entering your lungs and to allow a machine to breathe for you. The Anaesthetist will continue the anaesthetic to keep you asleep and allow the Obstetrician to deliver your baby safely. But you won’t know anything about all this. When you wake up, your throat may feel uncomfortable from the tube and you may feel sore from the operation. You will be taken to the recovery area where you will meet up with your baby and partner.

Some reasons why you may need a general anaesthetic:

- In certain conditions, when the blood cannot clot properly, regional anaesthesia is best avoided.
- There may not be enough time for regional anaesthesia to work.
- Previous back surgery, injury or deformity may make regional anaesthesia difficult or impossible.
- Occasionally, spinal or epidural anaesthesia does not work sufficiently well to proceed with surgery.
- Occasionally, a general anaesthetic may become necessary during your caesarean section because the regional anaesthesia is not fully effective or surgical complications have arisen. This is very uncommon.

Advantages of regional compared with general anaesthetic:

- Spinals and epidurals are safer for you and your baby.
- They enable you and your partner to share in the birth.
- You will not be sleepy afterwards.
- They allow earlier feeding and contact with your baby.
- You will have better pain relief afterwards.
- Your baby will be born more alert.

Disadvantages of regional compared with general anaesthesia:

- They may take longer to set up than a general anaesthetic.
- Occasionally they may make you feel shaky or itchy.
- Spinals and epidurals can lower the blood pressure and this may make you feel sick. This can be easily treated.
- Rarely, they do not work perfectly and a general anaesthetic may be necessary. Very rarely, spinals and epidurals are overly effective and you may need a general anaesthetic.
- Severe headache, in less than one in a hundred women. This can be treated.
- They may cause tingling or numbness down one leg. This will normally resolve within a few weeks. Very rarely this may be permanent (one in thirteen thousand spinals).
- Local tenderness in your back for a few days, this is not unusual. Spinals and epidurals do **not** cause chronic backache. Unfortunately, backache is very common after childbirth, particularly among women who have suffered with it before or during pregnancy.

Having a baby by Caesarean section is a safe and rewarding experience. Many women choose to be awake for the procedure. Others may need to be asleep for the reasons discussed above. We hope that this information will enable you to make an informed choice for your Caesarean section. If you have any questions regarding your treatment or the information contained within this document please discuss them with your anaesthetist.

Risks of having a regional anaesthetic (epidural or spinal) There are no accurate figures available from published literature for all of these risks. Figures are estimates only and may vary from hospital to hospital		
Type of risk	How often does this happen?	How common is it?
Significant drop in blood pressure	1 in every 5 women (spinal) 1 in every 50 women (epidural)	Common Uncommon
Not working well enough for a Caesarean section so you need to have a general anaesthetic	1 in every 20 women (epidural) 1 in every 100 women (spinal)	Sometimes Occasional
Severe headache	1 in every 100 women (epidural) 1 in every 200 women (spinal)	Uncommon Uncommon
Nerve damage (numb patch on a leg or foot, or having a weak leg)	Temporary - 1 in every 1,000 Permanent - 1 in every 13,000	Rare Rare
Epidural abscess (infection) Meningitis Epidural haematoma (blood clot)	1 in every 50,000 women 1 in every 100,000 women 1 in every 170,000 women	Very rare Very rare Very rare
Accidental loss of consciousness	1 in every 5,000 women	Rare
Severe injury, including being paralysed	1 in every 250,000 women	Extremely rare

Risks of having a general anaesthetic There are no accurate figures available from published literature for all of these risks. Figures are estimates only and may vary from hospital to hospital		
Type of risk	How often does this happen?	How common is it?
Chest infection	1 in every 5 women	Common (most are not severe)
Sore throat	1 in every 5 women	Common
Feeling sick	1 in every 10 women	Common
Airway problems leading to low blood-oxygen levels	1 in every 300 women	Uncommon
Fluid from the stomach entering the lungs, and severe pneumonia	1 in every 300 women	Uncommon
Corneal abrasion (a scratch on the eye)	1 in every 600 women	Uncommon
Damage to teeth	1 in every 4500 women	Rare
Awareness (being awake part of the time during your anaesthetic)	1 in every 250 to 1000 women	Rare
Anaphylaxis (a severe allergic reaction)	1 in every 10,000 to 20,000 women	Very rare
Death or brain damage	less than 1 in 100,000 women	Very rare (1 or 2 per year in the UK)

Acknowledgements

The information is based on good evidence. Please speak to an anaesthetist if you wish to be given any of the references used.

This information has been adapted from that written by the Information for Mothers Subcommittee of the Obstetric Anaesthetists Association. The Obstetric Anaesthetists' Association - Information for Mothers

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