Acknowledgements

The information in this booklet is based on good evidence; some of the publications from which it is derived are listed on pages 13 and 14.

The booklet was written by the Information for Mothers Subcommittee of the Obstetric Anaesthetists Association.

Dr Michael Wee (chairman), Prof Felicity Reynolds, Dr Michael Bryson, Mrs Carol Bates (RCM representative), Mrs Cathy Groeger (AIMS representative), Mrs Christina Campbell (Consumer representative), Mrs Shaheen Chaudhry (Consumer representative), Dr Michael Kinsella, Dr Geraldine O'Sullivan, Dr Roshan Fernando.

Further information on anaesthesia can be obtained from www.youranaesthetic.info.

- A video produced by the Obstetric Anaesthetists Association entitled 'Your anaesthetic for Caesarean section' has been produced to accompany this booklet.
- Further Copies of the booklet and the Caesarean section video can be obtained from the Secretariat of the Obstetric Anaesthetists' Association. Website: www.oaa-anaes.ac.uk.

OAA Secretariat
PO Box 3219, Barnes
London SW13 9XR
Tel: +44 (0)20 8741 1311
Fax: +44 (0)20 8741 0611
E-mail: secretariat@oaa-anaes.ac.uk

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Caesarean section: your choice of anaesthesia

About one in five babies is born by **caesarean section** and two thirds of these are unexpected; so you may like to glance at this booklet, even if you do not expect to have a caesarean yourself.

Having a baby is an unforgettable experience

A caesarean section can be just as satisfying as a vaginal delivery, and if it turns out you need a caesarean section, you should not feel this is in any sense a failure. The most important thing is that you and your baby are safe. A caesarean section may be the best way to ensure this.

There are several types of anaesthesia for caesarean section. This booklet 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*. This may be advisable if there is an increased chance of complications developing during a vaginal delivery. One example might be if your baby is in an unusual position in the later stages of pregnancy.

In some cases, caesarean section may be recommended in a hurry, usually when you are already in labour. This is an *emergency caesarean section*. This may be recommended because of poor progress in labour; because the baby's condition is deteriorating or a combination of the two.

Your obstetrician will discuss with you the reasons for your caesarean section and obtain consent for the operation.

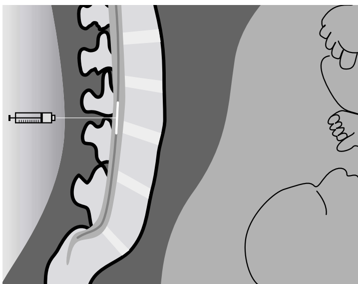
Types of anaesthesia

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 section. The nerves and spinal cord that carry feelings from your lower body (and messages to make your muscles move) 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.

Regional Anaesthesia



2. Epidural - A thin plastic tube or catheter is put outside 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. Your epidural can be topped up if needed.

3. Combined spinal-epidural or CSE - a combination of the two. The spinal can be 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.

The pros and cons of each are described later in this booklet. First it is useful to know what happens when a caesarean section is planned, and a date given for your operation.

Pre-operative assessment

Normally you will visit the hospital before you come in for your operation. The midwife will see you and take some blood from you for tests before the operation. She will also explain what to expect. Most women go home after the assessment and come back to hospital on the day of the operation, but you may need to stay in the night before. You may be given tablets to reduce the acid in your stomach and prevent sickness; you need to take one the night before the operation and one on the morning itself. This will be explained to you.

The anaesthetist's visit

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.

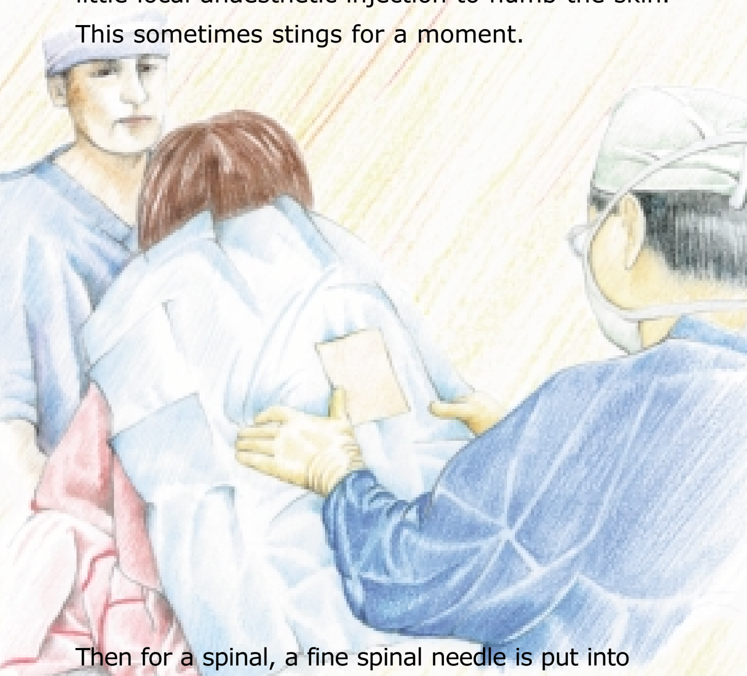
On the day

The midwife will confirm the time of your operation and check that you have taken your tablets. Your bikini line may need to be shaved. You will have a name band on your wrist or ankle. The midwife may help you to put on special tight stockings (called TED stockings) to prevent clots forming in your legs. You will be given a theatre gown to put on. Your birthing partner can accompany you and the midwife to the operating theatre. Special theatre clothes will be provided.

In theatre, equipment will be attached to measure your blood pressure, heart rate, and the amount of oxygen in your blood, quite painlessly. Using a local anaesthetic to numb your skin, the anaesthetist will set up a drip to give you fluid through your veins. Then the anaesthetic will be started.

What will happen if you have regional anaesthesia?

You'll 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.



Then for a spinal, a fine spinal needle is put into your back; this is not usually painful. Sometimes, you might feel a tingling going down one leg as the needle goes in, like a small electric shock. 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 larger 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, so a different anaesthetic may be recommended.

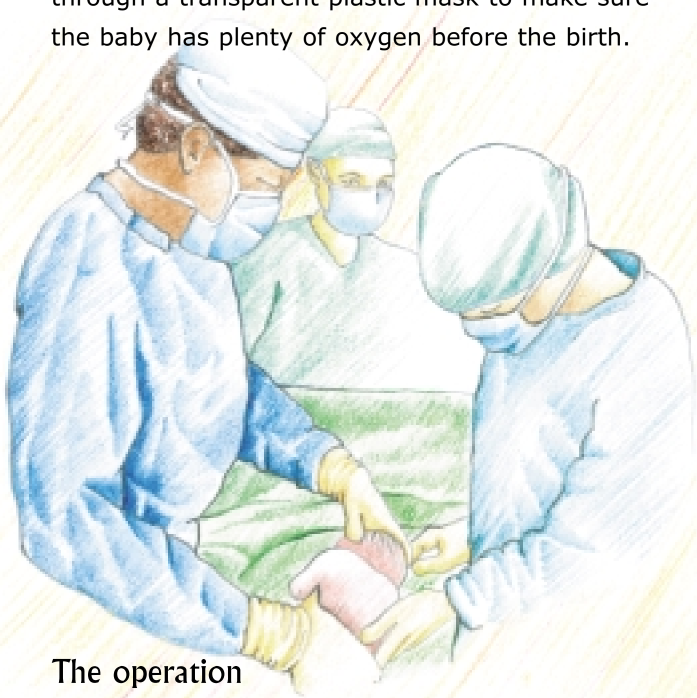
You will know when the spinal or epidural is working because your legs begin to feel heavy and warm. They may also start to tingle. Numbness will spread gradually up your body. The anaesthetist will check how far the block has spread to make sure that you are ready for the operation. It is sometimes 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 the next morning, so you won't need to worry about being able to pass water.

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 give you appropriate treatment to help you.

Until the baby is born, you may be given oxygen through a transparent plastic mask to make sure the baby has plenty of oxygen before the birth.



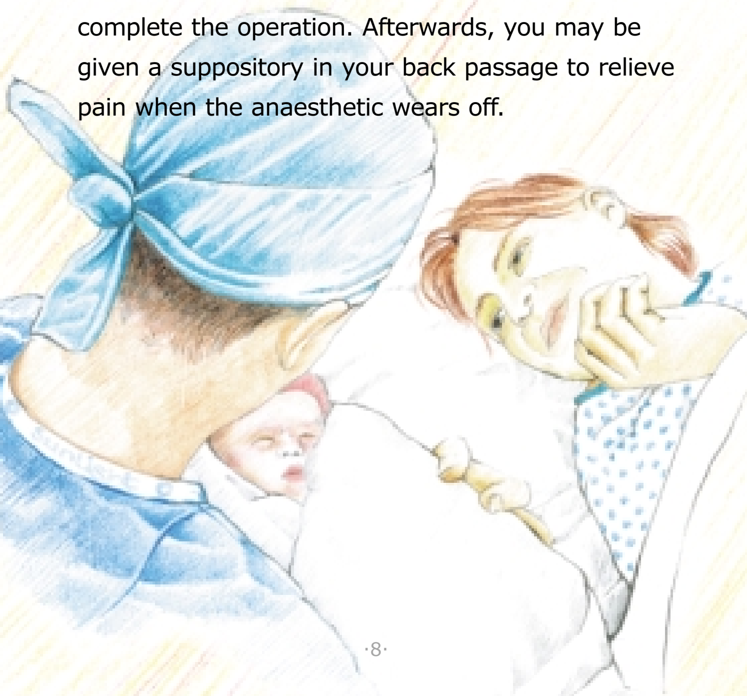
The operation

A screen separates you and your birthing partner from the operation site. The anaesthetist will stay with you all the time. You may hear a lot of preparation in the background. This is because the obstetricians work with a team of midwives and theatre staff.

Your skin is usually cut slightly below the bikini line. Once the operation is under way, 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 ten minutes before the delivery. Immediately after the birth, the midwife quickly dries and examines your baby. A paediatrician 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 Syntocinon is put into your drip to help tighten your uterus and deliver your placenta. An antibiotic will also be put into the drip to reduce the risk of wound infection. The obstetrician will take about another half-hour to complete the operation. Afterwards, you may be given a suppository in your back passage to relieve pain when the anaesthetic wears off.



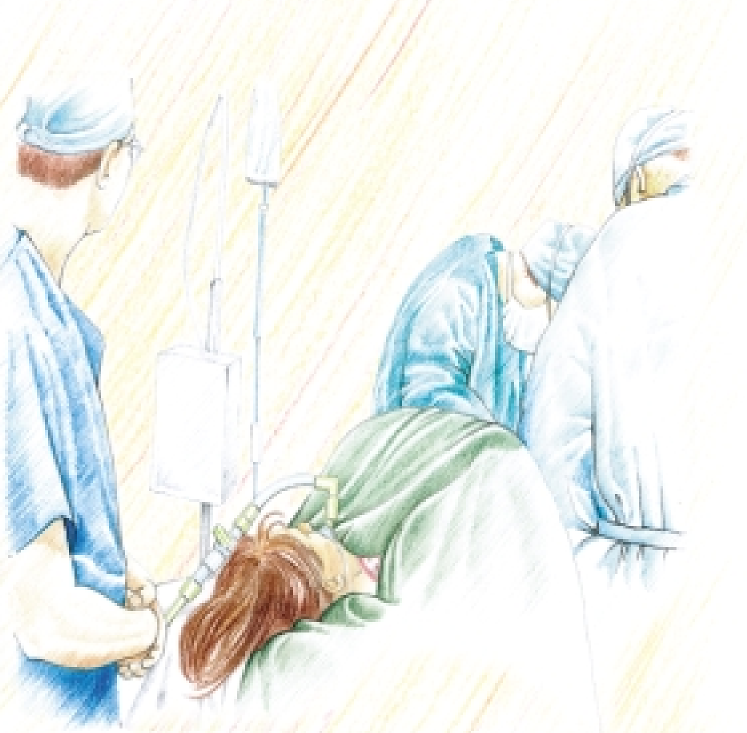
When the operation is over

You should be helped to sit up slightly, and then taken to the recovery room where you will be under observation for a while. Your partner and baby can usually be with you. Your baby will be weighed and then you can begin breast feeding if you like. 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'll 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.

What will happen with general anaesthesia?

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 assembled, 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 fluid 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 may also feel sleepy and perhaps nauseated, for a while. But you should soon be back to normal. You will be wheeled to the recovery area where you will meet up with your baby and partner. You may be given a patient controlled analgesia (PCA) machine, which provides you with pain relief at a press of a button whenever you need it. If not, ask the midwife when you need more painkillers.

Some reasons why you may need general anaesthesia:

- 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.

- A very abnormal back may make regional anaesthesia difficult or impossible.
- Occasionally, spinal or epidural anaesthesia does not work well.

Pain relief after the operation

There are several ways to give you pain relief after caesarean section:

- Regional: you can be given a long acting pain killer with the spinal or epidural.
- Epidural: in some hospitals the epidural catheter is left in for later use.
- Suppositories are often given at the end of the operation.
- Injection into a muscle of morphine or similar painkiller, by a midwife.
- Into a drip: (morphine or similar drug) you can control the amount yourself. This is called patient-controlled analgesia or PCA.
- By mouth: a midwife can give you tablets such as Voltarol or paracetamol.

Advantages of regional compared with general anaesthesia

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

Disadvantages of regional compared with general anaesthesia

- Spinals and epidurals can lower the blood pressure, though this is easily treated.
- In general, they may take longer to set up than a general anaesthetic.
- Occasionally, they may make you feel shaky.
- Rarely, they don't work perfectly; so a general anaesthetic may be necessary.

Also they may cause:

- Tingling down one leg, more with spinals. (In about one in ten thousand spinals, this may last several weeks or months).
- Itching during the operation and afterwards, but this can be treated.
- Severe headache, in fewer than one in a hundred women. This can be treated.
- 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, but spinals and epidurals do not make it more so.

Having a baby by caesarean section is safe and can be a very 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 booklet will enable you to make an informed choice for your caesarean section.

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