

FAQs for anaesthetic for Caesarean section:

. Q: What types of anaesthetics are available for caesarean section?

A: There are two main types of anaesthetic. You can be either awake (a regional anaesthetic) or asleep (a general anaesthetic). Normally, if you have a caesarean section, you will have a regional anaesthetic. This is where you are awake but you can't feel any sensation in your lower body. It is usually safer for you and your baby and allows both you and your partner to experience the birth together. There are three forms of regional anaesthetics. These are spinal, epidural and combined spinal epidural anaesthetics.

A spinal anaesthetic is the most commonly used form. The nerves that carry feeling from your lower body are contained in a compartment of fluid inside your spine bones. I will inject local anaesthetic inside this fluid compartment, using a very fine needle. This method works fast, and only needs a small dose of anaesthetic.

An epidural anaesthetic is when a thin plastic tube or catheter is put next to the nerves in your spine bone, and drugs to numb the nerves can be fed through the tube when needed. An epidural is often used to treat the pain of labour using weak local anaesthetic solutions. This can be topped up for a caesarean section, however is not commonly used for elective caesarean sections. You would need a larger dose of local anaesthetic with an epidural than with a spinal, and it takes longer to work.

A combined spinal-epidural anaesthetic or CSE is a combination of the two. The spinal makes you numb quickly for the caesarean section. The epidural can be used to give more anaesthetic if needed e.g. if surgery is prolonged.

General anaesthesia With a general anaesthetic you will be asleep while the obstetrician carries out the caesarean section. General anaesthesia is used less often nowadays. It may be needed for some emergencies, if there is a reason why a regional anaesthetic isn't suitable for you or if you prefer to be asleep.

• **Q: What happens once I am booked to have an elective (planned) caesarean section?**

A: Normally you will visit the hospital before you come in for your caesarean section. You will have your blood level checked and your blood group tested within 72 hours of surgery (typically Saturday for a Monday caesarean section). You will come back to hospital on the day of surgery. You need to avoid eating and drinking for a certain period of time before you have your caesarean section (at least 6-8 hours for solids and 2 hours for clear fluids). This is for your safety, to minimise complications, and to prevent you feeling sick during the surgery. You will receive a text or phone call from the hospital explaining this.

On the day of your caesarean section you will be given a theatre gown to put on. If you have a birth partner they will be able to be with you during the caesarean section, they will also wear special clothes for the operating theatre.

There are a lot of people who work in the operating theatre:

- The **midwife** will be there to help look after you and your baby.
- The **anaesthetist** (me) will have a **nurse assistant**. I may also have an **anaesthetic registrar** with me who may perform some procedures under my supervision (an exception is elective private patients where I will perform the regional myself).
- The **obstetrician** will have an **assistant** and a **scrub nurse** as well as a **scout nurse** who gets equipment ready.
- A **theatre orderly** to help move you onto and from the operating table.

At the very least there will be **seven members of staff** in the theatre.

- A **paediatrician** may be also present if needed.

Q: What happens in theatre if I am having a regional anaesthetic e.g. spinal?

A: In theatre, equipment will be attached to you to measure your blood pressure, heart rate, and the amount of oxygen in your blood. This won't hurt. I will put a cannula (a thin plastic tube) into a vein in your hand or arm and I will set up a drip to give you fluid through this before I start the anaesthetic.

You will sit with your feet on a chair to assist your positioning which is very important to open up the spaces in your back to pass the spinal injection through. I will clean the skin on your back with sterilising solution which feels cold. I 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 anaesthetic I will place a fine needle into your back. Sometimes, you might feel a tingling going down one leg as the needle goes in. Tell me if this happens. It is important that you keep still while I carry out the spinal injection. When the needle is in the right position, I will inject local anaesthetic mixture and then remove the needle. It usually takes just a few minutes, but if it is difficult to find the right spot for the needle, it may take longer. I will talk you through everything beforehand and answer any questions you may have.

For an epidural (or combined spinal-epidural), I will use a larger needle so I can place the epidural catheter (tube) into the space next to the nerves in your spine bones. As with a spinal, this sometimes causes a tingling feeling or small electric shock down your leg. It is important to keep still while I am putting in the epidural, but once the catheter is in place I will remove the needle and you don't have to keep still. I will then assist you to lie down from sitting.

When the spinal or epidural is starting to work, your legs will begin to feel very heavy and warm. They may also start to tingle. Numbness will spread gradually up your body. I will check that the numbness has reached the middle of your chest before the caesarean section begins. It is sometimes necessary to change your position to make sure the anaesthetic is working well. I will measure your blood pressure minutely initially.

After I have finished putting in the spinal, epidural or combined-spinal-epidural, you will be lying on your back, and tilted to the left. If you feel sick at any time, you should mention this to me or my assistant. A feeling of sickness is often caused by a drop in your blood

pressure which we will treat. While the anaesthetic is taking effect, an obstetric doctor will insert a small tube (a bladder catheter) into your bladder to keep it empty during the operation. This should not be uncomfortable. The bladder catheter will usually be removed once you are able to walk and at least 12 hours after the last “top-up dose” (a dose of spinal or epidural anaesthetic drugs given to maintain the effects of the anaesthetic). This means you won’t need to worry about being able to pass urine.

• Q: Will my partner be able to be with me during the caesarean section when I am awake?

A: If you have a regional anaesthetic, your birth partner will be able to join you in the operating theatre. They will be asked to sit down at your side. If you are to have a general anaesthetic your birth partner will be asked to wait in another room.

• Q: What happens during the caesarean section when I am awake?

A: Just before the caesarean starts, a member of the theatre team will confirm your name, date of birth and hospital number to ensure that we have the correct patient prior to the start of the caesarean section.

A screen will separate you and your birth partner from the lower part of your body and the surgery. I 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 staff in the operating theatre.

Your skin is usually cut slightly below the bikini line. Once the caesarean section is under way you will hear the sound of instruments and suction of fluids from around the baby.

• Q: Will I feel anything during the caesarean section with regional anaesthetic?

A: During the caesarean section, 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 talk to you while the operation is happening and can give you more pain relief if needed. Occasionally they may need to give you a general anaesthetic, but this is unusual.

• Q: How long does the caesarean section take?

A: From the start of the operation it usually takes about 10-15 minutes until your baby is born. The obstetrician will take about another 30 - 45 minutes to complete the operation. However, because every caesarean section is different, it may take longer than this.

• Q: What happens to my baby after it is born when I am awake?

A: Immediately after the birth of your baby, the midwife dries and examines your baby. A paediatrician may do this with the midwife. After this, as long as they are happy with that the baby is doing well, you and your partner will be able to cuddle your baby and, in some cases, have skin-to-skin contact.

• Q: Am I given any other medicines during the caesarean section?

A: Before your caesarean section starts, an antibiotic will be put into your drip to reduce your risk of getting an infection. After the birth, a drug called carbetocin is put into your drip to help tighten your womb and to cut down blood loss. If you feel sick, you may be given medicine to help you stop feeling sick or vomiting. If you feel any discomfort, I will give you extra medicine to help relieve the discomfort. We also have the option of converting to general anaesthetic, however it is very unusual to need to do this. At the end of the caesarean section, you will be offered an anti-inflammatory suppository in your back passage to relieve pain when the anaesthetic wears off.

. Q: What happens after the caesarean section when I am awake?

A: After the operation, you will be taken to the recovery room where your blood pressure will continue to be monitored. Your partner and baby will usually be with you. You may begin breastfeeding if you want to. In the recovery room your anaesthetic will gradually wear off and you may feel a tingling or itching sensation. Within a couple of hours you will be able to move your legs again.

. Q: Why might I need a general anaesthetic for my caesarean section?

A: These are some of the reasons why you may need a general anaesthetic.

- If you have certain conditions when the blood cannot clot properly, it is best not to have a spinal or epidural anaesthetic.
- If you need a caesarean very urgently, there may not be enough time for a spinal or epidural anaesthetic to work.
- Abnormalities in your back may make a regional anaesthetic difficult or impossible.
- Occasionally, a spinal or epidural anaesthetic can't be put into the right place, or doesn't work properly.

. Q: Will my partner be able to be with me if I have a general anaesthetic?

A: Unfortunately, your partner will not be able to come into the operating theatre with you. However, they will be near to the operating theatre and will be able to see your baby when he or she is born.

• Q: What happens about pain relief after your caesarean section?

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

At the end of the caesarean section, you may be given a suppository (tablet) up your bottom to relieve pain when the anaesthetic wears off. If you've had a regional anaesthetic, the pain-relieving drugs given with your spinal or epidural should continue to give you pain relief for several hours.

Typically I prescribe regular diclofenac (voltaren) and paracetamol by taking these regularly you will reduce the amount of stronger pain relieving drugs (e.g. endone) that you need. It is better to take regular pain medication when offered it to you than to wait until you are sore. The drugs may make you feel sleepy.

• Q: What are the advantages of a regional anaesthetic compared with a general anaesthetic?

A:

- Spinals and epidurals are usually safer for you and your baby.
- They let you and your partner share in the birth.
- You will feel less sleepy afterwards.
- They will let you feed and hold your baby as early as possible.
- You will usually have good pain relief afterwards.
- Your baby will usually be more alert when it is born.
- Reduced post operative nausea and vomiting.

• Q: What are the disadvantages of regional anaesthesia compared with general anaesthesia?

A:• Spinals and epidurals can lower your blood pressure, though this is easy to treat.

- In general they take longer to take effect, so it will take longer to get you ready for the operation than a general anaesthetic.
- They may make you feel a bit shaky.
- Rarely, they do not work well enough, so I may need to give you a general anaesthetic.
- You may have a tender area in the back where the needles go in
- You may develop a post dural puncture headache (See below)

• Q: What are the risks and side effects associated with regional anaesthesia for caesarean section?

A: The risks of a regional anaesthetic are shown in a table below. The information comes from published documents and may vary.

Risks and side effects of regional anaesthetic	
Possible problem	How common the problem is
Itching	Common – about 1 in 3 - 10 people, depending on the drug and dose
Significant drop in blood pressure	Spinal:Common – about 1 in 5 Epidural:Occasional – about 1 in 50
Epidural given during labour not effective enough to be topped up so another anaesthetic is needed for the Caesarean section	Common – about 1 in 10

<p>Anaesthetic not working well enough and more drugs are needed to help with pain during the operation</p>	<p>Spinal:Occasional – about 1 in 50 Epidural: Common – about 1 in 10</p>
<p>Regional anaesthetic not working well enough for Caesarean section and general anaesthetic is needed</p>	<p>Spinal:Occasional – about 1 in 50 - 100 Epidural:Occasional – about 1 in 20</p>
<p>Severe headache</p>	<p>Epidural:Uncommon – about 1 in 100 Spinal:Uncommon – about 1 in 500</p>
<p>Nerve damage(For example, numb patch on a leg or foot, weakness of a leg)</p>	<p>Effects lasting less than six months: Quite rare – about 1 in 1,000 - 2,000 Effects lasting more than six months:Rare - about 1 in 24,000</p>
<p>Meningitis</p>	<p>Very rare – about 1 in 100,000</p>
<p>Abscess (infection) in the spine at the site of the spinal or epidural Haematoma (blood clot) in the spine at the site of the spinal or epidural Abscess or haematoma causing severe injury, including paralysis (paraplegia)</p>	<p>Very rare – about 1 in 50,000 Very rare – about 1 in 168,000 Very rare – about 1 in 100,000</p>
<p>With an epidural: A large amount of local anaesthetic being accidentally injected into a vein in the spine A large amount of local anaesthetic being accidentally injected into spinal fluid, which may cause difficulty in breathing and, very rarely, unconsciousness</p>	<p>Very rare – about 1 in 100,000 Quite rare - about 1 in 2,000</p>

Acknowledgement:

A: • The information provided has been modified from www.labourpains.com

.Q: What references have been used to provide the above data?

- Holdcroft A, Gibberd FB, Hargrove RL, Hawkins DF, Dellaportas CI. Neurological complications associated with pregnancy. *British Journal of Anaesthesia* 1995 – chapter 75, pages 522–526.
- Jenkins K, Baker AB. Consent and anaesthetic risk. *Anaesthesia* 2003 – chapter 58, pages 962–984.
- Jenkins JG, Khan MM. Anaesthesia for Caesarean section: a survey in a UK region from 1992 to 2002. *Anaesthesia* 2003 – chapter 58, pages 1114–1118.
- Jenkins JG. Some immediate serious complications of obstetric epidural analgesia and anaesthesia: a prospective study of 145,550 epidurals. *International Journal of Obstetric Anesthesia* 2005 – chapter 14, pages 37–42.
- Reynolds F. Infection a complication of neuraxial blockade. *International Journal of Obstetric Anesthesia* 2005 – chapter 14, pages 183–188.
- Ruppen W, Derry S, McQuay H, Moore RA. Incidence of epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/ anesthesia. *Anesthesiology* 2006 – chapter 105, pages 394–399.
- Cook TM, Counsell D, Wildsmith JAW. Major complications of central neuraxial block: report on the third National Audit Project of the Royal College of Anaesthetists. *British Journal of Anaesthesia* 2009; 102: 179-190
- Pandit JJ, Cook TM. The 5th National Audit Project of the Royal College of Anaesthetists and The Association of Anaesthetists of Great Britain and Ireland. Accidental Awareness during General Anaesthesia in the United Kingdom and Ireland. September 2014.
- Soltanifar S, Tunstill S, Bhardwaj M, Russell R. The incidence of postoperative morbidity following general anaesthesia for caesarean section. *IJOA*. 2011;20(4) 365.
- Morgan BM, Aulakh JM, Barker JP et al. Anesthetic morbidity following cesarean section under epidural or general anesthesia. *Lancet* 1984;1:328-30.
- The Royal College of Anaesthetists. *Anaesthesia explained. Information for patients, relatives and friends.* RCoA 2008. 3rd edition. www.rcoa.ac.uk/patientinfo. epidural or general anesthesia. *Lancet* 1984;1:328-30.
- The Royal College of Anaesthetists. *Anaesthesia explained. Information for patients, relatives and friends.* RCoA 2008. 3rd edition. www.rcoa.ac.uk/patientinfo.