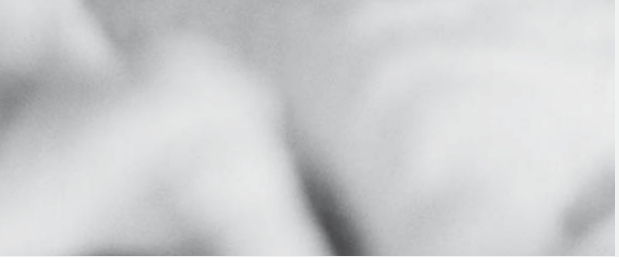
Information for Expectant Mothers

Regional Anaesthesia for Pain Relief in Labour

Ready reference guide

Anaesthesia refers to the elimination of pain; analgesia is one component of anaesthesia and is a term used to denote the mere alleviation of pain. Besides general anaesthetic procedures (narcosis*), regional anaesthetic techniques are also used to block or alleviate pain (analgesia). Neuraxial anaesthesia* is used both to relieve or eliminate the experience of pain during natural deliveries and Caesarean deliveries. Its effectiveness and safety have led to its widespread use. As a general rule, neuraxial anaesthesia does not harm the baby nor does it have any adverse effects on the natural course of childbirth. Serious complications are extremely rare and any minor side effects are usually short-lived.

* These terms are defined at the end of the brochure.



The modern woman has access to many different methods of pain relief during labour. This brochure aims to inform you about the most effective type of treatment, the so-called neuraxial anaesthesia techniques. The principal anaesthetic technique is epidural anaesthesia*, also called peridural anaesthesia*.

This brochure is not able or intended to replace the essential prenatal care and face-to-face consultations. It is merely meant to provide you with some basic information. Please do not hesitate to discuss all your questions about pain relief during labour with your midwife and physician.

Advantages of neuraxial pain relief

Neuraxial anaesthesia is the most effective method of obstetric pain relief. The anaesthetic effect can be powerful enough to entirely block out the pain of the contractions or to reduce it to a mere sensation of slight pressure. In contrast to many strong pain killers (opioids*), an epidural does not cause drowsiness. It is not known to have any adverse effects on your baby. In fact, the condition of the unborn child can be improved by the reduction of stress during childbirth. If a Caesarean delivery (Caesarean section) proves necessary during the course of labour, then the epidural anaesthetic can often be adjusted by using a stronger dose of local anaesthetic.

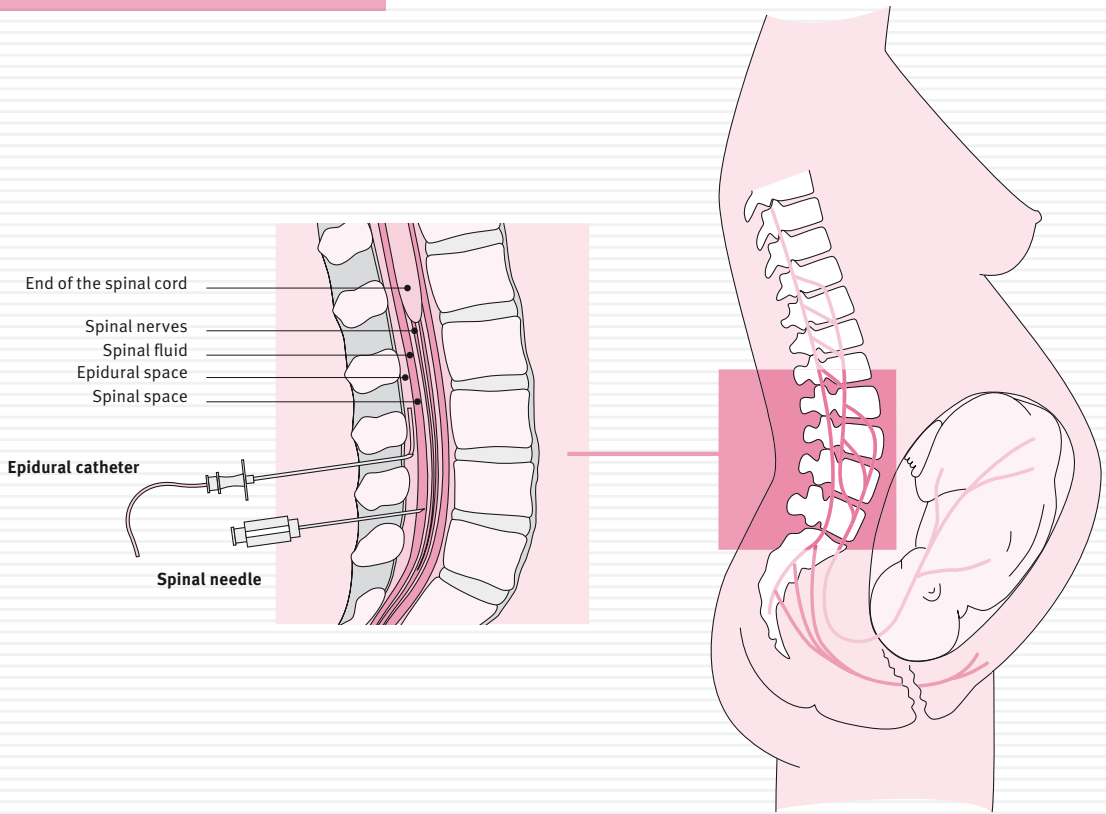
Regional anaesthetic techniques

When performing an epidural, the anaesthetist will administer a local anaesthetic to your lower back before inserting a thin plastic tube through a hollow needle into the so-called epidural space. This is separated from the spinal space where the spinal nerves and the spinal cord are located. The pain-relieving medication, local anaesthetics and opioids, can then be administered for the time required. The epidural takes effect after about 15 to 20 minutes. It extends to the nerves that relay pain signals from the uterus, vagina and perineum to the central nervous system during labour. By choosing a combination of several low-dose analgesics it is possible to achieve good pain relief with only slight reduction of muscle power. Therefore, it is still possible to walk about during labour, and most women also have the strength to push during the final stage of labour.

For spinal anaesthesia*, a single injection of the pain-relieving medication is made into the so-called spinal space. Spinal anaesthesia takes effect very quickly but only lasts for a limited amount of time.

Combined spinal-epidural anaesthesia is a somewhat more involved technique, incorporating the benefits of both methods.

Epidural and spinal anaesthetics



Possible side effects, risks and complications of neuraxial anaesthesia

No surgical procedure is completely free of side effects, risks and complications, even if the utmost care is exercised.

Possible side effects of regional anaesthesia in obstetrics include the sensation of warmth, shivering, numbness, tingling, and itching; muscle weakness in the lower half of the body, which can affect the ability to walk and sometimes the strength to push; a slow-down in contractions, which may need to be counteracted with oxytocin; a possible need for assisted delivery (vacuum or forceps). Nevertheless, epidural anaesthesia does not increase the rate of Caesarean sections.

Known risks and complications of regional anaesthesia in obstetrics: incomplete analgesia, a drop in blood pressure necessitating the administration of fluid or medication to raise blood pressure; occasionally postpartum headaches when standing; temporary postpartum urinary retention. Rare complications include respiratory muscle weakness; loss of consciousness or convulsions due to intravascular injection of local anaesthetic; allergic reactions; haematoma or infection at the site of injection; temporary sensory disorders or nerve injuries in the lower half of the body. Paraplegia is an extreme rarity, however.

Anaesthetic procedures for obstetric surgery

The regional anaesthesia techniques can be used for a Caesarean section or other obstetric interventions. Even in complete absence of pain, a certain sensation to touch is retained.

A general anaesthetic (narcosis*) is only used if regional anaesthesia is not possible for technical or medical reasons, in case of failure of achieving adequate pain relief during regional anaesthesia, or if informed consent is not obtained. Our preference for regional anaesthesia is in line with the wishes of many parents to be able to share the experience of birth. Therefore, we recommend regional anaesthesia for Caesarean delivery as this technique is usually the safest for the mother and her baby.

Alternatives to neuraxial regional anaesthesia for pain relief during labour

Although neuraxial anaesthesia is the most effective way of treating the pain of labour we would also refer you to alternative methods that can sometimes help you to cope with pain, such as walking, moving around, sitting on a birthing ball or stool, changing position, back massage, special breathing techniques, reflexology, the many methods of natural and homoeopathic medicine, acupuncture or acupressure, transcutaneous electrical nerve stimulation of the lower back (TENS). However, scientific evidence of the benefits of most of the above methods is missing. Therefore, they may not be offered by all maternity clinics.

The alleviation of pain by immersion in warm water should not be underestimated. Warm water has the ability to offer comfort right up to the actual delivery in the birthing pool.

Antispasmodic drugs (spasmolytics) are capable of relieving labour pain to a limited extent. Strong pain relievers belonging to the group of opioids* are used less and less because of limited efficacy and adverse side effects (especially drowsiness and nausea). The once popular nitrous oxide has also had its day.

Local infiltration anaesthesia can be used during the final stage of labour for assisted vaginal deliveries (vacuum extraction or forceps delivery), for perineal repair and episiotomy suturing.

Pain relief options can certainly vary. All professionals have their own experiences using various methods.

Please do not hesitate to contact us if we can be of any further help in answering your questions.

If you already know before the birth that you would like to have a regional anaesthetic for a natural delivery, we recommend that you talk to an anaesthetist during one of your antenatal appointments at your chosen maternity clinic. However, it is up to you to postpone this decision until your labour has started.

With our best wishes for a healthy pregnancy and a safe delivery of your child,

On behalf of the Anaesthetic and Obstetric Teams

Glossary

General anaesthesia (narcosis)
Temporary loss of consciousness and sensation of pain. Suppression of voluntary and involuntary (breathing) muscle functions

Epidural analgesia (EDA) or peridural analgesia (PDA)
Pain relief medication administered into the epidural space (area within the vertebral canal outside of the spinal space)

Epidural anaesthesia (EDA) or peridural anaesthesia (PDA)
Pain-blocking medication administered into the epidural space (area within the vertebral canal outside of the spinal space) with retention of consciousness and loss of voluntary muscle function in the lower half of the body

Spinal analgesia
Pain relief medication administered into the spinal space (fluid-filled area surrounding spinal cord and spinal nerves)

Spinal anaesthesia
Pain-blocking medication administered into the spinal space (fluid-filled area surrounding spinal cord and spinal nerves) with retention of consciousness and loss of voluntary muscle functions in lower half of the body

Opioids or opiates
Strong pain killers (narcotics)

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