> DOES AN EPIDURAL ALWAYS WORK?

Sometimes the epidural space can be difficult or impossible to locate, even by an experienced anaesthetist. These failures are mostly related to obesity or spinal anomalies.

Even with a correctly placed epidural catheter, pain relief can be incomplete or one-sided. These imperfections can be dealt with by asking you to change your position on the bed or by injecting additional medication. Occasionally, the catheter needs to be replaced to give you adequate pain relief.

> CAN THE EPIDURAL BE USED FOR CAESAREAN DELIVERY?

If an epidural is in place and working well, it can be used to provide adequate anaesthesia for caesarean section by injecting additional medication into the epidural space. With epidural anaesthesia you are awake for the birth without feeling the pain of the operation. However you may sense a feeling of "pulling and tugging" and a pressure on your chest as the obstetrician pushes on your belly to deliver the baby.

Rarely, if the epidural doesn't work and depending on the urgency of the situation, spinal or general anaesthesia might be used.

> ONCE THE BABY IS BORN

Removal of the epidural catheter is a painless procedure that is performed by the midwife. After you have given birth, you will stay in the delivery room for another 2 hours for surveillance.

> WHEN IS EPIDURAL ANALGESIA ADVISED?

Some medical situations might require epidural analgesia:

- > Induced labour
- Situations carrying a high risk of emergency caesarean: breech birth (buttocks first), previous caesarean delivery, multiple gestation (twins)
- > Previous instrumental delivery (forceps, ventouse)
- > Premature birth, low birth weight
- Mother having a personal medical history of cardiac malformation, high blood pressure, asthma, multiple allergies, epilepsy, tetany, detached retina.

CONCLUSION

The choice of having an epidural rests with the mother. She decides on which pain-management technique suits her best, while respecting possible limitations and contraindications.

We hope that this document has clarified epidural analgesia and answered most of your questions on this issue.



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MEDICAL INFORMATION ON EPIDURAL ANALGESIA FOR PAIN RELIEF IN CHILDBIRTH

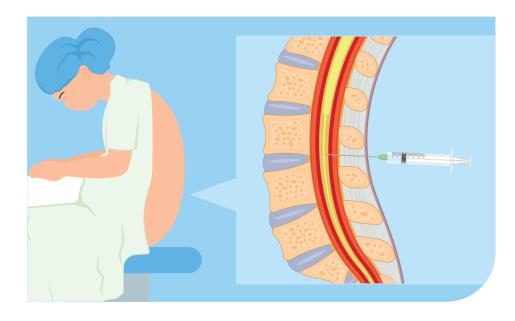
You have chosen to have your baby at the Maternité Grande-Duchesse Charlotte. A team of midwives, obstetricians and anaesthetists is at your disposal to make the birth process as comfortable and safe as possible for you and your baby.

Pain relief during labour can be achieved by epidural analgesia. This document aims to inform you about the procedure of epidural analgesia, its advantages and its risks.

> WHAT IS EPIDURAL ANALGESIA?

Epidural analgesia is the safest and most effective means of pain relief during labour. This technique involves the injection of medication (a mixture of local anaesthetic and narcotic) through a small tube placed into the space surrounding the spinal cord (epidural space). This space contains the nerves going from the uterus (womb) and birthcanal to the brain, which are transmitting the pain signals.

The injected drugs "bathe" these nerves and suppress the transmission of these signals, thus blocking out the pain. The epidural catheter stays in place during labour, allowing pain relief to be maintained until the baby is born.



WHAT ARE THE BENEFITS OF EPIDURAL ANAESTHESIA?

- Epidural analgesia provides pain relief without affecting the mother's mental state. Since the medication is injected into the epidural space, it works at spinal cord level and has very little effect throughout the rest of the body.
- Some women going through labour might eventually require a caesarean delivery. In most cases the epidural catheter can be used to give adequate anaesthesia for surgery.

The epidural also provides effective analgesia for forceps delivery, suturing of episiotomy incisions (stitches) or manual removal of the placenta in case of incomplete placental delivery.

> LA CONSULTATION PÉRIDURALE

The aim of the pre-anaesthesia consultation is to improve the quality of care and ensure the best safety conditions for local or general anaesthesia. Ideally, the pre-anaesthesia consultation takes place during the last 4 weeks of pregnancy. During this consultation, the anaesthetist evaluates your health condition from medical history, clinical examination, review of any medication and the results of any relevant investigations.

The anaesthetist arranges for any further investigatory or therapeutic measures that are considered necessary. It also gives you the opportunity to ask any questions you may have regarding the details of anaesthetic management.

> WHEN CAN AN EPIDURAL NOT BE USED?

In some circumstances, depending on your health condition and your blood test results, you cannot be given an epidural. The final decision on whether the epidural is performed is made by the anaesthetist. At night and on weekends, the placement of the epidural catheter might be delayed in case the anaesthetist on duty is busy with an emergency.

Epidural analgesia is inadvisable in the presence of:

- > Bleeding disorders, low platelet count, anticoagulant medication
- > Skin infection near the site of insertion
- > Fever, systemic infection
- > Allergy to local anaesthetics
- > Pre-existing neurological disorders may be a reason to avoid epidural analgesia. However, herniated intervertebral disk, sciatica or scoliosis are not absolute contraindications to the use of epidural.

WHAT ARE THE RISKS AND DISADVANTAGES OF EPIDURAL ANAESTHESIA?

Side effects are rare, but might occur even if the epidural has been performed by an experienced anaesthetist and according to current guidelines:

- A feeling of numb and heavy legs is common. However, you will still be able to move your legs around. The aim of modern epidural analgesia is to relieve pain without causing motor blockade, allowing you to participate as actively as possible in the birth of your baby.
- > Epidural analgesia might prevent you from feeling the pressure as the baby's head moves down the birth canal and may decrease your ability to push. If so, your midwife will guide you in pushing with your contractions.
- > Difficulty urinating is frequent and may require bladder drainage.
- > Epidural analgesia may cause your blood pressure to drop. You will receive intravenous fluids and your blood pressure will be carefully monitored and treated.
- > Some of the medications used can cause shivering, nausea, dizziness or itching.

Specific treatments exist to allow these side effects to be diminished or completely suppressed.

WHAT ARE THE RISKS AND DISADVANTAGES OF EPIDURAL ANAESTHESIA?

- Rarely you may feel back pain, which could last for 1 or 2 days. Back pain is not necessarily attributable to the epidural. Pregnancy itself can increase the incidence of back pain by softening the ligaments and causing static vertebral alterations. The position on the delivery table and the pushing efforts may also play their part.
- > Exceptionally a headache may develop in about 24 hours following the epidural procedure. This headache is the consequence of a needle hole in the sac containing the spinal fluid, causing a leakage of this fluid into the epidural space. The headaches can often be reduced or eliminated by pain medication and simple measures such as lying flat. An additional, specific treatment exists in case symptoms persist.
- Severe complications such as cardiac arrest, seizures, meningitis, epidural abscess formation, permanent nerve damage, paralysis or epidural haematoma are extremely rare. Only a few case reports exist in the medical literature, whereas hundreds of thousands of epidurals are performed each year.

> HOW DOES THE EPIDURAL AFFECT THE BABY?

The effects of the medication used for epidural analgesia on the newborn baby have very little or no clinical significance. Epidural analgesia can be beneficial for the baby by improving the placental blood flow.

Moreover, in the case of emergency caesarean an epidural can eliminate the need for general anaesthesia by enabling surgical anaesthesia.

> WHEN IS AN EPIDURAL STARTED?

You can ask for an epidural as soon as your contractions become painful. However, the final decision about when the epidural is started is taken by the midwife or obstetrician. Typically epidurals are placed when you are well into active labour and the cervix is dilated to 3-4 cm.

> THE PROCEDURE OF EPIDURAL PLACEMENT

- During placement of the epidural you will be asked to arch your lower back outwards and remain still while lying on your left side or sitting up. This position is important to make the epidural puncture easier and to prevent problems. You will be asked to inform the anaesthetist about impending contractions, in order to interrupt the procedure during the contraction.
- The anaesthetist will feel bony landmarks in your lower back and will clean your back with an antiseptic solution. Before placing the epidural, a small amount of local anaesthetic will be injected to numb your skin.
- A needle will be inserted into the numbed area in the lower back. A tiny plastic tube (catheter) is threaded through the needle into the epidural space. Occasionally, transient tingling nerve sensations can occur while inserting the catheter, as it brushes against the nerves in the epidural space. The needle is then removed, leaving the epidural catheter in place. A test dose is given to ensure that the epidural is in the correct place. The catheter will then be taped to your back to prevent it from slipping out.
- > The epidural can take 15-20 minutes to place. The medication injected through the catheter works gradually over the next 15 minutes.

Your vital signs (blood pressure, heartbeat, oxygen level) as well as the baby's condition will be monitored closely during and after the placement of the epidural catheter, in order to detect and treat potential complications immediately.