Epidural/sequential analgesia is considered by all national and international healthcare institutions to be an **extremely safe** method for labour pain relief. It does not increase the risk of caesarean section, poor fetal oxygenation, or long-term back pain. However, it reduces the mother's urge to push, so the second stage of labour lasts 14 minutes longer on average, and there is a slightly increased tendency for healthcare professionals to use oxytocin to speed up labour and to perform instrumental delivery. In about 1% of cases, transient headaches occur a few hours after birth, which usually resolve with bed rest and medication. More serious complications of the technique (epidural abscess, epidural hematoma, allergic reaction to injected drugs) are extremely rare, occurring in 0.0005% of cases.

Are there contraindications for epidural/sequential analgesia?

Yes, when there has been a previous allergic reaction to the drugs used in these techniques (local anaesthetics, opioids), when there are very low platelet levels, coagulation disorders, or a severe generalized infection.

Can the epidural catheter be used if I need a caesarean section?

Yes, when there is a functioning epidural catheter in place for pain relief in labour, it is usually used to administer the anaesthesia required for caesarean section.

When is the epidural catheter removed?

If you have a vaginal birth, the epidural catheter is usually removed in the delivery room, about two hours after birth. If you have a caesarean section, the catheter is normally left in place during the first 24 hours after childbirth, in order to allow medication to be administered to control the pain occurring after surgery.

References

1. Smith CA, Levett KM, Collins CT, Jones L. Massage, reflexology and other manual methods for pain management in labour. Cochrane Database of Systematic Reviews 2012, Issue 2. Art. No.: CD009290.
2. Anim-Somuah M, Smyth RMD, Jones L. Epidural versus non-epidural or no analgesia in labour. Cochrane Database of Systematic Reviews 2011, Issue 12. Art. No.: CD000331.

UNIDADE LOCAL DE SAÚDE
SANTA MARIA

PHARMACOLOGICAL METHODS FOR PAIN RELIEF DURING LABOUR

UNIDADE LOCAL DE SAÚDE SANTA MARIA

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Is labour a very painful experience?

For most women, uterine contractions during labour are painful, but pain is influenced by many factors and varies greatly from one pregnant woman to another. There are natural and there are pharmacological methods for relieving labour pain.

Does labour pain always remain the same?

At the beginning of labour, uterine contractions can still be somewhat irregular, but the intervals between them rarely exceed 10 minutes. The pain felt during a contraction is usually similar to that of a strong menstrual cramp, and may radiate to the back. Its intensity is highly variable and may or may not be tolerable. From about 4 cm of cervical dilation onwards, contractions generally become more regular, intervals between them progressively shorten, and the intensity of pain usually increases. While some women cope well with labour pain, especially if they remain mobile and have access to non-pharmacological methods of pain relief (massage, local heat application, warm water), others require pharmacological methods.

When can I request pharmacological pain relief?

Once it is clearly established that you are in labour, pharmacological pain relief (analgesia) may be requested at any time you feel that pain is causing you discomfort. However, if you are already pushing and the baby is just about to be born, it generally does not make much sense to use pharmacological pain relief, because these methods take about 10–15 minutes to take effect. Ask the midwife assigned to your room to call the anaesthesiologist and give you more information about available options for pharmacological pain relief. There is always an anaesthesiologist present in the labour ward.

Which pharmacological methods for pain relief are available?

The pharmacological methods for labour pain relief available are **opioid drugs** administered intravenously or intramuscularly, and **epidural or sequential analgesia**.

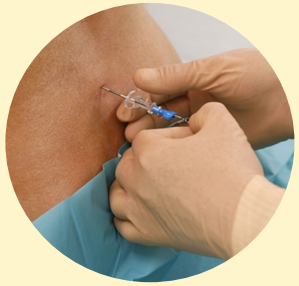
What are opioid medications?

Opioids are medications that have been used for many decades to relieve labour pain. **Pethidine** is the most commonly used opioid for this purpose, but **sufentanil** and **remifentanil** may also be used, among others. They are usually administered intravenously after placing a venous line in the forearm or in the back of the hand, but they can also be given intramuscularly in the buttocks. Pain relief is time-limited and varies according to the drug used, so repeated doses at regular intervals are usually required.

These drugs usually provide substantial pain relief and cause some drowsiness; they may also cause nausea and vomiting, but there are medications that quickly reverse these symptoms. In high doses, they may reduce breathing rate and depth (respiratory depression), but there are medications that quickly reverse this situation. Opioids cross into the baby's circulation and may also cause some drowsiness. Near the time of birth, high doses of opioids are generally avoided so as not to cause respiratory depression in the newborn.

What is epidural/sequential analgesia?

Epidural and **sequential analgesia** are techniques that block nerve conduction in the spinal cord, which is responsible for transmitting pain signals from the uterus and birth canal to the brain. These techniques are performed by an anaesthesiologist near the lower spine (lower back). After a small injection to numb the skin, a very thin tube (catheter) is inserted between two vertebrae into the space surrounding the nerve fibres. The catheter is then secured to your back with adhesive tape, and the opening of is positioned near your shoulder. This opening is used to inject medications (local anaesthetics opioids) that block the transmission of pain impulses. Epidural differs from sequential analgesia in the depth at which the first dose is administered, with sequential analgesia having a faster onset.



Epidural/sequential analgesia is considered **the most effective technique** for labour pain relief, providing complete pain relief in 95% of cases and partial relief in the remaining cases. If pain relief is incomplete, please alert the midwife assigned to your room. In such cases, it may be necessary to reposition or replace the epidural catheter.

Pain relief begins about 10–15 minutes after medication is injected through the catheter, and its duration is around two hours. Medications may be administered at intervals by the anaesthesiologist or by the midwife, when you report that pain is returning. Alternatively, administration can be controlled by the woman herself, but this requires special equipment that may not always be available . The anaesthesiologist will inform you if this is an option. There is no limit to the number of doses that can be administered via the epidural catheter during labour, so the technique can provide pain relief during the entire duration of labour and childbirth.

Epidural/sequential analgesia generally does not reduce leg strength, so **you may still move freely.** However, if you have received epidural medication less than 15 minutes ago, ask the midwife to help you before getting up for the first time.

Rarely, epidural/sequential analgesia can cause a **drop in blood pressure**, which may be accompanied by nausea, feeling of faintness, and a drop in the baby's heart rate. This is easily reversible with the administration of intravenous fluids and medications that raise blood pressure. For this reason, an intravenous infusion is required in all women receiving epidural/sequential analgesia, and blood pressure is regularly monitored after the administration of medication.

Another side effect of epidural/sequential analgesia is **itching**, especially in the upper body. This is not an allergic reaction and is easily reversible with medication. Please alert the midwife if this happens. You may also feel **numbness in your legs**; in this case, do not try to stand up and alert the midwife, as the dose may need adjustment. You may also have **difficulty recognizing the need to urinate**, and a catheter may be required to empty the bladder, which is not painful. Another common complaint is shivering and a subfebrile temperature (38.0–38.5°C), which may cause the baby's heart rate to increase. This is easily reversible with medication to reduce body temperature and by lowering room temperature.