# Pain relief in labour: epidurals and remifentanil explained

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<th><strong>Epidural</strong></th>
<th><strong>Remifentanil PCA</strong></th>
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</thead>
<tbody>
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<td><strong>What is it?</strong></td>
<td>A small amount (infusion) of anaesthetic and pain relief is given continuously to numb the nerves below your waist. This reduces the pain of labour contractions and causes your legs to feel heavy.</td>
<td>Remifentanil is a powerful morphine-type drug used regularly in anaesthetics. It was introduced for labour pain relief at this hospital in 2011.</td>
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<td><strong>How is it used?</strong></td>
<td>A needle is used (with local anaesthetic) to insert a fine plastic tube between the bones in your back. The anaesthetic infusion gives continuous pain relief. However, you can press a button to give an extra dose if needed.</td>
<td>A drip is inserted into a vein in your arm or hand and attached to a patient-controlled analgesia (PCA) pump. You press the button on the pump and a small dose of remifentanil is given directly into your vein providing pain relief on demand, reducing the severity of labour pain. This starts working within five minutes of the drip being connected.</td>
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<td><strong>It is important that you sit still while the epidural is being inserted and let the anaesthetist know if you are having a contraction. It usually takes 20 minutes to set up and 20 minutes to work.</strong></td>
<td>You need to press the button every time you have a contraction because each dose of remifentanil wears off within a few minutes.</td>
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<td><strong>Who is it for?</strong></td>
<td>To have an epidural you must be on labour ward and be in established labour (please discuss this with your midwife). Most women can have an epidural, however if you have had a previous operation on your back or problems with blood clotting it may not be suitable for you. Please discuss this with your anaesthetist.</td>
<td>To use remifentanil you must be on labour ward and be in established labour (please discuss this with your midwife). You cannot start remifentanil if you have had morphine or pethidine in the last four hours.</td>
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<td>If you have severe heart or lung disease, your labour is premature (you are less than 36 weeks pregnant) or you have an allergy to morphine, remifentanil may not be suitable for you. Please discuss this with your anaesthetist.</td>
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| Your midwife will discuss the reasons for continuously monitoring your baby's heartbeat with you.  
You will need a drip in your hand or arm to provide you with fluid and a temporary urinary catheter will enable you to pass urine.  
Your blood pressure will be checked regularly as an occasional decrease may cause a temporary drop in your baby's heart rate. | Continuous monitoring of your baby's heart rate is not required unless it has been recommended for another reason.  
Observing your oxygen levels via a peg-like clip on your finger is necessary as remifentanil is also a sedative. |
| Benefits                                                                           | Benefits                                                                                             |
| Provides the most complete pain relief of all methods of pain relief in labour. Epidurals do not make you drowsy, but as they offer good pain relief women are often able to sleep after having one.  
Minimal amounts of the drugs used pass to your unborn baby so your baby is unlikely to be drowsy at birth.  
Epidurals can be ‘topped up’ for procedures in the operating theatre, for example caesarean section with no extra injections. | Remifentanil will make you feel sleepy and relaxed. Although it will not provide you with complete pain relief, remifentanil has been shown to enable women to feel ‘in control of’ and able to cope better with their contractions.  
You can continue to use ‘gas and air’ (entonox) as an additional form of pain relief, if required.  
Remifentanil is quickly removed from your body, with the effects wearing off within ten minutes. Your baby will remove the drug from their body just as quickly as you do. |
### Epidural

**Side effects and risks**

Failure to provide adequate pain relief with one in every ten women needing adjustment or replacement of the epidural.

While the risk of long-term back ache or caesarean section is not increased, epidurals can slow down the second stage of labour slightly. Repeated use of strong local anaesthetic can increase your chance of needing assistance with forceps or a ventouse suction cup (ventouse).

**Common side effects**
- itching and shivering
- significant drop in blood pressure (one in every 50 women)

**Rare side effects**
- severe headache (one in every 100 women)
- nerve damage causing a numb patch or leg weakness (this is temporary in one in every 1000 women and permanent in one in every 13,000 women)
- infection, meningitis, epidural blood clot, severe nerve injury/paralysis (occur in less than one in 50,000 women)

### Remifentanil PCA

**Side effects and risks**

Remifentanil will not provide adequate pain relief for every woman. One in ten women will need an epidural.

An additional anaesthetic (for example spinal or epidural) will still be necessary for procedures in the operating theatre.

Remifentanil will pass across the placenta to your unborn baby and can cause your baby to be drowsy at birth. For this reason, we may advise you to limit the number of times you self-administer remifentanil when your baby’s birth is fast-approaching.

**Common side effects**
- nausea, vomiting and itching
- drowsiness and dizziness
- slow, shallow breathing (one in two women will need extra oxygen to breathe)

If you do not like the side effects of remifentanil, remember the drug is removed from your body quickly.

**Uncommon side effects**
- having to stop using remifentanil altogether due to persistently low oxygen levels or excessive sleepiness (sedation) despite oxygen support (one in 300 women)

**Rare side effects**
- stopping breathing or very slow heart rate needing emergency resuscitation (less than one in every 2200 women)