

A detailed pastel illustration of a woman with long, light brown hair and bangs, looking down at a newborn baby. The woman is wearing a light green top. The baby is wearing a yellow long-sleeved shirt and is being held in the woman's arms. The background is a textured blue.

Pain Relief in Labour

This booklet will give you some idea about the pain of labour and giving birth, and what can be done to make it less painful. The people who are looking after you (for example, your midwife, anaesthetist, or obstetrician) will give you more information about the types of pain relief that your own hospital or birth centre provides. We hope that, if you know what to expect and what pain relief is available, giving birth to your baby will be a satisfying experience.

Throughout this booklet, we have used references to show where we have got our information. We have listed these on page 15.

Written by the Obstetric Anaesthetists' Association

What will labour feel like?

- While you are pregnant, you may feel your uterus (womb) tightening from time to time. These are called Braxton Hicks contractions. When you go into labour, these tightenings become regular and much stronger.
- The tightening may cause pain that feels like period pain, and usually becomes more painful the further you get into labour. Different women experience labour pains in different ways.
- Usually, your first labour will be the longest.
- If medication is used to start off (induce) labour or speed up your labour, your contractions may be more painful.
- Most women use a range of ways to cope with labour pain (see reference 1 on page 15). It is a good idea to have an open mind and be flexible.

Preparing for labour

Antenatal parenting classes help you prepare for the birth. These classes are run by midwives and by other organisations that support people in being parents and giving birth. The classes will help you understand what will happen in labour and may help you to feel less anxious.

At antenatal classes, the midwife will tell you what is available to reduce labour pain. If you need more information about epidurals (an injection into your back to numb the lower half of your body), the midwife can arrange for you to meet an anaesthetist to talk about this. If you cannot go to antenatal classes, you should still ask your midwife about what is available to reduce the pain. You can then discuss this with the midwife who cares for you while you are in labour.

Where you choose to give birth can affect how painful it is. If you feel at ease in the place you give birth, you may be more relaxed and less anxious about labour (see reference 2 on page 15). For some women this means giving birth at home, but other women feel reassured by the support offered at a hospital or birth centre. Many hospitals try to make the labour rooms look homely and encourage you to play music you like to help you feel more relaxed.

If you are planning to give birth in a hospital or birth centre, it may be helpful to look round to find out what facilities they have.

Having a friend or birth partner with you while you are in labour can be helpful for you (see reference 3 on page 15). It is important to talk to your birth partner about your concerns and what you want, and they can help you to focus during the birth.

What pain relief is available?

It is difficult to know beforehand what sort of pain relief will be best for you. The midwife who is with you in labour should be the best person to give you advice. Here is some information about the main methods of pain relief available.

Self-help methods

- Calm breathing may increase the oxygen supplied to your muscles, and so make the pain less intense. Also, because you are focusing on your breathing, you are less distracted by the pain.
- It can be difficult to relax when you are in pain, which is why it can be helpful to practise before you actually go into labour. There are a number of different ways you can learn to relax.
- Having a massage while you are in labour is often very comforting and reassuring.



Using a birthing pool during labour

There are not many studies that have looked at the benefits and risks of using a birthing pool. However it has been shown that if you have your labour in water you will find it less painful and you will be less likely to need an epidural to reduce the pain (see reference 4 on page 15). There are some concerns that if the water is too warm your baby may show signs of distress during labour, but studies have shown that there is no more risk to you or your baby if you have your labour in water than if you have it out of water. The midwife will continue to monitor your progress and your baby's wellbeing.

Many maternity units have birthing pools, but these may not be available when you need them. It is worth checking with your midwife if there is a pool and whether you would be able to use it.

Complementary therapies (these do not use medications)

Complementary therapies (for example, aromatherapy) may help some women to cope with pain during labour. If you are thinking about using these, it is important that you get advice from a person trained in that therapy. This booklet does not cover homeopathy (using very dilute ingredients to reduce pain) and herbal remedies (produced from plants).

■ **Aromatherapy** involves using concentrated essential oils to reduce fear, improve your wellbeing and encourage you to keep going.

■ **Reflexology** is based on the idea that points on your hands and feet relate to points on the rest of your body. We do not know how it works, but it may work in a similar way to acupuncture (see below). A reflexologist usually massages points on your feet that relate to the parts of your body that are painful in labour.

■ **Hypnosis and acupuncture**

These two therapies are being used by more women to help them through labour. Very few maternity units provide these services on the NHS, so you would need to find a qualified therapist before you go into labour.

Hypnosis can distract you from the pain. You can be trained to do the hypnosis yourself (self-hypnosis), which you will need to practise while you are pregnant. Otherwise, a hypnotherapist will have to be with you while you are in labour.

Acupuncture involves putting needles into points on your body to help reduce the pain. The therapist would need to be with you during your labour.

Some studies suggest that women who used these therapies feel in control of their labour and use less medication to reduce pain (see reference 5 on page 15). However, not all parts of the country have therapists with this level of skill and their support can be quite expensive.



Transcutaneous electrical nerve stimulation (TENS)

- A gentle electrical current is passed through four flat pads stuck to your back. This creates a tingling feeling. You can control the strength of the current yourself.
- It is sometimes helpful at the beginning of labour, particularly for backache. If you hire one, you can start it at home. Some hospitals will also lend them out.
- It has no known harmful effects on your baby.

While you may manage your labour with only the help of TENS, it is more likely that you will need some other sort of pain relief later on in labour.

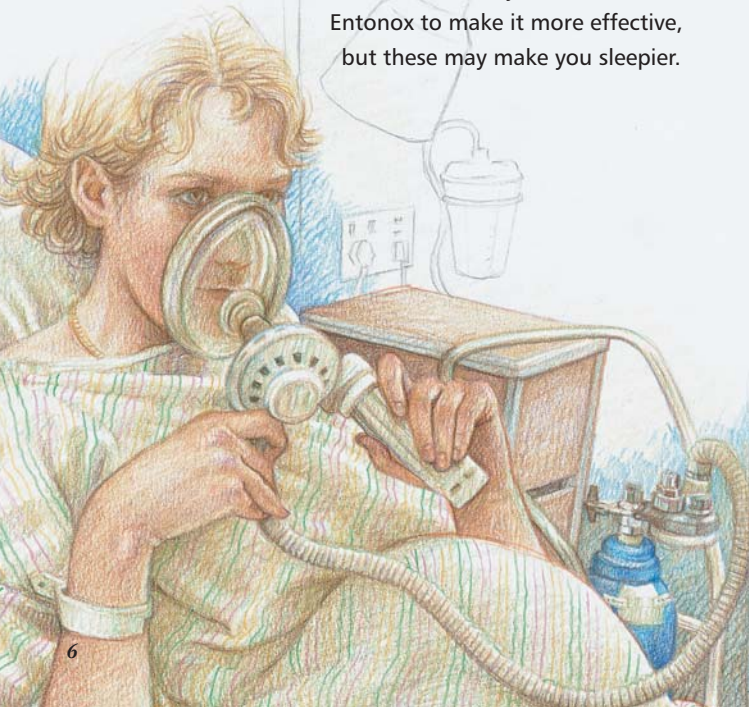
Entonox

Entonox is a gas made up of 50% nitrous oxide and 50% oxygen. It is sometimes known as **gas and air**.

- You breathe this through a mask or mouthpiece.
- It is simple and quick to act, and wears off in minutes.
- It sometimes makes you feel light-headed or a little sick for a short time.
- It does not harm your baby and it gives you extra oxygen, which may be good for you and your baby.
- It will not take the pain away completely, but it may help.
- You can use it at any time during labour.

You control the amount of Entonox you use, **but to get the best effect timing is important**. You should start breathing Entonox as soon as you feel a contraction coming on, so you will get the full effect when the pain is at its worst. You should not use it between contractions or for long periods as this can make you feel dizzy and tingly. In some hospitals,

other substances may be added to Entonox to make it more effective, but these may make you sleepier.



Opioids: morphine-like painkillers

Opioids include painkillers such as pethidine, as well as diamorphine (which is being used more and more in the United Kingdom). Examples of other opioids include morphine, meptazinol, fentanyl and remifentanyl. All these morphine-like painkillers act in a similar way.

- Opioids are usually given by a midwife injecting them into a large muscle in your arm or leg.
- The pain relief is often limited. It starts after about half an hour and may last a few hours.
- It has less effect on pain than Entonox.
- Although pain relief may be limited, some women say it makes them feel more relaxed and less worried about the pain (see reference 6 on page 15).
- Other women are disappointed with the effect of opioids on their pain and say they feel less in control.

Side effects

- Opioids may make you feel sleepy.
- They may make you feel sick, but you are usually given an anti-sickness medication to stop this.
- They delay stomach emptying, which might be a problem if you need a general anaesthetic.
- They may slow down your breathing. If this happens, you may be given oxygen from a face-mask and have your oxygen levels monitored.
- They may make your baby slow to take its first breath, but an injection can be given to your baby to stop this.
- They may make your baby drowsy, and this may mean that it cannot feed as well as normal (especially with pethidine).
- If you are given opioids just before you give birth to the baby, the effect on your baby is very small.

Patient-controlled analgesia (PCA)

Opioids can also be given direct into a vein for a faster effect, using a pump that you control yourself by pressing a button attached to the pump. PCA is available in some hospitals if an epidural (an injection into your back to numb the lower half of your body) is not possible or you do not want one.

PCA allows you to give yourself small doses of opioids when you feel that you need them. You have control over the amount of opioid you use. For safety reasons, the PCA limits how quickly you can take the opioid. However, if you use the PCA for a long time, some opioids may build up in your body which may increase the side effects of the opioid on you and your baby.

In a few maternity units, you may be offered PCA using an opioid called remifentanyl (see references 7 and 8 on page 15). Your body breaks down remifentanyl very quickly, so the effects of each dose do not last long. This opioid has a strong effect on pain but it is also more likely to slow down your breathing, so your breathing needs to be checked carefully. However, its effects can be reversed quickly and it does not affect your baby.

Epidurals and spinals

- Epidurals and spinals are the most complicated method of pain relief and are carried out by an anaesthetist.
- An anaesthetist is a doctor who is specially trained to provide pain relief and drugs that make you go to sleep. Pain relief during operations can be provided using general anaesthesia, epidurals or spinals. For more information on these types of anaesthesia for a caesarean section, please read our *'Your anaesthetic for caesarean section'* booklet. The last page of this booklet tells you how to get it.
- Epidurals and spinals are the most effective method of pain relief.
- For an epidural, the anaesthetist puts a needle in the lower part of your back and uses it to place an epidural catheter (a very thin tube) near the nerves in your spine. The epidural catheter is left in place when the needle is taken out so you can be given painkillers during all of your labour. The painkillers may be local anaesthetic that numbs your nerves, small doses of opioids, or a mixture of both.
- An epidural may take 40 minutes to give pain relief (including putting in the epidural catheter and getting the painkillers working).
- An epidural should not make you feel drowsy or sick.
- Having an epidural increases the chance that your obstetrician will need to use a ventouse (a suction cap on your baby's head) or forceps to deliver your baby.
- An epidural can usually be topped up to provide pain relief if you need a ventouse, forceps or a caesarean section.
- An epidural will have hardly any effect on your baby.

Spinal and combined spinal-epidural (CSE)

Epidurals are rather slow to act, especially if you have one late in labour. If the painkillers are put direct into the bag of fluid surrounding the nerves in your back, they work much faster. This is called a spinal. It is given as a one-off injection without a catheter, unlike the epidural. If an epidural catheter is put in at the same time, this is called a combined spinal-epidural.

In some hospitals a combined spinal-epidural is given to almost all women who want strong pain relief instead of an epidural. In others, a combined spinal-epidural is only used for a small number of women.

Who can and cannot have an epidural?

Most people can have an epidural, but certain medical problems (such as spina bifida, a previous operation on your back or problems with blood clotting) may mean that it is not suitable for you. The best time to find out about this is before you are in labour. If you have a complicated or long labour, your midwife or obstetrician may suggest that you have an epidural, as it may help you or your baby.

If you are overweight, an epidural may be more difficult and take longer to put in place. However, once it is in you will have all the benefits.

What does an epidural involve?

First, a cannula (a fine plastic tube) will be placed in a vein in your hand or arm, and you will usually have a drip (intravenous fluid) running as well (you may also need a drip in labour for other reasons such as medication to speed up your labour or if you are being sick). Your midwife will ask you to curl up on your side or sit bending forwards, and your anaesthetist will clean your back with an antiseptic. Your anaesthetist will inject local anaesthetic into your skin, so that putting in the epidural does not usually hurt much. The epidural catheter is put into your back near your nerves in the spine. Your anaesthetist has to be careful to avoid puncturing the bag of fluid that surrounds your spinal cord, as this may give you a headache afterwards. It is important to keep still while the anaesthetist is putting in the epidural, but after the epidural catheter is fixed in place with tape you will be free to move.

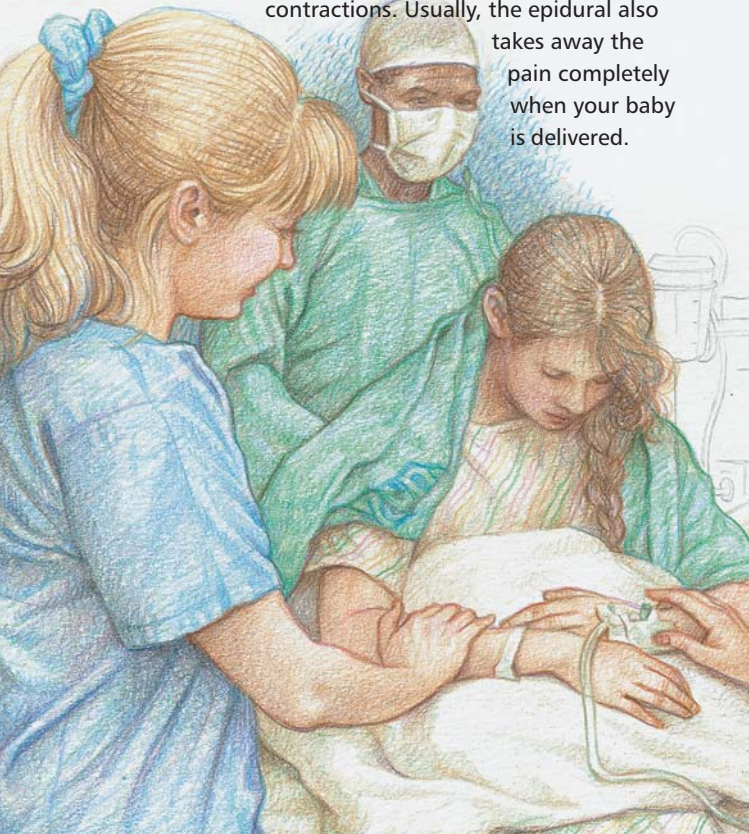
Once the epidural catheter is in place, painkillers are given through it. It usually takes about 20 minutes to set up the epidural and 20 minutes for it to give pain relief.

While the epidural is starting to work, your midwife will take your blood pressure regularly. Your anaesthetist will usually check that the epidural painkillers are working on the right nerves by putting an ice cube on your tummy and legs and asking you how cold it feels. Sometimes, the epidural doesn't work well at first and your anaesthetist needs to adjust it, or even take the epidural catheter out and put it in again.

During labour, you can have extra doses of painkillers through the epidural catheter either as a quick injection (a top-up), a slow, steady flow using a pump, or with a patient-controlled epidural analgesia (PCEA) pump. With patient-controlled epidural analgesia, you can give yourself doses of the painkiller when you need them by pressing a button attached to the pump. In each hospital there will usually only be one, or possibly two, of these methods for keeping the epidural pain relief going.

After epidural top-ups, the midwife will take your blood pressure regularly in the same way as when the epidural was started.

The aim of the epidural is to take away the pain of contractions. Usually, the epidural also takes away the pain completely when your baby is delivered.



Some women prefer to have some feeling during the delivery so they have a better idea of how to push the baby out. The epidural cannot be adjusted exactly, so if you want to have some feeling when your baby is delivered, there is more chance that you may have an uncomfortable sensation as well.

Nowadays it is usually possible to reduce the pain of labour without making the lower part of your body very numb or giving you weak legs. This modern method is called a 'mobile epidural'.

You will be able to breastfeed your baby after the epidural.

What if I need an operation?

If you need a caesarean section, the epidural is often used instead of a general anaesthetic. A strong local anaesthetic is injected into your epidural catheter to make the lower half of your body very numb for the operation. This is safer for you and the baby than having a general anaesthetic.

If you need a caesarean section but you do not already have an epidural, a spinal will often be used but with a bigger dose of local anaesthetic than the dose which is used for a spinal in labour.

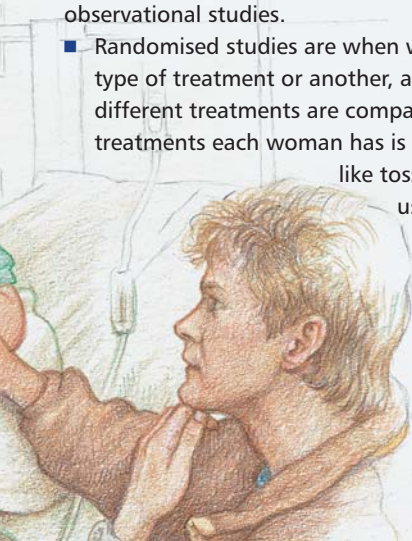
For more information on epidurals and spinals for a caesarean section, please read our '*Your anaesthetic for caesarean section*' booklet. The last page of this booklet tells you how to get it.

Benefits and risks of epidurals

How do we get our facts?

We get our facts from randomised studies and from observational studies.

- Randomised studies are when women have either one type of treatment or another, and the effects of the different treatments are compared. Which of the two treatments each woman has is decided randomly (that is, like tossing a coin). The studies usually compare women who have an epidural with women who used other painkillers (such as opioids or Entonox) during labour.



Reference 9 on page 15 is a review of all the published randomised studies on epidurals in labour. It was carried out by the Cochrane database, which is an independent scientific organisation. The effects of epidurals that we talk about below are from this review, unless we give a different reference.

In a few randomised studies, all the women have had an epidural, but the amount of opioid that is used in the epidural is decided randomly.

- Observational studies look at large numbers of women who have had an epidural to see what happens during the epidural and afterwards. This is the only way to find out the risk of very rare events.

The following information is based on the results of randomised studies.

Benefits of having an epidural

- Epidurals lessen the pain of labour more than any other treatment.
- With an epidural, there is less acid in the newborn baby's blood (see reference 10 on page 15).
- With epidurals, there is less need to use medication to make your baby start breathing when he or she is born, compared to opioids given in other ways (into the muscle or vein).

Things an epidural does not make a difference to

- With an epidural, you do not have a higher chance of needing a caesarean section.
- There is no greater chance of long-term backache. Backache is common during pregnancy and often continues afterwards. You may have a tender spot in your back after an epidural which, rarely, may last for months (see reference 11 on page 15).

Risks while the epidural is being used

- With an epidural, the chance of the obstetrician having to use a ventouse or forceps to deliver your baby is 14%. Without an epidural it is 7%.
- With an epidural, the second stage of labour (when your cervix is fully dilated) is longer and you are more likely to need medication (oxytocin) to make contractions stronger.
- You have more chance of getting low blood pressure.
- Your legs may feel weak while the epidural is working.

- You will find it difficult to pass water. You will probably need to have a tube passed into your bladder (a bladder catheter) to drain the urine.
- You may feel itchy.
- You may develop a fever, which may be associated with distress to your baby.
- If you have higher doses of opioid through an epidural, your newborn baby may be more likely to need help with breathing (see reference 12 on page 15) and you may have less chance of breastfeeding successfully (see reference 13 on page 15).

Other risks

- On average, having an epidural does not give you a higher risk of a headache. However around one in every 50 women who have an epidural have the bag of fluid which surrounds their spinal cord punctured by the epidural needle (this is called a 'dural puncture'). If this happens to you, you could get a severe headache that could last for days or weeks if it is not treated (see reference 14 on page 15). If you do develop a severe headache, your anaesthetist should talk to you and give you advice about the treatment you could have.

The following information is based on the results of observational studies.

- The risks of epidurals and spinals are shown in a table on page 14 (see references 15 to 20 on page 15).
- About one in every 13,000 women gets long-lasting nerve damage after an epidural, causing problems such as a weak muscle or a feeling of tingling or numbness down one leg. However, nerve damage after giving birth can happen whether you have an epidural or not (see reference 15 on page 15) and is actually about five times more common without an epidural, with one in every 2,500 women being affected by it.
- There is no evidence to show that having an epidural while you are in labour causes the nerves in your spine to become permanently inflamed (that is, swollen and sore). See reference 21 on page 15.

If you are worried about the risk of serious problems that might happen with an epidural, talk about this with your anaesthetist.

Risks of having an epidural or spinal to reduce labour pain

Type of risk	How often does this happen?	How common is it?
Significant drop in blood pressure	One in every 50 women	Occasional
Not working well enough to reduce labour pain so you need to use other ways of lessening the pain	One in every 8 women	Common
Not working well enough for a caesarean section so you need to have a general anaesthetic	One in every 20 women	Sometimes
Severe headache	One in every 100 women (epidural) One in every 500 women (spinal)	Uncommon
Nerve damage (numb patch on a leg or foot, or having a weak leg)	Temporary – one in every 1,000 women	Rare
Effects lasting for more than 6 months	Permanent – one in every 13,000 women	Rare
Epidural abscess (infection)	One in every 50,000 women	Very rare
Meningitis	One in every 100,000 women	Very rare
Epidural haematoma (blood clot)	One in every 170,000 women	Very rare
Accidental unconsciousness	One in every 100,000 women	Very rare
Severe injury, including being paralysed	One in every 250,000 women	Extremely rare

The information available from the published documents does not give accurate figures for all of these risks. The figures shown above are estimates and may be different in different hospitals.

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We would like to thank Dr Michael Wee (ex-chairman, Information for Mothers Subcommittee), Dr Michael Bryson, Dr Roshan Fernando and Professor Felicity Reynolds for their work on the previous editions.

- *The information in this booklet is based on reliable evidence. Some of the publications we got our facts from are listed on page 15.*
- *We also produce a booklet for mothers called **Your anaesthetic for caesarean section** and two films on a double DVD called **Coping with labour pain** and **Your anaesthetic for caesarean section**.*
- *You can find both booklets on our website, along with a number of translations.*
- *You can also get information on pain relief in labour from the National Childbirth Trust website, at www.nct.org.uk, or the Midwives Information and Resource Service (MIDIRS) website at: www.infochoice.org.*
- *Together with the Royal College of Anaesthetists, we have produced more information on epidurals including **Headache after an epidural or spinal anaesthetic** and **Nerve damage associated with a spinal or epidural injection**. You can download these from www.rcoa.ac.uk/docs/hesa.pdf or www.rcoa.ac.uk/docs/nerve-spinal.pdf.*

You can get extra copies of both booklets (in packs of 50 or 750) and the double DVD by filling in the order form at: **www.oaaformothers.info**

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