

Non-epidural pain relief

for **women**

The very word 'labour' suggests that there is some effort involved in giving birth. Pain relief options for labour that focus on preventing 'suffering' rather than completely eliminating pain, have been shown to build your confidence and help you to maintain a sense of control and well-being during your baby's birth.



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This leaflet is based on the best available research evidence and is one in a series of 25 Informed Choice topics

This publication is designed to help you make the right choices for you and your baby.

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This leaflet explains the choice of non-epidural pain relief methods, giving you the advantages and disadvantages associated with all the choices available. Childbirth is painful and only you can know how much pain you are experiencing in your labour; however, there are a number of measures that can help.

Introduction

You do not always have to have drugs in order to manage pain in labour and get safely through childbirth. Options that can help include the person(s) you choose to have with you (your birthing partner), the positions you adopt, use of water, use of drugs and therapies, and your general feelings of comfort and relaxation. Having information about all of these in advance of your baby's birth can affect how useful you may find them once your labour begins. As noted above, one factor that is very important in helping you to manage your pain in labour, is coming to terms with the pain that comes with the uterine contractions and trying to see this as a positive pain that will come to an end, in that it is helping your baby through the birth passage and out into the world, rather than a negative pain that occurs when you have an injury or disease. The approaches mentioned in this leaflet are about reducing the pain that you will feel; they are not about taking it away altogether. The only effective way of doing this is with an epidural (see the Informed Choice leaflet *Epidural pain relief in labour*). The purpose of this leaflet is to give you information on how well each method can do this so that you can make your own choices about what suits you.

Topics discussed in this section are:

- use of drugs (pethidine)
- breathing in gas called nitrous oxide (also called 'Entonox')
- use of water injections
- the importance of support for you in labour, including continuity of caregivers during pregnancy and childbirth and continuous, one-to-one labour support from a midwife or doula.

There are also ways to help yourself using 'feel-good' approaches (also described as 'comfort measures') and thinking positively (also called 'cognitive strategies') including:

- a birth environment that is pleasant and relaxing
- keeping active and choosing the right position
- massage and touch
- use of water
- acupuncture and acupressure
- hypnosis
- transcutaneous electrical nerve stimulation (TENS)
- aromatherapy
- application of hot compresses or ice packs.

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The use of pethidine

Effectiveness

Pethidine is the drug most commonly used for relieving pain in labour and is usually given by injection into your leg or bottom. It works within 20 minutes of having the injection and the effects tend to last for at least a couple of hours. However, research has found that it is much less effective than an epidural in giving pain relief during labour. Epidurals however, have advantages and disadvantages; for further information see the Informed Choice leaflet on *Epidural pain relief in labour*.



Non-epidural pain relief

Advantages

The use of pethidine for pain relief has been found to have the following benefits:

- it can usually be given in any birth location, including your own home
- you will usually have the injection within about five minutes of asking for it and it should take effect within around 20 minutes
- providing you are contracting regularly and strongly (called 'established' labour), it does not slow down your contractions or your progress in labour
- having pethidine might postpone or avoid you having an epidural
- pethidine may be prescribed and given by a midwife, which means you don't have to wait for a doctor to be available.

Disadvantages

Overall, there has been very little research regarding the safety, effectiveness and side effects associated with giving pethidine in labour. Side effects of having pethidine include feeling sleepy, dizzy and sick (you will be given a drug at the same time as the pethidine, which prevents sickness), and if given near to the time of the birth, it may also make your baby sleepy. Pethidine affects the baby's heart rate pattern and your midwife and doctor will monitor their heartbeat closely. For further information see the Informed Choice leaflet *Listening to your baby's heartbeat during labour*. Having pethidine near to the time of the birth may therefore mean that your baby is slow in taking their first few breaths. Your baby can be given an injection that will reverse or undo this effect, but this might still mean your baby may be at increased risk of needing admission to a neonatal care unit

Further research is needed into the impact that pethidine has on a newborn baby, including its effect on breastfeeding and parent-infant bonding. You will not be able to enter water (a birthing pool or bath) if you have been given pethidine within the preceding two hours, or if you are feeling drowsy.

The use of nitrous oxide inhalation (Entonox), also known as gas and air

Effectiveness

This is a mixture of oxygen and nitrous oxide that you inhale/breathe in through either a mouthpiece or face mask; you choose which you'd prefer to use. Research shows that women find Entonox useful, but it may not be very effective in actually lessening their labour pain; however, it is very much in your

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control how much you use and when you use it. It can be used in most birth locations (including home births and birth pools). Women in one study reported high levels of satisfaction when using Entonox for pain relief in labour.

Advantages

Entonox can be used whenever you decide you need it. It works within 30-40 seconds but has no lasting effect. As you are in control of when you use it, there is no risk of inhaling too much Entonox and losing consciousness.

Entonox can also be used throughout labour and right up until your baby's birth, without any interference to your contractions, the progress of your labour or your ability to push in the second stage. Once you stop using it, the effects wear off rapidly. Its use also does not appear to have any negative effects on the health and well-being of your baby at birth. The use of Entonox may also allow you to postpone or avoid having an epidural, which requires an anaesthetist to set up, and is followed by close monitoring of both you and your baby by the midwife.

Disadvantages

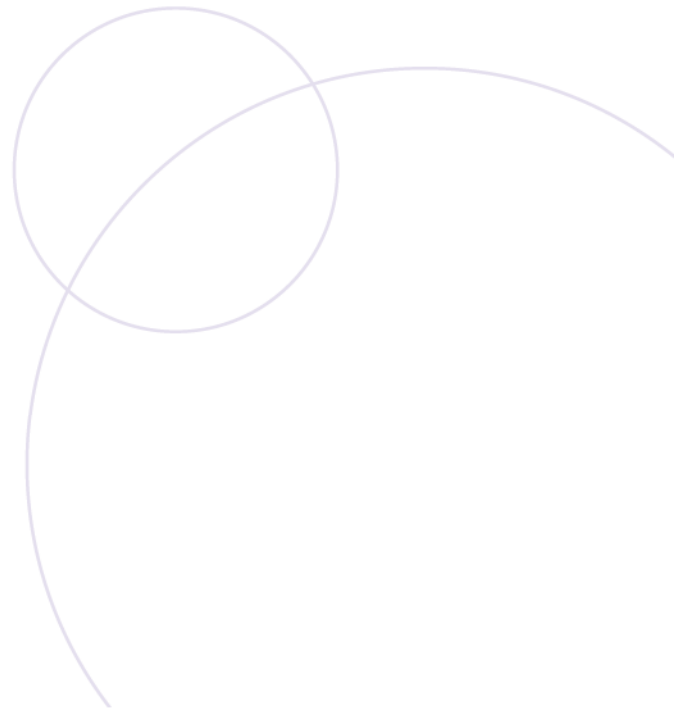
The timing of the use of Entonox in labour is one of its disadvantages since the time from breathing in to achieving maximum effect is almost a minute. This means that if you start inhaling when you feel a contraction, you will get little pain relief. You may need a bit of practice with the mouthpiece and timing with your contractions, before you feel the full effects. What's more, the continuous use of Entonox is associated with certain unhelpful side effects. These include: feeling sick, drowsy, dizzy or light-headed, which may limit how much you can walk about during your labour. Entonox can also cause the sensation of 'pins and needles' or feelings of numbness; it can also affect your ability to remember the events around your labour and baby's birth. Over-inhalation can cause loss of consciousness.

For this reason, it is vital that Entonox is always self-administered and that the mask or mouthpiece is hand-held by you and not your partner.

The use of injected water

Administration

Injected water, also sometimes referred to as 'intradermal water injections', can be offered if you are experiencing lower back pain during your labour. This method of pain relief consists of having four injections of sterile water into your lower back. These injections sting intensely for the first 20-30 seconds after they have been given; however, as the stinging fades, back pain also fades. Some maternity units offer the use of Entonox at the time that the injections are given, which helps to offset the intense 'stinging' sensation experienced.



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Effectiveness

Research into the use of intradermal water injections has found that they significantly reduce lower back pain during labour and most women report that they would use them in subsequent births. However, research has also found that having water injections doesn't rule out the need for other types of pain relief medication, because the injections reduce only back pain, not abdominal pain. One research study has also found that women who used intradermal water injections were significantly less likely to have a caesarean section birth.

Advantages

- low back pain is relieved within minutes of being injected and pain relief has been found to last for up to 120 minutes
- injections can be repeated without limitation
- this method of pain relief can be administered easily by a midwife or doctor
- there are no harmful side effects associated with its use regarding your labour progress, and your or your baby's health and well-being
- it is an appropriate option for those women who would prefer to delay or avoid the use of pain-relieving drugs.

Disadvantages

- there is an intense stinging sensation at the time of the water being injected
- it does not relieve labour pains that are felt in the abdomen
- recent UK labour care guidance does not recommend the use of injected water because of the lack of evidence. However, as there are no harmful side effects for mother or baby, water injections can be considered to be a reasonable non-drug based method for coping with back pain in labour and should be offered to you as such.

Support during labour and the birth

Having someone familiar with you when you go into labour should help you to be yourself. This means you can focus on your needs without being concerned about what people will think of you or being overly worried about how your pain might be affecting them.

Receiving care from the same person

You may hear your health professional talk about the term 'continuity of care'. This refers not only to the consistency of the care that you receive during your pregnancy, but also the care you receive in labour from midwives who are known to you and with whom you have been able to form trusting relationships. However, realistically, it is quite likely that you will not meet the midwife who will be providing your care in labour, until labour has actually started.

Effectiveness

Research has found that women who received continuity of care during their labour and birth were half as likely to have pain relieving drugs compared with those women who did not.

Advantages

Research has found that women who have continuity of care are:

- less likely to be admitted to hospital following their baby's birth
- less likely to have a baby who needs help with their breathing (resuscitation) at birth

- less likely to have a cut in the perineum (called an 'episiotomy')
- more likely to be pleased with their pregnancy, labour and postnatal care.

Disadvantages

Although they were less likely to have required an episiotomy, women were found to be at a slightly increased risk of the perineum or vaginal wall tearing.

Continuous one-to-one labour support from an experienced birth professional (doula)

'Support people' can also be women who have been trained to just 'be there' for you while you are in labour. In this case, it is thought the continued presence of another woman has a beneficial effect on labour and women are more likely to have a normal vaginal birth with fewer complications for their baby. Doulas are able to provide a continuous presence and emotional support, whereas midwives may have to simultaneously look after more than one woman in labour, so remaining with you constantly can be difficult. Doulas can also help with pain-relieving coping methods that are non drugs-based, such as massage and touch, positive thinking and relaxation techniques. They can also communicate on your behalf when needed and provide practical information that isn't medically-based.

Effectiveness

Doula support has been shown to positively enhance the experience in labour of specific groups of women, including women in prison and younger women.

Research has found that continuous labour support by a doula significantly reduced the likelihood of women using any pain relief, reduced the number of women needing caesarean section delivery, or forceps or ventouse births. Mothers were also less likely to report dissatisfaction with their childbirth experience. Continuous support was also associated with women reporting feeling more in control of their labour and birth experience.

Advantages

Research has found that women who have continuous doula support in labour will also benefit from this support into the postnatal period. They are more likely to still be fully breastfeeding (baby receiving only breast milk) at four to six weeks postnatally and are more likely to be confident in their abilities and have bonded well with their baby. For further information see the Informed Choice leaflet *Support in labour*.

Comfort measures and positive thinking (cognitive strategies)

Pain in labour is not usually focused in one area. It can affect several parts of your body, either all at the same time, or by coming and going. It may make you feel uncomfortable so that you need to find a position that will help you relax. Pain can also affect how your body functions so that you may feel or be sick, have problems passing urine or controlling your bowels, and you may feel overwhelmed by the way your body is responding. However, knowing these things can help in itself by enabling you to think positively, which in turn will reduce your anxiety about the unknown.

Comfort measures are a number of different approaches that can help you to cope with the pain of labour including, for example, the application of hot compresses or ice packs, using complementary therapies and adopting different positions for labour and the birth.

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Cognitive strategies (positive thinking) are based on your feelings and beliefs and how these can affect your ability to cope with pain in labour and the birth of your baby.

Although there is only a small amount of research about these methods of pain relief, they have been used for hundreds of years and many women find them effective in easing pain, helping aid relaxation, and giving a sense of well-being with no, or very little, potential to do harm. This is especially so when compared with the side effects often associated with the use of pain-relieving drugs. These measures have no effect on your state of consciousness and do not interfere with normal labour progress or your ability to push during the second stage.

Advantages

Comfort measures and cognitive strategies can be used in any birth setting, whether this is your home, local maternity unit or a designated birth centre. They can also be used in combination with pain-relieving drugs, which may include helping to ease labour pain while awaiting an epidural, or in situations where your baby's birth is imminent and it is too late to have pain-relieving drugs.

The birth environment

Giving birth in hospital can sometimes contribute to your discomfort or stress, as you are in an unfamiliar environment and there may be hospital practices and procedures which can have negative effects on the birthing process. These include lack of privacy, bright lights, the room temperature (which can be too hot or cold) and uncomfortable room furnishings. This is why some hospitals provide a more home-like environment for women to give birth in, which can help to improve comfort, and lower any anxiety or stress being experienced (for further information see the Informed Choice leaflet *Where will you have your baby?*).

Maternal positioning/activity

Many women experience an urge to adopt different positions to relieve the pain of their labour contractions; this can involve a large range of standing, sitting, kneeling or supported positions, such as squatting. For further information see the Informed Choice leaflet *Positions for labour and birth*.

Massage/touch

Massage has been widely used during labour to encourage relaxation and relieve pain. However, there is little research into the effects of massage on women's labour experiences. The studies that have been undertaken have found that women who use massage report less severe pain and anxiety. Frequent massage during labour has also been linked with having a shorter labour, more positive experiences and

improved health after the birth. Massage and touch can also be helpful in providing emotional support and feelings of well-being.

Use of water

Immersion in water during labour and birth can help you to relax, and cope with the pain of labour. Women who have used water for their labour and birth have said that it maximizes their feelings of control and they feel more satisfied with their birth experience. Immersion in water during labour is safe, as well as effective, in relieving pain and reducing the need for pain-relieving drugs. However, this option requires special equipment in the form of a bath tub/pool, as well as hourly monitoring of your temperature and the rate of your baby's heart beat. Immersion in water can also slow labour progress if you enter the bath/pool before your labour is established, or if you stay in for more than one or two hours. For additional information see the Informed Choice leaflet *Do you want a water birth?*



Acupuncture

Trials looking at the use of acupuncture in labour identified a reduced need for pethidine and epidurals. Acupuncture also increases relaxation, but it is an invasive procedure, which may not be suitable for everyone.

Acupressure or shiatsu

This is an alternative to acupuncture and involves the application of pressure with fingers or small beads on various acupuncture points. It is used for numerous ailments and discomforts in pregnancy, as well as for the management of labour pain. Three studies have shown that women who received acupressure found it to be an effective means of pain relief. The use of acupressure has been found to decrease labour pain and may be effective in shortening the length of the first stage of labour.

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Hypnosis

Hypnosis is 'a state of deep physical relaxation' which is thought to inhibit the body's stress response and promote a positive approach to the pain of the uterine contractions. Research has found that women who used hypnosis required fewer pain-relieving drugs, fewer drugs to speed up their contractions, were more likely to have a normal birth and to be satisfied with their birth experience. Hypnosis may also reduce the need for forceps, ventouse or caesarean sections and may allow you to postpone, limit or avoid medication use. Hypnosis is contraindicated in individuals with a history of the mental health disorder psychosis.

Transcutaneous electrical nerve stimulation (TENS)

A TENS unit is a hand-held battery-powered device that transmits electrical impulses to the lower back through four surface electrodes. You are able to set the intensity of the electrical impulses at a level which will then reduce your awareness of your labour contractions. Research has found that TENS had little effect on reducing labour pain or the use of analgesics. However, most women say they would use it again in a subsequent labour. It appears to work better when started early in labour and may be more effective in relieving back pain than abdominal pain.

TENS may offer immediate relief:

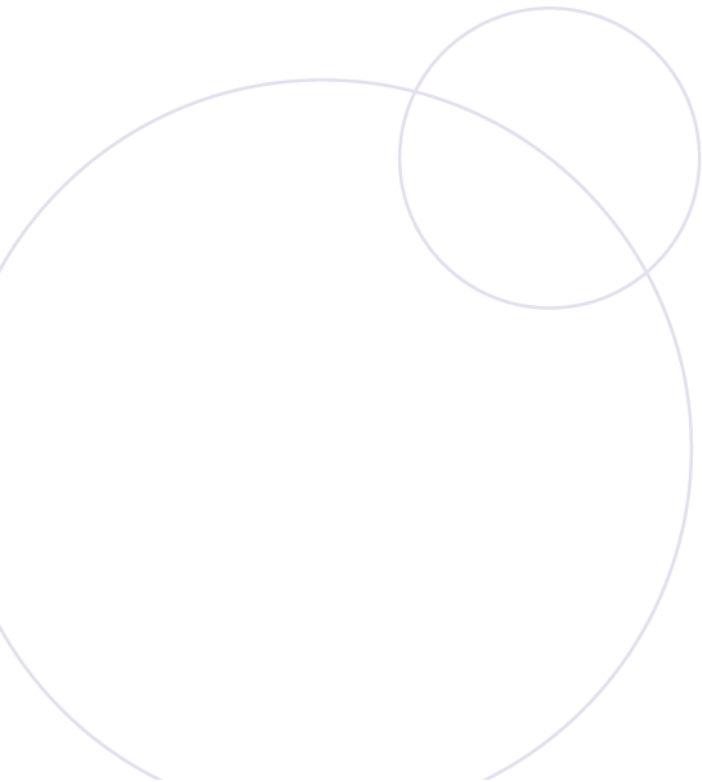
- because it is self-administered and so it increases your sense of personal control
- it may allow you to postpone or avoid the use of epidural analgesia
- it does not limit mobility
- it has no known adverse effects.

Disadvantages

TENS cannot be used if you choose immersion in water for pain relief.

Aromatherapy

Aromatherapy relates to the use of essential oils, sometimes in combination with other therapies such as massage, inhalations and baths. One study found the majority of women who used aromatherapy during labour found it helpful in relieving pain, anxiety and fear. It also appeared to reduce the need for additional pain relief. Potential drawbacks associated with the use of aromatherapy include adverse side effects, such as headache, nausea, rash, or allergic reaction.



Application of heat or cold

This is where you use heat or cold directly on your skin to provide relief from the pain of labour. This may take the form of hot compresses on the back, lower abdomen, groin, or perineum, a warm blanket over the entire body, warm shower, ice packs on the lower back, anus, or perineum. Cold compresses also work particularly well for musculoskeletal and joint pain and are particularly useful for low back pain in labour. You need to be careful not to get either a heat or cold burn on the place where you apply the compress. The use of heat or cold should not be used on any part of your body that you are not able to feel because you have had an epidural or that part of your body has been numbed (anaesthetised).

Cognitive strategies

This is an approach that uses positive thinking and an understanding of the labour and birth processes to help women feel more in control over a given situation. There are distinct strategies that can be used, and the following list presents these in the way that they would be used in the material available for birth preparation:

- **visualisation, meditation**
- **positive affirmations** (eg 'my body is strong and is working well for me')
- **conscious relaxation of tense muscles**
- **breathing techniques**
- **non-focused awareness** (ie notice what you see, hear, feel, smell without holding on to any of them)
- **vocalising, sounding, or repeating a mantra** (eg 'open, open, open')
- **music, environmental sounds or audio-analgesia** (pain relief)
- **prayer.**

If you are interested in any of these approaches, your midwife can give you information about services that can be found in your area. It is important to note that the majority of these techniques require pre-labour preparation, tuition and practice before they can be used effectively as a form of pain relief during labour.

How to find out more

If you'd like to find out more about non-epidural pain relief, please discuss this leaflet with your midwife and GP. Throughout this leaflet reference has also been made to a number of useful topics, more detailed information on these can also be found in the professionals' leaflets.

Questions you may want to ask

After reading this leaflet there may be some things you are still not sure about. You can use this space to write down any questions you may have and any things you would like to discuss with your midwife or doctor

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