



Pain Relief in Labour

This booklet will give you some idea about the pain of labour and what can be done to relieve it. You will need further information from those who are looking after you about the types of pain relief available at your own hospital. We hope that if you know what to expect and, with good pain relief if need be, you will find the birth of your baby can be a satisfying experience.

What will labour feel like?

Towards the end of pregnancy you may notice your uterus tightening from time to time. When labour starts these tightenings become regular and much stronger. This may cause pain that at first feels like strong period pain but usually gets more severe as labour progresses. The amount of pain varies. Your first labour is usually the longest and hardest. Sometimes it is necessary to start labour artificially or to stimulate it if progress is slow, and this may make it more painful. Over 90% of women find they need some sort of pain relief.

Preparing for labour

It is helpful to attend antenatal classes run by midwives who know about the hospital where you are booked. They can teach you about pregnancy and labour and caring for your baby. They will tell you what to expect when you go into hospital, what procedures may be needed and the reasons for them. Understanding what may happen during labour will make you feel less anxious. It is also helpful to visit the hospital where you plan to have your baby. All this will help you to relax and cope better.

During pregnancy physiotherapists or midwives will teach you control of breathing and ways of helping you to cope with contractions. They will also teach you correct ways of moving and good positions for working and how to relax in order to minimise problems with your joints and back, during and after your pregnancy.

At these classes you can also learn about the types of pain relief that are in use. Ask to see an anaesthetist if you want further advice about certain types of pain relief and whether they may be suitable for you. Anaesthetists are the doctors who provide epidurals, and who can also advise you about other types of pain relief. In some hospitals they give regular talks on pain relief to expectant mothers and their partners.

What methods of pain relief are available?

There are several ways of helping you cope with pain. A supportive companion is invaluable. Relaxation is important and moving around sometimes helps. Bathing in warm water and massage, particularly having your back rubbed, can help you relax and ease some pains away. Music can be helpful.

It is difficult for you to know beforehand what sort of pain relief will be best for you. The midwife who is with you in labour is the best person to advise you. Here are some of the facts about the main methods of pain relief that you may be offered.

Alternative methods

There are several ways of helping you to cope with pain, especially in early labour. Your companion can help with some of them. Although the amount of actual pain relief they produce is uncertain some people find them very helpful. You can ask whether any of these methods are used in your hospital.

- Aromatherapy
- Homeopathy
- Reflexology
- Hypnosis
- Herbalism
- Acupuncture.





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 require some other sort of pain relief in the later stages.

Entonox

(50% nitrous oxide and oxygen, sometimes known as **gas**)

- 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 beneficial for you and your baby.
- It will not take the pain away completely but it may help.
- It can be used at any time during labour.

You, yourself, control the amount of gas you use, **but to get the best effect timing is important**. You should start breathing the gas as soon as you feel a contraction coming on so that 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 the gas to make it more effective, but these may make you more sleepy.



Pethidine

- Usually given by injection, into a muscle, by midwives.
- It may make you drowsy, but it may also make you less worried by the pain.
- It may make you feel sick, but you should be given something else to reduce this effect.
- It may make your baby drowsy, but an antidote can be given by injection after birth. If pethidine is given **only** shortly before delivery, the effect on your baby is very slight.
- It delays stomach emptying which might be a hazard if a general anaesthetic is needed. You should not eat or use the birthing pool if you have had pethidine.
- It may delay the establishment of breast-feeding.
- It has less effect on pain than Entonox.

Though pethidine has less effect on pain than gas, many mothers find it makes them more relaxed and able to cope with pain, though some find it disappointing.

It can also be given directly into a vein for a faster effect, and some hospitals use a machine (called Patient controlled analgesia, PCA) which allows you to press a button to give yourself measured small doses when you feel you need them.

Other injected drugs

Pethidine is the drug licensed for use by midwives, although a number of other similar drugs have been used to relieve labour pain. Those worth mentioning are diamorphine, fentanyl and meptazinol, which some units feel give better pain relief. They act in a similar way to pethidine.

Epidurals

- Given into a very small tube in your back.
- Most complicated method, performed by an anaesthetist.
- Little effect on your baby.
- A small risk of headache.
- May cause a drop in blood pressure.
- Most effective method of pain relief.

Who should have an epidural?

Most people can have an epidural, but certain complications of pregnancy and bleeding disorders may make it unsuitable. If you have a complicated or long labour your midwife or obstetrician may recommend that you have one. In such circumstances it will benefit you and your baby.

What does it involve?

You will first need a drip, that is fluid running in to a vein in your arm. This is often necessary in labour for other reasons. You will be asked to curl up on your side or sit bending forwards. Your back will be cleaned and a little injection of local anaesthetic given into the skin, so putting in the epidural should hardly hurt. A small tube is put into your back near the nerves carrying pain from the uterus. Care is needed to avoid puncturing the bag of fluid that surrounds the spinal cord, as this may give you a headache afterwards. It is therefore important to keep still while the anaesthetist is putting in the epidural, but after the tube is in place you will be free to move.

Once the tube is in place, pain-relieving drugs can be given as often as is necessary, or continuously by a pump. While the epidural is taking effect, the midwife will take your blood pressure regularly. The anaesthetist and your midwife will also check that the epidural is working properly. It usually takes about 20 minutes to work, but occasionally it doesn't work well at first, and some adjustment is needed.

What are the effects?

- Nowadays it is usually possible to provide pain relief without numbness or heavy legs, in other words a 'mobile epidural'.
- An epidural should not make you feel drowsy or sick, nor does it normally delay stomach emptying.
- Occasionally it drops your blood pressure, which is why you have the drip.
- An epidural may prolong the second stage of labour and reduce the urge to bear down. Occasionally this may result in you having an instrumental delivery, but you are still more likely to have a normal delivery than any other type of delivery.
- It removes much of the stress of labour, which is good for the baby.
- Breast-feeding is not impaired, in fact it is often helped.



- In this country as a whole, there is less than a one in 100 chance of your getting a severe headache after an epidural, but hospitals vary in their headache rate so you might enquire about this. If you develop a headache afterwards, it can be treated. A leaflet is available, produced by the Royal College and the Association of Anaesthetists, *Headaches after Spinal and Epidural Anaesthesia*, which gives further information.
- Backache is common during pregnancy and often continues afterwards when you are looking after your baby. There is now good evidence that epidurals do **not** cause long-term backache, though you may feel local tenderness for a day or two afterwards.
- About one in 2000 mothers gets a feeling of tingling or pins and needles down one leg after having a baby. Such problems are more likely to result from childbirth itself than from an epidural. Other more serious problems happen even more rarely.

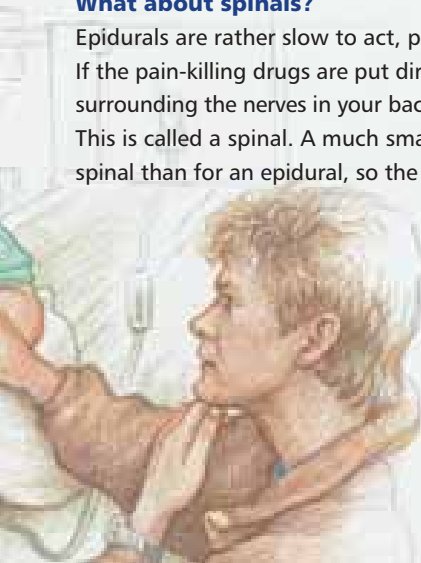
What if you need an operation?

If you should need any operation such as caesarean section or forceps delivery, you may not need a general anaesthetic, as the epidural can often be used instead. A stronger local anaesthetic and other pain-relieving drugs can be injected into your epidural tube to provide an adequate anaesthetic for your operation. This is safer for you and the baby.

What about spinals?

Epidurals are rather slow to act, particularly in late labour. If the pain-killing drugs are put directly into the bag of fluid surrounding the nerves in your back, they work much faster. This is called a spinal. A much smaller needle is used for a spinal than for an epidural, so the risk of headache is small.

In some hospitals spinals, or a combination of spinals and epidurals, are used for pain relief in labour and spinal anaesthesia is commonly used for caesarean section.



Bibliography

Relative merits of different types of pain relief

- Chamberlain G, Wraight A, Steer P, eds. *Pain and its relief in childbirth: The results of a national survey conducted by the National Birthday Trust*. Edinburgh, Churchill Livingstone, 1993;pp49-67.
- Melzack R, Taenzer P, Feldman P, Kinch RA. Labour is still painful after prepared childbirth training. *Can Med Assoc J* 1981;**125**:357-63.
- Keirse MJNC, Enkin M, Lumley J. Support from caregivers during childbirth. In: *The Cochrane Pregnancy and Childbirth Database. The Cochrane Collaboration and Update Software*, 1995; issue 1.
- Ranta P, Jouppila P, Spalding M, Kangas-Saarela T, Hollmén A, Jouppila R. Parturients' assessment of water blocks, pethidine, nitrous oxide, paracervical and epidural blocks in labour. *International Journal of Obstetric Anesthesia* 1994;**3**:193-8.
- Carrol D, Tramer M, McQuay H et al. Transcutaneous electrical nerve stimulation in labour pain: a systemic review. *Br J Obstet Gynaecol* 1997;**104**:169-75.
- Nikkola EM, Ulla UE, Penti OK et al. Intravenous fentanyl PCA during labour. *Can J Anaesth* 1997;**44**:1248-55.
- Holdcroft A, Morgan M. An assessment of the analgesic effect in labour of pethidine and 50 per cent nitrous oxide in oxygen (Entonox). *J Obstet Gynaecol Br Commonw* 1974;**81**:603-7.
- Ross JA, Tunstall ME, Campbell D et al. The use of 0.25% isoflurane premixed in 50% nitrous oxide and oxygen for pain relief in labour. *Anaesthesia* 1999;**54**:1166-72.
- Olofsson C, Ekblom A, Ekman-Ordeberg G, Hjelm A, Irestedt L. Lack of analgesic effect of systemically administered morphine or pethidine on labour pain. *Br J Obstet Gynaecol* 1996;**103**:968-72.
- Harrison RF, Shore M, Woods T, Mathews G, Gardiner J, Unwin A. A comparative study of transcutaneous electrical nerve stimulation (TENS), Entonox, pethidine + promazine and lumbar epidural for pain relief in labour. *Acta Obstet Gynecol Scand* 1987;**66**:9-14.
- Wee MYK, Hasan MA, Thomas TA, Isoflurane in labour. *Anaesthesia* 1993;**48**:369-72.

Effects of epidurals on labour and delivery

- Halpern SH, Leighton BL, Ohlsson A, Barrett JFR, Rice A. Effect of epidural vs parenteral opioid analgesia on the progress of labour. (A meta-analysis of 9 randomised trials.) *JAMA* 1998;**280**:2105-10.
- Zhang J, Klebanoff MA, DerSimonian R. Epidural analgesia in association with duration of labor and mode of delivery: A quantitative review. *Am J Obstet Gynecol* 1999;**180**:970-7.

Effects on the baby

- Reynolds F. ed: *Effects on the baby of maternal analgesia and anaesthesia*. London, WB Saunders 1993.
- Huch A, Huch R, Schneider H, Rooth G. Continuous transcutaneous monitoring of fetal oxygen tension during labour. *Br J Obstet Gynaecol* 1977;**84**(Suppl. 1):1-39.
- Belfrage P, Boreus LO, Hartvig P et al. Neonatal depression after obstetrical analgesia with pethidine: the role of the injection-delivery time interval and of the plasma concentrations of pethidine and norpethidine. *Acta Obstet Gynecol Scand* 1981;**60**:43-9.
- Hamza J, Benlabeled M, Orhant E, Escourrou P, Curzi-Dascalova L, Gaultier C. Neonatal pattern of breathing during active and quiet sleep after maternal administration of meperidine. *Pediatr Res* 1992;**32**:412-6.

- Weiner PC, Hogg MJ, Rosen M. Effects of naloxone on pethidine induced neonatal depression. *BMJ* 1977;**2**:228-31.
- Crowell MK, Hill PD, Humerick SS. Relationship between obstetric analgesia and time of effective breast feeding. *Journal of Nurse-Midwifery* 1994;**39**:150-6.
- Kotelko DM, Faulk DL, Rottman RL, et al. A controlled comparison of maternal analgesia: effects on neonatal nutritional sucking behavior. *Anesthesiology* 1995;**83**:A927.
- Hirose M, Hara Y, Hosokawa T, Tanaka Y. The effect of postoperative analgesia with continuous epidural bupivacaine after cesarean section on the amount of breast feeding and infant weight gain. *Anesth Analg* 1996;**82**:1166-9.

Effects on the gastrointestinal tract

- Petring OU, Adelhof B, Erinmadsen J, Angelo H, Jelert H. Epidural anaesthesia does not delay early postoperative gastric emptying in man. *Acta Anaesthesiol Scand* 1984;**28**:393-5.
- Nimmo WS, Wilson J, Prescott LF. Narcotic analgesia and delayed gastric emptying during labour. *Lancet* 1975;**i**:890-3.

Incidence of complications

i Effect on Mobility

- Russell R, Reynolds F. Epidural infusion of low-dose bupivacaine and opioid in labour. Does reducing motor block increase the spontaneous delivery rate? *Anaesthesia* 1996;**51**:266-73.
- Collis RE, Davies DWL, Aveling W. Randomised comparison of combined spinal-epidural with standard epidural analgesia in labour. *Lancet* 1995;**345**:1413-6.

ii Headaches

- Gleeson C, Reynolds F. Accidental dural puncture rates in UK obstetric practice. *International Journal of Obstetric Anaesthesia* 1998;**67**:242-6.
- Paech MJ, Godkin R, Webster S. Complications of obstetric epidural analgesia and anaesthesia: a prospective analysis of 10995 cases. *International Journal of Obstetric Anaesthesia* 1998;**7**:5-11.
- Royal College and Association of Anaesthetists. *Headaches after Spinal and Epidural Anaesthesia* 2003.

iii Lack of association with backache

- Russell R, Dundas R, Reynolds F. Long term backache after childbirth: prospective search for causative factors. *BMJ* 1996;**312**:1384-8.
- Breen TW, Ransil BJ, Groves P, Oriol NE. Factors associated with back pain after childbirth. *Anesthesiology* 1994;**81**:29-34.
- Macarthur A, Macarthur C, Weeks S. Epidural anesthesia and long term back pain after delivery: a prospective cohort study. *BMJ* 1995;**311**:1336-9.
- Loughnan BA, Carli F, Romney M, Dore C, Gordon H. The influence of epidural analgesia on the development of new backache in primiparous women: report of a randomized controlled trial. *International Journal of Obstetric Anaesthesia* 1997;**6**:203-4.

Neurological complications of childbirth

- Holdcroft A, Gibberd FB, Hargrove RL, Hawkins DF, Dellaportas CI. Neurological complications associated with pregnancy. *Br J Anaesth* 1995;**75**:522-6.
- Paech MJ, Godkin R, Webster S. Complications of obstetric epidural analgesia and anaesthesia: a prospective analysis of 10995 cases. *International Journal of Obstetric Anaesthesia* 1998;**7**:5-11.
- Loo CC, Dahlgren G, Irestedt L. Neurological complications in obstetric regional anaesthesia. *International Journal of Obstetric Anaesthesia* 2000;**9**:99-124.

- *The information in this booklet is based on good evidence; some of the publications from which it is derived are listed on pages 10 and 11.*
- *The Obstetric Anaesthetists' Association also produce a booklet for mothers on **Caesarean section: your choice of anaesthesia** and two films on a double DVD called **Coping with labour pain** and **Your anaesthetic for Caesarean section**.*
- *Both booklets may be found on the Association's website along with a number of translations.*
- *A booklet on **Headache after an epidural or spinal anaesthetic** has been jointly produced by the Royal College of Anaesthetists and the Association of Anaesthetists and can be downloaded from www.youranaesthetic.info.*

This booklet was written by the Information for Mothers Subcommittee of the Obstetric Anaesthetists' Association.

Dr Michael Wee (chairman), Prof Felicity Reynolds,
 Dr Michael Bryson, Mrs Carol Bates (RCM representative),
 Mrs Cathy Groeger (AIMS representative),
 Mrs Christina Campbell (Consumer representative),
 Mrs Shaheen Chaudry, Dr Michael Kinsella,
 Dr Geraldine O'Sullivan, Dr Roshan Fernando.

Further copies of both OAA booklets and the double DVD may be obtained from the Secretariat of the Obstetric Anaesthetists' Association

OAA Secretariat
 PO Box 3219, Barnes
 London SW13 9XR

Tel: +44 (0)20 8741 1311
 Fax: +44 (0)20 8741 0611
 Email: secretariat@oaa-anaes.ac.uk
 Web: www.oaa-anaes.ac.uk

