

## **Department of Anaesthetics**

### **Pain Relief in Labour**

The amount of time a woman is in labour varies greatly. So does the amount of pain women feel. Some women find labour much easier to cope with than they imagined and manage labour with little difficulty. For others it is painful and hard work – but bearable. For others coping with the contractions is much more difficult.

You need to know what choices are available if you require pain relief. Try to keep an open mind, remain positive and remember that each contraction is one nearer to having your baby.

As well as the benefits and risks of different pain relief options, you may wish to compare their environmental impact when choosing your pain relief for labour. Equipment and medications used for labour and delivery, and the energy needed to make and transport them, all come with a carbon footprint. This leaflet has been updated to include information about the Carbon Dioxide equivalent (CO<sub>2</sub>e) of each method when used over a 4 hour period during labour.

#### **Early Labour**

The early stages of labour can be slow. It's worth staying at home as long as you feel comfortable. Keep busy and active, go for a walk, have something to eat, chat to a friend on the phone, watch TV, or relax in a bath.

You can always ring and talk to a Midwife (either your Community, Midwifery Led Birth Unit or Delivery Suite Midwife) about how things are going and decide together when to go into hospital, or if you are having your baby at home, whether it is time for the Midwife to come to you.

#### **Helping Yourself**

It is important to prepare for labour. Understanding that labour is a natural process and that your body is designed to have babies can help you have self-confidence. Arrange to attend some antenatal classes and talk with your Midwife about ways to cope with labour.

#### **Labour supporter**

We encourage you to bring someone to support you. Women who have other support, as well as their Midwife, tend to require less pain relief. They also have slightly shorter labours and fewer caesarean sections or assisted deliveries. Your birth supporter may be your partner **or** a friend **or** a relative. It is not possible to have more than one person with you.

#### **Breathing / Relaxation**

Breathing and relaxation exercises may be included in antenatal classes, or your Midwife will be able to show you how to use them to cope with contractions. If a woman is more relaxed, her baby will be under less stress and will receive a better oxygen supply. The contractions will also be more effective.

Try to greet each contraction with a little breath in and a long sigh out. Keep your breathing slow and steady, and let your body relax while the contractions do their work. Remember SOS: SIGH OUT SLOWLY.

#### **TENS**

Transcutaneous Electrical Nerve Stimulation (TENS) is a small machine with pads that stick onto your back. It stimulates your nerves with small, safe amounts of electric current. You can turn the pulsations up and down as your contractions become stronger.

TENS is most effective when used from the start of labour. Most women hire a machine (e.g. online or from a chemist) and use it at home before going into hospital. TENS has no adverse effects on you or your baby and women often use TENS alongside other forms of pain relief.

### **Positions**

Women who move around in labour and use upright positions tend to have shorter labours and find the contractions more manageable. In the early stages of labour you may find it helps to go for a walk.

Later, as contractions get stronger, you can try leaning against your partner, a wall, leaning forward over a chair, some pillows, bean bags, or kneeling down on all fours. A birthing mat is also available, if you prefer.

### **Massage**

Firm massage low down on your back can feel really good, especially if you have a 'backache labour'. Your birth partner can do this for you. Some women cannot bear to be touched during contractions, but like to be massaged between contractions. Try it and see what suits you. Make sure you tell your supporters what helps rather than making them guess. This can be done non-verbally if you do not feel like speaking.

### **Music**

Many women find that listening to music helps them relax, which is useful in labour. You are welcome to bring a battery-operated CD player or iPod and your favourite pieces of music with you.

### **Birthing Balls**

Birthing balls are available. Many women find them very useful in labour, to sit on or lean against. They can help support you in comfortable positions and allow the pelvis to open up and make more space for your baby.

### **Water for labour and birth**

The NNUH has four pools that can be used for pain relief during labour. Some women also choose to give birth in the pool. The pools cannot be pre-booked. When you ring up in early labour, mention that you would like to use the pool. If all the pools are in use you could use one of the ordinary baths instead. Talk to your Midwife or refer to the leaflet "Waterbirth – information for women".

### **'Gas and Air' (Entonox – Nitrous Oxide mixed with air)**

You breathe Entonox in through a mouthpiece or mask. You need to take several good deep breaths at the very beginning of each contraction and then continue with your usual breathing to help you cope with the contraction.

Some women find they need to breathe the Entonox throughout the contraction. You may find it helps you to slow down your breathing and prevents you from hyperventilating. You hold the mask or mouthpiece and take as much or as little as you need – you are in control. It doesn't harm the baby. It's quickly breathed in and out so if you don't like it, it's easy to stop.

You may not like the feeling of light-headedness it gives and some women feel a bit sick when using it. It doesn't take the pain away but can take the edge off it and make it bearable.

Nitrous Oxide is a potent greenhouse gas that can remain in the atmosphere for 115 years. It has a Global Warming Potential of 300 and accounts for 2% of the total carbon footprint of the NHS. Using it for 4 hours during labour would produce 237kgCO<sub>2</sub>e which is the equivalent of driving 870 miles in an average car.

Entonox cannot be used in some of the rooms on Delivery Suite because they do not have adequate ventilation. We will endeavour to move you to different room if you wish to use it.

## **Pethidine**

This is a painkiller given by injection, usually into your thigh. It takes about 20 minutes to be effective and lasts for 2 to 4 hours. Some women find it helps 'distance' them from the pain making them feel detached from what is happening.

Some women find that Pethidine doesn't help with the pain, whereas others find it very effective. If you are feeling anxious, it may relax you and help contractions to be more effective. Pethidine may enable you to rest if labour is long and difficult.

You may feel dizzy or sick, but your Midwife will usually give you a drug to counteract the nausea. Pethidine may make your baby appear tired and slow to feed for the first couple of days.

Pethidine has very low environmental impact: 2 injections would produce 0.08kgCO<sub>2</sub>e, the equivalent of driving 0.3 miles in an average car.

## **Remifentanil Patient Controlled Analgesia**

Remifentanil is a strong pain-relieving drug similar to Pethidine or Morphine. It is different from these drugs in that it is very short acting. It is used as an alternative to Pethidine.

It has been used at this hospital since 2005 for pain relief in labour but its use had previously been restricted to women who could not have an epidural. We are now able to offer this form of pain relief to anyone who wants it provided they meet the criteria below.

Remifentanil is currently not licensed to be used for this purpose. The manufacturers of Remifentanil have not gone through the very involved and expensive process of getting a licence for its use in this situation. This does not mean it is unsafe and its use for this purpose is well established.

To use Remifentanil Patient Controlled Analgesia (PCA) you must be a patient on Delivery Suite. It is not available on the Midwifery Led Birthing Unit (MLBU). If this is your first pregnancy or you are having an induction then an epidural may be a better form of pain relief. Your Midwife or Anaesthetist can help guide you in this decision.

You cannot have Remifentanil if you have had Morphine or Pethidine within the last 4 hours. You cannot have Remifentanil if your body mass index (BMI) is over 40. Remifentanil may not be used in a birthing pool.

A small tube (cannula) is inserted into a vein in your arm or hand and attached to a Patient Controlled Analgesia (PCA) pump. With a PCA you are in control of your own pain relief. Pressing the button on the handset will deliver a small dose from the pump which will start to work within about 30 seconds. It will make you feel relaxed and sleepy. Its effects wear off within a few minutes so you will need to press the button each time you have a contraction.

Unlike an epidural, Remifentanil will not provide total pain relief. You will not be able to sleep as you have to stay awake to press the button. A recent study found that 20% of women needed to go on to have an epidural. In women who used Pethidine, 40% needed to have an epidural.

Common side effects can include nausea, itching, drowsiness and dizziness. These effects wear off very quickly when you stop using it. 50% of women find it slows their breathing which may cause lowered blood Oxygen levels. This can easily be treated by giving you additional Oxygen via a face mask or nasal cannula. Because of this your Oxygen levels must be monitored at all times using a small clip on one of your fingers.

Your baby's heart rate will also be monitored continuously. Remifentanil does cross the placenta to the baby in a similar way to Pethidine and may cause your baby to be slow to breathe or to be drowsy

at birth; unlike Pethidine this wears off very quickly. Remifentanyl is normally stopped just before delivery, so this is not an issue. You will still be able to breast feed if you have had Remifentanyl. This type of pain relief has now been used in large numbers of women in labour and has been shown to be safe for babies.

4 hours of Remifentanyl PCA use would produce 0.75kgCO<sub>2</sub>e, the equivalent of driving 2.5 miles in an average car.

## **Epidural**

This is an injection into your lower back which blocks the pain nerves so you don't feel the contractions. You will still be able to feel and move your legs. It takes 20 minutes to set up and another 20 to 30 minutes for it to work. It doesn't harm the baby and it works well for 95% of women. It is the most effective form of pain relief in labour. With an epidural you will be able to sleep through your contractions if you want to.

'Low dose' epidurals which allow you to move around and change position in bed are used at the NNUH. You will need a drip in your arm. Epidurals can have the potential to lower your blood pressure and a drip will help counteract this. You may also need a urinary catheter (a tube to empty the bladder), as you may not have the same awareness of needing to pass urine.

Occasionally pain relief may be patchy. This can normally be overcome using simple measures. If these do not work, then the epidural can be re-sited.

An electronic monitor should be used all the time to check the baby's heartbeat and your blood pressure will be checked regularly. You may be less able to move about.

Epidurals do not affect the 1st stage (dilating phase) of labour. They may prolong the 2nd stage (pushing phase) a little bit but there is no evidence to support stopping your epidural for this. However, if you wish to feel more during the delivery of your baby, please discuss this with your Midwife and your epidural can be adjusted.

Having an epidural has not been shown to increase your chance of needing a Caesarean section but there could be a small increased risk of needing an assisted delivery (forceps, vacuum).

Occasionally an epidural can cause severe headache following the birth. Backache is not caused by epidurals but is common after any pregnancy.

The Anaesthetist will be happy to discuss all of this with you and answer any questions you might have.

Four hours of pain relief with an epidural produces 1.2kgCO<sub>2</sub>e, equivalent to driving 4 miles in an average car.

More information about pain relief in labour including translations in 33 different languages can be found at [www.labourpains.org/](http://www.labourpains.org/) or by scanning this QR code.

