Clinical Guideline

PAIN RELIEF IN LABOUR – NON EPIDURAL

SETTING	Maternity Services
FOR STAFF	All staff providing intrapartum care
PATIENTS	Women in labour

Guidance

Non-Pharmacological Methods

Aim: to reduce the need for pharmacological analgesia.

Key points:

Provide a calming, positive, and welcoming atmosphere.

In normal labour most women will cope using coping strategies and non-pharmacological pain relief or N_2O+O_2; however, some women will require support from other pharmacological pain relief.

Coping Strategies

Key points:

Simple techniques can:	
• Provide the woman with good coping strategies for labour	• Enhance the physiological effects of labour
• Reduce the need for pharmacological analgesia	• Continuous support reduces intervention
• Encourage the use of upright positions	• Ensure good physical and emotional support
Further information is available from www.labourpains.com, and midwives and obstetricians are encouraged to familiarise themselves with this information.	

Providing a calming and supportive environment

Past experiences, anxiety, attention, and the meaning placed on experience of pain will all influence the opening and closing of the neural gate and therefore the amount of pain an individual experiences. Personality differences including 'locus of control' will mean some women will be comforted by strong guidance, but others will experience anxiety at not feeling in control. This can heighten pain perception. Care should be provided to ensure the woman feels supported in her choices about pain relief.

A calming and supportive atmosphere can help to stimulate the release of endorphins and reduce the release of catecholamines (stress hormones).

Provision of a private, warm, dimly lit, quiet environment increases the likelihood of labour progressing optimally. Avoiding bright light, intrusive noise, questioning, unfamiliar sights and sounds etc. prevents stimulation of the woman's neo-cortex ('thinking' part of the brain) and allows her to relax and promotes endorphin and oxytocin release. The woman should be encouraged in hospital to make her labour room her own space, using music, balls, chairs, pillows, wall bars etc. as she wishes. The midwife should help and support her to do this.

Conversation should be kept to a minimum and language used should be positive. For example

One to one care in labour

Benefits:

- Reduces the need for pharmacological pain relief
- Reduces the need for operative vaginal birth
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- Reduces the need for caesarean section
- Reduces the likelihood of five-minute APGAR score <5
- Increases maternal satisfaction
- More likely to be breastfeeding at four weeks postnatal
- Less likely to suffer from postnatal depression

Risks:

- None.

Movement and effective positions

Works by distracting the woman and providing a method of releasing muscle tension, also supports the mechanics of labour, helping the foetus move to an optimum position.

Benefits:	**Risks:**
• Labour pain is likely to be reduced with the woman in an upright position rather than supine positions	• Women who are exhausted may find movement and adopting effective positions difficult, but positions such as left lateral or sitting backwards on a chair may be possible
• Moving around or changing positions during contractions can help women cope better with discomfort or pain	
• Upright positions can help shorten labour	

Massage

Works by stimulating the release of endorphins.

Benefits:

- Can be controlled by the woman
- Reduces anxiety
- Helps relaxation
- Promotes release of oxytocin – may help shorten labour
- Quick and easy to provide
- Can be used with other coping strategies and pain relief options

Risks:

- Some essential oils may not be suitable for use in labour.

Comments

This is an ideal role for a birth partner, but they may need guidance to begin with:

- Use a carrier oil to reduce skin friction and damage
- Shoulder massage can help a woman regulate her breathing and stay relaxed
- Back massage can help a woman cope with back pain in labour – as labour progresses this may need to get firmer
- Foot massage should be firm to avoid tickling
- If a woman has an epidural, hand massage will help her stay relaxed
- Be guided by the woman's needs – not all women like to be touched in labour, and her preferences may change as labour progresses

Heat Packs (physio packs)

Works by stimulating the release of endorphins.

Benefits:

- Can be controlled by the woman
- Has the 'Mmmmm!' effect
- Reduces anxiety
- Helps relaxation
- Promotes release of oxytocin – may help shorten labour
- Quick and easy to provide
- Can be used with other coping strategies and pain relief options

Risks:

- May damage skin if pack is too hot – wrap pack in a towel
- Do not use if the woman has an epidural.

Immersion in water (birthing pool, bath, or shower)

Also see Water Birth Guideline.

WaterImmersionForLabourAndBirth

Use birthing pool or bath. Shower may have some benefit, but likely to be less effective.

Works by:

- Hydrothermia (warmth from the water
- Hydro kinesis (reduction in the forces of gravity);
- Assisting relaxation and reduces anxiety and fatigue

Benefits:

- Aids relaxation and reduces fatigue
- Facilitates mobility of the labouring woman
- Lessens pain and reduces the need for pharmacological analgesia
- 'Mobile' Entonox equipment may be used if necessary
- Shortens labour
- Increases the woman's control of her labour
- May lower blood pressure.

Risks:

The use of very hot water (>37^{O}C) over several hours of labour has been linked to hyperthermia and may cause brain damage or fetal death.

Every labour room on CDS has the facility of a bath or shower; women should be encouraged to use them. Use telemetry if continuous electronic fetal monitoring is indicated.

Transcutaneous Electrical Nerve Stimulation (TENS)

Pain relief in labour - NHS (www.nhs.uk)

Works by:

- Preventing some nerve impulses from reaching the brain ('gate control' theory)
- Stimulating endorphin release
- No conclusive evidence that it affects pain scores but is favoured by some women

Benefits:

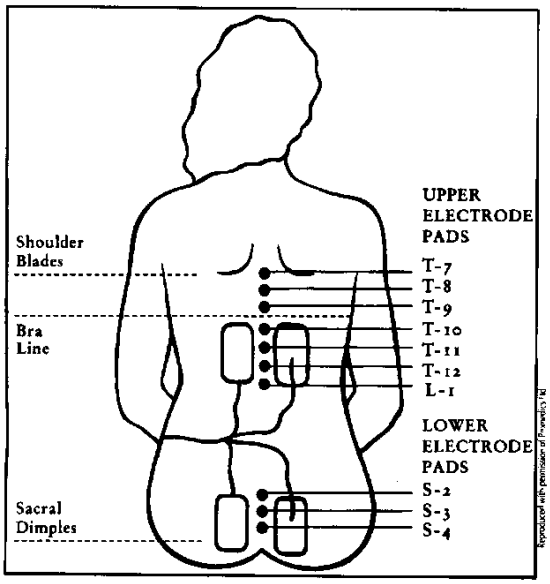
- It is non-invasive
- The woman is in control
- The woman can remain upright and mobile
- Other analgesia may be used in addition to the TENS if needed by the woman
- Does not affect consciousness or awareness
- No known adverse effects on the foetus.

Risks/disadvantages:

- Cannot be used in the bath or shower
- Absolute contraindication is an on-demand pacemaker in the mother
- Possible interference with continuous electronic fetal monitoring – minimised by situating pads on the woman's back

Placement of electrodes (pads):

1. Check that the unit is switched off
2. Turn the channel and amplitude controls down to the lowest limit
3. Connect the leads to the electrodes
4. Ensure the woman's back is clean and dry
5. Position the upper electrodes either side of the spine between the level of T10 and L2. To find these landmarks locate the lower tip of the scapula and trace a line laterally to the spine; this is T7. Count down 3 spinous processes to T10. As a reasonably accurate marker, this is just below the bra strap line. The woman's arms should be positioned loosely at her side and not forward or folded, as this can affect the accuracy of the position of the electrodes



6. The lower electrodes should be placed on either side of the spine between the level of S2 and S4. This is roughly in the middle of the sacrum (pelvis)
7. Turn the unit on and ask the woman to turn the control setting until she experiences a tingling sensation. The strength and frequency of the pulses should be controlled by the woman and will need to be increased as labour progresses

Women should be encouraged to hire their own TENS equipment in the antenatal period. There are no units available within the hospital.

Other Non-Pharmacological Methods

This can include visualisations, affirmations, aromatherapy, hypnotherapy for childbirth, acupuncture, acupressure, and reflex zone therapy.

What is hypnobirthing? | Tommy's (tommys.org)

Key points:

- Midwives should support a woman's choice to use these methods of pain relief/coping strategies.
- Some women find that these methods provide comfort and aid in relaxation.
- Aromatherapy, hypnotherapy in childbirth, reflex zone therapy, acupressure and acupuncture practitioners are not freely available at St Michael's. If a midwife finds herself giving care to a woman using one of these methods it may be appropriate for her to discuss it with the CDS matron, co-ordinating midwife, or midwifery advocate.

Pharmacological pain relief

Key points:

- Midwives sometimes underestimate the intensity of the pain experienced by women in labour and overestimate the efficacy of pharmacological pain relief.
- Labour pain can only be partially relieved using analgesia, and this must be acknowledged with labouring woman.
- All pharmacological methods of pain relief have side effects.
- Women need access to good information to be able to make informed choice ideally prior to labour. However, if this has not happened and been recorded, the midwife caring for the woman in labour must take responsibility for offering the information.

Entonox (N_2O+O_2)

Women must be instructed in the use of the equipment including beginning to inhale the gas at the very beginning of a contraction to gain the most benefit of the analgesic properties at the height of the contraction.

Benefits:

- The mother remains awake and in control of the analgesia
- Quick to start using
- It does not affect uterine activity
- The mother can feel to 'push'
- No clinically important side effects on the mother or baby have been noted
- It is portable and cheap
- It may be used in conjunction with other methods of pain relief
- Effects are rapidly reversed when discontinued.

Risks/problems:

- Need to start breathing it at the very start of the contraction to get best effect
- Can cause dizziness, drowsiness, and nausea
- Possible teratogenic and other pathological effects on reproduction for staff who are frequently in contact with N_2O+O_2 (Staff must take 'personal responsibility' for their safety, using the scavenging systems installed in the labour rooms)

Pethidine

Key points:

- The main effect is sedation
- There are considerable doubts about its analgesic effectiveness
- Potential maternal, fetal, and neonatal side effects are well documented
- Has little benefit when given in established labour
- Careful consideration should be made when administering pethidine to a woman in established labour

Risks:

- Maternal:
  - Hypotension
  - Nausea and vomiting
  - Dizziness
  - Dysphoria
  - Drowsiness
  - Pethidine is metabolised to norpethidine, which is epileptogenic and therefore must be used with caution in epileptics

- Neonatal:
  - Respiratory depression
  - Altered behavioural patterns
  - Lack of responsiveness to sights and sounds
  - Lassitude and drowsiness
  - Depression of reflexes, including impaired suckling reflex for up to several days
  - Possible association between fetal intrapartum exposure to narcotics and narcotic addiction in adulthood

If the mother gives birth within 6 hours of being given pethidine the baby should have 2 hourly observations for 12 hours (see NEWTT chart).

Dosage:

Booking weight <50Kg 50mg

Booking weight >50Kg 100mg

IM 3 – 4 hourly during established labour

Contraindications/Cautions:

As listed under Oral Morphine Solution section.

Midwives may administer Pethidine when a woman is in established labour during their professional practice under the Midwives Exemption. See the UH Bristol Midwives Formulary for more information.

NB: Pethidine should only be considered for use in the latent phase in exceptional circumstances. The case should be reviewed by an Obstetrician (ST3 or above) who should plan ongoing care.

The administration of pethidine in the latent phase is not covered as a Midwives Exemption – it must be prescribed by an Obstetrician (ST3 or above).

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RELATED DOCUMENTS AND PAGES	Labour pain information Coping with LabourPains for Mothers Waterbirth WaterImmersionForLabourAndBirth Pain relief in labour Pain relief in labour - NHS (www.nhs.uk) Labour Care http://nww.avon.nhs.uk/dms/download.aspx?did=1767 Hypnobirthing information What is hypnobirthing? | Tommy's (tommys.org) Epidural Anaesthesia Pain Relief in Labour guideline http://nww.avon.nhs.uk/dms/download.aspx?did=2400
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				Updated 'supervisor of midwives' to midwifery advocate