Non-Pharmacological Pain Relief in Labour

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Pain in normal labour can be relieved using many non-pharmacological methods including:-
Techniques that reduce painful stimuli: *Assuming various upright positions to ease the pain, encourage labour progress and increase the diameter of the pelvis.*
Techniques that activate peripheral sensory receptors: *Of the various techniques used, intradermal injection of sterile water (ISW) results in over 50% of pain relief compared to 18% in the 'dry needling' group, Dahl V., Aarmes T.[35] One RCT [38] concluded that ISW is more effective than TENS for relieving low back pain in labour. Two trials, Erkkola et al[19] and Bundsen et al[20] found that mothers using TENS received good to moderate pain relief 48%: 37% and 31%: 55%. There were no ill effects produced in the newborn infant.*
The use of essential oils, lavender, frankincense and rose for relief of anxiety and fear were favourably reported by E.Burn et al[14]. Also for the effectiveness rating of pain by parity and labour onset more women recorded a positive or equivocal score than a negative one.
The use of Active Birth *embraces many methods of non-pharmacological pain relief including using a humane approach and providing continuous emotional support by a companion or caregiver throughout labour. Two Bangkok hospitals, using Active Birth, showed a marked reduction in the use of pharmacological pain relief.*
Conclusion: *Pharmacological methods to help alleviate the pain of labour should only be used as a last resort.*

Keywords: *Pain, Relief, Labour*

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According to Leeman et al [1] most women report that labour is painful but most physicians have surpris-ingly little understanding of the nature of labour pain. Many physicians believe that the main determinant of maternal satisfaction with childbirth is major pain relief during labour and, invariably, pharmacological pain relief is resorted to as the only method known to us.

Hodnett [2] in his systematic review found that factors associated with increased maternal satisfaction were:-

- The quality of relationship with the caregiver and the amount of participation in decision making during labour and birth.
- Women preferred a home-like birth environment.
- Caregivers with whom they are personally acquainted.

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With these points in mind we shall proceed to look at various ways in which we can help women give birth.

Non-pharmacological pain relief in labour

Melzack and Wall's " Gate control theory" [3] introduced in 1965, helps to explain the various methods used in non-pharmacological pain relief in labour. Some, as follows, are the revival of traditional methods and some are newly developed.

1. Techniques that reduce painful stimuli.
2. Techniques that activate peripheral sensory receptors.
3. The use of 'Active Birth'.
4. Techniques that enhance descending inhibitory pathways.

This paper will discuss the first three methods.

1.TECHNIQUES THAT REDUCE PAINFUL STIMULI

1.1 Maternal movement and changes in position

Caldeyro-Barcia[4] described that when women were left to themselves they spontaneously adopted different upright positions in an attempt to reduce pain. Changing position also alters the relationship between gravity, the fetus, the pelvis and uterine contractions which can improve contractions, labour progress and help to reduce pain. When in a vertical rather than a horizontal position women experienced significantly less pain, particularly back pain, Melzack [5]. The width of the pelvis and the use of gravity can be maximised by changing position, Enkin M, et al [6]

Virtually all labouring women in Thailand are confined to bed and they mostly lie in a supine position.

1.2 Counter pressure

The use of steady, strong force, during a contraction, to an area on the lower back. (There is no controlled trial of its effectiveness).

1.3 Abdominal decompression

Was introduced in mid 1950 as a non-pharmacological method for shortening labour and reducing labour pain. Anecdotal reports were positive, but its use has disappeared partly from the lack of good evidence that it is beneficial.

2. TECHNIQUES THAT ACTIVATE PERIPHERAL SENSORY RECEPTION

2.1 Touch and message.
2.2 Reflexology.
2.3 Acupuncture.
2.4 Aromatherapy.
2.5 Trans-cutaneous electrical stimulation (TENS).
2.6 Water immersion.
2.7 Intra-dermal injection of sterile water.

2.1 Touch and massage

The use of pressure and massage to encourage relaxation and release tension is one of the oldest, simplest and most immediate tools available to the midwife/caregiver. Many midwives routinely use gentle back massage as part of their practice. Women may vary in their response to massage. Some prefer to be massaged during contractions, which helps to 'spread the pain' while some prefer to be massaged after each contraction to relax and soothe tired muscles. Massage is often used in combination with other therapies.

2.2 Reflexology

Reflexology is an ancient natural therapy which uses subtle energies of the feet to balance and harmonise the being, so that he or she may attain and maintain health and well being. To put it simply everything that happens in the being is reflected in the feet, and everything that happens in the feet is reflected in the body. Reflexology offers a woman in labour a very unobtrusive and gentle method of pain control.

Dr. W. Fitzgerald, who divided the body into ten longitudinal energy zones, introduced it to the West in the early 20th Century; anything, which happens in one part, affects the rest of the same longitudinal zone. Transverse energy zones also help to identify the reflex areas of the feet.

Corresponding reflexes for the uterus, fallopian tubes, ovaries and pelvic region are situated in an area around the ankle bones and can be stimulated by massage, using either circular movements with the thumb and forefinger or press and hold method. In labour, for pain relief there are five reflex zones used:-

1. Entire being: General massage to the whole foot to relax the mother and encourage inner stillness.

2. "Solar Plexus" (centre of energy): Using bimanual hold technique with the thumb on the solar plexus zone, rest fingers naturally and hold for 1-10 minutes to aid relaxation.

3. Chest: Using the lung press (metatarsal press) to influence regular breathing.

4. Adrenal glands: Using technique to sedate, thumb press and rotate counter clockwise. This helps to lower adrenaline output and encourage endorphin release.

5. Pelvis: Using the techniques of pelvic stretches to relax the pelvis.

At the height of labour, reflexologists will work on both feet, concentrating mainly on the points around the pelvis, uterus and vagina. If the mother is on her feet, the above points are still accessible but the solar plexus and the lung can be stimulated on corresponding points on the hands Enzer S.[7]

To date there are no Randomised Controlled Trial (RCT) reports on reflexology and pain relief in labour.

2.3 Acupuncture

Acupuncture is an ancient healing art, which is regarded as conventional medicine in China.

Acupuncturists believe that health is dependent on the correct flow of energy through the meridians (Qi), which are invisible tracts running through the body (14 meridians). The strength and

the clarity of these meridians govern the vital health of all the vital organs in the body. If the person is ill, then the energy flow is blocked or unbalanced.

The aim is to stimulate the appropriate meridians by using needles, heat, electricity and pressure at certain points. When these blocks are removed energy can flow and the body can heal itself.

Today we understand that energy is a dynamic force in constant flux and the body is an electromagnetic organism. It is electromagnetic energy that initiates chemical reactions that keep our bodies in balance, or 'yin' and 'yang' as the Chinese call it. i.e. negative and positive electrical charges.

Since light is a movement of electrical and magnetic energy, it is believed that an acupuncture needle (stainless steel) inserted into a point acts as an antenna to conduct electromagnetic energy into the body.

Thompson [8] reported that pharmacological effects of acupuncture and TENS have certain similarities.

- Inhibits descending inhibitory neural pathways
- Stimulating the release of enkephalins and endorphins, which help to reduce anxiety and fear and act as a powerful analgesic during labour.

Acupuncture is a precise art, which requires extensive training and practice.

The commonly used acupuncture points are:-

1. "Sanyinjiao" or spleen 6- is located inside the lower leg, on the posterior tibia 4 finger width(3cun) above the malleolus. It regulates Qi (energy) and stimulates the uterus and also relieves anxiety [9].

2. "Hegu" or large intestine 4 - is located at the fleshy skin at the base of the thumb and forefinger, 1cm down from the web of the thumb and the forefinger. It is a great mover of energy and is thought to be excellent for relieving pain and encouraging the baby through the birth canal [9]

3. Acupuncture points in the ear. - Budd [10] described the use of acupuncture points in the ear in labour. Usually, electro-acupuncture is used, needles are inserted in the ear at points, which are related to the uterus and have an effect on analgesia and relaxation of the body.

The electrodes are attached to the needles, the controls are given to the mother so that she can "turn the 'volume' up or down" according to her pain level at that time. The electro-acupuncture machine vibrates the needle, stimulating it more than resting it in the ear. This technique is used at the Plymouth Maternity hospital in the U.K.

Trial results: In their single blind study involving 210 women in active labour (106 real & 102 false acupuncture) Skilnand et al [11] showed that acupuncture reduces the experience of pain in labour and a secondary out come was a shorter delivery time. Smith et al [12] reviewed seven RCTs involving 366 women using different modalities of pain management. One trial involved acupuncture (n = 100) The trial of acupuncture decreased the need for pain relief.(relative risk (RR) 0.56, 95% confidence interval (CI) 0.39 to 0.81. ***Reviewers' conclusions:*** Acupuncture (and hypnosis) may be beneficial for the management of pain during labour.

2.4 Aromatherapy

The Essential Oils: Essential oils are highly concentrated aromatic substances extracted from plants by a process of distillation or cold compression. They contain natural organic chemicals.

They are highly volatile and evaporate quickly if left in an unsealed bottle. They are highly complex in their chemistry and are pharmacological active substances.

Mechanism of Essential Oils

1.Olefaction:- Receptors *stimulate* olfactory cells *'switch on'* olfactory bulb *relay message* via olfactory tract to the limbic system.

The limbic system is the emotional centre of the brain, it can influence the pulse rate, B.P., respiration and response to stress.

Stimulation of the limbic system triggers release of:- enkephalins (natural pain killers), endorphins (natural opioids), serotonin (natural sedatives) which leads to:- restful, balanced mood, awareness of senses, maintenance of body temperature. In effect - scent can help to relax and reduce anxiety [13]

2. Skin absorption:- the molecules of essential oils and carrier oils are small enough to permeate through the skin barrier. It will be absorbed through the skin within 20-40 minutes - depending on the chemical nature of each oil. Skin absorption can be via:- massage, bath, foot bath, hot or cold compresses or neat application to the skin.

Carrier oils such as almond oil or rapeseed oil can be used to dilute essential oils to reduce skin irritation from chemical constituents in some essential oils.

3. Internal method:- In the U.K., oral and rectal routes are not advocated except under the direction of medical practitioners. Perineal lavage (lavender or chamomile) can be used post-partum.

Results: In their report " the use of aromatherapy in intrapartum midwifery practice, an evaluative study" E.Burn, et al [14]. From 1990-1997, total of 8,058 mothers used aromatherapy, primigravida 60%, multipara 40%.

Reasons for administrating aromatherapy:- for fear/ anxiety which are the main contributory factors relating to pain 60% (4853). For pain 7% (537).

Lavender and frankincense were most frequently used for their sedative and calming effects.

Rose and jasmine were rather expensive to use all the time.

Effectiveness rating anxiety & fear by parity and labour onset:- A small number of mothers reported the aromatherapy as 'not helpful'. (Primigravida 14% total of 1524; Multigravida 10% total of 963).

Administration for pain relief:- 7% (537) used aromatherapy for pain relief. Essential oils used:- Lavender 64% (341), Frankincense 12% (63), Rose 4% (22).

Also clary sage and chamomile were shown to be effective in pain relief.

Mothers' effectiveness rating for oil administered for pain by parity and labour onset:- Again more women recorded a positive or equivocal score than a negative one. (Primigravida 8% total of 167; Multipara 12% total of 116).

The epidural rate for primigravidae and multigravidae, was lower than average when compared to the obstetric profile of the three study centres.

Number of reported associated symptoms following aromatherapy amongst mothers and caregivers/ partners:- Only 100 (1%) of mothers and 24 (0.3%) of caregivers/partners reported associated symptoms. The highest report of symptoms was vomiting and/or nausea 63 (51%).

Summary

- Aromatherapy was found to be effective for mothers with fear and anxiety, thus reducing the level of pain and the use of pharmacological pain relief.

Type of delivery and uptake of epidural analgesia for oil administered for pain, by parity and labour onset:

	Primigravida		Multigravida	
	Spontaneous (n=236) (%)	Induced (n=74) (%)	Spontaneous (n=153) (%)	Induced (n=73) (%)
Epidural	29 (37.2, 45.2,51.1)	45 (66.7, 67.8,74.9)	14 (13.8, 16,20.5)	21 (29.6, 36.7,36)

- Mothers were more positive on being able to use alternative therapy, which has low side effects and no effect on the baby.
- Treat aromatherapy with respect, it can have undesirable side effects if improperly used.
- User should receive proper training.

2.5 Transcutaneous electrical nerve stimulation (TENS)

TENS is the transmission of electrical energy across the surface of the skin via surface electrodes to the nervous system.

How does TENS work? Large diameter nerves can be stimulated at low intensities and have been found to transmit impulses at high frequencies. Therefore, low intensity, high frequency (100-200 Hz) TENS is appropriate and effective and has been shown to stimulate the A fibres. Janko & Trontelj [15].

Sjolund et al [16] and Salar et al [17] have shown that stimulation at 40-60 Hz, 40-80mA stimulated the release of endorphins, which bind to opiate receptors, which increase pain tolerance.

Application of electrodes

Top pair of electrodes at level T10-L1, Lower pair of electrodes at level S2-S4.

Different manufacturers have different features e.g. some are set at a fixed frequency, some have a fixed pulse width and some have variable pulse width and frequency.

Contraindications

- Not to be used with any cardiac pacemaker
- Never place over the carotid sinus
- Never use in the first trimester

Precautions

- Not to use while driving
- Women with epilepsy need full consultation
- TENS should be discontinued should any skin irritation occur on the electrode sites.

The effectiveness of TENS in labour

Augustissen et al [18] reported that out of 147 mothers using TENS in labour:- 48% obtained good to very good pain control, 37% obtained moderate relief, remainder had no relief.

Erkkola et al[19] in a trial involving 200 mothers:- Out of 100 mothers using TENS:- 31% reported good pain relief, 55% reported moderate pain relief.

Bundsen et al[20] found that TENS reduced pain in the first stage of labour, but did not relieve the majority of supra-pubic pain.

Davies [21] reported that 'out of 50 mothers, 29 obtained good to very good pain relief including back

pain'. and Bundsen et al [22] reported that there were no ill effects produced in the newborn infant when TENS is used.

Possible placebo effect:-Thorsteinsson et al [23] found that:- 48% of TENS users get good pain relief, 32% found relief with placebo TENS. Harrison et al[24] in their controlled study in two parity groups found 'no significant differences between the TENS and TENS placebo but, consumer satisfaction was higher in the TENS group than in the TENS placebo group.

Mothers using TENS_can remain mobile throughout, if needs be, pethidine and Entonox can be used at the same time. The unit using TENS should have a training programme and regular updating to maintain standards.

2.6 Water Immersion

The healing and pain relieving properties of water has been known for centuries. Recent interest in past decades was due to increased request by mothers to use it as a form of comfort. It can be used as either:- shower, tub, whirlpool, birth pool.

It was introduced in 1960 by Igor Tjarkovsky and popularised by Michel Odent and Janet Balaskas. P.Simkin [25] suggested that warm water has beneficial effects, which can be accounted for by the " Gate Control Theory" of pain relief.

Immersion in warm water gives an immediate feeling of well being. Deschenne [26] attributed this to Hydrothermic and Hydrokinetic effect.

Hydrothermic effect arises from water being a conductor of heat. The conduction of heat through the skin and mucous membranes release muscle spasm and pain relief.

Hydrokinetic effect is the sensation of the 'abolition of gravity' that is experienced during immersion.

The combined effect of the two leads to relaxation and reduced anxiety.

The effect on blood pressure: Church [27] and Nightingale [28] noted that blood pressure can be reduced within minutes of warm water immersion, implying that women with hypertension would benefit from hydrotherapy. But, Zimmerman [29] points out that the fall of the BP can reduce placental blood flow. He suggests that the mother should not spend many hours in the water before the birth.

When to enter the pool: Zimmerman et al[29] advised that immersion is best in the early stage if it is to have the most positive effect on dilatation.

Odent [30] suggested entering the pool with the cervix at 4-5cms dilatation for the acceleration of labour..

In a situation where labour is slow and painful, immersion in water is recommended as a form of relaxation which helps to reduce the hormone adrenaline thus allowing a further release of endorphin and oxytocin.

Who can use the pool?

- Low risk mothers
- Previous Caesarean operation
- Mild hypertension
- Twin pregnancy (for pain relief)

But women with severe pre-eclampsia and gestation of less than 36 weeks are *not* recommended.

Safety Rules:-

- Water temperature 37 C or less – to reduce the risk of fetal hyperthermia [31]
- Risk of infection can be minimised by using filters and ultra violet treatment for both hot and cold water.
- Mother should have free fluids to prevent dehydration
- Water spills should be mopped up to prevent slipping & accidents
- Depth of water should be sufficient to cover mother's abdomen

Other points

- Aromatherapy and massage can be used at the same time. Aromatherapy oil should not be added to the water and oil should be 'towelled off' the mother before she enters the water. It can be used as an inhalation.
- Entonox can also be used.
- Intermittent fetal monitoring using a hand held Doppler under water.
- Vaginal examination can be made under water or outside the pool

Results:-Three trials of 988 women, included in the Cochrane review " Immersion in water in pregnancy, labour and birth" Nikkoderm V.C. [32] showed that 'no statistically significant differences between water immersion and no water immersion' were detected for:- use of pain relief, augmentation and duration of first stage of labour, meconium stained liquor and perineal trauma.

Neonatal outcomes, APGAR scores, umbilical arterial pH values and neonatal infection rates showed no differences.

Richmond H.[33] in her retrospective study of 184 women from five birthing centres in SE England found that:-

- Water birth is a consumer led trend, mainly educated middleclass women.

- They thought that it was a natural drug-free method and it would be a less painful birth.
- They felt that water would provide a gentler medium for birth.
- They felt in control and liked the relaxing, calming effect of the water and to be able to hold their babies immediately.
- Mothers perceived water birth as therapeutic.

Samitivej Hospital use of warm water for pain relief (2001- 2003)

2001: Total no. of births 593. 136 women used warm bath. Of these 114 (83.9%) did not use any other form of pain relief, 22 (16.1%) used additional pharmacological pain relief:- pethidine = 8 (36.4%), epidural analgesia = 10 (45.5%), entonox = 4 (18.2%).

2002: Total no of births 575. 85 women used warm bath. Of these 65 (76.5%) did not use any other. form of pain relief, 20 (23.5%) used additional pharmacological pain relief:- pethidine = 6 (30%), epidural analgesia = 13 (65%), entonox = 1 (5%).

2003: Total no. of births 635. 99 women used warm bath. Of these 83 (83.9%) did not use any other form of pain relief, 16 (16.1%) used additional pharmacological pain relief:- pethidine = 7 (43.7%), epidural = 9(56.3%), entonox = 0.

NB In the years of 2002 & 2003 the Samitivej Birth Unit Hospital was closed for alterations, reflecting the drop in the use of warm water immersion for pain relief in labour during this period.

2.7 Intra-dermal injection of sterile water. (ISW)

Low back pain in labour tends to be a particularly difficult type of pain relief, which can affect the mother's ability to relax and cope with labour. It often denotes an occipito-posterior type of labour.

Melzack [34] used counter- irritation in the form of hypertonic saline injection into the lower back and has been shown to effectively relieve phantom limb pain.

Sterile water injection causes a burning sensation which is much more painful than saline injection and it is thought to relieve labour pain by counter-irritation.

Method: Intradermal injections of 0.1 ml of sterile water into four locations in the lower back. Two over each posterior superior iliac spine and two 3cm. below and 1cm medial to posterior superior iliac spine. The injection should raise a bleb below the skin. Simultaneous injections by two clinicians will decrease the pain of injection.

Results: Controlled trial in 1991, Dahl V., Aarmes T.[35] have shown 57% of women in ISW experienced more than 50% relief of pain, compared with 18% in the 'dry needling' group. ($p<0.00001$). Mean duration of pain relief was 79 15mins.in ISW group compared to 19 15 mins in the dry needling.

Conclusion: ISW injection is an efficient and safe way of reducing back pain in labour.

Two RCTs [36, 37] have shown visible reduction of pain based on visual analogue scale rating.

One RCT [38] concluded that ISW injections are more effective than TENS for relieving low back pain in labour.

M.Enkin[39] in " Effective Care in Pregnancy" suggested that ISW injection is worth pursuing for low back pain.

3. ACTIVE BIRTH

In addition to the points that have been discussed so far, we also recommend the use of Active Birth.

Active Birth embraces non-pharmacological methods of pain relief in labour and much more, Janet Balaskas,[40] to enable women to achieve a normal, physiological birth, introduced Active Birth in the UK in 1982.

Principles of Active Birth include:-

1. Use of alternative techniques (non pharmacological) instead of drugs for pain relief.
2. Encourage use of mobility and upright positions for labour and birth.
3. Avoid unnecessary routines e.g. shave, enema, NPO, IVI. Use individual assessment.
4. No intervention (e.g. artificial rupture of membranes (ARM), routine use of oxytocin) unless there is a justifiable medical need.
5. Work with normal physiology and anatomy.
6. Mother has birth companion of her choice.
7. Use midwifery care.

Point 4: The use of medical intervention

ARM and oxytocin infusion is widespread in the labour wards all over Thailand. The practice was started by O'Driscoll [41] who claimed that shorter labour time reduced intervention i.e. forceps and Caesarean operation. In the quest for a shortened and controlled labour the increased use of epidural analgesia for pain was brushed aside.

O'Herlily [42] from the Royal Maternity hospital, Dublin (the originator of active management of labour)

noted a twelve fold increase in epidural analgesia and its use in over 50% of primiparous labouring women. Thus, active management of labour, with its focus on technological solutions, encourages further medicalisation and should be avoided unless indicated.

Point 5. Work with normal physiology

The instinctive behaviour to reproduce and survive is inborn and is present in the hypothalamus, known as the " ancient brain". The situations that initiate the 'fight or flight' mechanism of survival will be different from those that encourage us to reproduce. During labour and birth the two are inter-connected since both mother and baby are vulnerable. Should a threat arise, nature instigates a series of life-preserving reactions to increase the chance of survival.

It is the interplay of these delicate mechanisms that dictate much of the physiology of labour and birth and stimulate much of maternal behaviour at the time. The interplay of hormones governs the physiology of labour and birth.

The three main hormones are:-

1. Oxytocin - helps control the flow of labour (uterine contractions) and initiates bonding together with the breast-feeding process.
2. b Endorphin - its role is to protect mother from excessive pain, to raise her sensitivity to her baby's need and to help her to labour more effectively.
3. Adrenaline - this hormone drives the survival behaviour (fight or flight).

Oxytocin & b Endorphin are sensitive to the adrenaline levels. The aim in labour is to keep the adrenaline level down so that oxytocin and endorphin can function to the full.

Point 6. Mother has birth companion of her choice

Kennel and Klaus [43] have shown in their RCT on 'continuous emotional support during labour' that, the presence of a supportive companion (sometimes known as a 'doula') during labour and birth in multiparous women has resulted in lower intervention and use of analgesia.

Results:

	Support group (n=212)	Observed group (n=200)	Control group (n =204)
Epidural	7.8%	22.6%	55.3%
Caesarean	8%	13%	18%

Duration of labour, prolonged infant hospitalisation and maternal fever followed a similar pattern.

In the Cochrane review [44] on "Effects of continuous support for women during childbirth". The outcome reported in at least four studies involving 1,000 women showed that: Women who received continuous support were less likely than women who did not to:-

- Have regional analgesia.
- Have any analgesia/anaesthesia.
- Give birth with vacuum or forceps extraction.
- Report dissatisfaction or a negative rating of their experience.
- More likely to give birth spontaneously.

Since birth has moved from home to hospitals, the majority of mothers, in Thailand, have been and still are deprived of a companion and family support

Point 7. Midwifery care

Midwifery has been a legitimate and well-established health profession in Europe for hundreds of years. The midwife is still the birth attendant at the majority of normal births in nearly every European country and also Canada, Australia and New Zealand. Being 'with women' throughout their labour and birth enables midwives to understand normal birth behaviours. They aim to keep labour normal and do so by assisting and supporting women in the ways that I have described and only resort to pharmacological pain relief when all else has failed.

Thornton & Lilford[45] in their review of active management of labour (AML) raised the issue of psychological support -' the third component of AML' i.e. the provision of a companion qualified or unqualified throughout labour.

Meta-analysis of these trials, altogether 10 RCTs, support the idea that psychological support is effective in reducing analgesia requirement, lowers the incidence of Caesarean and operative vaginal birth. Hodnett [46] in the Cochrane review of two studies involving 1,815 women: the trials compare "continuity of care by midwives with non-continuity of care by consultants and midwives".

The women from the continuity of care by midwives were less likely to have:-

- Drugs for pain relief during labour (odd ratio 0.53, 95%. CI 0.44-0.64).
- Have episiotomy (odd ratio 0.75, 95%. CI 0.60-0.94).
- More likely to have vaginal or perineal tears (odd ratio 1.28, 95%. CI1.05-1.56)

Samitivej Hospital.Use of medication with Active Birth

	1998	1999	2000	2001
Total no. of births	527	520	596	593
Using birth room (Active birth)	195	208	224	205
No pain medication	150 (82.4%)	162 (86.6%)	180 (86.5%)	172 (90.5%)
Pain medication	32 (17.6%)	25 (13.4%)	28 (13.5%)	18 (9.5%)

Charoengkrung Pracharak Hospital
Prior to the introduction of Active Birth (AB)

Year	Total no. of births	Use of pain relief
1997	6,450	1,766 (27.4%)
1998	5,216	1,316 (25.2%)
1999	4,779	505 (10.5%)
2000	4,933	730 (14.8%)
2001	4,897	426 (8.7%)
2002	4,479	261 (5.8%)
2003	4,255	286 (6.7%)

And they were more likely to be pleased with their antenatal, intra-partum and postnatal care.

Sadly, in Thailand today, there are no midwives, only obstetric nurses who work in the hospital under the direction of the obstetricians.

The use of pethidine has declined but the epidural rate remains at around 40% as the majority of Thai and Asian women (with the exception of the Japanese) still request this method of pain relief.

Summary: To be successful in the use of non-pharmacological pain relief in labour:-

1) Caregivers i.e. obstetricians & nurses must have a change of attitude.
2) Women need to be informed of the various alternatives available to them.
3) Care-givers should stop regarding "normal" labour & birth as a medical event.
4) Pharmacological pain relief should be used as a last and not first resort.

The well known U.K. obstetrician, Peter M Dunn, wrote:- " The use of anaelgesia for the first line of defence, is one of the saddest developments in obstetrics. It is also responsible for a very great deal of birth asphyxia and perinatal morbidity including interference with circulatory and respiratory adjustments at birth, poor temperature homeostasis and impaired suckling and swallowing…." (Lancet, 10.4.76., pp790-793).

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