



Using Aromatherapy in Labour

Resource Pack

Compiled: May 2009
Updated: September 2013, March 2018

Laura Wallbank

Version 3

What is Aromatherapy?

Aromatherapy is a science and an art which involves the administration of concentrated essential oils extracted from plants, for their therapeutic effects on the body, both physical and psychological.

The chemical constituents of the essential oils work pharmacologically and the highly aromatic and volatile essential oils are extracted from the plants by steam distillation, cold compression, carbon dioxide or solvent extraction. The chemical makeup of each essential oil varies slightly from harvest to harvest and will be different depending on which method of extraction is used. The highly aromatic and volatile essential oils are extracted from the plants by steam distillation, cold compression, carbon dioxide or solvent extraction.

Aromatherapy is considered to be a holistic form of complementary medicine which works due to the combination of the chemical constituents, the method of administration and the effect of the aromas on the limbic system which affects mood.

Why offer Aromatherapy in Labour ?

In the UK, there is professional concern within maternity services. There is a need to reduce obstetric interventions to minimise long-term maternal morbidity and reduce costs at a time when there are limited resources. The High Impact Actions for Nursing and Midwifery (NHS Institute 2009) identified “promoting normal birth” as a key issue for change. The emphasis on normality in childbearing and the importance of the midwife’s role in promoting holistic care was highlighted in the Midwifery 2020 report (2010).

Caesarean sections now account for over 30% of births in some areas (Birth Choices UK 2011) and this undoubtedly increases morbidity for mothers. The cost of a Caesarean is almost twice that of a normal birth, increasing precious resources which could be redirected to improving maternity services overall (NHS Institute 2009).

Surveys suggest that as many as 80% of pregnant women self-administer natural remedies or consult independent therapists to relieve pregnancy discomforts, prepare for birth, ease labour pain and adapt to motherhood (Babycentre.co.uk 2011; Bishop et al 2011; Hall et al 2011). Midwives are increasingly frequently asked for advice on natural remedies and many maternity units are now seeking to implement complementary therapies, such as aromatherapy, hypnosis and acupuncture, as a means of facilitating normality in childbirth.

Aromatherapy and massage have been proven to be beneficial in labour to facilitate normal birth, reducing the need for pharmacological or surgical intervention as well

as enhancing maternal satisfaction and increasing midwives job satisfaction which affected staff retention and recruitment (Burns et al (1999).

Results from the above study of 8058 women demonstrated that:

- The uptake of epidural anaesthesia was significantly less for women who used aromatherapy, regardless of parity and labour onset.
- There was an association with a reduction in the use of systemic opioids when aromatherapy was used.
- Less than 1% of women reported any side effects following the use of aromatherapy. The reported sensitivities were headache, nausea, vomiting or a mild erythemic rash. These symptoms may have been associated with the normal physiology of labour.

Additionally women expressed feelings of empowerment and feeling supported when using aromatherapy. (Burns et al, 2000. Allright et al, 2003. William et al, 2007.)

Aromatherapy aims to enhance women's overall birth experience by increasing choice and empowerment as recommended by Better Births (2016) and by promoting normality and reducing intervention. Aromatherapy, therefore has the potential to be a safe, effective and cost effective option for women, offering an alternative choice for easing the pain and discomfort of labour and relieving physiological symptoms.

Professional Framework

Professional Accountability.

The Nursing and Midwifery Council facilitates the use of aromatherapy and massage providing that midwives:

- "Complete the necessary training before carrying out a new role (NMC 2015, 13.5)."
- "Make sure that any information or advice given is evidenced based, including information relating to using any healthcare products or services (NMC 2015, 6.1.)"
- "Maintain the knowledge and skills you need for safe effective practise (NMC 2015, 6.2.)"
- "Make sure that you get properly informed consent and document it before carrying out any action (NMC 2015, 4.2)."
- "Keep clear and accurate records (NMC 2015, 10.)"
- "Make sure that you have an appropriate indemnity arrangement in place relevant to your scope of practice (NMC 2015, 12.1)".

Therefore, midwives wishing to use aromatherapy and massage during their practise whilst employed by Royal Berkshire NHS Foundation Trust must

- Be adequately and appropriately trained and must be able to apply the principles of aromatherapy and massage to their midwifery practise.
- Keep up to date with changes in aromatherapy and complete yearly updating.
- Base their aromatherapy practise on sound principles, available knowledge and skills and where possible contemporary evidence or authoritative debate.
- Complete and retain the aromatherapy documentation – see Aromatherapy Administration Record (Appendix A), which evidences risk assessment, consent, rationale for treatment, treatment given and evaluation of the treatment given.
- Use aromatherapy within the parameters of the Trust Aromatherapy Guideline to ensure cover by the Trusts vicarious indemnity insurance cover.

Every midwife wishing to use essential oils in practice does not need to be a fully qualified aromatherapist. (Tiran and Mack, 2000) but Midwives must have undertaken training and be competent to administer complementary therapies (NMC 2008).

Training and Education

Appropriate training will be provided by a midwife/aromatherapists. Midwives will be made aware of their professional accountabilities.

- Midwives interested in aromatherapy will be offered a half day study session to enable them to take responsibility for prescribing, dispensing and administering a small selection of essential oils to women in labour. Prior to the study day a resource pack will be issued with a quiz which must be completed and passed prior to the aromatherapy study session.
- Midwives using aromatherapy oils in their practise must maintain up to date skills and knowledge and demonstrate their competence to practise, this will be in the form of a yearly update to include 3 short reflections of cases where the midwife has used aromatherapy.
- Maternity care assistants may administer massage with essential oils on the responsibility of an aromatherapy trained midwife who has dispensed the relevant blend of oils to be used.
- Midwives joining the Trust will receive aromatherapy training in their preceptorship/induction period.
- A live register of midwives approved to use aromatherapy will be maintained by the Clinical Skills Facilitator. Midwives who have not used aromatherapy in their clinical practice for more than 1 year will not be able to administer aromatherapy until they have repeated the study session.

History of Aromatherapy

There is evidence that herbs and aromatic plants containing essential oils have been used for thousands of years for healing and therapeutic purposes, for religious ritual and in perfumery.

18,000 BC: In the Dordogne region of France there is documented evidence showing that plants were used for medicinal purposes.

4,500 BC: The Egyptians used essential oils in the embalming and mummification process to preserve, disinfect and deodorise bodies. When Tutankhamen's mummy was opened in 1922 there was still a smell from the embalming oils used 3000 years earlier.

3000 BC: In China the Yellow Emperor, Huang Ti included herbal medicine in his book on disease.

2000 BC: In India, aromatic plants such as patchouli and cedarwood were used as perfumes and insect repellents. The use of plant extracts is still the basis of Indian Ayurvedic Medicine today.

460-377 BC: Hippocrates recommended aromatic baths for female disorders and promoted the benefits of massage.

The Bible has numerous references to aromatic oils that were used to anoint or massage.

50 AD: A Greek, Dioscorides wrote "De Materia Medica" which gave detailed accounts of the healing properties of several hundred plants. His book remained a standard reference book in Western medicine for over 1000 years.

980-1037 AD: A Persian, Avicenna, wrote over 100 books on the properties of essential oils. He also contributed to the improvement of the distilling process.

1100-1200 AD: Knowledge of herbal medicine spread through Western Europe during the Crusades. Knights brought back knowledge that they had gained from the Middle East and the Mediterranean.

1400 AD: Frankincense and pine were burned in the streets and pomanders and garlands were worn containing aromatic herbs to disguise the offensive smells. When the plague struck, it is said, that the perfumers who were pervaded with essential oils remained immune.

1600 AD: Many books were written on the use of herbs. The earliest was by William Turner who wrote in English not Latin so increasing its popularity. Developments in plant therapy in Switzerland, France, Italy and Germany occur. Pharmacists begin to record the benefits of thyme, lemon and clove oils. These were widely used as antiseptics in the Second World War.

1700 AD: Nicholas Culpepper wrote his book Complete Herbal.

1800 AD: Essential oils were widely used in medicine at this time. Salmons Dispensary (1896) contains numerous aromatic remedies.

1900 AD: Industrialisation leads to greater urbanisation so people had little access to land to cultivate herbs. Synthetic essential oils were produced that were cheaper and easier to use. Natural medicines began to decline.

1928 AD: The word Aromatherapy was first used by Rene-Maurice Gattefosse, a French cosmetic scientist. He discovered the healing properties of lavender after plunging his burned hand into neat lavender after an accident in the laboratory. He wrote the first modern book on aromatherapy published in 1937.

1948-1959 AD: French physician, Jean Valnet, successfully used essential oils to treat wounds in the Indochina war.

1950- Present Day: The Austrian born Marguerite Maury introduced the idea of combining aromatherapy with massage. She also devised the “individual prescription” oils chosen according to the physical and emotional needs of the recipient.

Robert Tisserand was largely responsible for the surge in interest in aromatherapy in the 1970's due to his book *The Art of Aromatherapy*. He has also co-founded two Aromatherapy Associations and is editor of *The International Journal of Aromatherapy*.

How does Aromatherapy Work?

Aromatherapy is a science and an art. To use essential oils safely within clinical aromatherapy an understanding of the sciences of chemistry, pharmacology and anatomy and physiology is vital. The artistic elements of aromatherapy consist of aesthetic blending of essential oils and methods of administration.

Essential oils are known for their benefits in fighting infection, boosting the immune system and aiding natural pain relief. These effects are thought to be caused by activation of the higher centres of the brain. The chemical components of the essential oils are believed to stimulate the release of encephalin, endorphins and serotonin.

Chemistry

Essential oils typically contain 100 chemicals that are pharmacologically active. It is these chemicals, the balance of the chemicals and their relationship to each other that gives each oil its therapeutic properties and makes it unique. Essential oils consist of chemical compounds made up of carbon, hydrogen and oxygen molecules. It is the pattern of these atoms that determines which chemical it is. The compounds can be split into 2 main groups:

- **Hydrocarbons** –Terpenes (monoterpenes, diterpenes and sesquiterpenes)
- **Oxygenated compounds** – esters, aldehydes, ketones, alcohols, phenols, oxides.

Please see below, a table of the main chemical components of essential oils and their potential effect on the human body.

The main chemicals found in Essential oils and their presumed effects on the body

	Compounds	Presumed effects on the body	Examples
Hydro-carbons Or terpenes	Monoterpenes In mandarin and Frankincense (and lemon)	Antibacterial, mildly analgesic, stimulating, expectorant. Some may irritate the skin or mucous membranes.	Limonene Mycrene Phellandrene
	Diterpenes In peppermint	Antiviral, antifungal, expectorant. Weak anti-infective compound. May balance hormones.	Camphor Carvone Fenchone Jasmone Pulegone Thujone
	Sesquiterpenes In Chamomile	Antiseptic, antibacterial, anti-inflammatory, antispasmodic, Hypotensive, relaxing.	Terpenene Bisobolene, Farnesene, Sabinene
Oxygenated Compounds	Esters In lavender, Clary sage and jasmine	Gentle, anti-inflammatory, calming, sedating, antispasmodic, uplifting, tonic. Appears to have no adverse effects.	Lavendulyl acetate, Linalyl acetate, Geranyl acetate, Neryl acetate, Menthyl anthranilate.
	Acids In jasmine	Anti-inflammatory, hypotensive and expectorant. Maintains body temperature. It may have a balancing effect on hormones.	Phenylacetic acid
	Alcohols In peppermint, clary sage and jasmine.	Tonic for the body, soothing to the skin. Antiseptic, antiviral. Bactericidal, antidepressant, astringent, diuretic. Appears to have no adverse effects.	Faresol, Linalool Geraniol, Terpin-4-ol, Nerolidol, Sclareol, Menthol
	Phenols In jasmine	Powerful antiseptic action. Nervous system and immune stimulant. Antifungal, antispasmodic, disinfectant. Use with care- powerful.	Eugenol
	Oxides in eucalyptus	Expectorant. May be a skin irritant.	1-8 Cineole, Eucalyptol
	Lactones in lemon	Hypotensive, temperature reducing, calming, refreshing. Can be phototoxic.	Bergaptene, Alantolactone, Coumarin, Furocoumarins
	Ketones In peppermint, clary sage and lavender.	Calming, sedating, analgesic.	Menthone, Camphor

Mechanisms of Action of Essential Oils

Essential oils get into the body by two different ways; inhalation and skin absorption. (Oral ingestion is prohibited in the UK)

Inhalation is a quick and easy way to use essential oils. Human olfaction, the sense of smell, can detect thousands of different odours at very low concentrations. The more volatile the scent, the easier it is to smell i.e. peppermint is particularly pungent as it more volatile than other oils.

Scents enter our nose and settle on the cilia receptors. This is where the complex mechanism of smell begins.

There are two theories that have been formulated to explain how olfaction works.

- **The chemical theory** – assumes that there are different receptor chemicals in the membranes of the olfactory hairs which are capable of reacting with a particular olfactory substance. The interaction between chemical receptor and substance alters the permeability of the plasma membrane so that a generator potential is developed. This initiates a nerve impulse.
- **The physical theory** – suggests that there are physical receptor sites on the plasma membranes of the olfactory hairs that react with the substances. This interaction causes a change in membrane permeability, development of a generator potential and initiation of a nerve impulse.

As soon as an odorous molecule has triggered a receptor, a signal is sent, and the molecule enters the brain via the olfactory bulb. The output then passes to the thalamus which transmits to the neocortex and the hypothalamic regions.

- **The neocortex** is the cognitive part of the brain where sensory processing occurs and is the site of olfactory recognition, perception and memories.
- **The hypothalamic** region forms part of the limbic system. There is uncertainty about the precise composition and functioning of the limbic system. It is thought, however, that neurological links occurring within it can initiate emotional responses. This may affect pulse, blood pressure, respiration and stress responses. (Burns et al 1999) Stimulation of the limbic system triggers the release of enkephalins (natural pain killers), endorphins (natural opioids) and serotonin (natural sedatives). These can in turn induce rest, balance moods, maintain body temperature and create an awareness of the senses. This shows how essential oils have the potential to relax and reduce anxiety. Scent may trigger positive or negative memories. It is important therefore, to involve the person receiving the treatment in the choice of oils. This will help to prevent negative responses. Blending may help to disguise a smell with a negative association, if that oil will be particularly useful.

Essential oils are small enough to pass across the alveoli walls into the blood circulation by gaseous exchange. Therefore small amounts of essential oils reach the internal organs by inhalation.

Olfactory system

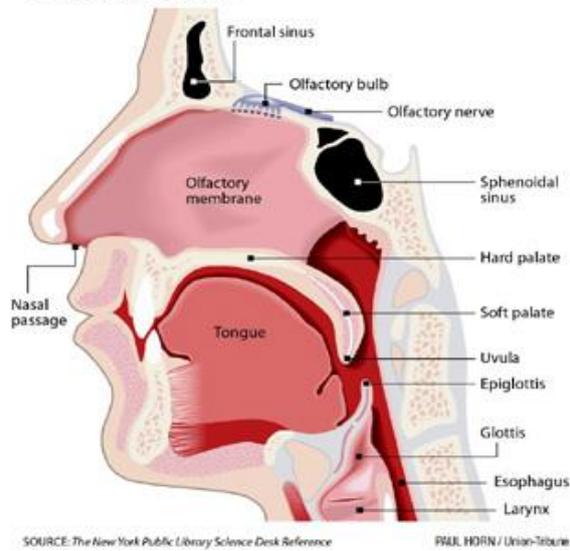


Diagram of the Olfactory System

Skin Absorption this occurs through simple diffusion via the semi permeable skin barrier. Essential oil molecules are small enough to cross the first layer of the skin, the epidermis. Once past the dermis, the lipids in the dermal layer can take up the molecules and allow compounds to cross into the blood stream. Smaller amounts of essential oil can be transported via shunts; the hair follicles and sweat glands.

Jaeger et al (1992) identifies that essential oils are lipid soluble and will absorb into the skin within 20- 40 minutes depending on the chemical nature of each oil. Buckle (1997) illustrates this with lavender. Skin absorption can occur through massage, baths, footbaths, compresses or neat application onto the skin.

Experimentally, different rates of absorption have been demonstrated depending on the location of the skin. Relatively permeable skin includes the genitals, forehead/scalp, soles and palms, armpits and mucus membranes. Relatively impermeable skin includes the trunk, abdomen, limbs and buttocks.

Molecules that have passed through the epidermis are transported in the capillary blood circulating in the dermis below. Blood flow in the skin is relatively low, so massage, which greatly enhances blood flow in the skin improves the absorption of essential oils into the circulating blood.

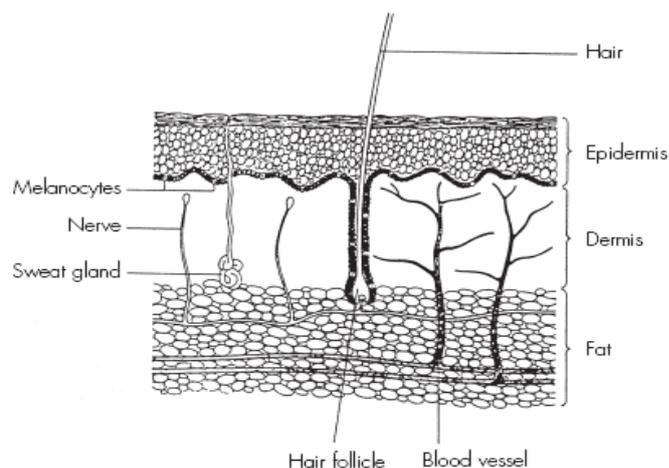


Diagram of the structure of skin

Evidence for Intrapartum use

The largest research study completed in Oxford and published in 2000, by Burns et al, is still good evidence that to support the use of aromatherapy in labour. The study involved 8085 women who used aromatherapy in labour. The authors found that aromatherapy helped women during labour in the following ways,

- It offered them another choice and this empowerment helped them to cope.
- It appeared very effective when used for fear, stress and anxiety.
- It influenced the women's perception of pain and reduced the uptake of epidurals and opiates.
- Some women, who used aromatherapy in induced labour, did not require syntocinon infusions.
- Aromatherapy was found to be useful in alleviating nausea and vomiting in labour.
- Less than 1% of women reported any adverse associated symptoms such as headache, dizziness and nausea. These may have occurred as a direct consequence of labour, not as a result of aromatherapy use.

Women in the aromatherapy group had a higher spontaneous birth rate and a lower emergency LSCS rate than the control group. This can not be solely attributed to the aromatherapy itself, as other factors such as feeling in control, feeling supported and nurtured by the midwife and increased relaxation may also be contributory factors.

More recent work supports the benefits of aromatherapy and massage in labour. Tiran (2014) states that the benefits of aromatherapy in childbirth include:

- Facilitating normality in childbirth
- Aids pain relief and facilitates uterine action in labour
- Eases physical discomforts and psycho-emotional issues of pregnancy
- Aids relaxation and well-being, gives women time for themselves

Mortazavi (2012) suggests that massage is an effective alternative intervention, decreasing pain and anxiety during labour and increasing the level of satisfaction. Also, the supportive role of presenting an attendant can positively influence the level of anxiety and satisfaction.

In a retrospective case note analysis, Dhany (2012) reports that using aromatherapy massage appears to have a positive impact on reducing rates of all types of intrapartum anaesthesia and is recognised as a beneficial addition to conventional midwifery practice which may influence mode of delivery and reduce general anaesthesia rates.

Use of Aromatherapy in Labour

Aromatherapy offers a means of helping women to ease the pain and discomfort of labour and cope with the associated physiological symptoms. It is a therapy that embraces the concept of nurturing and returns to the philosophy of childbirth as a normal life event.

Criteria for women using Aromatherapy

- Women who have been assessed as suitable to receive aromatherapy and have given informed verbal consent.
- Women who are in latent phase or established labour.
- Women with spontaneous, augmented or induced labour.
- Gestation 37/40 or more
- Singleton pregnancy, longitudinal lie, cephalic presentation.
- Normally situated placenta. No third trimester APH.
- Blood pressure within normal limits – diastolic 90 mmHg or below.
- Amniotic fluid volume within normal limits,
- Well fetus, no IUGR, fetal distress or suspected cephalopelvic disproportion.
- No medical conditions

Contraindications

- Women in the antenatal period
- We not given consent.
- Pre-existing medical condition e.g. epilepsy, diabetes, hypertension, HIV, IDDM.
- Complicated pregnancy e.g. , PET, DVT, gestational diabetes.
- Preterm labour (< 37 weeks gestation).
- Multiple pregnancy triplets or above.
- Transverse, oblique or unstable lie.
- Polyhydramnios or oligohydramnios.
- Pathological anaemia or any thrombo-embolic or coagulation disorder.
- Infectious condition or unexplained pyrexia.
- Severe asthma or other major respiratory condition.
- Current APH.
- Placenta praevia.
- Severe hypotension.

- Multiple allergies.
- Long term medication e.g. anti-hypertensives, anti- coagulants.
- Current reduced fetal movements or reduced fetal growth.

Use with caution

- Epidural in situ – avoid hypotensive oils – lavender and clary sage.
- Hypotension or fainting episodes – avoid hypotensive oils if diastolic BP below 60.
- Mild asthma – avoid essential oils from flowers if mother suffers hay fever or asthma triggered by pollen.
- Twin pregnancy – do not use uterine stimulating oils
- VBAC – do not use uterine stimulating oils.
- Do not use uterine stimulating oils when using oxytocin or for 1 hour after ARM of administration of prostin/propress.
- Avoid abdominal massage if placenta anterior or history of APH.
- Do not use essential oils in the bath if membranes have ruptured.
- Do not add essential oils directly into the birthing pool. Small bowls of hot water with essential oils in should be used for inhalation.
- Ensure that the woman is not allergic /sensitive to the essential oil or where it is derived from i.e. citrus fruit and mandarin.

Information and properties of essential oils to be used.

The following essential oils have been chosen for their safety and effectiveness in pregnancy and childbirth. (Tiran 2000, Burns et al 1999, Tiran and Mack 2000.)

N.B. Aromatherapy oils inactivate homeopathic remedies.

Lavender – *Lavendula Angustifolia*.

Relaxing, sedative, balancing, calming, analgesic, antibacterial, hypotensive antispasmodic, muscle relaxant.

Can aid coping, reduces muscular aches and pains. Helpful with anxiety, stress and insomnia as emotionally calming. Has analgesic properties, good for headache/migraine. Can aid healing.

Is hypotensive

- **Do not use** on women if diastolic BP below 60 or with women with epidurals.
 - **Do not use** if mother suffers hay fever or asthma triggered by pollen.
-

Roman Chamomile – *Chamaemelum Nobile*.

Anti-spasmodic, anti-inflammatory (strong), bactericidal, antidepressant, calming.

Can be used in a similar way to lavender to assist ability to cope with labour as is emotionally calming. Helps with nervous tension, stress and insomnia. Analgesic. Valuable for skin rashes, eczema, pruritus.

Frankincense – *Boswellia Carteri*.

Anti-inflammatory, antiseptic, antibacterial, antifungal, antiviral, analgesic, calming but mentally stimulating.

Can help panic, anxiety and nervous tension. Good analgesic and emotionally balancing.

Recommended in situations of maternal panic i.e. transition.

Mandarin - *Citrus Reticulata*.

Sedating, relaxing, calming, antispasmodic, digestive stimulant, revitalising.

Enhances maternal wellbeing. Uplifting.

Recommended for restlessness, agitation and exhaustion.

Is phototoxic–

Avoid exposure to strong sunlight/UV light for 12 hours as can increase the risk of sunburn.

Clary Sage – *Salvia Sclarea*.

Anti spasmodic, uterotonic, emmenegogic, analgesic (strong), antidepressant, anti viral and sedative.

A strongly relaxing oil that can reduce anxiety, stress and depression. It can assist contractions and can therefore accelerate and promote labour labour. May be useful to expel retained placenta when blood loss is normal.

Enhances uterine action

- **Do not use** on women who have had LSCS or have a uterine scar.
 - **Do not use** if hyperstimulated or have oxytocin infusion in progress or for 1 hour after ARM of administration of prostin/propess.
-

Jasmine – *Jasminum Officinale*.

Analgesic, antidepressant, antibacterial, antifungal, antiviral, uplifting, anti-inflammatory, antispasmodic,emmenagogic.

Emotionally uplifting. Enhances confidence and optimism. Analgesic and enhances uterine action. May be useful to expel retained placenta when blood loss is normal.

Enhances uterine action.

Do not use on women who have had LSCS or have a uterine scar.

Do not use if hyperstimulated or have oxytocin infusion in progress or for 1 hour after ARM of administration of prostin/propess.

Rose – *Rosa Centifolia*.

Calming, relaxing, analgesic, antibacterial, immunostimulant, antiviral, vasoconstrictive,emmenagogic,

Promotes a feeling of wellbeing, use for poor obstetric histories such as, bereavement, and depression. It can enhance uterine action. Good for sensitive skins.

Enhances uterine action.

Do not use on women who have had LSCS or have a uterine scar.

Do not use if hyperstimulated or have oxytocin infusion in progress or for 1 hour after ARM of administration of prostin/propess

Peppermint – *Mentha Piperita*

Anti emetic, antibacterial, antifungal, anti-inflammatory, cooling, analgesic.

Can help reduce nausea and vomiting in labour and heartburn and indigestion. Relieves muscular aches and pains, headache and migraine. Calming for anxious and stressed women and refreshing for tired women.

May cause skin irritation.

Use only in footbath or on a taper/ inhalation.

Grapeseed carrier oil

Carrier oil aids absorption of essential oils into the skin and acts as a lubricant for massage.

Grapeseed oil is a light, hypo-allergenic oil that has no known contraindications.

With the woman's consent, Grapeseed oil can be used for massage to support her in labour when aromatherapy is contraindicated.

Methods of Application.

Footbath	<ul style="list-style-type: none"> • Mix 3-4 drops of essential oil with 5 mls of milk. Mix well into ½ a bowl of warm water. • Absorption of essential oils occurs through the soles of the feet very easily. • Useful in early stages of labour to relax or assist contractions.
Bath	<ul style="list-style-type: none"> • Mix up to 6 drops of essential oil with 10mls milk to disperse oil in water evenly and minimise skin reactions. Add to water after filled to required temperature and agitate well • Do not add further essential oils even if the pool/bath is topped up.
Compress	<ul style="list-style-type: none"> • Hot for pain. Cold for swelling • ½ fill a bowl of water. Add 3-4 drops of essential oil, mixed with 5 mls of milk, agitate well. Soak a flannel, wring out and apply. • Cover with towel to aid absorption. • Re-wet flannel when skin temperature is reached. • Do not add more essential oil.
Inhalation on taper/tissue	<ul style="list-style-type: none"> • Particularly useful for peppermint or frankincense. • 1 undiluted drop on taper or tissue and inhale directly. Can be taped to clothing. • Frankincense to reduce panic/ hyperventilating • Peppermint to relieve nausea and vomiting or headache.
Inhalation via bowl in room	<ul style="list-style-type: none"> • Use small bowls in aromatherapy box. • Fill with hot water. Add 3-4 drops of essential oil and agitate. Place on a flat surface near to the mother for her to inhale vapours.
Massage	<ul style="list-style-type: none"> • Use a maximum of a 2% blend of essential oils in labour – see table below (Tiran 2006). • A maximum of 3 essential oils may be blended and used in any labour, but the treatment may be repeated. • Do not use massage if the woman is hypotensive. Take care with epidurals.

Massage Blends

	5mls of carrier oil	10mls of carrier oil	15mls of carrier oil	20mls of carrier oil
1% blend	1 drop	2 drops	3 drops	4 drops
1.5% blend	- - - - -	3 drops	- - - - -	6 drops
2% blend	2 drops	4 drops	6 drops	8 drops
3% blend – IOL only	3drops	6 drops	9 drops	12 drops

Systemic effects

Midwives need to be aware that essential oils considered safe in pregnancy and childbirth may affect the physiological systems of the body in a potentially undesirable way. E.g. rosemary raises BP, ylang ylang lowers BP. Some essential oils may induce epileptic fits. However, to put this into context, Tiran (2002) points out that undesired side effects are rare, usually minimal and often caused by prolonged use, high doses and inappropriate use of essential oils.

The essential oils to be used at Royal Berkshire have been chosen for their safety in pregnancy and childbirth. However some of our selection of oils may have systemic effects.

Phototoxicity

Citrus oils increase the sensitivity of the skin to the sun. This is further enhanced in pregnant women due to their raised melanocytic hormone. To reduce the likelihood of skin burning Tiran (2000) recommends avoiding the sun for at least two hours after administration of mandarin oil.

Emmenagogic oils

These may induce or assist menstruation. Due to the uterine stimulating properties, these should not be used in pregnancy until term. These oils are Clary Sage, Jasmine, Rose.

In the Oxford Study, Burns et al (1999) identified a small proportion of women (9 out of 8058) who experienced very rapid labours after receiving aromatherapy. These appeared to occur in women who had other interventions in rapid succession i.e. ARM or VE.

Although there were no adverse outcomes to mother or baby, they now recommend that aromatherapy and particularly the emmenagogic oils do not be used for 30 minutes after a VE or for 1 hour after ARM of administration of prostin/propess and not at all if administering an oxytocin infusion.

These oils may be used to promote contractions, if contractions have reduced in a previously established labour.

The emmenagogic oils, Clary sage, Jasmine, Rose should not be used with women who have had a previous LSCS or have a uterine scar.

Hypotension

Lavender and Clary Sage oils are hypotensive. Avoid these oils in women with epidurals or if there is a history of hypotension or fainting episodes – avoid hypotensive oils if diastolic BP below 60.

Possible Side Effects

Essential oils have the potential to may be toxic, hence the need for education and assessment of midwives competence to use them safely. This education should include possible side effects and contraindications. (Tiran 2004, Burns et al 1999.) It must be stressed however, that Tisserand and Balacs (1999), have considered that the pharmacological interactions between essential oils used for pregnancy and childbirth appear safe, especially in the dilution and applications advocated. The essential oils used at Royal Berkshire Foundation Trust are chosen for their non-toxic, non-irritating and non-sensitising properties. (Burns et al, 1999). Prolonged use (i.e. over a period of three or more months) will not be an issue so dermal sensitivities are unlikely to be a problem.

In the Oxford Study of 8085 women using aromatherapy, there was a less than 1% incidence of reported side effects. These side effects were vomiting, nausea and headache and may have been attributable to the physiology of labour not the aromatherapy. A very small proportion of women (0.2%) reported a rash or itchy feeling following a footbath. This can be minimised by using milk to evenly disperse the oils.

Effects on the Fetus

Essential oils have a low molecular mass and therefore have the potential to cross the placenta to the fetus. (Tiran 2004). However, that does not mean that most essential oils are fetotoxic. It depends on the constituents of the essential oils and the plasma concentrations. (Tisserand and Balacs 1999). The immaturity of the fetal liver means that it is unable to metabolise compounds into more toxic ones (unlike adults) thus giving the fetus a degree of protection from any potentially harmful constituents in some essential oils. (Tiran 2004)

Fetotoxic essential oils will not be used at Royal Berkshire Foundation Trust. The concentration of oils used, which will be for a short period of time, will not allow development of high plasma concentrations in the fetus.

Safe use of Aromatherapy

Tiran (2014) recommends the minimum dose of essential oils necessary for the desired effect. For labour this is a maximum massage blend of 2% i.e. 2 drops of essential oil in 5mls of carrier oil or 6 drops in 15mls.

- A maximum of 3 different essential oils should be used in any one blend. With one exception: Jasmine or Clary Sage can be used, following the birth, when

there is a retained placenta with normal blood loss. Even if this is the fourth essential oil to be used.

- A 'quick look' list of oils, uses, cautions and methods of application will be available in the aromatherapy boxes for competent midwives to use as reference. (Tiran 2004)
- Do not add essential oils directly into the birthing pool. Small bowls of hot water with essential oils in should be used for inhalation.
- Do not top-up footbaths/baths. Use a freshly filled one.
- Do not use aromatherapy treatments in rapid succession. The effect of the treatment should be observed and the aroma be allowed to dissipate before another treatment is offered.
- Be careful that undiluted oils do not come into contact with the skin – especially face, nose and eyes. Wash off and leave exposed to air to encourage evaporation.
- Do not store blended oils following use. Dispose of correctly.
- Consider other people in the room including birth partners when using aromatherapy.
- Communicate to colleagues that aromatherapy is in use by documenting on the report board, informing the co-ordinator and hanging 'aromatherapy in use' sign on the door.
- Ventilate room as best as you can after use of aromatherapy.

Implications for Staff

The essential oils used at Royal Berkshire Foundation Trust are chosen for their non-toxic, non-irritating and non-sensitising properties. (Burns et al, 1999).

Tisserand and Balacs (1999) suggest that important indicators of toxicity of essential oils are found through dosage levels, frequency of use and method of administration. They continue that massage using essential oils is very unlikely to result in toxicity to staff as the amount of oil used is so small and the absorption rate into the blood stream is low. Midwives will administer oils infrequently and not usually for long periods of time so absorption into the blood stream will be minimal.

The risk of toxicity from inhalation of essential oils is very low even though the rate and depth of breathing influence the speed of absorption of essential oils into the blood stream. (Tisserand and Balacs, 1999).

In the Oxford Study (Burns at al, 1999) found that 24 caregivers (0.3%) reported any adverse associated symptoms whilst attending women in labour:

- 19 complained of headache
- 3 suffered nausea
- 2 suffered watery eyes.

Midwives who have a natural tendency to skin or olfactory sensitivities should be cautious when using essential oils initially until they have assessed their personal response to each of the oils. (Tisserand and Ballacs, 1999)

Midwives may need to consider the possible effects of the emmenagogic oils – Clary sage, Jasmine and Rose at the times of menstruation.

Pregnant Staff

There is no evidence to suggest that the essential oils are abortifacient or teratogenic when used appropriately. (Tiran, 2014) However caution recommended for midwives who are pregnant or who think that they are pregnant when using essential oils and uterine stimulating oils are definitely contraindicated for pregnant midwives.

Adequate communication of the use of aromatherapy by the use of signs on doors and informing co-ordinators should be implemented to allow members of the healthcare team to avoid aromatherapy if they require.

Minimising the risk of sensitivities to midwives

- Neat essential oils should not be used directly on the skin.
- Avoid contact of essential oils with sensitive areas such as nose, eyes and face.
- Gloves can be used when blending, mixing and agitating.
- Mix oils on a flat surface in the room that they are to be used. Take the aromatherapy box into the room.
- Wash hands thoroughly after massaging and/or essential oil treatments.
- Do not store blended oils after use.
- Wash bowls, pots and any other equipment with warm soapy water, rinse and dry and store in the designated place.

Manual Handling Regulations (1992) (see Trust policy CG079)

Require staff to learn safe practices for moving and handling and take reasonable care to ensure the safety of oneself and others.

- Ensure awareness of correct posture when massaging/lifting bowls of water is included in the Trust aromatherapy study day.
- Ensure staff up to date with manual handling study days

Dealing with Adverse Reactions

- Remove the taper, tissue, footbath or bowl of water.
- Remove the woman from the bath.
- Wash skin/shower with unperfumed soap to remove oil from skin.
- If appropriate expose skin to the air to encourage evaporation of any residual oil.
- Ventilate the room if possible to facilitate evaporation.
- For splashes into the eyes, irrigate with warm water.
- In the unlikely event of a severe reaction follow the Anaphylaxis Guideline. (see Trust policy GL517)

- Document any sensitivities on the Aromatherapy Administration form.
- Report any serious adverse reactions on the Risk Management Incident Reporting System.

Ordering, storage and Disposal

Tiran (2000) advises purchase of essential oils from a reputable supplier as allergic reactions may result from additives in poor quality oils. Reputable suppliers will be happy to supply a written analysis of the actual oil being sold.

- Essential oils deteriorate when exposed to sunlight or air. This is oxidation. Oils should be stored in dark bottles and be kept away from direct sunlight to maintain their shelf life. (Tiran 2000)
- Mandarin Oil loses its potency after 3 months and should be discarded 3 months after opening.
- Grapeseed carrier oil goes rancid after 6 months and should be replaced.
- All other oils last 1 year from opening.

Chemical Hazard Information and Packaging for Supply (CHIPS, 2002)

- Requires that essential oil bottles be correctly labelled with the date of opening and /or expiry date.
- It is therefore recommended that one person take responsibility for this. (Midwife/Aromatherapist)

Control of Substances Hazardous to Health Regulations (COSHH, 2002)

- Essential oils are flammable liquids.
- Essential oils should be stored in a sealed box in a locked cupboard. Be aware of other children in a home birth environment.
- Waste diluted oils can be disposed of down the sink for footbaths, compresses and bowls of water.
- Waste oils mixed with carrier oil should be disposed of by wiping out the pot with a hand towel and disposing in a yellow bag.
- Equipment used for mixing, blending and treatment should be washed with soap and warm water and then be dried thoroughly.
- Expired, undiluted essential oils should be collected, in the original bottle, in the 'Aromatherapy Waste 'bin that is located in Delivery Suites' sluice. This will then be transferred to pharmacy for safe disposal.

Consent

Women should be provided with sufficient knowledge to make an informed decision about the use of aromatherapy. (NMC 2006.) *See also Maternity information leaflet - Aromatherapy during Childbirth*

- Midwives offering aromatherapy should document that they have discussed its use with the woman on the Aromatherapy Administration record, which should be filed with the intrapartum notes.
- The discussion should include information about the essential oils that have been chosen, the reasons for use and information on possible adverse associated symptoms should be given.
- Verbal consent is sufficient. Midwives should respect, support and document a person's right to accept or refuse treatment. (NMC, 2015, 2.5)

Documentation

Midwives must maintain contemporaneous records on the use of aromatherapy according to The Code (2015) and Trust guidance.

- The woman's details should be recorded on the "Aromatherapy Record Sheet" in the aromatherapy box to maintain a record of who has received aromatherapy and facilitate audit.
- The Aromatherapy Administration Sheet (See Appendix 1) must be completed each time essential oils are used. This should be filed in the Maternity notes in the intrapartum section. Only 1 Aromatherapy Administration sheet should be used for each woman. This is to ensure that no more than 3 essential oils are used per woman. Each time a new essential oil or method of administration is used, it should be added to the existing form.
- To facilitate continuing audit, midwives are requested to enter the use of aromatherapy on CMIS as a pain relief option. (NMC 2015)
- The aromatherapy aftercare maternity information leaflet should be given.
- Women receiving aromatherapy should be identified on the report board and the room door.
- In the unlikely event of a serious reaction to aromatherapy, an Incident Report should be completed as part of the risk management process. (NMC 2006)

References

1. Allright, E. Pidgeon, K. (2003) Supporting mothers and midwives with aromatherapy. A relaxing dream come true. Midwifery Matters 99; 4-9.
2. Babycentre.co.uk. Survey on the use of herbal medicines in Pregnancy. Accessed at <http://www.babycentre.co.uk/midwives/natural-remedies-survey> November 2017.
3. National Maternity Review. (2016) Better Births. Improving outcomes of maternity services in England. NHS England.
4. Birth Choice UK. 2011. Hospitals with the highest and lowest Caesarean section rates. Accessed online <http://birthchoicuk.com/Professional/BirthChoiceUKFrame>.
http://birthchoicuk.com/Professional/Tables/CS_HLtables.htm November 2017.
5. Bishop, JL. Northstone, K. Green, JR, Thompson, EA. 2011. The use of Complementary and Alternative Medicine in pregnancy: data from the Avon Longitudinal Study of Parents and Children. Complement Ther Med. 2011 Dec;19(6):303-10.
6. Broughan, C. (2005) The psychological aspects of aromatherapy. International Journal of Aromatherapy, 15; 3-6.
7. Burns, E. Blamey, C. Errser, SJ et al. (1999) The Use of Aromatherapy in Intrapartum Midwifery Practice: An Evaluative Study. Oxford Centre for Health Care Research and Development. Report no 7. Oxford Brookes University.
8. Burns, E. (2002) Aromatherapy in Childbirth. MIDIRS midwifery Digest, 12(3); 349-353.
9. Burns, E. Zobbi, V. Panzeri, D. Oskuchi, R. Regalia, A. (2007) Aromatherapy in childbirth: a pilot randomised controlled trial. BJOG, 114(8); 838-844.
10. Carne, V (2008) Non-Epidural strategies for pain relief in labour. www.midirs.org accessed 12/01/2009.
11. Dhany, A., Mitchell, T. and Foy, C. (2012) Aromatherapy and massage intrapartum service impact upon use of analgesia in women in labour; A retrospective case note analysis. Journal of Alternative and Complementary Medicine, 18 (10). pp. 932-938.
12. DOH (1974). Health and Safety at Work Act. HMSO: London.
13. DOH (2010) Midwifery 2020:Delivering Expectations. Accessed online at http://www.midwifery2020.org/documents/MW2020_exec_summary_ms_web.pdf Nov 2017
14. Hall, HG. Griffiths, DL. McKenna, LG. 2011. The use of complementary and alternative medicine by pregnant women:a literature review. Midwifery 27(6):817-24.
15. HSE. (2002) Manual handling regulations 1992 (amended)-guidance on regulations. HSE Books. Suffolk.
16. HSE. (2002). COSHH. Control of substances hazardous to health regulations: approved Code of Practice and Guidance. HSE Books. Suffolk.

17. HSE. (2002). CHIPS. Chemical Hazard Information and Packaging for Supply. HSE Books. Suffolk.
18. Jaeger, M et al. (1992) Basic concepts of computer simulation of plant growth, *Journal of biosciences*, 17(3):275-291
19. Juffs, S. Sheppard, L. Thorley, M. Thomey, S. (2005) Guidelines for Midwives for the Juffs Intrapartum Use of Essential Oils. Nottingham City Hospital Trust. Michael Pittilo, R. (2005) An overview of the regulation of complementary medicine. MIDIRS Midwifery Digest 15(2) supplement 1.
20. Mitchel, M. Williams, J. (2006) Implementing Complementary therapies. *The Practising Midwife*, 9 (3); 12-15.
21. Mortazavi SH et al (2012) Effects of massage therapy and presence of an attendant on pain, anxiety and satisfaction during labor, *Archives of Gynecology and Obstetrics*, 286(1), p19-23.
22. Mousley, S. (2005) Audit of an Aromatherapy Service in a Maternity Unit. *Complementary Therapies in Clinical Practice*, 11; 205-210.
23. NHS Institute for Innovation and Improvement. (2009) High Impact Actions for Nursing and Midwifery. Accessed online at http://www.institute.nhs.uk/building_capability/general/aims.html. Nov 2017.
24. NMC. (2006) Complementary Alternative Therapies and Homeopathy. www.nmc.uk.org. Accessed 12/01/2009.
25. NMC. (2015) *The Code: professional standards of practice and behaviour for nurses and midwives*. NMC. London.
26. Tiran, D. (2000) Clinical Aromatherapy for Pregnancy and Childbirth. 2nd Edition. Churchill Livingstone. London.
27. Tiran, D. Mack, S. (2000) *Complementary Therapies for Pregnancy and Childbirth*. 2nd Edition. Balliere Tindall, Edinburgh.
28. Tiran, D. (2004) Implementing Aromatherapy in Maternity Care. A Manual for Midwives and Managers. Expectancy Ltd. Croydon.
29. Tiran, D. (2006) Midwives responsibilities when caring for women using complementary therapies during labour. *MIDIRS Midwifery Digest*, 10(1); 77-80.
30. Tiran, D. (2006) Complementary Therapies in pregnancy: midwives and obstetricians appreciation of risk. *Complementary Therapies in Clinical Practice*, 12; 126-131.
31. Tiran, D. (2007) Complementary therapies: time to regulate? *The Practising Midwife*, 10(3) 14-19.
32. Tiran, D. (2014) *Aromatherapy in Midwifery Practice. A manual for clinical practice*. Expectancy. 2014.
33. Tisserand, R. Ballacs, T. (1999) Essential Oil Safety: A Guide for Health Care Professionals. Churchill Livingstone. London.
34. Williams, J. Mitchell, M. (2007) Midwifery managers' views about the use of complementary therapies in the maternity services. *Complementary Therapies in Clinical Practice*, 13; 129-135.

Aromatherapy Administration Record

Please file in Maternity Notes

Patient name
NHS no
Affix patient label here

Date/Time: _____ Gestation: _____

Type of care: MW / CONS _____ Parity: _____

Risk assessment *(please circle and give details if Yes)*

Any medical/obstetric History: _____ Yes No
(If any history, see guideline to check if suitable to receive aromatherapy)

Details.....

Any allergies/hay fever/asthma? _____ Yes No
(If Yes refer to guideline)

Details.....

Does the woman have an epidural? _____ Yes No
(If Yes refer to guideline)

Details.....

Consent and Administration *(please circle)*

Has the woman given consent for aromatherapy ? _____ Yes No

Possible side effects have been explained? _____ Yes No

Choice of oils and method of application discussed ? _____ Yes No

Oils used *(please circle)*

Lavender	Chamomile	Frankincense	Mandarin
Clary sage	Jasmine	Rose	Peppermint
Carrier oil	Grapeseed	Other.....	

Indication for oils used

Oil 1.....

Oil 2.....

Oil 3.....

Method of application *(please circle)*

Taper Bath Footbath Compress Room inhalation

Massage - % blend used:.....

- mls of carrier oil.....

- no. of drops of each oil.....

Duration of treatment.....

Frequency of treatment.....

Evaluation of treatment *(please evaluate effectiveness)*

Sensitivities/adverse effects?

Yes No *(please circle)*

Details and actions.....

Aftercare advice leaflet given? *(please circle)*

Yes No

Midwife signature.....