

1.0 INTRODUCTION

My desire is to help women gain control over, protect and optimise their own fertility. There have been so many medical advances in the field of infertility, yet there are still many couples that are left childless and wondering why. In order for women to understand how they can impact their own fertility we first need to be educated, so that women can recognize when their body is out of balance, and to understand why such an imbalance has occurred. Only then can we address ways in which to bring about balance and harmony that is so vital for a conscious and healthy conception.

I have approached this subject from a holistic view offering therapy in the form of essential oils. Although essential oils play a vital role in our reproductive health the importance of diet, life style, personal relationships and personal wellbeing, and the role of herbal, vitamin and mineral supplements cannot be ignored. Medical intervention may also be necessary, however my goal is that each woman can make educated decisions about her own body, and to understand that she has the power to heal herself in many situations.

Why are we seeing such a prevalence of infertility or difficulty in conceiving?

- Women leaving childbearing to their late 30's and 40's when their natural production of hormones becomes more irregular as they approach menopause.
- The excess pollution in the air we breathe contains xeno-oestrogens that create a hormonal imbalance.
- The food we eat contains more chemicals and artificial hormones also creating a hormonal imbalance.
- Increased sexual activity with numerous partners increasing the risk of STD's and PID, which can threaten fertility if infection is untreated.
- Increased levels of stress due to balancing a family and a demanding career.
- Perhaps we are also more willing to talk about our difficulty in conceiving than our parents possibly were, which makes infertility *seem* more prevalent.

2.0 UNDERSTANDING THE MENSTRUAL CYCLE

I am 33 years old and have been trying to conceive for the past 9 months. Before becoming interested in starting a family I found the menstrual cycle something to be endured rather than revered. I never realized the things you could discover about your body, simply by being in tune with and understanding this delicate balance of hormones. The heartening thing is that you don't need to have a medical degree or a science laboratory to discover this, you simply need to observe your own body signs.

First of all I will explain the hormones involved and the pattern they follow in a typical 28-day menstrual cycle [average cycles can fluctuate from 24-35 days in length].

FSH – FOLLICLE STIMULATING HORMONE

The hormone produced by the pituitary gland in response to a signal from the hypothalamus. When FSH reaches the ovary, it stimulates the release of oestrogen, which causes the follicles to ripen several eggs in preparation for ovulation.

OESTROGEN

Oestrogen is the general name for a group of around 20 different female hormones of very similar structure and function and collectively is one of the primary hormones responsible for the menstrual cycle and is produced mainly in the ovaries. Increasing oestrogen levels in the first half of the cycle are responsible for the build up of the endometrial lining, and for changes in cervical fluid and cervix position – two of the main fertility indicators. Oestrogen production gradually builds to a peak just prior to ovulation, and then levels off for the remainder of the cycle, dropping further at the end just before menstruation. Excess oestrogen in the second half of the cycle can lead to PMS and luteal phase defect. Insufficient oestrogen at the beginning of a cycle [low levels of oestrogen that are unable to pass the threshold necessary to cause an egg to be released] can have several effects – delayed ovulation, no ovulation leading to an anovulatory cycle or the temporary cessation of menstruation.

LH – LUTENIZING HORMONE

Produced by the pituitary gland in response to the rising levels of oestrogen, it is released in a surge causing the ripest egg to rupture from its follicle and thus ovulation takes place.

CORPUS LUTEUM

The yellow gland formed by the ruptured follicle after ovulation. If the egg is fertilized it will continue to produce progesterone until the placenta is formed [the placenta will then produce sufficient progesterone for the remainder of the pregnancy], otherwise it will disintegrate within 12-16 days.

PROGESTERONE

Progesterone is a single hormone produced by the corpus luteum in the ovary after ovulation. Progesterone [pro-gestation] is required for a pregnancy to be sustained as it causes the endometrium to thicken from around the time of ovulation for the next 5-7 days, readying the uterus for the embryo. It is responsible for the increase in body temperature after ovulation as well as the change in cervical fluid and cervical position. Progesterone production increases dramatically at the time of ovulation, peaking a few days after

ovulation and remaining high in order to maintain the uterine lining in the event of conception. If conception does not occur, progesterone and oestrogen levels drop quickly and menstruation begins. This dramatic drop in progesterone is what causes the endometrium to shed.

LUTEAL PHASE

The Luteal Phase is the 2nd part of the menstrual cycle from ovulation to the onset of the next menstruation and it remains constant for each woman and rarely varies by more than a day or two [on average 12 – 16 days]. In order for an embryo to successfully implant in the endometrium, this period should not be shorter than 10 days [10 days of high temperatures before spotting or menstrual bleeding].

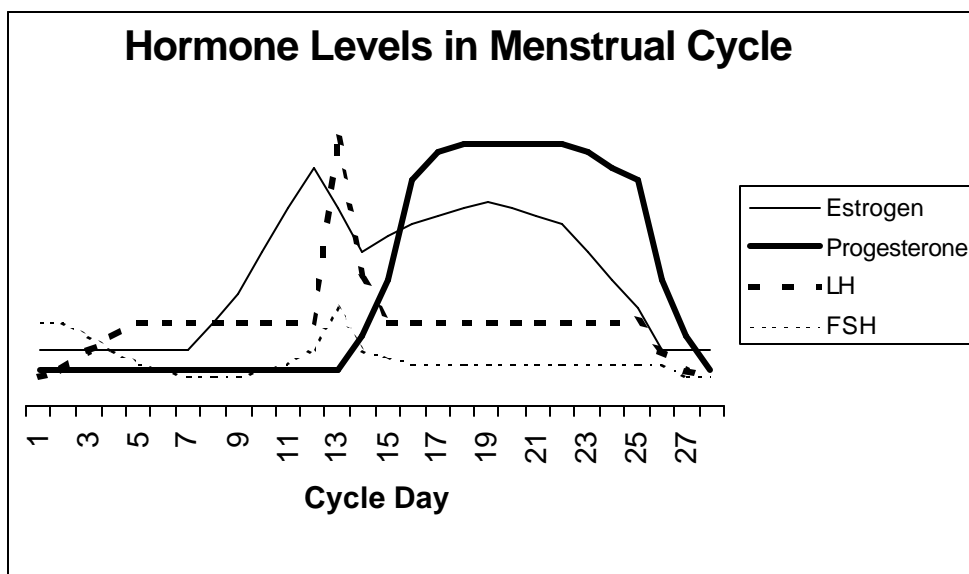


Figure 1.0

Ovulation takes place on day 14 in this 28-day cycle.

3.0 PRIMARY FERTILITY SIGNS

A woman can read her fertile signs and thus pin point potential problems by charting and keeping a record. This is an extremely enlightening and liberating experience to realize that you don't have to rely on the 'experts' to tell you where a problem may lie. It would seem that a well-informed woman is the best expert when it comes to her own body.

3.1 BASAL BODY TEMPERATURE [BBT]

The easiest way to track your cycle is by taking your temperature upon waking, which is known as the Basal Body Temperature. You should take your temperature orally [with a special Basal Thermometer which has accurate readings to .1 of a degree] upon waking and before doing anything else, preferable at the same time each day [or within the hour] to get a correct

reading. Lack of sleep, illness, alcohol and taking your temperature at a different time to normal can all affect your BBT reading.

A woman's preovulatory BBT typically ranges from 97.0 to 97.5 degrees Fahrenheit and rises to around 97.6 – 98.6 degrees after ovulation. About one day after ovulation the temperature will rise and remain high for around 12 - 16 days and will remain high if a pregnancy occurs. It is the heat inducing qualities of progesterone that cause this temperature increase.

When taking your temperature each day you may become confused with the constant ups and downs, and it is only by charting your temperature that you can begin to see the distinct pattern of low temperature before ovulation and high temperatures after ovulation. Your temperature needs to be a minimum of 0.2 degrees Fahrenheit above the previous 6 days and remain in this area [not dip to the lower temperatures] to signify that ovulation has occurred.

By taking your temperature you are not necessarily able to predict when you are ovulating because the change in temperature patterns occurs *after* ovulation. However once you have charted your cycle a few times and in conjunction with the other fertility signs, you can begin to predict when ovulation is about to occur, especially if you have a regular cycle.

The great thing about charting your temperature is that you can detect hormonal imbalances that can become challenges to your fertility if not brought back into check. You could also confirm a pregnancy with 18 high temperatures!

You may detect the following patterns that signal an imbalance.

Short Luteal Phase

Less than 10 days of high temperatures after ovulation is often an indicative of low progesterone levels that are unable to sustain the endometrial lining for a long enough period to allow implantation of the embryo to take place. Even if conception took place it could result in a miscarriage. Women with short cycles who have had trouble conceiving would benefit from taking their temperatures as it may be due to low progesterone levels preventing implantation – a condition which can be readily treated by herbs, the essential oil of Vitex and natural progesterone products.

No Thermal Shift - Anovulation

If there is no distinct thermal shift from low to high temperatures this indicates that ovulation has not taken place. If bleeding does occur it is referred to anovulatory bleeding as it is not a true menstrual period. In other cases there is no bleeding and menstruation temporarily ceases. This is often due to insufficient levels of oestrogen that is required to ovulate.

Long Cycle– Greater than 32 days

This will be characterized by delayed ovulation and is generally due to lower levels of oestrogen in the first part of the cycle.

Short Cycles – Less than 26 days

Could point to excess oestrogen leading to early ovulation and an imbalance between oestrogen and progesterone in the 2nd part of the cycle.

3.2 CERVICAL FLUID/MUCUS

Fertile cervical fluid is essential in order to conceive, since it is required to nourish and assist the sperm as they travel through the cervix, uterus and fallopian tubes to fertilize the egg. The levels of oestrogen and progesterone influence the consistency of a woman's cervical fluid, and charting this in conjunction with the BBT will give a clear indication of pending ovulation, as well as highlighting a hormonal imbalance.

As ovulation approaches and oestrogen levels rise the mucus becomes more profuse, as well as wetter, thinner and clearer. At the most fertile time when oestrogen levels peak, the mucus can resemble raw egg white.

Once ovulation has occurred, oestrogen levels fall and progesterone levels rise, resulting in an almost immediate drying up of the fertile cervical mucus, returning to non-fertile, sticky mucus, or the absence of cervical fluid.

3.3 OTHER FERTILITY SIGNS DUE TO HORMONAL CHANGES

Cervical Position

As oestrogen levels rise prior to ovulation, the cervix softens, opens and rises. Once ovulation takes place and oestrogen levels drop dramatically, the cervix drops, hardens and closes. You will detect this gradual change in your cervix around 4 days prior to ovulation.

Ovulatory Spotting

Some women experience spotting for one or two days around the time of ovulation. This is usually due to the sudden drop of oestrogen that precedes ovulation and since progesterone has not yet been released to sustain the lining a small amount of the lining leaks before progesterone kicks in. It is more common in longer cycles.

4.0 HORMONAL IMBALANCE

4.1 PMS

An early indication of your hormonal and reproductive health is whether or not you suffer PMS and to what extent. PMS symptoms are most often caused by a hormone imbalance, usually in respect to the ratio of oestrogen to progesterone. When the correct ratios are disrupted a variety of brain chemicals are also out of sync, resulting in a variety of PMS symptoms. These symptoms can be categorized by the following hormonal patterns¹

1. Anxiety:
Associated with high Oestrogen levels and progesterone deficiency in the luteal phase.
2. Cravings:
Hypoglycaemic response during luteal phase – may be due to a hormone imbalance.
3. Depression:
A result of depleted levels of oestrogen during the luteal phase.

This information is invaluable when deciding on the best essential oils to use when treating PMS and the way these essential oils will address the underlying hormonal imbalance.

4.2 CAUSES OF HORMONAL IMBALANCES

- Coming off the pill or other hormones – the body may take some time to clear the drugs from their systems.
- Stress – A common factor that contributes to longer rather than shorter cycles. This is due to the mind/body connection affecting the endocrine system and therefore the production of the sex hormones. During time of stress progesterone is capable of being converted into the stress hormone cortisol.
- Illness – if illness occurs before ovulation it may delay or prevent it altogether. If illness occurs after ovulation there will be no affect on the rest of your cycle as the luteal phase has a consistent life span within each woman.
- Travel – the body can interpret travel as a type of stress and ovulation can be suppressed.
- Low body fat – A minimum of 18% body fat is required to store sufficient oestrogen [and to convert other hormones to oestrogen] in order to ovulate.
- Weight Loss - Women who lose 10 – 15 % of their body weight may stop getting their periods.
- Weight Gain – With obesity, excess fatty tissue can cause excessive oestrogen, which then disrupts the hormonal feedback system that prompts the egg follicles to mature.
- Diet - Foods high in fat content may stimulate an oestrogen overload. A diet insufficient in the correct vitamins and minerals required for hormonal balance.
- Pollution – A great deal of modern pollution consists of substances that are, or can become, xeno-oestrogens. Xeno-oestrogens are chemicals that behave like oestrogen, attaching themselves to oestrogen receptors in the body and produce stronger effects than oestrogen itself. Xeno-oestrogens are the by-products of the petrochemical and plastics industries and can be exuded from plastics, furniture, carpets, underlay, some paints and plastic water bottles.

- Water Supply – oestrogens are passed into the water supply from women on HRT and the contraceptive pill. Although they are removed from the drinking water, many experts doubt that this is completely possible.²

5.0 BALANCING HORMONES WITH ESSENTIAL OILS

5.1 OESTROGEN

Essential oils may have hormone-like activity if their structure is similar enough to a hormones' structure for them to interact with the same receptor. Oestrogenic activity has been found in certain plants due to their content of the chemical oestrone. Anethole, found in bitter and sweet fennel, star anise and aniseed essential oils, is the methyl ether of oestrone, and seems to display the same potent oestrogenic activity.³

Phytoestrogens

Phytoestrogens are compounds that occur in plants and whilst they are not identical to human oestrogen, they are similar in structure and thereby elicit an oestrogenic response by reacting with oestrogen receptors. Unlike xeno-oestrogens that have a stronger effect than oestrogen, phytoestrogens have a weaker effect. The remarkable aspect of Phytoestrogens is that whether there is an over abundance of oestrogen, or the level of oestrogen is insufficient; the effect of Phytoestrogens is to create an equilibrium. Herbalist Ruth Tickey [1996] was able to explain this paradox, saying that Phytoestrogens may actually prevent many of the more stimulatory body-made oestrogens from occupying receptor sites, a process called competitive inhibition. Phytoestrogens are also capable of slowing down the production of extra, non-ovarian oestrogen produced in the fat tissues.⁴

Franchomme & Peneol [1990] have also explained the effect of Phytoestrogens by citing the ability of some oils to normalize hormonal secretions via the pituitary gland, however no pharmacological evidence has been provided.

Tisserand [1979] has spoken of the ability of some oils [Geranium, Basil, Rosemary] to stimulate the adrenal cortex, which produces oestrogen amongst other hormones.

Phytoestrogenic Essential Oils:

These oils are best utilized to kick-start the body's natural hormone production, rather than relying on them long term.

Sweet Fennel – *Foeniculum vulgare*

- Contains anethole 50 – 90%
- Strong oestrogenic affect
- The most effective phytoestrogenic essential oil

Clary Sage – *Salvia sclarea*

- Stimulates the pituitary gland which produces oestrogen
- Predominantly oestrogenic – for oestrogen deficiency
- Contains sclareol – a plant oestrogen
- Uterine tonic
- Powerful support for geranium

Geranium – *Pelargonium graveolens*

- Balancing effect on endocrine system
- Regulates hormone function

Aniseed – *Pimpinella anisum*

- Contains anethole

Star Anise – *Illicium verum*

- Contains anethole

Sage – *Salvia officinalis*

- Phytoestrogen
- Restorative effect on the reproductive system
- Good reputation for treating infertility

Tarragon – *Artemisia dracuncululus*

- Contains anethole
- Regulates erratic periods
- Calms menstrual pain

Myrrh – *Commiphora myrrha*

- Phytoestrogen
- Clears obstructions in the womb
- Regulates scanty periods

5.2 PROGESTERONE

Until recently there have been no known essential oils that have progesterone like effects. The herb of *Vitex agnus castus* has long been used as a tincture to improve progesterone levels and bring progesterone and oestrogen into homeostasis. Although it is known that an essential oil will not necessarily have the same properties as an herbal extract of the same plant, it is interesting to note that the liquid extract of Vitex [chaste berry] stimulates the pituitary gland's production of Luteinizing Hormone, which in turn stimulates ovarian production of progesterone. The benefits include normalizing of a woman's cycle, reducing PMS, menorrhagia and amenorrhea. Herbalists have found success in treating infertility by prescribing forty drops of vitex tincture in water each morning for three months, even during menstrual periods.⁵

Vitex – *Vitex agnus castus*

- Vitex is now available as an essential oil and has been shown to be more effective in alleviating PMS by acting on this

estrogen/progesterone balance than any other oil that has estrogenic like properties.⁶

6.0 FERTILITY TONICS

There are numerous other ways to utilize essential oils in order to optimise fertility. I have explored the mind/body connection, TCM as well as general system tonics. When formulating a personalized program taking all these points into consideration will maximize the effect.

6.1 INFERTILE CERVICAL MUCUS

In the instance of thick [infertile] cervical mucus that is impeding the travel of sperm through the cervix, essential oils with mucolytic properties to thin the cervical mucus could be helpful. Doctors have often prescribed the cough medicine Robitussin which acts to thin all mucus secretions and has been found to correct this problem.⁷ Essential oils could be used in a cough syrup to be taken orally or as rectal suppositories.

Mucolytic Essential Oils:

Rose otto – *Rosa damascena*

- Promotes vaginal secretions

Cardamom – *Elettaria cardamomum*

- Liquefies dry mucus
- Also detoxifies blood

Cedar – *Cedrus atlantica*

- Breaks down mucus
- Kidney tonic

Lemon Eucalyptus – *Eucalyptus citriodora*

- Mucolytic

Frankincense – *Boswellia thurifera*

- Dry mucus – moistens mucus membranes [support oil]

Geranium – *Pelargonium graveolens*

- Moistening to mucus membranes

6.2 UTERINE TONICS

Uterine tonics tone and regulate the reproductive system, as well as strengthening the uterus. This enhances the ability of the uterus to not only accept the embryo, but to hold onto an embryo.

- **Clary sage** – *Salvia slacria*
- **Jasmine** – *Jasminum grandiflorum*

- **Rose** – *Rosa damascena*
- **Myrrh** – *Commiphora myrrhaneae*
- **Frankincense** – *Boswellia thurifera*
- **Cypress** – *Cupressus sempervirens*
- **Clove** – *Eugenia caryophyllata*

6.3 LIVER TONICS

When there is excess oestrogen in the first half of the cycle it can often carry over to the second half of the cycle, causing an imbalance with progesterone. Also in very short cycles [under 23 days] there is often an excess of oestrogen that is carried forward from cycle to cycle. Stimulating the liver will help to flush out the oestrogen after ovulation.

Carrot Seed – *Daucus carota*

- Detoxifies the liver, boosts the general action of organs due to its ability to increase red blood corpuscles.
- Tonic to the hormones and regulates the menstrual cycle.

Lemon – *Citrus limonum*

- Decongestant action on liver and kidneys
- General cleansing action on the body.

Rosemary – *Rosmarinus officinalis*

- Liver decongestant

Fennel – *Foeniculum vulgare*

- Excellent body cleanser and
- Tonic to the liver.

6.4 GENERAL REPRODUCTIVE SYSTEM TONICS:

Rose otto – *Rosa damascena*

- Balancing to hormones
- Nurturing

Lavender - *Lavandula angustifolia*

- Irregular or scanty periods
- Balances endocrine system – supports Geranium and Clary sage

Carrot Seed – *Daucus carota*

- Tonic to hormone production
- Regulates menstrual cycle
- Thyroid regulator

Vetiver – *Vetiveria zizanoides*

- Tonic to reproductive system
- Relaxes underlying sexual problems

Ylang ylang – *Cananga odorata*

- Energizes reproductive organs
- Aphrodisiac
- Good support for hormonal imbalances when used with Geranium and Lavender

Coriander – *Coriandrum sativum*

- Stimulates oestrogen
- Glandular tonic
- Stimulates vaginal secretions

7.0 MIND/BODY CONNECTION

The emotions you feel affect your body and your beliefs become your biology. Often when a couple have difficulty in conceiving there are underlying issues stemming from childhood and family experiences that create unconscious conflicts affecting their ability to conceive – often when no other reasons for infertility exist and they are labelled with ‘unexplained infertility’. It can be helpful to ask yourself if there are any reasons why you may not want to become pregnant and if you are prepared to be honest with yourself you may be surprised with what you discover. “Whether your emotions are up front or hidden behind a veneer, they filter through every organ of your body. Messages are transmitted between your brain, immune and hormonal systems in the form of biochemicals called neuropeptides. Neuropeptides are controlled by certain mental states including thoughts, feelings and images of stress, helplessness, depression, anger and hostility. Becoming aware of the emotions you have repressed and how they are affecting your body can open you to the possibility of conception.”⁸

7.1 THE LIMBIC & ENDOCRINE SYSTEMS

Essential oils are a valuable tool in unlocking emotions via olfaction. The odour molecules stimulate olfactory cells, which results in a nerve impulse that enters the brain via the limbic system. The limbic system is comprised of the thalamus, hypothalamus, pituitary and pineal glands; and the stimulation of the hypothalamus and pituitary glands causes reactions in the autonomic nervous system and the endocrine system; therefore exerting influence on hormones, sexual arousal and stress. By utilizing essential oils that are found to be relaxing, soothing, calming, healing and nurturing and that incite feelings of self-acceptance and love you can positively impact your endocrine system and the consequential production of hormones. This also helps us to relax and to stop trying to force something that our body may not be yet ready to accept. In the act of slowing down, facing our fears and creating space for another life, we can bring ourselves closer to conception.

Niravi B. Payne reported examples of stress/emotional induced endocrine malfunction in her book *The Language of Infertility*. One woman was unable to sustain a pregnancy and suffered several early miscarriages as a result of low progesterone levels. This woman was suffering from severe inner conflict

concerning the safety of her unborn child which caused her hypothalamus to send danger signals in the form of chemical and neural messages, resulting in insufficient production of progesterone. Once she was able to work through this conflict she was able to carry a pregnancy to term. Ms Payne refers to research conducted by Sarah L. Berga M.D. at Magee Women's Hospital, Pittsburgh, Pennsylvania. Dr Berga concluded that emotional tension is one of the major factors effecting decline in the hypothalamic secretion of GnRH [Gonadotropin Releasing Hormone], reducing the pituitary secretion of LH and FSH, which leads to insufficient ovarian stimulation to support menstruation. ⁹

When lack of ovulation is caused by stress or trauma the use of essential oils particularly in a relaxing massage, aromatic bath or diffuser during meditation can be extremely helpful. Quite a few essential oils have relaxing, balancing, toning, cleansing and hormonal qualities that can make for an effective overall mind/body tonic.

Essential Oils for the Fertile Mind:

Rose – *Rosa damascena*

- Calming, nurturing, soothing, grief, heartbreak, frustration, depression
- Connects to your sexuality and creativity
- Good affinity with reproductive system
- Aphrodisiac
- Balances hormones

Neroli – *Citrus aurantium*

- Calms the mind, anxiety, depression, stress
- Balancing support oil for Geranium and Lavender
- Cleansing to blood and liver tonic

Lavender – *Lavandula angustifolia*

- Calming, soothing, nurturing, anxiety
- Balancer for endocrine system especially with Geranium and Clary sage
- Clears liver

Clary Sage – *Salvia sclarea*

- Calming, euphoric, mental fatigue, stress, sedative
- Uterine tonic
- Balances the endocrine system

Mandarin – *Citrus reticulata*

- Supports emotional healing
- Nurturing, warming, anxiety, uplifting, calming
- Supports balancing action on endocrine system of Geranium and Lavender

Sweet Orange – *Citrus sinensis*

- Nourishes and warms
- Uplifting, refreshing, calming

Ylang ylang – *Cananga odorata*

- Soothes anxiety, supports feelings of inner trust, reassuring
- Nervous depression caused by extreme tension
- Supports endocrine system

Vetiver – *Vetiveria zizanoides*

- Anxious mind causing sexual disorders
- Calming and balancing
- Provides sense of security

Roman Chamomile – *Anthemis nobilis*

- Brings inner calm and peace
- Relieves anxiety and anger

Sandalwood – *Santalum album*

- Excellent oil to use during meditation
- Creates inner awareness
- Cleanses the spirit
- Calming, soothing, balancing

Grapefruit – *Citrus paradisi*

- Cleansing, may help shift blocked energy
- Nervous exhaustion, depression

Frankincense – *Boswellia thurifera*

- Excellent to use in meditation
- Helpful in healing past emotional wounds
- Calming and soothing
- Calming effect on sexual nervous tension

8.0 TCM & INFERTILITY

TCM is used to treat infertility in both men and women and is based on stimulating the bodies natural healing potential by treating the root causes, as well as creating the free flow of Qi which is considered vital to maintain overall health. Though much of TCM treatment is based on herbs and acupuncture, aromatherapy can be administered to tonify specific internal organs to increase function and eradicate stagnation – the most common being Liver Qi stagnation and deficient Kidney Qi.

8.1 LIVER QI STAGNATION

Stagnation of Liver Qi is most prevalent in women and is often a cause of unexplained infertility since it affects the flow of blood to the pelvic cavity. Symptoms of Liver Qi Stagnation are PMS, irritability, depression, frustration, irregular periods, breast pain, worry, headaches and dark colored blood with clots. Essential Oils can effectively be used to tonify the liver and to increase the liver's cleansing efficiency.

Essential Oils to assist in Liver Qi Stagnation:

Grapefruit - *Citrus paradisi*

- Cleansing and decongesting
- Grapefruit helps to purify the blood by regulating and cooling the liver.

Bergamot – *Citrus bergamia*

- Cooling and refreshing,
- Bergamot's energetic properties smooth the flow of Qi energy and harmonize Liver Qi.

Sweet Orange – *Citrus sinensis*

- Able to shift stagnant Qi energy, mainly when accumulated in the Liver, Stomach and Intestines.
- Helps to ease tension and frustration.

Mandarin – *Citrus reticulata*

- Stimulates the liver, soothes nervous tension
- Gentle to use during pregnancy.

8.2 DEFICIENT KIDNEY QI

Men with low sperm counts can benefit from herbal formulas that tonify the Kidney energy and essence [Jing].

The kidneys store our genetic essence [Jing], which is formed at conception from the combination of each parent's essence. This essence is responsible for reproduction, growth, and development and determines our constitution and immunity to disease. Since our essence is inherited it is difficult to replenish and a deficiency in our Jing can cause infertility and miscarriage.

The kidneys are the organs of the Water element and in TCM the water element is inseparable from fertility. Aromatherapy can be applied to ground and strengthen the mind and body's essential energy. The spirit of the water element is the Will [Zhi] and essential oils can be used to strengthen the will as well as strengthening the Kidney Qi and Jing.

Prior to conception a blend aimed at strengthening the Kidney Qi and cleansing the Stagnant Liver Qi could be beneficial.

Essential Oils that Strengthen the Kidneys:

Juniper – *Juniperus communis*

- Warming properties stimulate the yang energy, especially the Kidney-yang
- Consolidates the Will power and is suited to persons who are self absorbed due to worries, pressure and unpleasant memories [as is often the case when people have difficulty in conceiving].

Cedarwood – *Cedrus atlantica*

- A powerful tonic to the Qi and tonifying to the kidneys.
- Fortifies the Will and gives strength in times of crisis.

Geranium – *Pelargonium graveolens*

- Clears heat and inflammation,
- Enhances circulation of blood and Qi.
- Due to its cool and moist energy, Geranium is a tonic of the yin.

Ginger – *Zingiber officinalis*

- Stimulates the Yang energy of the Kidneys
- Activates will power.

9.0 TIMING OF AROMATHERAPY

Different aromatherapy blends should be timed to restore the balance that will lead to a healthy menstrual cycle, thus allowing conception to take place and be sustained.

Blends and timing will vary in each woman, depending on her cycle patterns, fertile signs and PMS symptoms. The choice of oils would also need to take into account other health and emotional issues in order to create a well rounded blend with the greatest impact on a holistic level.

Amenorrhoea [lack of menstruation]

Regardless of other personal issues, the general reason behind lack of menstruation in a woman of normal body weight is sluggish levels of oestrogen. An aromatic program would involve using a blend of phyto-oestrogenic essential oils massaged into the abdomen once daily until ovulation occurs. Since the ovaries have not been used to producing high levels of progesterone [since this is produced after ovulation occurs] it may be helpful to regulate the production of progesterone with *Vitex agnus castus* from ovulation until menstruation occurs.

Short Cycles

Short cycles with signs of excess oestrogen would benefit from the balancing effect of phyto-oestrogens at the beginning of the cycle until ovulation. After ovulation the liver should be flushed to rid the body of these excess oestrogens.

Short Luteal Phase

A short luteal phase could benefit from the use of *Vitex agnus castus* for the entire cycle [except during menstruation] to balance the levels of progesterone.

Long Cycles

Phyto-oestrogens used at the beginning of the cycle to increase the level of oestrogen would help to shorten a cycle. This is advisable since the later that ovulation occurs, the higher the risk of miscarriage and abnormal eggs. This is due to the size of the follicle at different times during the cycle. When the follicle is at its largest [around day 14] it releases the healthiest egg and the corpus luteum will be large enough to produce adequate progesterone. After day 14 the follicle will start to shrink, and therefore "if you ovulate on day 15, or later, your chances of a viable conception drop to 43%". " Long pre-ovulatory phases [greater than 17 days] have been associated with changes in the corpus luteum, and the efficiency of progesterone secretion, which is necessary to maintain the pregnancy." ¹⁰

10.0 CASE STUDIES

10.1 SHORT LUTEAL PHASE / INSUFFICIENT PROGESTERONE

I have used myself as my first case study during my research for this paper and together with some other alternative therapies, including acupuncture, Chinese herbs and natural progesterone [prior to my discovery of Vitex] I have been successful in altering my cycle in a very short span of time.

I am 33 years old and over the 1st 9 months of trying to conceive I tracked my cycle and discovered that my cycle was getting shorter from an average of 26 days down to 24 days. It was also interesting to note that the events of September 11th delayed ovulation and that cycle was subsequently 29 days. My typical cycle was 4 days menstrual bleeding, 3-4 days spotting, ovulation on day 12, 9-11 days of high temperatures before 2-3 days of spotting prior to menstruation. It appeared to me that my luteal phase was too short and that my progesterone levels were probably low. I also felt that using oils to balance the first part of my cycle would assist in creating the correct levels/balance with my oestrogen.

Month 1:

The first month I used essential oils I used a PMS blend over the last week of my cycle to balance my hormones and to reduce the cramping I experience prior to and during my period. This salve was massaged into the abdomen every morning for the last 7 days.

1oz Salve

<i>Lavandula angustifolia</i>	Lavender	14 drops
<i>Citrus reticulata</i>	Mandarin	14 drops
<i>Salvia sclarea</i>	Clary Sage	4 drops
<i>Pelargonium graveolens</i>	Geranium	8 drops
<i>Citrus sinensis</i>	Orange	14 drops

Result:

My period arrived one day later, extending to a 25 days cycle and I only experienced 1 day of spotting prior to menstruation.

Month 2:

The same salve was massaged into the abdomen for the duration of my period as well as weekly acupuncture sessions and Chinese herbs. After ovulation natural progesterone suppositories were taken for 14 days.

Result:

Ovulation occurred 1 day later than usual on day 13 and my entire cycle was 28 days with a 15-day luteal phase and ½ day of spotting prior to menstruation. The extended luteal phase and minimal spotting were attributed to the natural progesterone supplement.

Month 3:

This month I used a blend of phytoestrogen hormonal balancers and massaged them into the abdomen, back and buttocks from day 1 to day 10 of the cycle.

1oz Massage Blend in carrier oil

<i>Pelargonium graveolens</i>	Geranium	4 drops
<i>Foeniculum vulgare</i>	Fennel Sweet	7 drops
<i>Salvia sclarea</i>	Clary Sage	3 drops
<i>Rosa damascena</i>	Rose	1 drop

Result:

I had 5 days of menstrual bleeding and amazingly only 1 day of spotting instead of the usual 4. I also experienced ovulatory spotting on days 12 & 13 for the very first time [a sign of dropping oestrogen levels]. I attribute this to the essential oils, the Chinese herbs and perhaps the effects of the acupuncture.

I am mid way through this cycle and plan to take the natural progesterone supplements as well as taking 1 drop orally of Vitex agnus castus essential oil from 1 day after ovulation until menstruation starts. I then plan to stop taking the natural progesterone on my next cycle and rely on the Vitex to stimulate progesterone production. To evaluate this I will have my progesterone levels tested 7 days after ovulation.

Ingredients of Chinese Herbal Supplement

Pin Yin	English	Percentage
Dan Shen	Salvia Root	11.7%
He Shou Wo	Fo Ti	11.7%
Yin Yang Huo	Epimedium	9.4%
Mu Dan Pi	Tree Peony Bark	9.4%
Dang Gui	Tang Kuei	9.4%
Ba Ji Tian	Morinda Root	9.4%
Rou Cong Rong	Broomrape	9.4%
Tu Si Zi	Dodder Seed	7.8%
Fu Ling	Hoelen	7.8%
Xian Mao	Curculigo Rhizome	4.7%
Zhi Mu	Anemarrhena Root	4.7%
Huang Bai	Amur Cork-Tree Bark	4.7%

Chinese Medical Actions:

Replenishes Kidney Yin and Yang, regulates the Ren and Chong Channels, harmonizes the Blood, drains Fire.

10.2 EXCESS OESTROGEN / DEFICIENT PROGESTERONE

Amy is 32 years old and has been trying to conceive for the last 6 months. Previous to this she was on the contraceptive pill for many years, and it seems that her system is still working to dispel the excess hormones. Amy's periods gradually got shorter and shorter until they were only 21 days long with a 5-day luteal phase [her charting indicates ovulation around day 16]. She has recently started working with a naturopath who has her on a mixture of herbs to balance the hormones as well as to regulate the pituitary and hypothalamus glands. The herbs contain Vitex to promote progesterone as well as others to regulate her oestrogen. Amy has also indicated that her circulation and digestion are a little sluggish. PMS symptoms are limited to anxiety which points to low progesterone levels.

I have recommended an aromatic program to complement her current herbal treatment to balance the excess oestrogen from day 1 to ovulation, flush the liver of oestrogen from ovulation for 4 days and promote progesterone after ovulation for the remainder of the cycle. Each blend is to be massaged into the abdomen and mid to lower back every morning.

Excess Estrogen:

Massage once/day from day 1 until ovulation. This blend will also act as a tonic to the digestion.

1 oz carrier oil:

<i>Pelargonium graveolens</i>	Geranium	4 drops
<i>Foeniculum vulgare</i>	Fennel Sweet	7 drops
<i>Salvia sclarea</i>	Clary Sage	3 drops
<i>Rosa damascena</i>	Rose	1 drop

Liver Tonic:

Massage once/day into rib cage and abdomen from the 1st day of high temperatures for 4 days. This blend will also stimulate Amy's sluggish circulation.

1 oz carrier oil:

<i>Daucus carota</i>	Carrot Seed	5 drops
<i>Citrus limon</i>	Lemon	3 drops
<i>Rosmarinus officinalis</i>	Rosemary	2 drops
<i>Citrus reticulata</i>	Mandarin	5 drops

Progesterone Promoter

One drop of *Vitex agnus castus* in 1 tsp of carrier oil massaged into abdomen and mid/lower back once/day. This should start on the 1st day of high temperatures for the remainder of the cycle and stop when menstruation starts.

Endocrine Tonic:

Since Amy has found her inability to conceive upsetting and stressful, as well as holding a demanding job, I have suggested she use the following synergy to inhale from a tissue or straight from the bottle when she is feeling anxious.

<i>Rosa damascena</i>	Rose	4 drops
<i>Cananga odorata</i>	Ylang ylang	12 drops
<i>Citrus paradisi</i>	Grapefruit	24 drops

10.3 PROPOSED GROUP CASE STUDY

Due to timing I have not yet conducted a group case study, however I plan to conduct a formal study utilizing *Vitex agnus castus* and documenting its effects, not only on PMS symptoms, but also on treating Luteal Phase Defect, which is a cause of infertility. Currently the only documented study for this relatively new essential oil and its effect on female hormones has been undertaken by Barbara Chopin Lucks who studied the effects of Vitex on Menopausal Balance [Essential Oils and Cancer, Proceedings of the 4th Scientific Wholistic Aromatherapy Conference, San Francisco, 2000; Editor Kurt Schnaubelt]. Kurt Schnaubelt has noted other experimental use in the treatment of PMS in his book Medical Aromatherapy [pg 207] where it has proven to be more effective in eliminating PMS than other commonly used estrogenic essential oils.

Time Period:

The study will be conducted over a 6-month period, with the 1st two months being a record of a typical menstrual cycle prior to taking the Vitex essential oil. Vitex will then be taken for the next four months and any changes recorded. Some women will already have a documented record of their cycles and could start the oil straight away.

Case Study Participant Guidelines:

1. Premenopausal women
2. Must not be using hormonal birth control

A further breakdown will be made within the group:

1. Women who suffer from PMS [may or may not be trying to conceive].
2. Women who have a short luteal phase [may or may not be trying to conceive].

Number of Participants:

A minimum of 20 with an aim to have at least 10 women in each of the groups outlined above.

Each participant will be required to:

1. Fill in a questionnaire regarding her general health and menstrual cycle.
2. Track her cycle using the main fertility signs and record PMS symptoms.

3. Take 1 drop of *Vitex agnus castus* every day from ovulation through to the start of their period [internal or dermal application].
4. Record any changes over the 4 months of using Vitex.

The dose of 1 drop/day should not pose a health risk during the first weeks of pregnancy, however as a precaution, if any of the participants were to become pregnant they would be advised to cease taking Vitex and have their progesterone levels tested [immediate testing in the case of those know to have luteal phase defect] to see if they were producing enough progesterone to sustain the pregnancy.

11.0 CONCLUSION

I did extensive research in compiling this paper and I was surprised to find little on the subject on fertility and essential oils. Most research on essential oils and their hormonal effect was concentrated on relieving PMS and Menopausal symptoms. References to fertility still left me with questions regarding the best way to apply the oils in order to bring my cycle's idiosyncrasies into balance.

Through my research for this paper I have now come to understand the reason *why* certain oils are indicated, in which situations they are more therapeutic, and the best time to apply them; and this has allowed me to blend with greater *intent*. I have also realized the many different ways we can treat the *whole* body when dealing with fertility and conception, rather than treating isolated symptoms.

Through self-experimentation I have learnt how quickly our hormones respond to essential oils, and I only hope that women come to learn of the wonderful therapy of essential oils in the fulfilling, exciting; yet sometimes frustrating and disappointing; pursuit of motherhood.

REFERENCES

1. Battaglia, Salvatore; Aromatherapy & Phyto-oestrogens; Aromatherapy Today; Vol 7 Sep 1998
2. Rushton, AnnA & Dr Shirley A Bond; Natural Progesterone; Thorsons 1999; pg 7
3. Balacs, Tony; Hormones & Health; IJA, vol 5 No 1 spring 1993
4. Battaglia, Salvatore; Aromatherapy & Phyto-oestrogens; Aromatherapy Today, Vol 7 Sep 1998
5. Martin, Raquel & Judi Gerstung, D.C.; The Estrogen Alternative; Healing Arts Press, 2000. pg 84-85
6. Schnaubelt, Kurt; Medical Aromatherapy; Frog Ltd, 1999. pg 207
7. Lauersen, M.D., Ph.D. Neils H. & Colette Bouchez; Getting Pregnant; Simon & Schuster, 2000. pg 426
8. Payne, Niravi; The Language of Fertility; Harmony Books 1997. pg 78-79
9. Payne, Niravi; The Language of Fertility; Harmony Books 1997. pg 174
10. Nash, Francesca & Janette Roberts; Healthy Parents, Better Babies; The Crossing Press, 1999, pg 174

BIBLIOGRAPHY

Books:

- Battaglia, Salvatore; The Complete Guide to Aromatherapy; The Perfect Potion, 1997.
- Caddy, Rosemary; Essential Oils in Colour, Caddy Classic Profiles; Amberwood Publishing, 1997.
- Damian, Peter & Kate; Aromatherapy Scent & Psyche; Healing Arts Press, 1995.
- Davis, Patricia; Aromatherapy an A-Z; Saffron Walden, 1996.
- Hobbs, Cristopher, L.Ac & Kathis Keville; Women's Herbs, Women's Health; Botanica Press, 1998.
- Lauersen, Neils H., M.D., Ph.D. & Colette Bouchez; Getting Pregnant; Simon & Schuster, 2000.
- Martin, Raquel & Judi Gerstung, D.C.; The Estrogen Alternative; Healing Arts Press, 2000.
- McQuade Crawford, M.N.I.M.H, Amanda; Herbal Remedies for Women; Prima Health, 1997.
- Mojay, Gabriel, Aromatherapy for Healing the Spirit, Gaia Books Limited 1999.
- Nash, Francesca & Janette Roberts; Healthy Parents, Better Babies; Random House, 1996.
- Payne, Niravi; The Language of Fertility; Harmony Books 1997.
- Pitchford, Paul. Healing With Whole Foods, Oriental Traditions and Modern Nutrition, North Atlantic Books, 1993.
- Rushton, AnnA & Dr Shirley A Bond; Natural Progesterone; Thorsons, 1999.
- Sapolsky, Robert M.; Why Zebras Don't Get Ulcers; W.H. Freeman & Co, 1998.
- Schnaubelt, Kurt; Medical Aromatherapy; Frog Ltd, 1999.
- Sellar, Wanda; The Directory of Essential Oils; Saffron Walden, 2001.

- Shutes, Jade; Aromatherapy Apprenticeship Course Modules 1-8; The Institute of Dynamic Aromatherapy.
- Trickey, Ruth; Women, Hormones & the Menstrual Cycle; Allen & Unwin, 1998.
- Weschler, Toni, MPH; Taking Charge of Your Fertility, Harper Collins 1995
- Wildwood, Chrissie; The Encyclopedia of Aromatherapy; Healing Arts Press, 1996.
- Worwood, Valerie Ann; The Complete Book of Essential Oils & Aromatherapy; Macmillan London Limited, 1991.

Publication Articles:

- Balacs, Tony; Hormones & Health; IJA, spring 1993 vol 5 No 1
- Battaglia, Salvatore; Aromatherapy & Phyto-oestrogens; Aromatherapy Today; Vol 7 Sep 1998
- Chopin Lucks, Barbara; "The Vitex Anthology: Explorations in Menopausal Balance" Essential Oils and Cancer, Kurt Schnaubelt, Pacific Institute of Aromatherapy, Proceedings of the 4th scientific wholistic aromatherapy conference, November 2000.
- Holmes, Peter, LAc, MH; Clary Sage, Oil Profile of a Remedy for Women; IJA, Spring 1993 vol 5 No 1
- Smith, Melinda; Natural Fertility Management; IAJ, Vol 15 September 2000

Internet Articles:

- Snow, Violet; Herbs & Fertility; Fertile Heart, www.fertileheart.com/articles
- Borkin, Michael, N.M.D.; The Endocrine System & the Female Cycle; Fertile Heart; www.fertileheart.com/articles
- Borkin, Michael, N.M.D.; Hormones 101 – What you really need to know; Fertile Heart; www.fertileheart.com/articles
- Hoffman, David L., B.Sc, M.N.I.M.H.; Infertility; Health World Online – Herbal Medicine – Infertility

- Hoffman, David L., B.Sc, M.N.I.M.H.; Chaste Berry; Health World Online – Herbal Materia Medica – Chaste Berry
- Hirsh, Roger C., OMD, LAc; Chinese Medicine & Assisted Reproductive Technology for the Modern Couple; Health World Online – Chinese Medicine