NATUROPATHIC MEDICINE AND THE TREATMENT OF INFERTILITY

Naturopathic Medicine and the Treatment of Infertility

Introduction
Infertility can be defined as the inability to conceive and produce viable offspring. A diagnosis of infertility is usually only made after one year of engaging in sexual relations without contraception. Where once it was thought of that infertility was predominantly due to the female, studies now show that approximately 30% of cases are due to female factors, 30% due to male factors, 20% to combined, and 20% to unknown causes.

Medical diagnosis and treatment of infertility often involves invasive tests, drug therapy, surgery, and the possibility of artificial conception technologies. As is often the case in the orthodox model, infertility is seen as a ‘disease’ to be overcome, fought, and ‘attacked’ from every angle. There has been some consideration of psychological and emotional factors in its etiology, however, most sources consulted for this article cited that no studies had conclusively shown this to be true. Similarly, there appears to be little ongoing support and counseling for couples as they embark on this often stressful treatment rollercoaster.

A naturopathic approach to infertility adopts a more holistic view. The person or couple concerned is treated individually, with support for their psychological, emotional and spiritual wellbeing as well as their physical. There is much that natural remedies and treatments can do to correct imbalances in the body that may be preventing conception, using a range of modalities from nutrition, herbalism and homoeopathy to flower essences and osteopathy. The aim of naturopathic treatment is to support and enhance the body's natural processes, excluding the need for toxic drugs, invasive surgery or artificial conception technologies.

An overview of fertility
Infertility can be a complex phenomenon and it is often difficult to assess the true causes. It is not the purpose of this article to elaborate on the biological and physiological mechanisms behind conception, but the following gives a simple, concise summary of the sequence of events that lead to, and are required for, pregnancy.

The woman must be able to ovulate, and the ova able to enter the oviduct. If either of these two processes fails to occur, she will not be able to conceive.

The man must be able to produce a reasonable quantity of healthy sperm.

The man must be able to obtain and maintain an erection and ejaculate semen, containing the healthy sperm, into the upper part of the woman's vagina.

‘Unprotected’ sexual intercourse should take place sufficiently for ejaculation to occur at about the time the woman ovulates.

Some of the ejaculated sperm must swim through the uterus and enter the oviducts.
journey will be halted. A sperm has to come into contact with the ovum in the oviduct within 12 hours of ovulation and its head must enter the substance of the ovum to fertilize it. The fertilized egg must pass along the oviduct and into the uterus.

### Causes of Infertility

#### Female Causes

**Hormonal Imbalances**

Hormonal balance in women is dependent on the Hypothalamic-Pituitary-Ovarian axis, and anything interfering with this cycle may lead to ovarian dysfunction. There needs to be a balance of estrogen, progesterone, follicle stimulating hormone (FSH) and luteinizing hormone (LH) for ovulation to take place, and therefore make conception possible.

Dysfunctions in the Hypothalamic-Pituitary-Ovarian feedback loop may occur on a number of levels. The hypothalamus may fail to release GnRH, the hormone that acts on the pituitary gland; or the pituitary gland may fail to respond to GnRH stimulation; the ovary itself may be resistant to the pituitary gonadotropins and fail to respond (this is primary ovarian failure; where the follicle may develop abnormally in the ovary, so that the corpus luteum does not synthesize enough progesterone to prepare the endometrium for a fertilized egg.

Other endocrine imbalances that may cause infertility are thyroid imbalances (hypo- or hyper-thyroidism) and adrenal dysfunction, which may lessen fertility, libido and immune function. The adrenal gland also secretes small amounts of estrogen and progesterone. The pineal gland is also a factor, as it is said to exert influence over the anterior pituitary gland.

#### Anatomical Factors

Physical barriers to conception may include genetic abnormalities of the ovaries, fallopian tubes, uterus or cervix. They may form a physical barrier to sperm and ova or decreased secretions by these tissues. Scar tissue, fibrosis or adhesions from operations or past infections (such as salpingitis and endometriosis), cysts and fibroids can interfere with the movement of sperm and ova. There may be abnormal physical development of the ovum, whereby ovulation is occurring but the ovum is not able to be implanted or is rejected as not viable.

#### Infections/Immunological Factors

Infections, often chronic and low grade, may alter the mucus consistency and integrity of the reproductive organs, thus inhibiting movement. They may also cause tissue erosion and degradation. Gonorrhea and trichomonas are the principle ones affecting the fallopian tubes.

In approximately 1-2% of infertility cases, the immune system of one partner is provoked to produce antibodies to sperms, which then prevent the sperms from migrating through the cervical canal, and reaching and fertilizing the egg. The antibodies may be produced by either the man (auto-antibodies), or by the woman. They coat the sperm, which then stick to the cervical mucus.

#### Cervical Environment

As well as anatomical displacement or abnormalities of the uterus, cervical mucus can present a hazard to sperm. The mucus may be unsuitable in terms of consistency or contents, it may plug the cervix, preventing movement of sperm into the uterus or destroying the sperm. Causes for abnormal mucus include hormonal factors, low grade infection, or atrophic mucosa due to poor circulation. Infections, as previously mentioned, are another cause of cervical erosion.

#### Health of Reproductive Organs

The overall health of the reproductive organs can have a profound effect on fertility. There must be strength, integrity and normal functioning for gonadotropins to have affect; tissues must be sufficiently nourished and toned; and there must be adequate...
innervation and blood supply to the area. Under-contraction of capillaries, stagnation, atrophy, atony, sluggish nerve response can all cause under-functioning of the system.

**Nutritional Aspects**

A poor diet, being high in processed foods, toxins, chemicals, additives and preservatives, will not be conducive to good overall health, and thus reproductive health will also suffer. Anemia may interfere with the presence and plantation of ova, and so adequate iron intake is essential. Proteins are necessary for tissue growth, and adequate vitamins and minerals are also of paramount importance. Studies have implicated pyridoxine (Vitamin B6) as particularly relevant for infertile women.

**Lifestyle Factors**

Smoking, alcohol and drug taking will hamper reproductive health and fertility. Amenorrhea can result from taking barbites, opiates, corticosteroids and tranquilizers. The oral contraceptive pill (OCP) also disturbs the natural menstrual cycle, and so may be a factor in infertility for several months after its discontinuation.

Amenorrhea may be caused by excessive dieting or exercise, which is particularly prevalent among 18-30 year old women. Even after ceasing such vigorous activity or gaining weight, hormonal cycles may take some time to revert to their natural cycles.

Stress is also an important factor. Poor energy levels, anxiety, depression, and under- or over-active may lead to hormonal imbalances and affect responsiveness of reproductive tissue to hormonal stimulation. Unresolved emotions in a marriage or subconscious fears or uncertainties about pregnancy may prevent conception taking place.

Although the role of stress in the etiology of infertility has been debated, it is reasonable to consider it a valid proponent given the ability of stress, depression, emotional upsets and anxiety to inhibit the release of GnRH from the hypothalamus. Suppression of the pulsatile surges of GnRH will prevent the sequence of events that lead to ovulation (as previously mentioned). In severe cases, ovulation will cease as will menstruation; in mild cases, menstruation may continue but without ovulation, making it more difficult to detect. This may help explain the 20% of cases of infertility for which no cause is found.

**Male Causes**

**Sexual Dysfunction**

The first consideration in assessing male infertility is his functionality in sexual intercourse. Sexual dysfunction may take the form of low sexual desire or arousal, which limits the frequency of intercourse, or erectile failure (impotence), which prevents intra-vaginal ejaculation of sperm.

Reduced sexual desire may be due to factors such as a strict ‘religious’ upbringing, in which sexuality was either not discussed or considered ‘dirty’, a poor relationship with their partner, or illness, either physical or psychological (including depression).

Approximately 50% of cases of erectile failure are due to illnesses, such as diabetes, alcoholism (liver disease), neurological disease e.g. MS or hypothyroidism, or the effects of drug such as antihypertensives, and some antidepressants and tranquillizers. The other 50% are due to psychological causes, including depression (as cause or effect), marital discord, ‘performance anxiety’ and fear of failure.

**Sperm Production**

Deficiencies in sperm production, or irregularities in the sperms produced, are common factors in male infertility. A semen analysis seeks to assess not only the sperm count, but also the volume, abnormal forms and motility of the sperm.

**CRITERIA FOR 'NORMAL' SEMEN**

**Volume** – more than 2ml
**Sperm count** – more than 20 000 000 per ml
Abnormal forms – less than 40%
Motility – more than 60%, 2 hours after ejaculation

Azoospermia is a complete absence of sperm in the seminal fluid; oligospermia is a major reduction in the numbers of sperm being produced. Causes may include trauma to the sperm producing cells, such as excessively high temperature or inflammation, or radioactive damage to the cells.

Anatomical Factors
One of the most common anatomical conditions in male infertility is an obstruction to the spermatic cord which contains the vas deferens, and passes the sperm from each testicle to the urethra. There may be a cluster of varicose veins in the spermatic cord around the vas on either or both sides, known as a varicocele. This greatly affects sperm production. Rarely there is a defect in the anatomical development of the penis itself, preventing the sperm being deposited high up within the vagina during intercourse. Retrograde ejaculation is an unusual condition whereby the sperm are not ejaculated through the urethra into the woman's vagina, but instead are ejaculated backwards into the bladder. This may occur in diabetic men or when there has been previous urethral surgery.

Hormonal Factors
Irregularities in levels of follicle stimulating hormone (FSH), luteinizing hormone (LH), testosterone, prolactin and thyroid hormones should be assessed as possible causes of infertility in the male. FSH levels above three times normal indicates that a man's testicles will not produce sperm, although testosterone is still being produced. High levels of prolactin usually manifest in erectile failure, but may be confirmed by blood test.

Infections
White blood cells in the semen may indicate a chronic infection that may have been asymptomatic and thus undetected. Such infections include gonorrhea, non-gonococcal urethritis (NGU), or other unknown causes, and are reported to account for about 10% of male infertility. A level of above 5 million leucocytes/ milliliter of semen indicate an infection is present. Infections may also affect the seminal vesicles, ducts or prostate, which all in turn have an impact on fertility.

Immunological Factors
As with the female cause, a man producing auto-antibodies to his own sperm will be jeopardizing the viability of those sperm.

Nutritional Factors
Studies have shown that certain vitamins, minerals and elements may be deficient in infertile men, and thus contributing factors in male infertility. A study by the Journal of the American Medical Association showed that men with sperm agglutination had borderline levels of serum ascorbic acid, and when supplemented, the levels of agglutinated sperm had dropped from over 20% to 11%. Other studies reported a rise in conception when taking ascorbic acid similar to that when taking mesterolone, a synthetic form of testosterone. Low serum zinc status may also retard sperm production and motility, as well as affect the activity of the prostate in providing nourishment for the sperms. Amino acids have also been examined as factors in male infertility, with arginine receiving particular attention. L-Arginine supplementation is claimed to be beneficial for infertile men. Vitamin E in normal doses is also reported to be beneficial in improving sperm motility.

Lifestyle Factors
There are many factors in a man's lifestyle that may play some part in preventing conception. While the individual incidences of some of the following may not be high, each should be given consideration as possible contributing factors.

Smoking is known to reduce spermatogenesis, as well as the motility of sperm. Alcohol in excess will also reduce the sperm count and the production of the hormone testosterone. Therefore a lifestyle
incorporating these two habits is not optimum if trying to conceive. Stress is also a major consideration here. A man who is tired, stressed and overworked from his job is unlikely to want to be as sexually active at home, and therefore may be less enthusiastic about having sex, even at his partner’s most fertile time. Stress may affect his hormone production and glandular function, and hence the health of his sperm. Heat is another factor in sperm production and viability, therefore long hot baths and tight fitting underwear, which raise the testicles and hold them closer to the body, are not recommended. Some workers may have occupational hazards that may interfere with fertility, such as working near radiation, chemicals and pesticides.

Medical Treatment of Infertility
Medical treatment of infertility depends on the cause. Testing and diagnosis is carried out via physical examination, history taking, blood tests, biopsy, biochemical tests, postcoital tests, microsurgery and other methods.

Treatments include –
- use of synthetic hormones to regulate hormone levels
- antibiotics to counter infections
- microsurgery to correct varicoceles, cysts, tumors, tubal blockages etc
- laparoscopy or laparotomy for minor adhesions
- surgery for endometriosis,
- high dose steroids to counteract anti-sperm antibodies
- drug therapy to increase male sperm count e.g. anti-estrogen drugs, gonadotropin therapy, testosterone therapy
- Artificial or ‘assisted conception’ such as IVF, GIFT or AIH.

The Natural Approach to Infertility
At the time when conception is desired, it is very important that both partners have optimum levels of general health. In modern society very few people maintain dietary practices that ensure they receive all the right nutrients, and the least amount of artificial additives, preservatives, pesticides and fertilizers in their food. Their lifestyles may be rushed and stressed, and laden with environmental toxins. Drugs (prescription or otherwise) should be avoided wherever possible, as should heavy metal toxicity, nitrosamines (formed in stomach after eating delicatessen meats), x-rays and pollutant gases.

In the diet there should be a strong emphasis of whole foods, the least refined and processed foods available. Fresh fruits and vegetables, preferably organic and raw, together with whole grains, pulses, legumes and some light proteins (such as fish and free range chicken) should be chosen, and refined carbohydrates, sugars and fatty foods avoided. Plenty of filtered water should be drunk, and substances such as caffeine, alcohol and nicotine excluded. Marijuana smoking can also retard fertility in the male and is best avoided.

It can be useful for a couple to embark on a cleansing, detoxifying regime to start them off on these new nutritional principles. Elimination diets may be of use if allergies are suspected; problems with recurrent Candidiasis in the woman should be treated, as they can play a role in infertility. There should be an assessment of vitamin and mineral status, and deficiencies treated with supplementation. A good multi-vitamin and mineral supplement would be recommended for most people, even in the absence of obvious deficiencies, as these days our foods cannot be relied on to provide the nutrients they once held, even if the optimum types of foods are chosen.

At this stage it would be beneficial to the couple to undertake some form of exercise routine, incorporating aerobic exercise, and some form of yoga and relaxation. This will heighten their sense of well being, and assist their bodies in becoming strengthened and empowered.

There is much benefit in recommending these non-invasive, non-medical lifestyle shifts to infertile patients. They will enhance their sense of esteem and well-being, which may on a subconscious level facilitate conception. Certainly a body being well fed and exercised is more likely to conceive that one that is being treated disrespectfully.
One of the primary considerations in conception is ensuring the couple is having sexual intercourse at the optimum time in the woman's cycle for pregnancy to occur. This may involve the woman taking her basal temperature every morning before she gets out of bed and charting it, in order to establish when ovulation is taking place. Differing mucus secretions may also be helpful indicators. The egg may only survive for 24 hours; the sperm survive for 3 days, so clearly timing is paramount in ensuring that fresh sperm meet a fresh egg, giving conception the greatest chance of occurring. The day before ovulation is reportedly the best time for intercourse to occur, as then the viable sperm will be waiting for the egg. Abstaining from intercourse (or at least ejaculation) for 2 or 3 days prior to this may help to build a high count of healthy sperm. Sexual penetration from the rear is said to be the best position for ensuring the sperm are deposited high in the vagina.

Specific Treatment Protocols
In the naturopathic tradition, a multi-modality approach would be adopted in the treatment of infertility. A combination of diet, supplementation, exercise, lifestyle improvements, stress management, herbs, homoeopathy, flower essences and other methods may be selected in accordance with the needs of the individual.

Natural Hormone Therapy
There are several aspects to a woman's menstrual cycle that may be preventing ovulation. The timing of events may be skewed. Normally, there is a 10-12 day follicular phase followed by a 2-3 day midcycle, and a 10-12 day luteal phase. Often the luteal phase is shortened, with inadequate levels of progesterone to maintain the corpus luteum. Through functional medicine lab testing, it is possible to map the cycle to assess both the levels of estrogens, progesterone and testosterone, but also the timing of events. Such a test involves taking a saliva sample every other day throughout the entire cycle. The lab will measure the hormone levels, and present a graph of the estrogens and progesterone. Natural hormone augmentation can help regulate the menstrual cycles, and provide adequate progesterone to maintain the corpus luteum, and hence the pregnancy.

Nutrition
Nutrients for the Female
The fat soluble vitamins play an important role in fertility for the female. Vitamin E used to be called the ‘fertility vitamin’, and is necessary to ensure conception and a healthy pregnancy. A lack of Vitamin A has also been associated with infertility. It keeps the mucous membranes healthy, as well as the ciliae, which are important for the transport of the egg. A Vitamin A deficiency may also lead to degeneration of the sex organs, and decreased conversion of cholesterol to estrogen. It must be noted, however, that an excessive intake is unwise due to its reported association with birth defects.

Folic acid can lead to infertility through reducing the production of eggs, and via chromosomal damage leading to mutations. This nutrient should be particularly noted by women who have come off the oral contraceptive pill and are trying to conceive. Vitamin B complex is also important – B2 deficiencies are indicated in infertility, B6 may help balance hormones by increasing progesterone; and B12 has been shown to enhance fertility. B group vitamins are also useful to help a woman deal with the stresses that she may be under.

Vitamin C is important as it is necessary for the production of sex hormones. The ovaries are very rich in Vitamin C, indicating a strong need for its presence. It has been shown to start ovulation in anovulatory women. Ruth Sharkey, however, in her book Natural Conception, argues that high doses of Vitamin C may actually prevent conception as its high levels of acid may interrupt the pH of the body. She recommends obtaining adequate vitamin C from natural food sources (see Appendix A). Today, many ascorbic acid supplements are available in low acid formulas, including calcium and sodium ascorbates.

Minerals implicated in female infertility are zinc, which is important for general reproductive tone and hormonal balance; copper – too much or...
too little – too much can decrease zinc levels and fertility; selenium, as an antioxidant; and chromium, for blood sugar stability and adrenal function. It is important to have sufficient iron levels, however too much iron can block zinc absorption. A study reported in Lancet (June 22, 1991), reported that both low iron and vitamin C levels may be implicated in infertility, and when supplementation was introduced, the chances of pregnancy were reportedly increased 7 1/3 times. ix

Sufficient manganese is necessary, but too much can make mucus sticky, and thus hamper the efforts of sperm to reach the ovum. Calcium and magnesium are also beneficial. Calcium may counter the effects of too much manganese on the mucus, assists in the formation of fertile mucus, and can improve the ability of sperm to swim through it. In a study carried out at the Biolab Medical Unit in London, it was found that supplementing with magnesium and selenium to correct RBC-Mg levels led to all of the 12 women who had previously been diagnosed with unexplained infertility, conceiving within 8 months of the test. x

Boron is found in fruits and vegetables, or as a supplement. A diet rich in boron may increase the levels of estrogen in the blood.

Essential fatty acids are important for women trying to conceive. They are necessary for the formation of prostaglandins, which play a role in correct hormonal balance, and for fully functioning sex glands. Also sufficient amino acids, which can either be derived from animal protein, or vegetable sources. Care must be taken, however, to combine proteins adequately to obtain sufficient levels of all.

A Note on Vegetarianism
An April 1986 study reported in the American Journal of Clinical Nutrition found that vegetarian women were more likely to have irregular menstrual cycles than non-vegetarian women. This was possibly due to the lower intake of carbohydrates, common especially in vegan and high raw diets, which have a lower caloric value, and hence vegetarian women are more likely to be underweight, which is a factor in infertility (if ovulation is not occurring or menstrual cycles are disrupted). Vegans may find that increasing their caloric/ carbohydrate intake via the addition of extra grains, cereals and soups, and healthy oils from nuts and seeds, may help them ensure their cycle is regular.

Nutrients for the Male
Zinc is the most widely recognized nutrient in male fertility. It is necessary for a viable sperm count, sperm motility and a high percentage of live sperm in the semen. A male may lose 2-5mg of zinc a day via the semen. Supplementation of 120mg twice daily for at least three months has been recommended, and studies report quite dramatic increases in sperm counts with such supplementation. xi

Manganese deficiency may also lead to a total lack of sperm, so normal levels must be ensured. Copper, chromium and selenium levels should also be considered. Magnesium deficiency is also said to be a contributing factor to male infertility, as semen magnesium and zinc levels and acid phosphatase work together, correlating with sperm motility. Levels of semen plasma magnesium are reported to have dropped over 30% since the beginning of the century. Tests showed that treatment of males with Mg supplementation led to an increase of 30% in male infertility. xii

Essential fatty acids are important for the male, as a deficiency can lead to impaired gonadal function and even chromosomal defects. 500-1000mg of EFA's from Evening Primrose Oil is recommended.

Of the vitamins, Vitamin A is important for sperm production, healthy testes and conversion of cholesterol to testosterone; a Vitamin B complex would be recommended, ensuring at least 50mg each of B1, B2, B3, B5 and B6, and 400 mcg of B12. B5 is needed for healthy testes, and B12 to increase sperm count and motility, but all are important, and will also help counteract stress reactions. Folic acid is also reported as an important nutrient.

Vitamin C, as previously discussed, is necessary to prevent sperm
Agglutination. 1-3g per day is recommended. Ascorbic acid in doses of 1000mg per day has also been demonstrated to counter some of the effects of smoking on sperm quality. Antioxidants are important to protect sperm from free radical induced lipid peroxidation leading to reduced motility and fertilization capacity, so a high potency formula would be indicated. Co-enzyme Q10 has also been found to increase sperm counts and motility, probably due to its ATP enhancing and antioxidant effects.

Amino acids may also be supplemented as they are needed for sperm production and motility, and healthy testes. L-arginine and L-carnitine have both been demonstrated to improve sperm motility.

While food sources alone may not be relied on to provide all the necessary nutrients in adequate dosages, patients should be advised to choose foods that are rich in those nutrients. Please see Appendix A for listings of such sources.

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Herbal Medicine
For many natural therapists, herbal remedies form the foundation of naturopathic treatment of infertility. I have outlined below some of the most common herbs used for the more common causes of infertility. Some causes will not be treatable with herbs, however should surgery be the only option, natural remedies can offer supportive and complementary treatment.

Herbalism for the Female
The herbal remedies prescribed for the woman will be quite individual, based on her particular condition and the reason for her infertility. However, treatment principles will include the following.

General Balancing and Toning of Reproductive Organs
This can be achieve using uterine tonics and astringents, such as Black Cohosh, Blue Cohosh, Lady's Mantle, Goldenseal, False Unicorn Root, Life Root, Raspberry, Motherwort and Squaw Vine. Tonifying the uterus and reproductive organs will enhance the general state of reproductive health and thus may assist conception.

Providing a balanced hormonal environment
Given that hormonal balance is dependent on the hypothalamic-pituitary-reproductive axis, as well as the pineal gland, remedies to support this should be given, such as Avena, Passiflora and Pulsatilla. These herbs also act as nervines, strengthening and supporting the nervous system. Rehmania, Peony and Licorice may also strengthen pituitary function.

There are particular herbs that have estrogenic, progesterogenic or adaptogenic effects. Estrogenic herbs include Alfalfa, Licorice, Fennel, Hops and Clover. Progesterogenic herbs include Wild Yam, Birth Root, Sarsaparilla and Stargrass; while Chaste Tree, Saw Palmetto and Blue Cohosh are adaptogenic, meaning they regulate either way depending on the need.

Prolactin excess can be treated with Chaste Tree or Rehmania; Bugleweed and Hops will help high levels of LH; FSH levels can be raised through use of Black Cohosh, which also lowers raised LH and increases estrogen. Chaste Tree lowers elevated FSH, testosterone, prolactin and raises low levels of LH and progesterone.

Emmenagogues are herbs used to promote circulation and menstruation, and therefore are indicated if amenorrhea is present. Such herbs include Mugwort, Pennyroyal, Tansy, Rue and Southernwood. These should be used with the herbs that promote normal ovarian function. If excessive bleeding is the problem, hemostatic and astringent herbs such as Shepherd's Purse, Beth Root, Lady's Mantle, Cranesbill, Raspberry and Black Haw may help.

The thyroid is another major consideration, as dysfunction may hamper conception. Bugleweed and Vervain may calm an overactive thyroid, while remedies for hypothyroidism include Kelp, Coleus, Poke Root, Blue Flag and
Adrenal, pancreatic and liver support is often indicated. Adrenals are strengthened by Licorice, Ginseng and Borage; Fennel, Dandelion and St Mary's Thistle are liver herbs; and Fringe Tree is specific for the pancreas.

**Treating Physical Problems**

Cysts, endometriosis and fibroids are three conditions that are associated with difficulty conceiving. Many cases may be treated herbally. Cysts are swellings in the lining of the membrane, filled with fluid or semi-fluid material. They usually develop on the tubes or the ovaries. Herbs used here may include Calendula, Blue Flag, Echinacea, Celery, Licorice, Chaste Tree and Red Clover. Because there seems to be some correlation between cyst development and thyroid dysfunction, a thyroid tonic could be included.

Endometriosis is a condition where endometrial tissue is growing in places other than the uterus. Suspected causes are excessive acid and estrogen production, excessive prostaglandin synthesis, prolonged use of the OCP and high stress lifestyles. Herbal treatment is aimed at rebalancing estrogen and progesterone while providing pain relief. Herbs include Wild Yam, Jamaica Dogwood, Chaste Tree, Yarrow, Witch hazel, Beth Root, Cramp Bark, Meadowsweet and Cranesbill.

Fibroids are tumors of the uterus, which seem to be associated with excess estrogen. A few cases are reported to have responded to herbal treatment, using similar herbs as for endometriosis, as above. If surgery is needed to remove the fibroids, however, herbs can be used complementarily to provide support, to strengthen the patient's health and aid recovery.

**Digestive and Circulatory Considerations**

It is important when treating infertility to treat the whole person, not just the symptoms or system in question. The body works as an intricately linked system, and so an imbalance in one area can show up in another. Assessing the circulatory system is important, as inefficient circulation can mean reduced nutrition and atrophic tissues. Herbs to help here include Ginger, Prickly Ash, Cayenne and Bayberry. Blood building herbs may be used, such as Yellow Dock, Nettles and Parsley. The digestive system is said to be the seat of much disease and dysfunction, and the root of the Life Force, so bitters, tonics and cholagogues such as Gentian, Golden Seal, Rosemary, Meadowsweet and Fennel may be needed, and can assist in the breakdown and assimilation of nutrients.

**Building Immunity and Treating Infection**

A strong immune system is of fundamental importance when trying to conceive. Immune strengthening herbs include Echinacea, Garlic, Poke Root, Rehmania and Pau D'Arco. Lymph support can be given with Poke Root, Red Clover, Blue Flag and Cleavers. Genito-urinary infections should be treated with immune boosting herbs and antibiotic herbs such as Myrrh, Thyme, Sage, Uva Ursi and Bilberry. St John's Wort is an antiviral herb and can be used with others such as Bittersweet and Yellow Dock to treat herpes infections. Thuja will help counter fungal infections and wart viruses (HPV).

If the woman has developed sperm antibodies, immune boosting herbs are indicated, alongside anti-allergy herbs including Picrorrhiza, Rehmania, Bupleurum and Ephedra. The Reishi mushroom is another valuable remedy – it is specific for overproduction of antibodies.

**Supporting the Nervous System**

Nervine herbs can also be used to counter the effects of stress and to strengthen the nervous system. Restoratives include Avena, Damiana and Gotu Kola; examples of relaxing, sedative nervines are Chamomile, Valerian, Scullcap, Hops and Black Cohosh. Consideration of nervous exhaustion, stress, depression, anxiety or any other nervous condition should be seriously considered as a cause and/or effect of infertility.

**Herbalism for the Male**

Many components of herbal prescribing for the male will be the same
as for the female. Immune strengthening, blood building, infection fighting, nervous system support and/or calming, lymph support, digestive system improvement and general tonics will all apply.

A general tonic for the male reproductive system may include herbs such as Chaste Tree, Sarsaparilla, Ginseng, Damiana, Saw Palmetto, Oats, Shepherd's Purse, Black Willow and Golden Seal.

Herbs that may help boost testosterone levels in a male include Panax Ginseng, Gingko, Oat Seed, Gotu Kola, Sarsaparilla and Damiana. Key herbs for the prostate gland are Saw Palmetto and Pygeum, while Couch Grass, Cornsilk and Hydrangea may also assist if there is a genito-urinary infection.

Adrenal support can be invaluable, with remedies such as Ginseng and Licorice. Nervines are also important when formulating a remedy aimed at increasing the sperm count, as stress can affect the sperm count through its action on nutrient levels.

Where the problem has an immunological base, as in the production of antibodies, herbs used are Golden Rod, Garlic, Echinacea and White Willow Bark. Low motility levels are best treated with the tonic herbs, above, as well as herbs that treat the liver and enhance lymphatic drainage. Astragalus is an immune boosting herb, used in longer term, chronic conditions, and it can be useful in this situation.

If too much semen is a problem (and it can be as it dilutes the numbers of viable sperm), Black Willow may help to reduce it. Mucus solvent herbs such as Fenugreek, Golden Rod, Golden Seal and Garlic may be of assistance where the semen is too thick. For over acid semen, alkalizing remedies like Alfalfa and Red Cherries may help (with an alkalizing diet).

Homoeopathy

Homoeopathy, in the classic tradition, is prescribed according to the totality of symptoms, and as such is a constitutional remedy. The following remedies are ones that are commonly found to apply to infertile conditions, however what works for one person may not work for another. Homoeopathic remedies must be prescribed according to the individual and his or her symptoms.

Agnus castus:
Female – sterility with sadness, leucorrhea.
Male – impotence with no desire, swollen testicles.

Aletris farinosa:
Female – tendency to abort, uterine pain.

Apis:
Female – ovarian tumors, painful periods.

Argenicum metallicum:
Female – prolapse of uterus (pain).
Male – pain in testicles, seminal emissions.

Belladonna:
Female – dryness in vagina, temperature too high.
Male – testicles hot and drawn up, no interest in sex.

Borax:
Female – sterility with hot watery discharge.

Bufo:
Female – epilepsy with period, ulceration of cervix, polyps.
Male – impotence, involuntary emissions and spasms with coition.

Calcium carbonate:
Female – sterility in the overweight, uterine polyps.
Male – weakness and inability after coition.

Calendula:
Female – vaginal warts, uterine hypertrophy, heavy periods.

Conium maculation:
Female – painful periods, painful enlarged breasts, difficulty conceiving, inflammation of the ovary.
Male – increased desire, decreased power, feeble erection, swollen hard testicles.

Eupion:
Female – diseases in tubes, pain in right ovary, backache.

Gelsenium:
Female – painful light period.
Male – continual sweating in scrotum, discharge corrosive.

Graphites:
Female – nausea/ constipation with period, herpes.
Male – ejaculation too soon, sexual debility, herpes.

Hydrastis:
Female – cervical erosion, leucorrhoea, itchy vulva.
Male – yellow discharge.

Iodum:
Female – irregualr period, inflammation of ovary, lumps in breasts.
Male – testicles swollen, hard or atrophied.

Lecithin:
Female – ovarian insufficiency.
Male – no power, feeble erection.

Lycopodium:
Female – coition painful, period late and lasts too long, pain in right ovary.
Male – impotence, enlarged prostate, psoriasis.

Medorrhinum:
Female – sterility, intense itch in vulva, genital warts, fishy odour, offensive periods.
Male – impotence, enlarged prostate, frequent painful micturition.

Onosmodium:
Female – uterine pain, no desire for sex, period early and lasts too long, yellow discharge, sore breasts.
Male – impotence, deficient erections.

Oophorinum:
Female – ovarian cysts, acne, hot flushes.

Paladium:
Female – prolapse and/or retroversion of uterus.

Phosphoric acid:
Male – sexual weakness, emissions at night and when passing stools, herpes.

Phytolacca:
Female – mastitis, tumors of glands, ovarian pain.

Male – pain in penis and/or testicles.

Plumbum:
Female – tendency to abort, vagina hypersensitive.

Pulsatilla:
Female – weeps easily, period erratic, tires easily.

Male – inflammation or bruising to testes, prostatitis, yellow discharge.

Sabina:
Female – threatened miscarriage, breakthrough bleeding at ovulation.

Male – increased desire, painful erections.

Thuja:
Female – vaginal warts, polyps, pain in left ovary.

Male – pain in penis, warts, enlarged prostate.

Viburnum opulus:
Female – frequent early miscarriage, heavy period, congested ovaries.

Zinc metallicum:
Female – left ovarian pain, periods flow mainly at night.

Male – testicles drawn up, erections violent, skin conditions.

**Homeopathic remedies for specific conditions**

Infections – apis, belladonna, sulphur, silica, bryonia, lobelia, pulsatilla.

Cysts – apis, lycopodium, folliculum, thuja, conium, oophorinum, calcium carbonate and aurum metallicum.

Endometriosis – calcium carbonate, silicea, aurum metallicum, thuja, phosphorus, trillium, viburnum opulus and sabina.

Low immune function – cinchona, sulphur, belladonna, lycopodium.

**Flower Essences**

Bach Flower Remedies, and the Australian Bush Flower Essences, may both be used to enhance a couple’s ability to conceive. They work largely on the emotional plane, and may clear blockages that may have been inhibiting conception, even subconsciously.

Bach Flowers

Rock Rose For cases where hopelessness is prevalent, when the patient is very frightened. May be beneficial for use alongside medical
procedures that frighten the woman.
Aspen Specific for vague, unknown fears; when there is fear of something happening but without knowing what.
Gentian For being easily discouraged; progressing but easily put off.
Gorse For those who feel hopeless; may help when person feels that no more can be done for them; despair.
Crab Apple Cleanser; for those with a feeling of physical unhealthiness.
Oak For despondency though struggling on.

Australian Bush Flower Essences
Bottle Brush For major life changes.
Old Man Banksia For those who are weary of trying, who have had many disappointments, and are disheartened and frustrated.
She Oak Specific for female imbalances; useful when emotional reasons are blocking conception.
Sturt Desert Pea Especially helpful when there has been loss or miscarriage in the family; helps in the natural grieving process and to let go of pain.
Wisteria Can help the male become more balanced and aware of his dual nature; for tension about sex and effects of sexual abuse.
Dagger Hakea For resentment; bitterness towards family and close friends.
Kapok Bush For resignation, apathy, being easily discouraged.
Black Eyed Susan For stress, rushing, constant striving, impatience.

Hypnotherapy
Hypnotherapy may also be used as a source of overt or subliminal affirmation. Because a deep state of relaxation is necessary for hypnosis, this form of therapy will also carry the benefits of relieving tension and anxiety states. Hypnosis is useful when there has been trauma, as it helps the mind understand why the body is reacting in a certain way. Memories can become locked into the mind with all the conditions that were present when that memory was obtained. Hence experiencing similar conditions many years later and within an entirely different context may again trigger the feelings originally experienced. Hypnosis can enable a patient to clear their thoughts, recall the event, and understand what happened in a rational context, hence making it easier to overcome, or at least, come to terms with. Examples relevant to infertility may be a young child who felt unwanted and unworthy of being brought into the world by her parents, and who now subconsciously, is resisting bearing a child of her own; or a young woman who was sexually abused, and who deep down has deep fears about sex and her own sexuality.

Osteopathy/ Chiropractic/ Massage Therapy
Many forms of bodywork have been used as a part of a treatment regime for infertility. Shiatsu is particularly useful as it works on clearing the energy channels of the body (the Chi) by using acupressure points and meridians. Massage also helps to relieve stress, tension and anxiety, which all lead to a more conducive environment for conception to occur.

Osteopathy and chiropractic manipulation can relieve congestion, stimulate the body's own healing processes, restore nervous system health, as well as correct skeletal problems that may contribute to reproductive disorders.

Psycho-Emotional Considerations In The Treatment Of Infertility
The importance of counseling and emotional support cannot be overlooked in the treatment of infertility. It is a time where there may by much anger, grief, sorrow, frustration, resentment and hopelessness. Couples should be encouraged to find the appropriate support. There are also support groups and foundations set up to assist in this process.

In her book, Counseling for Fertility Problems, Jane Read highlights four areas of counseling that should be addressed – information counseling, to ensure couples are well informed and are making educated choices; implications counseling, to help them understand the outcomes of each particular action; support counseling, for emotional support in times of stress; and therapeutic counseling, to help people cope with the
consequences of infertility and treatment, and help them resolve the problems which these may cause. It also includes helping people adjust their expectations and accept their situation.

As well as providing support for the couple along the path of their therapeutic regime, a counselor will be trying to uncover any unconscious or repressed conflicts that may be impeding conception, and thus aiding pregnancy to occur.

The frustrations and pressures associated with infertility may also take their toll on the relationship between the man and woman trying to conceive. There may be blame, resentment, feelings of guilt, pressure and responsibility, or hostility. The man may feel excluded from the process, and this in itself may generate negative feelings. The importance of noting the differences in the way that men and women may respond to these pressures was summed up by Stanton, when she said:

“Men … often cope with their pain by keeping it to themselves and focusing on their wives. Women often cope by talking continually about their pain to their husbands, who, feeling powerless to take away the pain, sometimes stop listening. In order to get him involved, she escalates her complaints and he, in response, retreats even further and may even cease participating in the treatment process. In these cases, the woman feels abandoned when she needs her husband most, and he feels overwhelmed because she needs him so much.” xv

**Conclusion**

There are still other options for treating infertility. Acupuncture, Traditional Chinese Medicine and Ayurvedic medicine are just a few. Yoga is reported to have profound healing effects, either short term such as relieving period pain, or longer term, including improving reproductive and general health. Continual yoga practice can benefit fertility as well as calming the mind and spirit.

For the naturopathic doctor, a large part of his or her work will be based on understanding and trying to reduce the emotional effects of infertility on both partners. In this light an attitude of compassion, empathy and understanding is just as critical as the knowledge a practitioner imparts or the remedies he or she prescribes. There must be an environment of trust, confidentiality, honesty and openness surrounding the therapeutic relationship.

Realigning women with their femininity, encouraging acceptance of selves and their current situation can all help to restore the emotional balance within the woman, and may help to remove any blocks to conception. If appropriate, it may even be beneficial to refer patients to books such as Wise Woman Herbal for the Childbearing Year by Susan Weed or Hygieia by Jeannine Parvati to encourage a more holistic view of their sexuality, fertility, and the more spiritual aspects of their conception attempts. Patients should be given the most correct and up to date information available, they should have the right to make their own, individual, informed choices, and should not be judged should they decide to seek medical treatment. The naturopathic doctor serves only to assist the patient, to work with the patient for their highest good, and to facilitate the self-healing and self-regulating power of their own bodies.

**Appendix A – Food Sources Of Nutrients**

- **Iron**
  - Liver, oysters, lean meat, leafy green vegetables, grains, legumes, nuts.

- **Zinc**
  - Meat, milk, eggs, seafood, legumes.

- **Magnesium**
  - Nuts, soybeans, cocoa, seafood, grains, dried peas and beans.

- **Calcium**
  - Milk, cheese, green leafy veges, grains, egg yolks, legumes, nuts.

- **Manganese**
  - Whole grains, leafy greens, legumes, nuts, pineapples.

- **Chromium**
  - Whole wheat bread, wheat bran, rye bread, wheat germ,
beef, fresh chilli, green capsicum, potatoes, apple, parsnip, chicken, oysters.

Vitamin B1 Pork, beef, liver, grains, legumes, brewers yeast, molasses, fish, egg yolks, nuts.

Vitamin B2 Milk, liver, cereals, yeast, grains, molasses, egg yolks, nuts.

Vitamin B3 Meat, liver, peanuts, grains, wheat, corn, yeast.

Vitamin B5 Liver, egg yolks, milk, yeast, legumes, salmon.

Vitamin B6 Wheat, corn, meat, liver, yeast, molasses, green leafy vegetables.

Vitamin B12 Liver, meat, milk, egg, cheese, fish.

Folic acid Liver, green leafy vegetables, yeast, root vegetables, grains, oysters, salmon, milk.

Vitamin C Citrus fruit, tomatoes, cabbage, potatoes, green and yellow vegetables, berries, melons, peppers, pineapple, rose hips, alfalfa, cherries.

Vitamin A Yellow fruits and vegetables, dark green fruits and vegetables.

Vitamin E Whole grains, brown rice, wheatgerm and oil, sunflower seeds and oil, almonds, sesame oil, safflower oil, spinach, salmon.

Amino acids Animal proteins are a good source of amino acids. Fish is the best source as it has no saturated fats and is high in minerals and essential fatty acids.

Endnotes


15. Kiss, Szollosi and Viski, "Connection between male fertility and magnesium supply", Gyorgyi Medical University, Dept of Obstetrics and Gynecology, H-6725, Szeged, Semmelweis u.1., Hungary.


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