

Fertility, Yoga for

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Yoga Therapist Training Nov 2010 to April 2011

1. Description of Condition

Infertility is a condition in which a couple are unable to conceive, after frequent sexual intercourse, for 12 months or more. Infertility can be primary (occurring in couples who have not previously had a child) or secondary (occurring in couples who have conceived in the past) and can stem from factors related to the male partner, the female partner, or both.

Infertility is a significant public health problem with emotional, financial and demographic consequences. Finding out one is infertile is often tragic for a couple who wish to conceive, and accessing treatment to enhance fertility can be an expensive, stressful and sometimes futile endeavor.

At a population level, infertility can have a significant impact on total fertility rates. Decisions regarding the provision of fertility treatments therefore have national implications. In developed countries, treatment for infertility is usually regulated and may be included in medical benefits schemes (e.g. in Australia, couples using assisted reproductive technology (ART) are eligible for a Medicare rebate). This is not as yet the case in Canada.

The incidence of infertility varies around the world. Overall, some 84% of couples are estimated to conceive naturally within a year of attempting pregnancy, when having frequent sexual intercourse. Some 92% of all couples conceive naturally within a two year period. The remaining 8% are considered infertile.

At the time of the Royal Commission for New Reproductive Technologies (RCNRT) in 1990, there were no measures of the prevalence of infertility in Canada. Work carried out by the Commission suggested that there is a 7% prevalence rate of infertility when measuring the inability to conceive after two years. A 12-month measure suggested the rate was 8.5%. These rates convert into over a quarter of a million couples in Canada.

2. Causes of Condition

There are a range of factors which predispose individuals and couples to infertility.

Predisposing factors in both men and women include:

Age

In both men and women, the risk of infertility increases naturally with age. Despite scientific advances in Assistive Reproductive Therapy (ART), the chance of a successful outcome (either through natural or assisted techniques) declines with age, particularly in relation to the age of the female partner. After age 35, female fertility declines significantly, and the likelihood of conception is very slim in women over 40 years.

History of cancer treatment

Both chemotherapy and radiotherapy commonly lead to irreversible infertility.

History of sexually transmitted and other pelvic infections

Sexually transmitted infections are often associated with infection, inflammation and scarring.

Obesity

Fertility gradually declines as weight increases above normal levels (i.e. BMI > 30).

Exposure to pesticides

Men and women who are exposed to pesticides on a daily or weekly basis have a higher risk of lower fertility than non-exposed men and women.

Couples who have sex infrequently

Couples who are busy with work and other activities, or separated for periods of time, are less likely to conceive.

Some predisposing factors are specific to women and include:

Endometriosis

Endometriosis is a condition characterized by the growth of endometrial tissues outside the uterus.

Fibroids

Women with uterine fibroids are more likely to be infertile than women without uterine fibroids.

Polycystic ovarian syndrome (PCOS)

PCOS is a condition characterized by the growth of ovarian cysts.

Smoking

Women who smoke are almost twice as likely to be infertile as women who do not smoke.

Some predisposing factors are specific to men and include:

Cryptorchidism

Cryptorchidism (the failure of the testes to descend into the scrotum) affects around 3% of males at birth and 1% at one year of age.

Heat exposure

Testicular function is dependent on temperature. Exposure to high temperatures can lead to abnormalities in sperm. This can be as a result of disability such as spinal cord injuries.

Alcohol

Excessive alcohol intake reduces sperm quality.

Drugs

Some drugs reduce sperm quality, including anabolic steroids used by athletes; recreational drugs including marijuana, nicotine, heroin and cocaine; and antidepressants.

3. Signs and Symptoms of Infertility

Many couples who find themselves infertile after 12 months of trying to conceive will go on to conceive naturally. About half of the 16% of couples who fail to conceive after one year, conceive within the next two years. For the remaining 8% of couples who fail to conceive naturally within three years, there is a good chance of conception using Assistive Reproductive Therapy (ART). Some two-thirds of all couples using IVF – the most common ART treatment for infertility – successfully conceive within six treatment cycles.

Infertility will be diagnosed if the couple has failed to conceive after 12 months of frequent unprotected sex. It is also necessary to diagnose the underlying causes of infertility.

In the initial phase of assessment, couples will usually be asked a range of questions about their sexual and reproductive activity (past and present), their history of sexually transmitted and/or other reproductive tract infections, and their relationship problems and lifestyle habits (especially alcohol, tobacco and recreational drug use).

Women will be asked about the regularity of their menstrual cycles. Men will be asked whether they ever have difficulty maintaining an erection or ejaculating. A doctor is also likely to perform a physical examination of both partners, including an assessment of their BMI, physical

examination of the genital area, and assessment of abnormal hair growth (which indicates hormonal imbalance).

4. Common Medical Treatments for Condition

There are three types of medical treatment available for infertility (lifestyle, surgical and pharmacological), as well as numerous lifestyle modifications which can be made by couples who wish to continue to try and conceive naturally. The most suitable type of treatment will depend on the factors underlying the couple's infertility. Whatever the underlying factors, couples should be treated together, and are entitled to accurate and objective information to let them make an informed decision regarding their fertility treatment options. In addition, all couples should be offered counseling and psychosocial support or psycho-education before, during and after infertility treatment.

As first line treatment, there are a range of lifestyle changes which couples should make to increase their chance of conception. Surgical treatment may be provided for specific conditions, and surgical procedures can also be used to retrieve eggs or sperm for IVF or cryopreservation. Pharmacological treatments can be used in conjunction with normal, frequent intercourse or assisted reproductive technologies (ARTs). ART may be started after pharmacological treatment alone fails, or where the conditions underlying infertility indicate its necessity.

Lifestyle treatments

Many couples who fail to conceive after 12 or 24 months will conceive naturally after a longer period of time. When diagnostic tests do not identify any reproductive abnormalities which may be causing infertility, continuing attempts to conceive naturally are just as likely to result in conception as pharmacological treatment and intrauterine insemination.

There are a number of lifestyle factors which influence fertility:

- Frequency of coitus: Couples attempting to conceive should have sex every 2–3 days to maximize the chance of conception;
- Alcohol consumption: Men should not become intoxicated, as this will reduce sperm quality. Women should also avoid intoxication and limit alcohol consumption to once or twice per week (zero alcohol is ideal);

- Body mass index: Women with a BMI > 29 will take longer than average to conceive and should attempt to lose weight. Women with a BMI < 19 should gain weight to increase the chance of conception. Men with a BMI of > 29 are less fertile;
- Underwear: Men should not wear tight underwear as this increases heat to the testicles and can inhibit sperm production;
- Hot baths: Men should not take hot baths as this increases heat to the testicles and can inhibit sperm production;
- Smoking: Cigarette smoking should be avoided by both men and women trying to conceive;
- Regular exercise: 20–30 minutes of exercise per day will help maintain normal BMI and fertility;
- Folic acid supplements: Taken by women.

Surgical treatment

Surgical treatments for women may include laparoscopic ablation and drainage, tubal surgery, ovarian drilling and surgical oocyte retrieval. Surgical treatments for men may include surgical correction of epididymal blockage and testicular biopsy.

Pharmacological treatment

Pharmacological treatments for women may include clomiphene citrate or tamoxifen and combined metformin (an insulin sensitizing agent) treatment. Pharmacological treatments for men may include gonadotrophin drugs and PDE5 inhibitors

Assisted reproductive technology (ART)

Assisted reproduction refers to all procedures other than sexual intercourse which are performed with the aim of conception. There are a range of ARTs for the treatment of infertility, varying considerably in terms of complexity, cost and invasiveness.

The most appropriate treatment is determined by the factors affecting fertility, the couple's cultural beliefs, personal preferences and financial circumstances.

ART can be a lengthy, costly and emotionally draining process that does not always result in conception or live birth. This should not discourage couples seeking treatment, but they should have realistic expectations regarding their likely treatment outcomes. At a minimum, all couples will be informed of the likelihood of achieving pregnancy and live birth through natural conception and ART, the risks involved in ART, including long and short term risks for the conceiving couple and best available information regarding the risk of health problems in the individuals born through ART, the options for gamete retrieval and storage, the cost of various procedures and how confidentiality and privacy will be ensured and the potential need for future follow up.

ARTs for women may include induced ovulation and hyper-ovarian stimulation, oocyte retrieval, in vitro fertilization and embryo transfer, donor IVF and gestational surrogacy IVF. ARTs for men may include sperm retrieval and intracytoplasmic sperm injection

Infertility in a couple can be stressful and cause problems in the relationship and the individuals. The process of being treated and awaiting the results of treatment can also be extremely draining. Treatment is often drawn out, time consuming and costly. Treatment failure can result in grief, anger and depression. Counseling and psycho-education is therefore recommended for couples who appear distressed about their infertility, or who wish to further discuss their treatment options. For couples who decide to use ART in Australia, counseling is mandatory before starting treatment.

Counseling should be considered by couples at all stages of ART treatment. Even if a couple are not considering using ART, counseling or psycho-education may help them cope with emotional or relationship problems associated with their infertility. Counseling will:

- Emphasize the failure rate of treatment and encourage couples to consider other options should their treatment fail (e.g. ART if pharmacological treatment fails, adoption if ART fails);
- For men, reinforce the difference between infertility and virility to attempt to overcome male perceptions that their masculinity is threatened;
- Make couples aware of support groups which exist

5. Yoga Therapy and Holistic View

Medical approaches to treating infertility are very effective for many but not all women. Increasingly for some women due to choice, availability, or the associated costs medical intervention is not a realistic option. And for many it simply makes sense to explore all possible means - both holistic and conventional.

Holistic fertility offers an entirely different approach, one in which individuals actively participate making lifestyle changes and using traditional treatments which have been shown to help women become pregnant. It combines working with traditional approaches from yoga, oriental medicine as well as nutrition and the focus is upon achieving balance within the whole body and mind, to prepare for conception.

More and more women today are turning to holistic techniques to increase their odds of conception and importantly to cope with the stresses of trying to conceive. Increasingly there is evidence of the efficacy of holistic approaches and some medical doctors are recommending women introduce yoga, relaxation, and nutrition into their fertility treatment plans, as well as recommending women try acupuncture, either in addition to assisted reproduction or alone.

Taking a holistic approach to improving fertility can be effective on its own or as a support for medical fertility treatment. This approach is based on the understanding that we all have five bodies that together make up our whole being: a physical body made of flesh and blood, an energy body alive with life-energy (called “prana” in yoga and “qi” in Oriental Medicine), a body made up of our thoughts and emotions, a body of wisdom and intuition, and a body that is made of pure joy. These bodies are called koshas and they fit together in a way that’s analogous to lampshades around a light bulb. As we create greater awareness and “clear away” blockages in each of the shades, our inner light becomes brighter, resulting in a healthier, more fulfilling and peaceful existence.

An holistic approach may begin with practices like yoga, nutrition and acupuncture that help to calm, nourish and detoxify the physical body in preparation for conception. Those with infertility concerns also need to strengthening the letting go muscle and tackle the mental-emotional issues of the infertility process. Often women experience a spiritual crises when they’re trying to

conceive. A holistic approach, while based on traditional healing is supported by an increasing body of clinical research.

Widespread clinical data supports the belief that women using Assisted Reproductive Technologies (ART) have levels of stress and anxiety that are higher than their fertile counterparts. Infertility, which affects nearly one in eight couples of childbearing age worldwide, is first and foremost an incredibly stressful experience.

In a 1993 study published in *Fertility and Sterility*, researcher Dr. Alice Domar found that women undergoing In Vitro Fertilization (IVF) had depression and anxiety levels equal to women with cancer and AIDS. While it is yet unclear whether stress causes infertility, it is clear that infertility causes stress – marital, financial and personal. Stress in turn is associated with behaviors that are detrimental to fertility including alcohol consumption, smoking, poor sleep and overweight/stress eating. It stands to reason that interventions that decrease stress would increase a woman's chances of conception, and in fact that appears to be the case. Subsequent studies by Dr. Domar showed that women who participated in mind-body interventions that included yoga, meditation and visualization, and cognitive and behavioral therapy had higher pregnancy rates than control subjects.

Yoga

The stretching and poses that most of us recognize as “yoga” is actually the tip of an enormous wealth of teaching first revealed by ancient sages many thousands of years ago. The yoga postures, called asana, were initially practiced by yogis in caves with the aim of making their bodies strong and supple enough to remain in seated meditation for extended periods of time. Along the way, however, the same yogis began to notice the health benefits of practicing different poses and a new practice of yoga chikitsa, or yoga therapeutics, evolved.

Yoga poses do their work by stretching muscles and realigning the body. In the case of fertility, yoga poses that stretch and open tight pelvic musculature increase blood flow into the pelvic region. And better blood flow nourishes the ovaries and uterus.

In addition to the physical stimulation provided by yoga asana, much of yoga's beneficial effect on fertility comes from the practice of deep, mindful breathing that is an integral part of any yoga regimen.

Yoga breathing practices serve to positively impact hormonal balance by decreasing levels of the "fight or flight" hormone cortisol, which is known to interfere with the proper functioning of the reproductive system.

Oriental Medicine

The practice of Oriental Medicine includes many modalities, the best-known of which are acupuncture, Chinese Herbal Therapy and exercises like T'ai Chi and Qi Gong. The goal of Oriental Medicine is to cultivate balance in body and mind. When the body is in balance, it functions well. Sleep is restful, our immune function is strong and we are relaxed in mind and spirit. In the context of Oriental Medicine, infertility is viewed as a symptom of imbalance. Although it has been used for thousands of years to increase fertility in Eastern countries, Oriental Medicine crashed on the fertility scene in 2002 when a group of German researchers demonstrated that an acupuncture protocol designed to calm and increase blood flow to the uterus raised IVF success rates by 61% when administered before and after IVF embryo transfer. Suddenly, this ancient technique became a front-line treatment for women who were stressed-out and looking for any way they could improve their odds of having a baby. Acupuncture is the insertion of very fine needles into specific points on the body and is analogous to getting the kinks out of a garden hose to free the flow of water. The needles are placed at specific points along energy paths, called meridians, to bolster insufficient or dispel excess energy that is causing a root imbalance.

One of the biggest strengths of Oriental Medicine is that it treats each patient individually. A skilled practitioner uses a range of diagnostic tools including pulse diagnosis, tongue examination and extensive health history to determine an individual's specific pattern of disharmony. And treatment is as individual as the diagnosis. In this system, the same disease can require very different treatments plans. Beyond the study above, Oriental Medicine has been clinically proven to decrease miscarriage rates, improve the quality of the uterine lining and improve sperm quality. The use of Chinese herbs in the treatment of infertility can also be very

helpful when a woman is trying to conceive, but herbal therapy is not recommended during medical fertility cycles and should only be administered by a skilled Oriental Medicine practitioner.

Nutrition

According to the American Society of Reproductive Medicine, about 12% of infertility cases are due to over- or underweight, and of these, nearly 75% would resolve with dietary intervention. In the recent book *The Fertility Diet*, Harvard researcher Jorge Chavarro shares data from the Nurses' Study II which found higher consumption of monounsaturated rather than trans fats, vegetable rather than animal protein sources, low glycemic carbohydrates, high fat dairy, multivitamins, and iron from plants and supplements to be associated with lower rates of ovulatory infertility. Like yoga and Oriental Medicine, fertility nutrition is not a one-size-fits-all program.

Mind-Body Practices

Perhaps the most important part of any holistic fertility program (and life, for that matter) is learning to cope with the constant anxiety and stress that comes with the territory.

When a woman's belief of complete control over her destiny starts to falter, she begins to feel broken – first physically and then mentally and spiritually. Patterns of negative thoughts harden into self-defeating mantras of “I'm never going to get pregnant.” Letting go – through deeper yoga techniques of meditation, ritual and prayer allow a woman to connect with something greater than her self and create healing through recognizing her own innate fertility.

Yoga therapy for fertility may focus on the centers of the body or “chakras” associated with fertility and reproduction. In particular it uses specially designed yoga poses that open the pelvis and stimulate the second or Swadhisthana chakra located just below the naval. This vital centre has long been associated with fertility and creativity. But more than just improving blood flow to the reproductive organs, yoga for fertility helps relax the body and restore physical and emotional balance.

6. Yogic Remedies

The medical community has conducted only a few studies involving the ideal mind-body connection for conception. The majority of results indicate that many couples simply need to relax. Practicing yoga postures for infertility, while perhaps not an absolute guarantee of conception, can at the very least promote a refreshed mind and spirit while you restore the body in preparation for its new journey. The following are examples of some yogic remedies.

Mediation

Mama Meditation:

Relax in a comfortable seated position or in your favorite yoga pose. Take your time letting your body fully relax. Tune into the waves of breath that enter and leave the body. Let them wash through you bringing you to an even deeper state of calmness. As you drift into a very open and calm place, allow your heart to open and connect with your vision for parenthood. Visualize your child looking into your eyes. Breathe. When you notice you have wandered into habitual stressful thought patterns, bring yourself back to a simple and comfortable vision of being with your child. Continue to breathe freely. When your mind interrupts your vision of parenthood with thoughts of worry and stress, be vigilant about coming back to a vision or feeling of your child. Do not be afraid to ask for directions. Listen for answers.

Pranayama

Sending Breath

Bring your focus to your reproductive system. As you inhale calmly direct the breath to the ovaries, fallopian tubes, uterus and cervix (lower uterus). As you exhale, relax these areas even more deeply and feel life; energy, blood and essential nutrients circulating through your reproductive organs. You may visualize your breath as being a color if that is helpful. Other images may include: golden rays of sunlight, white light, or cool blue water. You will naturally resonate with an image that is most healing for you. As you continue to breathe, send your best intentions to your organs and be open to receiving any information your organs may want to share with you.

Sending breath can be practiced during IUI or IVF in-office procedures such as insemination, egg retrieval and embryo transfer. Not only can sending breath help your mind remain calm and focused, it can relax the ovaries and uterus making procedures more efficient.

Asana

Yoga can help men and women dealing with infertility to reconnect with their inner wisdom and intuition. Classes provide a safe place to share stories, wisdom, experiences, laughter and tears. Learning self-love and acceptance helps overcome feelings of isolation and inadequacy. Simply realizing that there are other couples in similar circumstances may make the yogi feel less alone.

Although participating in a Yoga for Fertility class is ideal, there are a few Yoga for Fertility DVD's available, as well as audio iPod downloads of complete classes to help guide you through a home practice. If a Yoga for Fertility class is not an option a restorative yoga class would be a good alternative.

Begin with an Intention

- Repeat a phrase that awakens a peaceful spirit. This mantra helps you declare your purpose without fear or negativity.
- Envision yourself holding your healthy newborn. Return to that image if other thoughts invade your session.
- Practice a short meditation at the beginning of the day, and perhaps again before intercourse or fertility treatments.

Fertility Poses

Yoga postures for infertility are best described as fertility poses because they spark hormone production, promote full body restoration, and increase circulation to reproductive organs to encourage responsiveness.

Start by stimulating the hormones with poses such as:

- Supported Headstand
- Bridge Pose

Rejuvenate the body through the following postures:

- Wide-Angle Seated Forward Bend
- Child's Pose
- Seated Forward Bend
- Bound Angle Pose or Cobbler's Pose

Simultaneously stimulate and relax the abdominal and reproductive areas with these poses:

- Reclining Bound Angle Pose
- Lotus Pose
- Reclining Hero Pose

Yogis familiar with fertility yoga also suggest doing the Legs-Up-The-Wall pose after coitus for better sperm penetration of the uterus.

Some clinical studies attest to a greater conception rate among people who attend fertility retreats. The atmosphere, rich in partner yoga programs, sexuality classes, fertility education, and healthful eating, promotes incredible relaxation and ease of process.

The following yoga poses are some of the most popular yogic asana remedies for infertility.

Legs-Up-The-Wall Pose

This pose will increase the blood supply to the pelvic area, calm the mind, and relieve tired legs and feet. If you concentrate on breathing, using your diaphragm, it will help you soften the muscles of the vaginal wall and pelvic area. Imagine a softness in the uterus and ovaries allowing the flow of blood and energy without restriction or tension.

Preparation: Lie on your side with your buttocks close to or against the wall. As you slowly roll over onto your back gently lift one leg at a time and place it against the wall. Once you are on your back, rest the legs against the wall. Stay in this pose for 5-15 minutes as you concentrate on your breathing.

Modifications: This pose is ideally performed using a bolster or blanket under the pelvis. The blanket or bolster should lift the pelvis approximately 2-3 inches depending on your level of comfort. *DO NOT use a bolster with this pose during menstruation.

Option: Move the legs away from each other creating a mild stretch for the inner thigh.

To come out of the pose gently bend your knees and roll over on to your side. Remove your pelvis from the blanket or bolster and remain on your side for 10 to 15 breaths.

Inner Reflection. Focus on your desire to have a baby. Begin to invite your baby to come into your life. Change your perspective: you are no longer “waiting” or “trying” you are “open to conceive” or “inviting your baby”.

Child’s Pose

This pose calms the nervous system and helps reduce blood pressure and balance the endocrine system. It is a resting pose that relaxes and calms the mind and body while lengthening your spine and reducing tension in your back and neck. In relation to fertility, I recommend performing child’s pose with your knees apart; this allows space for the belly to drop toward the floor with each inhale. Imagine a softness in the uterus and ovaries allowing the flow of blood and energy without restriction or tension.

Preparation: Kneel on the floor with your knees slightly wider than your hip joints. Bend at the hip as you bring your upper body forward. Reach your arms forward and place your hands and head on the floor.

Option: Turtle Pose - Place your hands beside your feet or ankles creating more security and safety as you settle into your “shell” for protection.

Inner Reflection. Bring your awareness to your thoughts about yourself and your body. Notice whether your thoughts are positive or negative. Move your focus to more positive thoughts and perhaps repeat one the following affirmations: “I love my body and trust its wisdom,” “I am whole and complete,” “I accept my body,” “I forgive myself,” “I am fertile.”

The journey through infertility doesn't need to feel so isolating and all-consuming. Mind-body techniques such as yoga and meditation as well as holistic nutrition, naturopathic medicine and conventional western science can help men and women dealing with infertility to learn to listen to their own divine inner wisdom and guidance. As they begin to make choices and live from the heart they will find a renewed sense of control and connection to self and each other. And hopefully welcome a baby into their arms!

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