

YOGA - A THERAPEUTIC ADJUVANT IN FEMALE INFERTILITY**Dr.Vijay kumar¹, Awadhesh Kumar Pandey*², Pathak Meenakshi S.N.³,****Dr.Neeru Nathani⁴**

¹Associate Professor, Department of Swasthavritta, Patanjali Bharteeya Ayurvedigyan Avum Anusandhan, Sansthan, Haridwar, U.K, India.

²Assistant Professor, Department of Shalya Tantra, Patanjali Bharteeya Ayurvedigyan Avum Anusandhan Sansthan Haridwar Utrakhand.

³Assistant Professor, Department of Prasuti Tantra, Patanjali Bharteeya Ayurvedigyan Avum Anusandhan Sansthan Haridwar Utrakhand.

⁴Assistant Professor, Department of Swasthavritta, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi.

Article Received on
10 Jan 2014,

Revised on 05 Feb 2015,
Accepted on 01 Mar 2015

Correspondence for*Author****Dr. Awadhesh Kumar
Pandey**

Assistant Professor,
Department of Shalya
Tantra, Patanjali
Bharteeya Ayurvedigyan
Avum Anusandhan
Sansthan Haridwar
Utrakhand.

ABSTRACT

The rate of fertility is seen lower these days because of the sedentary lifestyle of women at home or in office, lot of stress, smoking, intake of certain medicines, deficiency of certain nutrients in body. Relaxation of mind is given importance because stress is considered one of the most important factors of infertility. During such kind of situations any natural solution to solve this problem than the regular infertility treatments is essential. Among the natural treatments, yogic practices are important for treating infertility. It increases the chances of conceiving and is also inexpensive, natural, and safe. Yogic practices for infertility treatment involves poses that increase the fertility rate. One of the best ways to de-stress is through asanas. Yoga is a great form of exercise to do when you are trying to conceive, as it is gentle on the joints and promotes healthy blood flow while stretching and toning the body. Trying to conceive naturally,

especially at a more 'advanced' age, can prove difficult these days. More and more women are turning to in vitro fertilization (IVF) in order to have a child. Yoga poses can encourage the flow of blood to the groin, thereby stimulating reproductive organs, as well as releasing any muscle tension. The best kind of yoga to do for fertility is a gentler, mindful sort, not the very heated yoga. The slow, deep, yogic breathing focuses the mind, allowing you to concentrate on holding the poses (also called asanas). While holding a yoga pose, it is beneficial to imagine the flow of vital energy to the areas that most needs it, ie in this

instance the reproductive organs. Yogic practices also encompasses the all-important relaxation and short meditation at the end .This is extremely beneficial for stress relief, as it allows the body and mind to be in total relaxation, even for just a few minutes. Yogic practices is proven to radically decrease stress levels in men and women.

KEYWORDS: Asana, Hormonal Imbalance, Infertility, Pranayama, Stress, Yoga.

INTRODUCTION

Pregnancy is distinguished by a multitude of physiological and endocrine adjustments directed towards the creation of an optimal environment for the fetus ¹. Every organ system in the expectant mother as well as her personality are intimately involved in this complex process.

The function of yoga has traditionally been to cut through cultural dependence and bring the individual in touch with his/her own powers. Yoga is about self help. It provides an excellent preparation for conception, encouraging a positive and healthy attitude.^[2] There are some Yogic postures that strengthen the uterus, improving ones chances of a rapid and uncomplicated conception. Yoga Nidra can be an adjunct for the other yogic practices.^[3] It is a useful tool to recuperate from exhaustions, to manage stressful situations of all kinds.

Practicing yoga regularly helps to improve fertility as many asanas cause toning of reproductive organs like uterus and ovaries. It is also beneficial for reducing psychological stress and improving overall health.^[4]

Benefits of yoga have been observed by many people today and in almost all aspects of life. Yoga for fertility helps the body to get prepared for successful conception. It helps both men and women who are trying to conceive. The basic principles of yoga are introduced and some specific postures are added that helps rejuvenate the reproductive system. Mediation can reduce blood pressure, pain response, stress, addiction, and even help cognitive function.^[5]

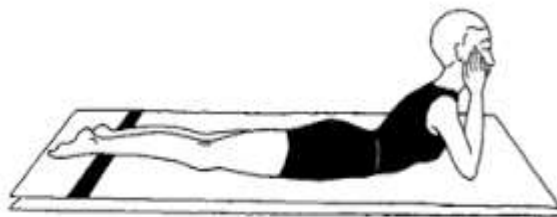
In this way the possibilities of conceiving increases.

Yoga Postures to cope with infertility^[6,7,8]

- Makarasana
- Bhujangasana
- Dharmikasana

- Paschimottanasana
- Halasana
- Bhadrasana
- Ardha-Matsyendrasana
- Shavasana

(A) Makarasana



Steps to do Makarasana

Lie down on the floor on your stomach with your upper limb flexed at elbow joint. Place the palms below the chin in a relaxed way and close your eyes. Stretch the legs as far as possible. The toes should point outwards. Relax the whole body. Breathe normally and slowly. Feel the whole body touching the ground and the deep relaxation in all your muscles. Relax in this posture for 2 – 5 minutes.

Benefits of Makarasana

This asana can be done as a relaxation pose between other asanas or it can be relaxation method when you are tired. Person can be in this asana for a prolonged period of time if tired after a workout. It gives deep relaxation to the shoulders and the spine.

(B) Bhujangasana



Bhujangasana can be significantly useful at relieving discomfort in the muscles of the back, neck and abdomen. Furthermore, a little time spent in Bhujangasana can go a long way towards alleviating stress, anxiety and even depression.

In Sanskrit, “bhujanga” means serpent or snake and “asana” means pose; hence the English, cobra pose. This invigorating backbend was named such because Bhujangasana reflects the posture of a cobra that has its hood raised.

Steps to do Bhujangasana

Start by lying flat on your stomach on a comfortable, level surface, preferably a yoga mat. Make sure that feet are together with the tops of them against the floor. Spread hands on the floor under shoulders and hang elbows against your rib cage. Close eyes and inhale slowly, deeply. Feel the stability in the pelvis, thighs and tops of the feet. Imagine them rooted to the ground throughout Bhujangasana. Exhale gradually before opening your eyes. Continue breathing slow and deep.

As you inhale, steadily straighten your arms and lift your chest from the floor. Be mindful as you extend your arms. Do not fully straighten them if this feels uncomfortable. Rather, extend through and deepen your stretch to create a graceful, even arc in your back. Use the stretch in your legs and back, instead of exerting yourself to gain height and risk overarched the spine. Press your tailbone toward your pubis and lift your pubis toward your navel, narrowing your hips. Keep your shoulders broad, but relaxed, with the blades low on your back.

Lift from the top of your sternum, but avoid pushing the front of your ribs forward. Rather, puff your side ribs forward and keep your lower back relaxed. Try to distribute the stretch evenly along your spine. Breathe calmly and hold here for 5 to 10 breaths. As you exhale, gently release your body back to the floor.

Benefits of Bhujangasana

Improves and deepens breathing. It tones the ovary and uterus. Improves menstrual irregularities and other gynaecological disorders. Stretches muscles in the shoulders, chest and abdominals. Decreases stiffness of the lower back and increases flexibility. Stimulates organs in the abdomen like liver and kidneys. Relieves stress and fatigue. Improves circulation of blood and oxygen, especially throughout the spinal and pelvic regions. Improves digestion and strengthens the spine.

(C) Dharmikasana

Dharmika asana is known as the "devotional pose." It is also sometimes referred to as shashanga asana. Shasha is the Sanskrit word that means "crouch," and anga means "limb." Therefore this can also be called the "crouched (with limbs) pose."

Steps to do Dharmikasana

From the starting position of vajra asana, exhale and slowly lower your forehead down to the floor. Draw your nose into the space between your knees, stretching the back of the neck so that the point of contact of your head with the floor is around the hair-line (or where a normal hair-line should be) or slightly higher. Relax your arms to the sides and place your palms on top of the soles of your feet. To come out of the pose, first straighten your head and neck, and then slowly return to vajrasana as you inhale.

Benefits of Dharmikasana

Dharmika asana is a great position for the relief of tension. It can be used alone, when you need to relax. It is a good practice to follow any strenuous movements or yogic practices. The spinal cord is drawn under tension within this position, thereby relieving pressure of the cerebral spinal fluid which surrounds the spinal cord and brain, leading to a calming of the nervous system and a very relaxed state.

(D) Paschimottanasana

There are many benefits of this posture, the main and most obvious one is to provide a complete stretch of the entire backside of the body from the back of the head through the heels. Immediately following this is the counter stretch, the inclined plane.

Steps to do Paschimottanasana

Paschimottanasana begins by coming up to a seated position. Sit up straight with your legs together, stretched out in front of you. Point both feet straight up towards the ceiling. Person is sitting straight up on the pelvis with your spine straight. Inhale and stretch your arms up over your head. Following the direction of your hands, at the same time lengthen the entire spine upwards. Exhale and bend forward from the hips keeping your spine as elongated as possible and reaching towards your feet with your hands as you come down. For this posture, try to avoid a lot of curvature in middle part of the spine. It is best to keep the back more straight, although not rigid, and bend from the hip area. Be sure to keep the feet pointed straight up towards the ceiling and together. Once in position, you can gently pull with the arms on the feet or legs, stretching the head more towards the feet and giving an additional stretch to the spine and backs of the legs. As you continue to hold the posture, relax as much as possible, especially in the shoulders and hips. With each exhale let your breath do the work ideally the abdomen should fall closer toward the thighs, the chest toward the knees and the head towards the feet. Hold the asana for 30 seconds at first and work up to 5 minutes or more.

Benefits of Paschimottanasana

Stretches the hamstrings on the back of the legs and increase flexibility in the hip joint. Stretches and lengthens the entire spine. Tones and Massages the internal organs of abdominal and pelvic region especially the urogenital systems and adrenal glands. It removes excess weight in pabdomen and pelvic region thereby combating obesity. Relieves digestive problems such as constipation. Invigorates the nervous system.

(E) Halasana



This yoga pose gets its name from the plow – a popular farming tool commonly used in Indian agriculture to prepare the soil for sowing crops. Like its namesake, this pose prepares the ‘field’ of the body and mind for deep rejuvenation.

Steps to do Halasana

Lie on your back with your arms beside you, palms downwards. As you inhale, use your abdominal muscles to lift your feet off the floor, raising your legs vertically at a 90 degree angle. Continue to breathe normally and supporting your hips and back with your hands, lift them off the ground. Allow your legs to sweep in a 180 degree angle over your head till your toes touch the floor. Your back should be perpendicular to the floor. This may be difficult initially, but make an attempt for a few seconds. Do this slowly and gently. Ensure that you do not strain your neck or push it into the ground. Hold this pose and let your body relax more and more with each steady breath. After about a minute (a few seconds for beginners) of resting in this pose, you may gently bring your legs down on exhalation. Tip: Avoid jerking your body, while bringing the legs down.

Benefits of Halasana

Strengthens and opens up the neck, shoulders, abs and back muscles. Calms the nervous system, reduces stress and fatigue. Stimulates the thyroid gland, strengthens the immune system. Promote the production of insulin from pancreas and improve liver and kidney function.

(F) Bhadrasana



Steps to do Bhadrasana

Sit in Vajrasana. Keep the head, neck and back upright straight. If there is knee pain, use a pillow under the knee to ease the pose and sit comfortably. If there is ankle pain, use a pillow

under the ankle and sit comfortably. That will help sitting in the posture more time. Separate the knees as far as possible, while keeping the toes in contact with the floor. Separate the feet just enough to allow the buttocks and perineum to rest flat on the floor between the feet. To sit comfortably, a folded blanket may be placed under the buttocks. The buttocks rest firmly on the ground in order to stimulate Mooladhara chakra (base energy wheel point). Try to separate the knees further, but do not strain. Place the hands on the knees, palms downward.

Benefits of Bhadrasana

It is an excellent meditation pose beneficial for the reproductive organs. It alters the flow of blood and nervous impulse in the pelvic region and strengthens the pelvic muscles. It alleviates menstrual disorders. A good pose for spiritual aspirants as it has a stimulating influence on Mooladhara chakra. Develops the strength of the back by ensuring it is kept upright. Improves digestion and alleviates ailments of the stomach such as constipation, hyperacidity and peptic ulcer.

(G) Ardha matsyendrasana



Steps to do Ardha Matsyendrasana

Sit up with the legs stretched out straight in front of you, keeping the feet together and the spine erect. Bend the left leg and place the heel of the left foot beside the right hip (optionally, you can keep the left leg straight). Take the right leg over the left knee. Place the left hand on the right knee and the right hand behind you. Twist the waist, shoulders and neck in this sequence to the right and look over the right shoulder. Keep the spine erect. Hold and continue with gentle long breaths in and out. Breathing out, release the right hand first (the hand behind you), release the waist, then chest, lastly the neck and sit up relaxed yet straight. Repeat to the other side. Breathing out, come back to the front and relax.

Benefits of Ardha Matsyendrasana

Makes spine supple. Increases the elasticity of the spine. Opens the chest and increases the oxygen supply to the lungs, thereby improving the lung capacity. This asana might give stimulation to the reproductive organs through the abdominal twist.

(H) Shavasana**Steps to do Shavasana**

Come to lie down on the back. Let the feet fall out to either side. Bring the arms alongside the body, but slightly separated from the body, and turn the palms to face upwards. Relax the whole body, including the face. Let the body feel heavy. Let the breath occur naturally. To come out, first begin to deepen the breath. Then move the fingers and toes, awakening the body. Bring the knees into the chest and roll over to one side, keep the eyes closed. Slowly bring yourself back up into a sitting position.

Benefits of Shavasana

This asana relaxes the whole psychophysiological system. It is practiced particularly after dynamic exercises, when person is physically and mentally tired.

CONCLUSION

These asanas altogether can be fruitful in a couple trying to conceive or in females suffering from unexplained infertility. The following benefits are seen in females trying to conceive:

Combating stress

Yoga helps the female to relax her body and calm her mind and slow down breath. The nervous system which is aided by the breath helps lower stress hormones like cortisol.^[9] This is potentially beneficial for fertility and helps sleep better at night. This can be achieved by Shavasana, Dharmikasana and Makarasana.

Increases blood flow to the internal reproductive organs.

The asanas like Bhujangasana, Paschimottanasana and Bhadrasana, there is increased blood flow in the pelvic region thereby improving infertility caused by tubal blockage, endometriosis and other inflammatory disorders. These yogic practices might also increase success rate of in vitro fertilization.^[10]

Empower the immune system

Pranayama (breath control) and Yoganidra are tools for stress-reducing activities that produce positive changes in the immune system. Natural rhythms through yoga and breathing can bring a deep sense of peace and connection to our own innate healing capacity. This relaxation might help in relieving stress caused by inability to conceive.

Regulation of ovarian functions

Practicing certain yoga poses increase blood circulation to the pelvis and near the ovaries as mentioned previously. When you invert the body in yoga, it increases blood flow to the reproductive organs which means increased oxygen capacity and more nutrients to the reproductive organs. This might improve hormonal imbalance caused by ovarian dysfunction.^[11]

Reduction in fertility drug side effects

The females undergoing several rounds of fertility drugs as a part of treatment may develop drug side effects. When the stress response balance turns off, stress hormone levels fall and the body quickly recovers and returns to balance.^[12]

IVF and IUI success rates

Yoga can control chronic stress by eliciting a relaxation response in body by counteracting harmful stress hormones. These Yogic practices can significantly increase conception rates in women. It's important to keep in mind that living a fertile life is more than just getting ready for pregnancy or parenthood.^[13]

REFERENCE

1. Stewen .G. Cabbe ,Obstetrics Normal and Problem pregnancies ,ed. 5, Ch 3,page 56
2. Sophy Hoare ,Yoga and Pregnancy –Ch. 3 pg. 12
3. Swami Satyanand Saraswati ,Yoga Nidra ,Yoga Publication, Trust Munger, Bihar India, 2.

4. Moller A, Fallstrom K. Psychological consequences of infertility: a longitudinal study. *J Psychosom Obstet Gynaecology*, 1991; 12: 27–45.
5. Connolly KJ, Edelmann RJ, Cooke ID, Robson J. The impact of infertility on psychological functioning. *J Psychosom Res*, 1992; 36: 459–68.
6. Swami Satyananda Saraswati, Asana Pranayama Mudra Bandha, Yoga Publication, Trust Munger, Bihar India, 112.
7. Swami Satyananda Saraswati, Asana Pranayama Mudra Bandha, Yoga Publication, Trust Munger, Bihar India .pg.114.
8. Swami Satyananda Saraswati, Asana Pranayama Mudra Bandha, Yoga Publication, Trust Munger, Bihar India .pg.118.
9. Domar AD, Zuttermeister PC, Friedman R. The psychological impact of infertility: a comparison with patients with other medical conditions. *J Psychosom Obstet Gynaecol*, 1993; 14: 45–52.
10. Domar AD, Rooney KL, Wiegand B, et al. Impact of a group mind/body intervention on pregnancy rates in IVF patients. *Fertil Steril*, 2011; 95: 2269–73.
11. Campagne DM. Should fertilization treatment start with reducing stress? *Hum Reprod*, 2006; 21: 1651–8.
12. Boivin J, Griffiths E, Venetis CA. Emotional distress in infertile women and failure of assisted reproductive technologies: meta analysis of prospective psychosocial studies. *BMJ*, 2011; 342: d223.
13. Pasch LA, Gregorich SE, Katz PK, et al. Psychological distress and in vitro fertilization outcome. *Fertil Steril*, 2012; 98: 459–64.