



Exploring the Concepts and Benefits of Yoga in Pregnancy: An Overview

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ABSTRACT

Motherhood is the most gracious phase in every woman's life. It brings about physical, physiological, emotional changes to the body. In this phase the body needs extra care for a pregnant woman herself, developing fetus, and birth outcomes as well. Although it is a beautiful process, pregnancy may have numerous complications like intrauterine growth retardation, pregnancy induced hypertension and pre-term delivery etc. that can affect both the mother and fetus. *Yoga* comprises stretching exercises, physical postures, breathing techniques and meditation which minimizes the pregnancy complication provides a great range of activity and benefits to mother, unborn child in various ways. A regular *yoga* practice during pregnancy can improve birth weight, reduces pre-term labor, decreased IUGR with less or no complications resulting in healthy pregnancy. This paper reviews about the types of *Yogasana*, *Pranayama*, and *Mudra* that are beneficial for women in all the stages of pregnancy.

Key Words *Pregnancy, Complications, Yoga, Pranayama, Mudra*

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INTRODUCTION

Today popularity of *Yoga* is increasing day by day and people are embracing towards *Yoga* as compared to the past. The concepts and practices of *yoga* originated in India about 2500 years ago. *Yoga* is an ancient mind-body practice and used for variety of immunological, neuromuscular, psychological, and pain conditions^{1, 2}. The word *yoga* comes from the Sanskrit term "yug" and directly translates as "to unite", it means to work

towards a unified experience of the self and improved health³. *Yoga* has potential to create balance along with emotional, mental, physical and spiritual dimensions. *Yoga* includes physical postures (*asana*), breathing exercises (*pranayama*), concentration (*dharana*) and meditation (*dhyana*), and self-awareness practice. Motherhood is woman's ordained duty. This is not merely a physical state, but a divine state. Pregnancy is the state of union between a sperm



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and an ovum in the uterus and the formed fetus is nurtured in the mother's womb. Pregnancy covers the entire time frame of 40 weeks, from the minute the fetus is conceived to the moment of the birth⁴. Being pregnant is totally different feeling for an expectant mother whether they are first time pregnant or having a second, third and fourth child. The changes are apparent not only physically, but in the emotional well-being too. It is a state in which the mother goes through various changes physically, physiological and psychological. There is a demand to manage the results of the changes during all the stages of pregnancy and labor with physical, emotional and mental status. Maternal stress, anxiety, various complications during pregnancy results in negative consequences for the fetus and subsequent development⁵. This is the phase which is directly related to the health of the expectant mother and to fetus⁶. Hence, it is essential to maintain the health of mother and unborn child. *Yoga* may be effective in the reduction of negative symptoms associated with pregnancy and birth.

Yoga includes slow dynamic and static movements with focused breathing, a controlled stretching and it does not include any vigorous practices. To a pregnant women *yoga* gives the capacity to adjust the inner and outer changes with extraordinary flexibility. Hence *yoga* practice is safe during pregnancy.

According to the American College of Obstetrics and Gynaecology (ACOG) guidelines, if pregnant women are healthy and free from complications, then they should start doing exercises and continue

it further. Physical exercise is beneficial for both maternal and fetal health and it improves pregnancy outcome by minimizing the risk of causing GDM, pre-eclampsia (PE) and abnormal fetal growth⁷.

In India, there is lack of attention towards antenatal check-up and myths related to physical activity of a pregnant woman. At present about 15.1% of pregnant women exercise or practice *yoga* at the recommended level⁸. This is significantly lower than the general population of 45% in U.S⁹. This shows, In India percentage rate suggested for physical practice and *yoga* is considered to be very low.

Because of the sedentary behaviour during pregnancy such as long hours sitting, sleeping, watching television, physical inactivity may develop stress, depression and anxiety in an expectant mother resulting abnormal metabolic changes, abnormal blood pressure, cardiovascular diseases, GDM and resulting in adverse maternal and fetal outcomes including occasional mortality¹⁰.

COMPLICATIONS IN PREGANCY:

Health of a mother is directly related with fetus health therefore, any infection may directly affect the fetus health. A new research suggests that adult illnesses like diabetes, obesity, asthma; hypertension etc. may have their roots before birth it can be termed as Gestational conditioning. In general, maternal complications such as nausea, vomiting, extreme fatigue, urinary tract infection (UTI), edema, backache, a low or sad mood, obstructed labor, antepartum hemorrhage (APH),



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pregnancy induced hypertension (PIH) and eclampsia also have direct effect on fetus resulting adverse pregnancy outcomes. *Yoga* can be an effective measure in preventing pregnancy-related complications which in later stage becomes a threat to the mother and child.

BENEFITS OF YOGA:

Yoga has many benefits during the whole childbearing year. During pregnancy it helps you to focus on your health in a deeper way.

- *Yoga* integrates the body, mind and spirit. Bringing harmony and positive attitude.
- *Yoga* practices improve posture, increases flexibility of spine and enhance breathing capacity and calms the mind. Helps to manage stress.
- Helps to reduce morning sickness, nausea and mood swings.
- Relieves breast discomfort.
- Helps to relieve edema (fluid retention) and cramps which are more common in the last months.
- They strengthen the abdomen and help to stimulate appetite and bowel action.
- It helps in relieving tension around the cervix and birth canal¹¹ there by speed up the labor.

➤ It helps in opening the pelvis and widens the pelvic diameter to make labor easy and quicker. Thus helps in normal delivery.

➤ It influences the position of the fetus and turns it in advance if needed.

➤ *Yoga* can help in post-natal period by restoring the uterus, abdomen and pelvic floor.

YOGA IN PREGNANCY:

Early pregnancy is a very good time to start with *yoga*. During pregnancy each trimester is different and brings about different hormones and energy levels. It is different for each and every woman.

FIRST TRIMESTER:

The early part of pregnancy (before ten weeks) has high risk of miscarriages, so physical activity during this period, should be an optimal, thus providing the uterus a proper environment in order to ensure implantation of the embryo and proper attachment of the placenta¹². Hence practice of basic poses with a few modifications is advised. Avoiding inversions twists and back bends that might compress the uterus or over stretch it which causes low blood circulation to uterus.

Table 1 Types of *Asanas* for first trimester and their benefits:

<i>Asana</i> (Posture)	Benefits
<i>Tadasana</i> [Palm Tree Pose]	<ul style="list-style-type: none"> • Helps to maintain physical and mental balance. • Helps to stretch the entire spine and to loosen, thus helps to stretch back and relax.
<i>Utthita Trikonasana</i> [Extended Triangle Pose]	<ul style="list-style-type: none"> • It strengthens the pelvic floor muscles, thighs and calf muscles. • Helps in back stretch, reduces backache and improves digestion.
<i>Utthita Parsvakonasana</i> [Extended Side Angle Pose]	<ul style="list-style-type: none"> • Strengthens the legs, knees and ankles. • Develops the connections between the brain hemispheres.
<i>Vrksasana</i> [Tree Pose]	<ul style="list-style-type: none"> • It stretches and also strengthens the muscles of legs, back, hip and arm. • It helps to improve concentration.



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SECOND TRIMESTER ¹³:

During second trimester the centre of gravity starts shifting towards right; therefore all standing poses are to be done with the support of wall. Avoid

lying on back because it reduces blood circulation to uterus and *asanas* (poses) that stretch the muscles too much. Avoid of unnecessary pressure on abdomen.

Table 2 Types of *Asanas* for second trimester and their benefits:

Asana (Posture)	Benefits
Kati Chakrasana [Waist Rotating Pose]	Tones up waist, back, neck, shoulders and hips. Helps to relieve from physical and mental tension and brings body lightness.
Vajrasana [Thunderbolt pose]	It enhances digestive system, increases the energy uptake. Increases blood flow and strengthens pelvic region. It is the only asana that can be practiced after taking meals.
Matsyakridasana [Flapping fish pose]	Enhances digestion and relieves constipation. It relaxes the nerves of legs. It improves blood circulation.
Marjariasana [Cat stretch pose]	Tones reproductive system and pelvic muscles. Improves the flexibility of spine, neck and shoulders muscles that are necessary for bearing down efforts during labor.

THIRD TRIMESTER ¹⁴:

The third trimester of pregnancy begins at the end of the sixth month and lasts until the baby is born. Practice of only those *asanas* that do not exert pressure over abdominal region. It is the best time to focus on gentle pelvic floor awareness

practices that help in delivery. *Pranayama* i.e. breath work is an essential aspect of a third trimester practice. It not only promotes relaxation, but helps in the development of the ability to focus deeply. Supine poses should be avoided.

Table 3 Types of *Asanas* for third trimester and their benefits

Asana (Posture)	Benefits
Urdhva Hastasana [Standing Upward Stretch or Hand Raising Pose] ¹⁵	<ul style="list-style-type: none"> Improves blood supply and has an impact on the heart. An extra supply of oxygen is delivered to the entire body, especially to the brain.
Chakki Chalanasana [Churning mill pose]	<ul style="list-style-type: none"> Tones muscles of pelvis and abdomen and prepare them for delivery.
Baddha Konasana [Cobbler pose/ bound angle pose]	<ul style="list-style-type: none"> Helps in loosening up the hip joint and increasing blood flow. Helps to reduce stress and fatigue in the inner thigh muscles and legs.
Supta Udarakarshanasana [Sleeping abdominal stretch pose]	<ul style="list-style-type: none"> Removes constipation. Improves digestion. Relieves stiffness and strain of spine caused due to long sitting hours.

PRANAYAMA (breathing technique):

Pranayama is practice of complete, prolonged and slow breathing. It works on both mind and soul. *Pranayama* help to release negative feelings such as anger and frustration. Keep the mind calm and

relaxed. In addition to *pranayama*, meditation is so helpful during pregnancy because it improves the ability to relax and concentrate and can help aid with fatigue, anxiety and stress levels.

Table 4 *Pranayama* during pregnancy and their benefits

Pranayama	Benefits
Anuloma-viloma pranayama [Alternative nostril breathing]	<ul style="list-style-type: none"> It strengthens the body physically and mentally. During labor, holding of breath for maximum duration may aid a great help for pushing baby.



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	<ul style="list-style-type: none"> • It increases oxygen level in the body so extra oxygen is transferred to the fetus.
Bhramari Pranayama [Bee breath]	<ul style="list-style-type: none"> ▪ Helps to regulate blood pressure. • Relieves headaches. • Increases oxygen supply and helps with the baby's growth.
Ujjayi Pranayama [Ocean breath] ¹⁶	<ul style="list-style-type: none"> • This practice highly beneficial during delivery and reduce labor pain. • Helps to increase more power and focus, strengthens the nervous system. • Aids in digestion. • It helps to improve better sleep.

DHYANA (MEDITATION):

Dhyana is an integral part of yoga. It is a practice in which an individual trains the mind that includes techniques designed to promote relaxation and to build internal energy. Its goal is to increase focus and calms the mind, eventually reaching a higher level of self-awareness.

Benefits:

- It helps us to achieve harmonious balance between body and mind.
- Improves the ability to relax and concentrate.
- It helps to relieve fatigue, anxiety and stress levels.
- It helps in positive preparation for labor.
- Induces better sleep.

YOGA MUDRAS (HAND GESTURES)¹⁷:

Yoga mudra is hand positions that help to stimulate different energies in the body. In *Hatha Yoga*, a *Mudra* is a special body position forcing activity of the involuntary muscular system to create reflex genic feedback to associated glands, particularly the endocrine glandular system¹⁸.

Table 5 *Mudra*'s during pregnancy and their benefits

<i>Mudra</i>	Benefits
Gyan Mudra	<ul style="list-style-type: none"> • Helps in purification of mind.

	<ul style="list-style-type: none"> • Helps to tackle anger, <u>stress</u>, <u>anxiety</u> and insomnia.
Apana Mudra	<ul style="list-style-type: none"> • Beneficial during labor, helps to facilitate contractions. • Helps in cleansing the body by eliminating of waste matter through the mouth, eyes, ears, nose etc. • It reduces constipation.
Aakash Mudra	<ul style="list-style-type: none"> • Helps in setting intentions to stay positive and healthy.
Pushan Mudra	<ul style="list-style-type: none"> • Alleviates nausea, flatulence and bloating during pregnancy.

MULA BANDHA (THE ROOT LOCK):

The name "*Mula bandha*" can be translated from Sanskrit as the root; *mula* (or *moola*) means 'root' and *bandha* – 'lock'. This is an external meaning. The internal or deeper meaning is that *mula* or the root is the source of energy for our body and through the practice of this *bandha* helps to gain a certain amount of control over this energy¹⁹. It is integral part of *yogic* practice; these are static postures which constrict certain part of body there by redirecting the flow of blood to other parts of the body. *MulaBandh* (the root lock) is beneficial if practiced regularly before and after conceiving, it helps to prepare the muscles for easy delivery. It is also good for postpartum period.

Yoga Precautions in pregnancy:

- Avoid *yoga* practices from the 10th to 14th week of pregnancy since these are critical times.



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- During first trimester of pregnancy, recommended for standing *yoga* poses. This helps to strength the legs and increases the blood circulation. Reduces the leg cramps.
- During the second and the third trimesters, minimize the duration of time spent on holding of *asanas* to avoid fatigue. Practice of breathing exercises and meditation are beneficial.
- Avoid performing inversion poses.
- During the third trimester of pregnancy, avoid *yoga asanas* which exerts pressure over the abdomen.

Yogasana/Pranayama to be avoided during pregnancy²⁰

- *Naukasana* (Boat pose).
- *Chakrasana* (Wheel pose).
- *Ardha Matsyendrasana* (Sitting half spinal twist).
- *Bhujangasana* (Cobra pose).
- *Viparita Shalabhasana* (Superman pose).
- *Halasana* (Plough pose).
- *Bhastrika* (bellow's breath) or *Kumbhaka* (breath retention).

DISCUSSION

Mindfulness of *yoga* practice helps to minimize the pregnancy complications such as pregnancy induced hypertension (PIH), intra uterine growth retardation (IUGR) and pre-term delivery etc. According to the study the effect of the Integrated Yoga Approach during Pregnancy (IYAP) improves birth weight and resulting healthy pregnancy and decreases preterm labor (PTL),

intra uterine growth restriction (IUGR), reduces low back pain (LBP), pregnancy-induced hypertension (PIH) and other various complications related with pregnancy. Another study shows complications such as intrauterine growth retardation (IUGR $p<0.025$) and pregnancy induced hypertension (PIH) associated with IUGR ($p<0.025$) were significantly lower in the group of patient practicing *yoga* and there is no significant adverse effect noted²¹. In high risk pregnancies, *yoga* reduces the stress, anxiety and is a safe effective intervention that can be adapted²². Prenatal *yoga* practice shows significant effect on systolic blood pressure and the fetal heart rate in primigravida mothers²³.

Asana (Posture): A perfect time to save an unborn baby's life is before pregnancy begins. *Yogasana* is proven beneficial as a measure of safeguarding against failure to conceive owing to defects of the ovaries, glands, or fallopian tubes. In *asanas*, the uterus is exercised to become stronger and to function efficiently, resulting in normal delivery. *Yogasana* are non-violent, non-vigorous practice, they helps to strengthen the reproductive system improve blood circulation in the pelvic region, strengthen the pelvic muscles and exercise the spine and making the perfect period of confinement bearable. Hence it is advised that every woman should start practicing *yoga* in pregnancy period.

Pranayama (Breathing exercise) and Dhyana (Meditation): Helps to relax the mind, thereby refocuses the energy and relieve stress and tension of a pregnant woman. *Pranayama* strengthens the



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nerves to enable the mother to breathe calmly in the periods between spasms that are essential for easy delivery. It helps to relax the nerves and to avoid mental tensions.

Yoga mudra: *Yoga mudras* are hand positions that help to stimulate different energies in the body. Help in easy contraction. It helps in purification of mind. Help in aiming intentions to stay positive and healthy.

CONCLUSION

In conclusion, a regular practice of *yoga* during pregnancy can reduce maternal and fetal complications, enhancing psychological status of mother during pregnancy and post pregnancy too. So, *Yoga* must be included in the pregnancy regime to attain the higher level of fitness for both mother and child.



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