

ROLE OF YOGA AND PRANAYAMA DURING PREGNANCY: A TRIMESTER-WISE
HOLISTIC APPROACH FOR MATERNAL AND FETAL WELL-BEINGDr. Deepashree H. P.*¹, Dr. Shilpashree H. P.²¹Associate Professor, Department of Prasuti Tantra and Striroga, Rajeev Institute of Ayurvedic Medical Science and Research Centre, Hassan, Karnataka, India.²Dept. of Microbiology, Biotechnology and Food Technology, Janabharathi Campus, Bengaluru University, Bengaluru, Karnataka, India.***Corresponding Author: Dr. Deepashree H. P.**

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ABSTRACT

Pregnancy is a physiological state marked by reflective anatomical, hormonal, and psychological changes that require wide-ranging care to ensure maternal and fetal well-being. Stress, anxiety, musculoskeletal discomfort, and altered autonomic balance are commonly encountered during gestation. Yoga and Pranayama, integral components of traditional Indian health sciences, offer a safe, non-pharmacological and holistic tactic to antenatal care. From an Ayurvedic perspective, these practices align closely with the principles of *Garbhini Paricharya*, which emphasizes trimester-wise care for optimal fetal development and maternal health. This article evaluates the role of Yoga and Pranayama during pregnancy through a trimester-wise approach and explains their physiological and psychological benefits. Gentle Yoga Asanas and controlled breathing techniques improve flexibility, circulation, respiratory efficiency, autonomic regulation, and emotional stability. Evidence suggests that regular prenatal Yoga practice reduces pregnancy-related discomforts, improves labor outcomes, and enhances overall quality of life. When practiced under proper guidance, Yoga and Pranayama can be effectively integrated into routine antenatal care as complementary therapies for promoting maternal and fetal health.

KEYNOTE: *Yoga, Pranayama, Garbini.***INTRODUCTION**

Pregnancy (*Garbhavastha*) is a delicate and significant phase in a woman's life, involving continuous physical, mental, and emotional adaptations. Ayurveda describes a systematic antenatal regimen known as *Garbhini Paricharya*, which aims to maintain Dosha balance, nourish maternal tissues, support fetal growth, and facilitate *Sukha Prasava* (easy labor).^[7,8] Among the Doshas, *Vata* plays a dominant role during pregnancy, particularly in fetal development and parturition; hence, its regulation is essential.

Modern lifestyles pigeonholed by stress, sedentary habits, and poor posture can adversely affect pregnancy upshots.^[1,2] Yoga and Pranayama provide a holistic framework to address these challenges by integrating

physical postures, breath regulation, and mental relaxation. Prenatal Yoga, when adapted appropriately, rallies musculoskeletal strength, circulation, and autonomic balance, while Pranayama enhances oxygenation and reduces stress responses.^[3-6]

Pregnancy care is planned on a month-wise basis (*Masanumasika Garbhini Paricharya*). Yoga and Pranayama function as *Sukha Cheshta* (gentle physical activity) and *Satvavajaya* (mental regulation), supporting both physical and psychological health. These practices appease aggravated *Vata Dosha*, enhance *Prana Vata*, and promote *Ojas*, thereby ensuring maternal-fetal well-being.

Trimester-wise / Month-wise Yoga and Pranayama Practices and Benefits

Trimester	Phase / Aim	Recommended Yoga Asanas	Recommended Pranayama	Benefits
First Trimester (0–12 weeks)	Stabilization Phase	<i>Sukhasana, Tadasana, Vajrasana</i>	Deep diaphragmatic breathing, <i>Anuloma Viloma</i>	Promotes relaxation and emotional stability; reduces nausea, fatigue, anxiety, and stress; supports <i>Garbha Sthapana</i> by pacifying Vata and Pitta
Second Trimester (13–28 weeks)	Growth & Strength Phase	<i>Baddha Konasana, Virabhadrasana, Marjariasana</i>	<i>Nadi Shodhana, Bhramari</i>	Improves posture, pelvic flexibility, and uteroplacental circulation; reduces back pain, edema, leg cramps; supports fetal growth (<i>Garbha Vriddhi</i>)
Third Trimester (29–40 weeks)	Preparation for Labor Phase	<i>Malasana</i> (supported), Squatting postures, <i>Shavasana</i> (left lateral)	<i>Bhramari</i> , Slow rhythmic breathing	Regulates <i>Apana Vata</i> , improves pelvic flexibility, facilitates fetal descent, enhances pain tolerance, reduces fear & anxiety, promotes calm labor (<i>Sukha Prasava</i>)

Scientific Evidence and Mechanisms

Yoga and Pranayama exert multidimensional benefits during pregnancy, influencing musculoskeletal, cardiovascular, respiratory, neuroendocrine, and psychological systems.

1. Musculoskeletal Alignment and Strength

Pregnancy induces postural changes, including lumbar lordosis and anterior pelvic tilt, which can cause back pain and pelvic discomfort. Regular practice of Yoga Asanas such as *Baddha Konasana*, *Marjariasana*, and *Virabhadrasana* strengthens core and pelvic muscles, maintains spinal alignment, and improves flexibility. This not only lessens musculoskeletal strain but also facilitates optimal fetal positioning, which can aid in easier labor. From an Ayurvedic perspective, these postures stabilize *Vata Dosha* in the lower abdomen and pelvis, reducing the risk of premature uterine activity and enhancing *Apana Vata*, which governs downward-moving energies including labor.

2. Circulation and Cardiovascular Effects

Yoga postures and gentle stretches enhance uteroplacental and systemic circulation, ensuring efficient oxygen and nutrient delivery to the fetus. Improved blood flow also helps prevent lower limb edema and varicose veins, which are common during pregnancy. By promoting vascular elasticity and cardiac efficiency, Yoga contributes to maternal cardiovascular stability.

3. Respiratory Efficiency

Pranayama techniques such as *Nadi Shodhana* and *Bhramari* optimize ventilation-perfusion ratios and increase oxygen saturation. Precise breathing expands lung capacity and enhances diaphragmatic function, which recompenses for the upward pressure of the growing uterus on the diaphragm. Improved oxygenation supports fetal neurodevelopment and reduces maternal fatigue.

4. Neuroendocrine Modulation

Pregnancy is associated with elevated stress levels and fluctuations in cortisol, catecholamines, and other

hormones. Pranayama and meditation increase parasympathetic activity and reduce sympathetic overdrive, as evidenced by heart rate variability studies. This leads to lower stress hormone levels, reduced anxiety, and improved maternal mood. These neuroendocrine effects also positively influence uterine blood flow and labor outcomes.

5. Pain Perception and Labor Outcomes

Prenatal Yoga and Pranayama enhance body awareness, relaxation response, and pain tolerance. Women practicing Yoga report lower perceived labor pain, reduced need for analgesia, and shorter labor duration. Mechanistically, this may involve modulation of the central nervous system's pain pathways, reduced cortisol, and improved GABAergic activity, promoting calmness and fortitude during labor.

6. Psychological and Emotional Well-being

Yoga fosters mindfulness, emotional regulation, and positive maternal-fetal bonding. Meditation and breath-focused practices enhance *Satva Guna* according to Ayurveda, leading to mental clarity, emotional stability, and reduction of pregnancy-related anxiety and depression. This psychosomatic balance is critical for both maternal and fetal health.

CONCLUSION

Yoga and Pranayama are safe, effective, and economical complementary practices during normal pregnancy. Their trimester-wise application, aligned with the principles of *Garbhini Paricharya*, supports physical comfort, emotional stability, and optimal fetal development. Regular practice under professional supervision enhances maternal preparedness for labor and contributes to positive pregnancy outcomes. Integration of prenatal Yoga and Pranayama into routine antenatal care can play a significant role in promoting holistic maternal and fetal well-being.^[1–8]

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