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The Risks and Benefits of Yoga During Pregnancy – A Literature Review

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ABSTRACT

Background. Yoga has become an increasingly popular form of physical activity among pregnant women worldwide. As a mind-body exercise that combines physical postures, breathing techniques, and relaxation practices, yoga may influence both physiological and psychological aspects of pregnancy. Although moderate physical activity during pregnancy is widely recommended, the specific safety profile and benefits of yoga remain under continuous investigation.

Aim. The aim of this literature review is to analyze current scientific evidence regarding the risks and benefits of yoga during pregnancy.

Material and methods. A narrative review of clinical trials, meta-analyses, and mechanistic studies published in recent years was conducted. The analysis focused on metabolic health, musculoskeletal outcomes, cardiovascular adaptations, injury risks, respiratory and thermoregulatory responses, psychological effects, and obstetric outcomes.

Results. Current research suggests that yoga practiced during pregnancy may reduce maternal stress and anxiety, improve sleep quality, alleviate low back and pelvic pain and improve glucose regulation [26–28]. Some studies indicate potential benefits in reducing the risk of gestational diabetes and improving birth outcomes, including reduced rates of preterm birth and cesarean delivery [11,12,28]. However, risks may occur especially when certain postures are performed incorrectly or without modification [8,21]. Pregnancy-related ligament laxity, balance changes, and supine positioning in late pregnancy may increase the risk of musculoskeletal strain or reduced venous return [8].

Conclusions. Prenatal yoga appears to be a generally safe and beneficial form of exercise when appropriately adapted for pregnancy. However, more large-scale randomized controlled trials are needed to determine optimal intensity, frequency, and posture modifications for pregnant practitioners.

Keywords: yoga, pregnancy, prenatal yoga, physical activity, maternal health, gestational diabetes, psychological well-being

1. Introduction

Regular physical activity during pregnancy is widely recognized as beneficial for both maternal and fetal health. Research consistently demonstrates that pregnant women who remain physically active experience improved cardiovascular fitness, better weight control, and reduced risk of pregnancy-related complications such as gestational diabetes mellitus (GDM) and hypertensive disorders [1–3].

The World Health Organization (WHO) recommends that pregnant women engage in at least 150 minutes of moderate-intensity physical activity per week, provided that no medical contraindications are present [4]. Similarly, the American College of Obstetricians and Gynecologists (ACOG) supports regular exercise during pregnancy, emphasizing the importance of individualized activity programs based on a woman's pre-pregnancy fitness level [5].

Yoga has emerged as one of the most widely practiced forms of prenatal exercise. Originating from ancient Indian traditions, yoga integrates physical postures (asanas), breathing exercises (pranayama), and meditation practices designed to promote both physical and mental well-being [6].

During pregnancy, yoga programs are often modified to accommodate physiological and anatomical changes such as increased body mass, shifting center of gravity, and increased ligament laxity caused by hormonal changes [7]. Prenatal yoga classes typically emphasize gentle stretching, breathing techniques, relaxation exercises, and pelvic floor strengthening.

Despite the increasing popularity of prenatal yoga, scientific debate continues regarding its safety and effectiveness. Some yoga poses may involve abdominal compression, spinal twisting, or prolonged supine positioning, which may influence maternal circulation or musculoskeletal stability during pregnancy [8].

Further clarification of optimal training parameters - including type, intensity, frequency, duration of exercise and posture modifications for pregnant practitioners - is necessary.

The aim of this review is to evaluate the current scientific evidence regarding the risks and benefits of yoga during pregnancy, focusing on physiological adaptations, injury risk, metabolic health, psychological outcomes, and obstetric results.

2. Materials and Methods

This study was conducted as a narrative literature review aimed at synthesizing current scientific evidence regarding the potential risks and benefits of yoga practice during pregnancy. The review focused on physiological, psychological, and obstetric outcomes associated with prenatal yoga, including metabolic health, musculoskeletal adaptations, cardiovascular responses, respiratory regulation, injury risk, thermoregulation, psychological well-being, and pregnancy outcomes.

A comprehensive literature search was performed using several electronic scientific databases, including PubMed, Scopus, Web of Science, and Google Scholar. The search included studies published primarily between 2000 and 2024, although several earlier landmark publications were also included due to their relevance.

Studies were included in the review if they were published in peer-reviewed scientific journals, written in English, involved pregnant women as the study population, investigated yoga, prenatal yoga, or yoga-based interventions, reported outcomes related to maternal physiology, psychological health, or obstetric outcomes.

The review included a variety of study designs, such as randomized controlled trials (RCTs), observational studies, clinical trials, systematic reviews, and meta-analyses.

3. Molecular Mechanisms Underlying the Effects of Yoga on pregnant women

3.1. Modulation of hypothalamic–pituitary–adrenal (HPA) axis

Yoga during pregnancy has been increasingly studied as a complementary intervention that may influence maternal and fetal health through a range of interconnected molecular and physiological mechanisms. One of the primary pathways involves modulation of the hypothalamic–pituitary–adrenal (HPA) axis, the central regulator of the stress response [22,26]. Pregnancy is associated with naturally elevated levels of stress hormones, particularly cortisol, which can cross the placenta and influence fetal neurodevelopment. Chronic maternal stress may lead to excessive activation of the HPA axis, increasing circulating cortisol and corticotropin-releasing hormone (CRH) [22].

Regular prenatal yoga practice—through physical postures (asanas), controlled breathing techniques (pranayama), and mindfulness meditation—has been shown to reduce sympathetic

nervous system activity while enhancing parasympathetic tone [19,24]. This shift in autonomic balance is associated with decreased cortisol secretion and improved regulation of glucocorticoid signaling pathways, which may protect placental tissues from stress-induced dysfunction and support healthier fetal development.

3.2. Anti-inflammatory effects

At the molecular level, yoga may also exert anti-inflammatory effects, which are particularly important during pregnancy because excessive systemic inflammation is associated with complications such as preeclampsia, gestational diabetes mellitus, and preterm birth [9,13]. Mind–body practices have been shown to downregulate pro-inflammatory cytokines such as interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF-α), and C-reactive protein (CRP), while simultaneously increasing anti-inflammatory mediators such as interleukin-10 (IL-10) [13]. These changes may occur through the regulation of transcription factors including nuclear factor-kappa B (NF-κB), which plays a key role in inflammatory gene expression [13].

3.3. Oxidative stress regulation

Another important molecular mechanism involves oxidative stress regulation. Pregnancy is characterized by increased metabolic activity and mitochondrial respiration, which can lead to elevated production of reactive oxygen species (ROS) [18]. When antioxidant defenses are insufficient, oxidative stress may damage placental cells, endothelial tissues, and fetal membranes, contributing to complications such as intrauterine growth restriction or hypertensive disorders of pregnancy [18].

Studies suggest that yoga practices can enhance endogenous antioxidant defense systems by increasing the activity of enzymes such as superoxide dismutase (SOD), catalase, and glutathione peroxidase [13]. These enzymes neutralize ROS and help maintain cellular redox balance, thereby protecting maternal and placental tissues from oxidative damage.

3.4. Metabolic and endocrine pathways

Yoga may also influence metabolic and endocrine pathways that are crucial during pregnancy. Regular gentle physical activity combined with mindful breathing has been associated with improved insulin sensitivity and glucose metabolism [10,11,12,13]. At the molecular level, these effects may involve modulation of insulin signaling pathways, including the phosphoinositide 3-kinase (PI3K)/Akt pathway, which regulates glucose uptake and cellular

metabolism. Improved metabolic regulation may reduce the risk of gestational diabetes mellitus and support stable energy supply to the developing fetus. Additionally, yoga may influence the secretion of hormones such as oxytocin, serotonin, and endorphins, which are associated with improved mood, reduced anxiety, and enhanced maternal–fetal bonding [26,27].

3.5. Epigenetic regulation

Emerging research also highlights the potential role of epigenetic regulation in mediating the effects of yoga during pregnancy. Epigenetic mechanisms—such as DNA methylation, histone modification, and regulation by non-coding RNAs—can alter gene expression without changing the underlying DNA sequence [13]. Stress reduction and lifestyle interventions like yoga may influence epigenetic patterns in genes related to immune regulation, inflammation, and metabolic control. For example, decreased stress signaling may reduce methylation changes in genes involved in glucocorticoid receptor sensitivity, potentially improving the body's ability to regulate stress responses. Because the prenatal environment plays a critical role in fetal epigenetic programming, these molecular changes could have long-term implications for offspring health, including immune function, metabolic stability, and neurodevelopment [13].

3.6. Vascular and endothelial function

Furthermore, yoga practices may enhance vascular and endothelial function, which is essential for adequate placental perfusion and nutrient exchange [18,19]. Controlled breathing and relaxation techniques can increase nitric oxide (NO) bioavailability through improved endothelial nitric oxide synthase (eNOS) activity. Nitric oxide is a key signaling molecule that promotes vasodilation and regulates blood flow. Enhanced NO signaling may improve uteroplacental circulation, ensuring sufficient oxygen and nutrient delivery to the fetus and potentially reducing the risk of hypertensive disorders of pregnancy [18].

4. Research results

4.1. Effects of yoga on metabolic health and gestational diabetes

Gestational diabetes mellitus affects approximately 7–14% of pregnancies worldwide and is associated with increased maternal and neonatal risks [9]. Regular physical activity has been shown to improve insulin sensitivity and glucose metabolism during pregnancy [10]. Several studies have investigated yoga as a potential intervention for metabolic health in pregnant women. A randomized controlled trial by Youngwanichsetha et al. demonstrated that women

with gestational diabetes who participated in prenatal yoga experienced significant reductions in fasting blood glucose levels compared with those receiving standard care [11]. Similarly, Rakhshani et al. reported improvements in insulin resistance markers and fasting glucose among pregnant women practicing yoga regularly [12]. Yoga may influence metabolic health through mechanisms such as increased muscle glucose uptake, improved insulin sensitivity and reduction in stress-related cortisol levels [13]. Stress hormones such as cortisol can contribute to glucose intolerance; therefore, yoga's stress-reducing effects may indirectly improve metabolic outcomes [26].

4.2. Musculoskeletal adaptations and pain reduction

Musculoskeletal pain, particularly low back pain and pelvic girdle pain, is one of the most common complaints during pregnancy, affecting up to 70% of pregnant women [14]. The increasing size of the uterus, altered posture, and hormonal changes contribute to mechanical stress on the spine and pelvis. Yoga interventions may alleviate these symptoms by strengthening core muscles, improving flexibility, and promoting better posture. A randomized controlled trial by Field et al. found that prenatal yoga significantly reduced low back pain intensity and improved mobility among pregnant women [15]. Yoga may also improve pelvic floor muscle strength, which plays an important role in supporting the uterus and preparing the body for childbirth [16]. However, excessive stretching poses may increase the risk of joint instability because pregnancy hormones such as relaxin increase ligament laxity [17].

Physiological change	**Possible symptoms**	**Yoga-related benefit**
Increased ligament laxity	Joint instability	Gentle strengthening
Postural shift	Back pain	Postural awareness
Pelvic floor strain	Pelvic discomfort	Pelvic floor exercises
Center of gravity changes	Balance issues	Controlled movement

Table 1. Musculoskeletal changes during pregnancy and potential yoga benefits

4.3. Cardiovascular function

Pregnancy induces major cardiovascular adaptations including increased cardiac output, increased blood volume, and decreased systemic vascular resistance [18]. Moderate exercise during pregnancy can support these adaptations and improve cardiovascular function. Yoga practices involving slow movement and breathing techniques may improve heart rate variability, indicating improved autonomic nervous system balance [19]. Improved autonomic regulation may contribute to lower maternal stress levels and better cardiovascular stability. Some research also suggests that maternal relaxation techniques may positively influence fetal heart rate patterns [20].

4.4. Injury risk and safety considerations

Yoga is generally classified as a low-impact form of physical activity, which reduces the likelihood of traumatic injuries compared with high-impact sports such as running or contact sports. However, pregnancy introduces several physiological and biomechanical changes that may influence exercise safety. Hormonal changes, particularly increased levels of relaxin, progesterone, and estrogen, contribute to ligament laxity and joint instability, increasing the potential risk of musculoskeletal strain during stretching or balance-intensive movements [17].

In addition, pregnancy leads to progressive changes in posture, body mass distribution, and the center of gravity, which may affect balance and coordination. These biomechanical adaptations may increase the likelihood of falls during standing poses that require single-leg balance or rapid transitions between positions [21]. For this reason, certain yoga postures commonly practiced in non-pregnant populations require modification or avoidance during pregnancy.

Deep twisting poses such as Revolved Triangle (Parivrtta Trikonasana), Revolved Chair (Parivrtta Utkatasana), Revolved Side Angle (Parivrtta Parsvakonasana) and seated spinal twists such as Ardha Matsyendrasana may place excessive compression on the abdomen and should generally be replaced with gentler open twists that rotate primarily through the thoracic spine [8]. Similarly, intense backbending postures such as Wheel Pose (Urdhva Dhanurasana), Camel Pose (Ustrasana), and King Pigeon (Kapotasana) may increase strain on the lumbar spine and should be modified to gentler chest-opening movements supported by props or performed in seated positions [8].

Certain advanced postures involving strong abdominal engagement or arm balance may also require modification. Examples include Boat Pose (Navasana), Crow Pose (Bakasana), Side Plank (Vasisthasana), and Eight-Angle Pose (Astavakrasana) [8]. These poses involve significant core activation and increased intra-abdominal pressure, which may be uncomfortable or potentially unsafe as pregnancy progresses. Instead, prenatal yoga programs often emphasize gentle core stabilization exercises and pelvic floor strengthening [16].

Postures performed in the prone position, such as Cobra Pose (Bhujangasana), Locust Pose (Salabhasana), Bow Pose (Dhanurasana), and Sphinx Pose, also require modification because lying on the abdomen becomes uncomfortable and mechanically impractical as the uterus enlarges [8]. Furthermore, inversion poses, including Headstand (Sirsasana), Shoulder Stand (Sarvangasana), Handstand (Adho Mukha Vrksasana), and Forearm Stand (Pincha Mayurasana), may increase the risk of falls due to altered balance and changes in blood pressure regulation during pregnancy [8]. While highly experienced practitioners may be able to continue certain inversions during early pregnancy under supervision, these poses are generally discouraged for beginners or in later stages of pregnancy [8].

Special consideration must also be given to supine postures performed after the first trimester, such as Savasana (Corpse Pose), Bridge Pose (Setu Bandhasana), Reclining Bound Angle Pose (Supta Baddha Konasana), and supine spinal twists. Prolonged lying on the back during the second and third trimesters may compress the inferior vena cava, reducing venous return to the heart and potentially decreasing uteroplacental blood flow [23]. As a result, many prenatal yoga programs recommend performing relaxation poses in a side-lying position or with the upper body elevated using bolsters or pillows [8].

Despite these considerations, when yoga practice is properly modified and supervised by instructors trained in prenatal exercise, the overall risk of injury remains low [8]. Emphasis on controlled movement, moderate intensity, and avoidance of high-risk postures allows yoga to remain a safe and beneficial form of physical activity for many pregnant women.

Pose	Potential concern	Typical modification
Revolved Triangle	Abdominal compression	Open twist
Wheel Pose	Lumbar strain	Supported backbend
Boat Pose	Abdominal pressure	Gentle core exercise
Cobra Pose	Prone position	Standing back extension
Headstand	Fall risk	Avoid or wall support
Savasana	Vena cava compression	Side-lying relaxation

Table 2. Yoga poses commonly modified during pregnancy

4.5. Breathing techniques and thermoregulation

Breathing exercises are a key component of yoga practice. Pregnancy increases maternal oxygen consumption and minute ventilation in order to meet fetal metabolic demands [24]. Slow breathing techniques used in yoga may enhance parasympathetic nervous system activity, promoting relaxation and improved respiratory efficiency [25]. However, certain forceful breathing techniques used in traditional yoga practices may not be appropriate during pregnancy. Additionally, yoga practiced in heated environments such as Bikram yoga may increase the risk of hyperthermia, which has been associated with fetal developmental risks [26].

4.6. Psychological benefits

Pregnancy is often associated with increased emotional stress, anxiety, and mood fluctuations. Yoga is widely studied as a mind–body intervention capable of improving mental health outcomes. A meta-analysis by Gong et al. found that prenatal yoga significantly reduced anxiety, depression, and perceived stress levels among pregnant women [27]. Other studies have

demonstrated improvements in sleep quality, emotional well-being, and overall quality of life [28]. These effects may be mediated by stress-related hypothalamic–pituitary–adrenal (HPA) axis modulation and improved autonomic nervous system regulation [26,27].

4.7. Obstetric and neonatal outcomes

Several studies suggest that yoga during pregnancy may influence obstetric outcomes. A randomized trial by Narendran et al. found that pregnant women who practiced yoga experienced lower rates of preterm birth and higher average birth weights compared with controls [29]. Other research indicates that yoga may contribute to shorter labor duration and lower rates of cesarean delivery, possibly due to improved physical conditioning and stress management [30]. However, evidence remains heterogeneous and further research is necessary to confirm these associations.

Study	**Study type**	**Sample size**	**Key findings**
Narendran et al.	RCT	335	Reduced preterm birth
Youngwanichsetha et al.	RCT	74	Improved glucose control
Field et al.	RCT	92	Reduced back pain
Gong et al.	Meta-analysis	13 studies	Reduced anxiety and depression

Table 3. Summary of selected prenatal yoga studies

5. Discussion

The present review integrates findings from randomized controlled trials, observational studies, systematic reviews, and clinical guidelines examining the role of yoga as a form of physical activity during pregnancy. Overall, the available literature suggests that appropriately modified prenatal yoga may offer a wide range of physiological and psychological benefits while maintaining a relatively low risk of adverse events when practiced safely [26–30].

One of the most consistently reported benefits of prenatal yoga is its influence on maternal psychological well-being. Pregnancy is a period characterized by significant hormonal fluctuations and psychosocial adjustments, which may increase vulnerability to anxiety, stress, and depressive symptoms [27,28]. Mind–body interventions such as yoga combine physical movement, controlled breathing, and relaxation techniques that can modulate the autonomic nervous system and reduce stress-related physiological responses [26,27]. Several studies have demonstrated reductions in perceived stress levels, anxiety, and depressive symptoms among pregnant women participating in yoga-based programs [27,28]. These effects are likely mediated by decreased activation of the hypothalamic–pituitary–adrenal (HPA) axis and reduced circulating cortisol levels, which may contribute to improved emotional regulation and sleep quality [22,26].

Beyond psychological outcomes, prenatal yoga may also contribute to improved metabolic regulation during pregnancy. Gestational diabetes mellitus remains one of the most common metabolic complications of pregnancy and is associated with increased risks for both mother and child [9]. Evidence from randomized controlled trials indicates that yoga-based exercise programs may improve fasting glucose levels and insulin sensitivity [11,12]. These metabolic effects may be explained by several mechanisms, including enhanced skeletal muscle glucose uptake during physical activity, improved insulin signaling pathways, and reductions in stress-related hormonal responses that contribute to insulin resistance [13,26]. Although the current body of evidence remains relatively limited, the available findings suggest that yoga may represent a useful adjunctive lifestyle intervention for improving metabolic health in pregnant women [10–13].

Another important aspect highlighted in the reviewed literature is the potential role of yoga in reducing musculoskeletal discomfort, particularly low back pain and pelvic girdle pain. These symptoms are common during pregnancy due to increased mechanical load on the spine, postural changes, and hormonal influences that affect ligament elasticity [14–17]. Yoga-based interventions typically include gentle stretching, strengthening exercises, and postural awareness training, which may help stabilize the spine and pelvis [15,16]. Improvements in core muscle activation and pelvic floor function may also contribute to better postural control and reduced pain intensity [16]. However, caution is required because excessive stretching or extreme ranges of motion may increase the risk of joint instability due to pregnancy-related ligament laxity [17].

Cardiovascular and respiratory adaptations represent another area in which yoga may exert beneficial effects. Pregnancy involves substantial increases in blood volume, cardiac output, and oxygen demand [18]. Moderate-intensity physical activity has been shown to support cardiovascular adaptation and improve maternal fitness [18]. Yoga practices involving slow, controlled movement and breathing exercises may enhance heart rate variability, which reflects improved autonomic nervous system balance [19,24]. Increased parasympathetic activity and reduced sympathetic activation may contribute to improved cardiovascular stability and stress regulation [19,24,26]. Additionally, breathing techniques commonly used in yoga may improve respiratory efficiency and maternal oxygenation, potentially supporting fetal oxygen supply [24,25].

Despite these potential benefits, certain safety considerations must be carefully addressed when practicing yoga during pregnancy. Hormonal changes, particularly increased levels of relaxin, progesterone, and estrogen, lead to increased ligament laxity and joint mobility [17]. While these changes facilitate childbirth, they may also increase the risk of musculoskeletal strain if exercises are performed with excessive intensity or improper alignment [8,17]. Furthermore, pregnancy-related changes in balance and center of gravity may increase the risk of falls during complex standing poses or transitions between positions [21].

Several yoga postures commonly practiced outside pregnancy require modification in prenatal practice. Deep spinal twists, strong abdominal contractions, prolonged supine positioning, and extreme backbends may place unnecessary mechanical stress on the maternal body or influence

maternal circulation [8,23]. In particular, supine positioning after the first trimester may compress the inferior vena cava, potentially reducing venous return to the heart and decreasing uteroplacental perfusion [23]. Consequently, prenatal yoga programs typically recommend side-lying relaxation positions or the use of supportive props to maintain maternal comfort and safety [8,23].

Another important safety consideration involves thermoregulation and environmental conditions during yoga practice. Activities performed in excessively heated environments, such as hot yoga or Bikram yoga, may increase the risk of maternal hyperthermia [26]. Elevated maternal body temperature during early pregnancy has been associated with potential risks for fetal development [26]. Therefore, most clinical guidelines recommend avoiding high-temperature exercise environments during pregnancy and ensuring adequate hydration and ventilation during physical activity [26].

The present review also highlights the potential influence of prenatal yoga on obstetric outcomes. Some studies have reported lower rates of preterm birth, reduced need for cesarean delivery, and improved birth weights among women participating in prenatal yoga programs [29]. These findings may reflect a combination of physiological and psychological mechanisms, including improved physical conditioning, enhanced stress management, and better overall maternal health behaviors [26–30]. However, the evidence remains heterogeneous, and differences in study design, intervention protocols, and sample sizes make it difficult to draw definitive conclusions [26–30].

Several limitations should be considered when interpreting the available literature. Many studies investigating prenatal yoga involve relatively small sample sizes, which may limit statistical power and generalizability [11,12,15,27]. Additionally, there is considerable variability in yoga intervention protocols, including differences in session frequency, duration, intensity, and specific yoga styles used [6,7,8]. This heterogeneity makes it challenging to determine optimal exercise prescriptions for pregnant populations [6,7]. Future research should aim to conduct large-scale randomized controlled trials with standardized intervention protocols in order to better evaluate the effectiveness and safety of prenatal yoga [11,12,28].

Despite these limitations, the overall body of evidence supports the view that prenatal yoga can be a valuable component of maternal health promotion strategies. When appropriately adapted to the physiological changes of pregnancy and guided by trained instructors, yoga may provide a safe and accessible form of physical activity that supports both physical and emotional well-being [26–30].

6. Conclusions

The findings of this review suggest that yoga may represent a safe and beneficial form of physical activity during pregnancy when properly modified to accommodate the physiological and biomechanical changes that occur during this period [26–30]. Prenatal yoga integrates gentle physical movement, controlled breathing, and relaxation techniques, allowing it to address both the physical and psychological dimensions of maternal health [26–30].

Current scientific evidence indicates that prenatal yoga may contribute to several positive health outcomes, including improved metabolic regulation, reduced musculoskeletal discomfort, enhanced cardiovascular and respiratory adaptation, and improved psychological well-being [11–16,18,19,26–28]. In particular, reductions in stress, anxiety, and depressive symptoms appear to be among the most consistently reported benefits of yoga practice during pregnancy [26–28]. These psychological effects may also indirectly influence pregnancy outcomes by reducing stress-related hormonal activity and improving sleep quality [22,26–28].

From a physical health perspective, yoga-based exercise programs may help pregnant women maintain mobility, improve posture, and strengthen muscles that support the spine and pelvis [15,16]. Such adaptations may reduce the prevalence and severity of common pregnancy-related musculoskeletal complaints, including low back pain and pelvic girdle pain [14–17]. Additionally, preliminary evidence suggests that yoga may support metabolic health by improving insulin sensitivity and glucose regulation, potentially contributing to the prevention or management of gestational diabetes [11,12,13].

Nevertheless, it is essential to recognize that pregnancy introduces several physiological changes that require careful modification of traditional yoga practices. Increased ligament laxity, changes in balance, and cardiovascular adaptations may increase the risk of injury if exercises

are performed incorrectly or without appropriate supervision [8,23]. Certain yoga poses—including deep spinal twists, extreme backbends, intense abdominal contractions, and prolonged supine positions—should therefore be modified or avoided during pregnancy [8,23]. Furthermore, yoga sessions conducted in excessively heated environments should be avoided in order to prevent maternal hyperthermia [26].

The safe practice of prenatal yoga depends largely on appropriate program design and professional supervision. Classes specifically designed for pregnant women and led by instructors trained in prenatal exercise can help ensure that postures are adapted to individual needs and pregnancy stages [8]. Healthcare providers should also consider discussing physical activity options, including prenatal yoga, with pregnant patients as part of routine prenatal care [5].

Although current findings are promising, additional research is necessary to further clarify the role of yoga in prenatal health. Future studies should aim to establish evidence-based guidelines regarding optimal training parameters, including exercise frequency, intensity, and duration [11,12,28]. Moreover, long-term investigations examining the potential effects of prenatal yoga on postpartum recovery, maternal mental health, and child development would provide valuable insights into the broader impact of this intervention [26–30].

In conclusion, prenatal yoga represents a promising and holistic approach to supporting maternal health during pregnancy. When practiced safely and appropriately modified, it may serve as an effective complementary strategy for improving both physical and psychological outcomes for pregnant women [26–30].

Disclosure

Author's Contribution:
Conceptualization: JS, TL, MF
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Resources: KJ, LP, OL
Writing- rough preparation: JS, TL, MF, KJ, LP, OL
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