

## Safety and Prevention of Injuries in Yoga

Yoga has long been celebrated for its holistic benefits, merging physical, mental, and spiritual health into a cohesive practice. From stress relief to enhanced flexibility, the advantages of yoga are well documented. However, the rising popularity of yoga has brought an increased awareness of its potential risks and adverse effects. To navigate this issue effectively, examining both scientific literature and traditional yoga prescriptions is crucial.

The practice of yoga is usually considered safe. However, it is important to recognize that like any other activity, yoga practice may present a certain risk for adverse events. Although they are uncommon, there are reports that adverse events may arise from yoga practices due to improper technique or preexisting health issues. Considering the popularity of yoga, it is imminent that yoga enthusiasts, practitioners, instructors, therapists, and medical practitioners are aware of such issues and the ways to prevent the possible complications of yoga practice through preventive measures rooted in traditional yogic knowledge and contemporary practice.

### Adverse Events among Yoga Practitioners

The current body of research on the safety of yoga practice presents a complex picture. While numerous studies have reported the positive effects of yoga, there is also evidence of adverse events, ranging from musculoskeletal injuries to more severe complications. Some studies highlight the risks of yoga, whereas others suggest that the incidence of serious adverse events is relatively low and comparable to nonyoga practitioners.<sup>[1]</sup> Furthermore, the benefits of yoga, such as improved physical fitness, mental health, and cognitive function, are widely reported.<sup>[2]</sup> A review of the literature suggests that the incidence of adverse events in yoga practice is relatively low, but the severity can vary widely.<sup>[3]</sup> A study found that the most common adverse events associated with yoga practice include muscle strains, sprains, and pain, particularly in the back, neck, and shoulders.<sup>[4]</sup> Common yoga practices that lead to adverse events are usually advanced practices such as *Sirsasana* (Headstand) or *Kapalabhati*.<sup>[5,6]</sup>

### Causes of Injuries/Adverse Events with Yoga

The practice of yoga, which is generally regarded as advantageous, may result in complications, particularly when executed incorrectly or without proper insight. Adverse consequences such as overuse, injury, strain, and sprains have been documented, and in rare instances, traumatic dental injury has also been reported.<sup>[1]</sup> The practice of hot yoga, which may pose risks for individuals

with preexisting health conditions, such as heart disease, asthma, and diabetes, potentially leads to harmful outcomes.<sup>[7]</sup> The factors which can increase the risk of adverse events following the practice of yoga include: (i) the duration, (ii) the frequency of practice, (iii) the number of yoga techniques practiced, and (iv) the level of awareness during practice.<sup>[2]</sup> In addition, a common cause of injuries due to yoga is attempting practices that one is not adequately prepared for.

### Potential Ways to Prevent Injuries with Yoga Practice Narrated in Traditional Yoga Texts

Traditional texts and teachings of yoga offer a different lens through which to view these risks. Ancient yogic philosophy, as outlined in texts such as the *Yoga Sutras of Patanjali* and the *Hatha Yoga Pradipika*, provides insights into how deviations from traditional practices might lead to adverse outcomes. *Hatha Yoga Pradipika* also emphasizes a balanced approach to practice, integrating physical postures (*asanas*), breath control (*pranayama*), and meditation. While these texts primarily promote the therapeutic potential of yoga, they also provide guidance on avoiding adverse effects.

Four major factors should be considered to minimize adverse events while practicing yoga.

#### The concept of *adhikara* (eligibility)

Traditional yoga emphasizes the importance of proper preparation and alignment with one's personal abilities and readiness. The concept of *adhikara* implies that individuals should approach advanced practices only when they have developed a solid foundation. Ignoring this principle can lead to injuries and imbalances.

#### The role of *sattva*, *rajas*, and *tamas*

According to traditional yoga philosophy, a balanced state of mind and body is essential for safe practice. *Sattva* (purity), *rajas* (activity), and *tamas* (inertia) are seen as the three *gunas* or qualities that influence our being. Overemphasis on any one quality, such as excessive activity or ambition (*rajas*), can result in physical or mental strain and negative outcomes.

#### The danger of *avidya* (ignorance)

Traditional yoga teaches that ignorance or lack of understanding (*avidya*) about one's own limitations and the purpose of yoga can lead to misuse of the practice. This ignorance can manifest in pursuing poses or practices that are beyond one's capacity, leading to physical and psychological harm.

## Self-discipline (*yamas and niyamas*) and practice (*abhyasa*)

The *yamas* and *niyamas* lay the groundwork for the other limbs of yoga, including physical postures (*asana*), breath control (*pranayama*), and meditation (*dhyana*). By adhering to these ethical guidelines, practitioners create a stable foundation for deeper spiritual and personal development. *Abhyasa* is crucial in yoga as it fosters discipline, supports skill development, promotes personal and spiritual growth, and helps integrate the principles of yoga into daily life. Through consistent effort, practitioners experience the profound benefits of yoga and build a strong foundation for ongoing development.

It is evident from the verse taken from *Hatha Yoga Pradipika* that proper practice of *pranayama* can eliminate health problems, while the improper practice of yoga can result in various health problems.<sup>[8]</sup>

प्राणायामेन युक्तेन, सर्वरोगक्षयो भवेत् |

अयुक्ताभ्यासयोगेन, सर्वरोगस्य संभवः || II-16

*Prāṇāyāmena yuktena sarva-roga-kṣayo bhavet |*

*Ayuktābhyāsa-yogena sarva-roga-samudbhavaḥ || II-16*

## Contemporary Ways of Preventing Yoga-related Adverse Events

Incorporating appropriate training and education for instructors, establishing safety guidelines and protocols, and regularly updating students with the latest research and best practices in yoga safety are essential measures for preventing yoga-related adverse events. Implementing regular assessments and evaluations of instructors, fostering open communication between students and instructors, and conducting thorough investigations into reported incidents can also aid in mitigating such events. Educational institutions can promote the prevention of yoga-related adverse events by offering continuous professional development opportunities and promoting a culture of transparency and accountability. In addition, promoting the use of evidence-based practices and guidelines can also contribute to the reduction of yoga-related adverse events. Considering the need for such safe practices, the World Health Organization is now preparing a benchmark document on the training of yoga professionals. The creation of this benchmark document will serve as a crucial resource for ensuring that yoga professionals are properly trained in safe practices, enabling them to provide high-quality instruction to their students.

In conclusion, while yoga offers numerous health benefits, acknowledging and addressing its potential risks is

essential for safe practice. By integrating insights from both scientific research and traditional Hatha yoga principles, practitioners can enjoy the profound benefits of yoga while minimizing the risk of adverse events. Balancing caution with enthusiasm and understanding one's own body remain the keys to a safe and fulfilling yoga journey.

## Nandi Krishnamurthy Manjunath

Vice Chancellor, Swami Vivekananda Yoga Anusadhana Samsthana,  
Bengaluru, Karnataka, India  
E-mail: [nkmsharma@svyasa.org](mailto:nkmsharma@svyasa.org)

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