

# THE SERPENT UNCOILS: A HISTORICAL, PHILOSOPHICAL, AND ANATOMICAL EVOLUTION OF BHUJANGASANA IN HATHA YOGA

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**Abstract :** This paper traces the evolution of *Bhujangasana* (Cobra Pose) from its textual origins in pre-modern Hatha Yoga to its contemporary status as a globally recognized therapeutic posture. Employing a multi-disciplinary research approach that combines textual analysis of Sanskrit sources, a historical review of modern yoga lineages, and a systematic review of the cobra pose in contemporary research, this study charts the asana's transformation. We argue that the history of *Bhujangasana* serves as a compelling microcosm for the broader modernization of Hatha Yoga, illustrating a significant shift in implementation and purpose from an esoteric tool for awakening Kundalini to a scientifically validated intervention for musculoskeletal and physiological health. The paper first establishes the pose's absence in early key texts and analyzes its initial description in the 17th-century *Gheranda Samhita*. It then examines the influence of 19th-century compendiums and the pivotal role of 20th-century masters like T. Krishnamacharya in redefining the pose within dynamic sequences. Finally, it synthesizes a body of anatomical and clinical evidence, particularly concerning chronic low back pain, to demonstrate the contemporary, evidence-based understanding of the posture. This evolutionary trajectory reveals a dynamic interplay between tradition, innovation, and scientific inquiry in the ongoing development of yoga.

**IndexTerms - Bhujangasana, History of Bhujangasana, Kundalini, Anatomical Evolution of Bhujangasana, Cobra Pose in Hath Yoga text, low back pain.**

## Introduction: The Serpent in the Indian Imagination

### The Primordial Symbolism of the *Nāga*

The serpent, known in Sanskrit as *nāga* or *sarpa*, is a potent and polyvalent symbol deeply embedded within the Indian cultural and philosophical landscape. Its significance far precedes its association with any single yoga posture, providing a rich symbolic context essential for understanding the origins and esoteric underpinnings of *Bhujangasana*. The serpent's ability to shed its skin has long made it a powerful emblem of evolution, dropping the past impression and being in the present and the cyclical nature of existence (*samsara*). This transformative capacity is often depicted as moving towards the supreme.

In Hindu mythology, *nāgas* are depicted as a divine race of serpentine beings inhabiting the subterranean realm of *Patalaloka*, possessing great power and esoteric wisdom (Panda, n.d.). Sheshanāga, the cosmic serpent on whose many hoods Lord Vishnu rests, is believed to sustain the entire creation, symbolizing the primordial consciousness that forms the basis of the universe. The intimate association of major deities with serpents further underscores their symbolic weight. Lord Shiva, the ascetic deity associated with destruction and transformation, adorns a cobra around his neck, symbolizing his complete mastery over cosmic energy, time, and death. Likewise, the sage Patañjali, venerated as the compiler of the *Yoga Sūtras*, is often portrayed as a being who is half human and half serpent an image that reflects the yogic journey of transcending and mastering the primal, serpentine energies of nature and consciousness. Thus, to invoke the serpent is to engage deeply with the principles of transformation, primal vitality, and the transcendence of fear and ignorance (*avidyā*).

### Kundalini Shakti: The Coiled Serpent as a Metaphor for Potential Energy

In the esoteric disciplines of Tantra and Hatha Yoga, the broad symbolism of the serpent is internalized and articulated as the concept of *Kuṇḍalinī Śakti*. This divine feminine energy (*Śakti*) is described as a latent and potent force residing at the base of the spine in the *Mūlādhāra* chakra. The term *Kuṇḍalinī* literally means "the coiled one." This energy is said to be coiled three and a half times, asleep like a serpent awaiting awakening. Appropriately, one of its traditional names is *Bhujangini*, meaning "the Serpent." (Sivanand, 1994)

The original purpose of Hatha Yoga was not physical conditioning but spiritual liberation (*mokṣa*), attained through the awakening and upward movement of *Kuṇḍalinī Śakti* along the *Suṣumṇā nāḍī*. As this energy pierces the cakras, it culminates in union with *Śiva* at the *Sahasrāra*, symbolizing the dissolution of duality and the realization of higher consciousness. The practices of *āsana*, *prāṇāyāma*, *bandha*, and *mudrā* were thus designed as technologies for transformation (Saraswati, 1999). The naming of *Bhujangāsana* ("Serpent Pose") directly alludes to this esoteric goal.

### Textual Emergence and Pre-Modern Forms

#### Absence and Inference: The Lack of Serpentine Poses in Early Hatha Texts

The historical development of *āsana* in the yogic tradition is far from uniform, and scholarly evidence indicates that the extensive repertoire of modern postures represents a relatively recent evolution. The absence of *Bhujangāsana* in the foundational Hatha Yoga texts is as telling as its later emergence, suggesting that prone back-bending postures were not integral to the early practice of the tradition.

The *Gorakṣa Saṁhitā*, an early Hatha Yoga text dating from the 11th–12th centuries CE, refers to eighty-four classical āsanās said to have been revealed by Lord Śiva, yet it describes in detail only two asana *Siddhāsana* (Accomplished Pose) and *Padmāsana* (Lotus Pose). Both are seated postures designed for prolonged meditation and breath control, reflecting the early emphasis of Hatha Yoga as a preparatory stage for *Raja Yoga* i.e. higher states of consciousness.

Similarly, the *Hatha Yoga Pradīpikā*, a seminal 15th-century compilation by Svātmārāma and one of the three classical manuals of Hatha Yoga, enumerates only fifteen āsanās, primarily seated postures, along with a few others such as *Mayūrāsana* and *Matsyendrāsana*. Notably, *Bhujangāsana* is absent from this influential corpus.

The *Śiva Saṁhitā*, likely composed between 1300 and 1500 CE, also recognizes the traditional number of eighty-four āsanās but provides detailed instructions for only four: *Siddhāsana*, *Padmāsana*, *Paścimottānāsana*, and *Svastikāsana*. The consistent omission of prone or serpentine backbends across these early texts suggests two possibilities: first, that Hatha Yoga practices were intended primarily for advanced yogins rather than the general practitioner, and second, that these postures may have been so common or familiar within the yogic tradition that detailed explanation was deemed unnecessary.

The later development of *Bhujangāsana* signifies not just the introduction of a new pose, but also a transformation in yoga itself from a practice reserved for yogis to one accessible to the common practitioner.

### The First Description: An Exegesis of *Bhujangāsana* in the 17th-Century *Gheranda Saṁhitā*

The first known textual description of *Bhujangāsana* appears in the *Gheranda Saṁhitā*, a late 17th-century encyclopedic text structured as a dialogue between the sage Gheranda and his student Chandakapali. This text marks a significant expansion of the asana repertoire, detailing 32 postures deemed "useful in the world of mortals". The inclusion of *Bhujangāsana* is part of a broader trend in later Hatha Yoga texts toward a more comprehensive and physically diverse practice, moving beyond a singular focus on meditative seats.

The *Gheranda Saṁhitā* provides a concise technical instruction for the pose in verses 2.42:

अङ्गुष्ठनाभिपर्यन्तमधोभूमौ विनियसेत् ।  
करतलाभ्यां धरां धृत्वोर्ध्वं शीर्षं फणीव हि ॥ २.४२ ॥

Anguṣṭhanābhiparyantam adho bhūmau vininyaset |  
karatalābhyāṁ dharāṁ dhrtvordhvaṁ śīrṣaṁ phaṇīva hi || 2.42||

“Let the lower part of the body from the toes up to the navel touch the ground. Place the palms on the ground and raise the head like a serpent”. This description is clear: it is a prone backbend where the lower body remains grounded to the navel, and the lift is initiated by pressing the palms into the floor, using the arms as levers to arch the spine.

More importantly, the text explicitly states in verses 2.43

देहाग्निवर्धते नित्यं सर्वरोग विनाशनम् ।  
जागर्ति भुजगी देवी भुजगासन साधनात् ॥ २.४३ ॥

“dehāgnirvardhate nityaṁ sarvarogavināchanam |  
jāgarti bhujagē devē sādhanādbhujagāsanaṁ”|| 2.43||

“By practising *Bhujangāsana kuṇḍalinī* is aroused, heat of the body increases and all diseases are destroyed”.

This statement is profound. It confirms that the original intent of the pose was not primarily for spinal flexibility or back strength, but as a specific technology to awaken the dormant serpent power, generate internal heat (*tapas*), and achieve both spiritual and physical purification.

### A 19th-Century Divergence: Analysis of *Sarpāsana* in the *Sritattvanidhi*

Nearly two centuries later, another important textual source emerged that provides a critical "missing link" in the asana's history. The *Sritattvanidhi* ("The Illustrious Treasure of Realities") is a 19th-century compendium compiled between 1811 and 1868 under the patronage of the Maharaja of Mysore, Krishnaraja Wodeyar III (Sjoman, 1999). Its ninth section, the *Kautuka Nidhi*, contains instructions and illustrations for 122 asanas, a far more extensive collection than any prior text (Sjoman, 1999).

Within this text, a pose resembling *Bhujangāsana* is depicted, but it is named *Sarpāsana* (Serpent Pose) (Singleton, 2010). While the full textual description from the original manuscript is not available in the reviewed sources, the illustration reproduced in Sjoman's work, along with modern interpretations of *Sarpāsana*, consistently show a crucial technical difference from the *Gheranda Saṁhitā's Bhujangāsana*: the hands are interlocked behind the back, not pressed into the floor. This variation fundamentally alters the biomechanics of the pose. Without the support of the arms, the practitioner must lift the chest from the floor using solely the strength of the back muscles, primarily the erector spinae group (Saraswati, 1999).

### The 20th-Century Transformation: *Bhujangāsana* in Modern Postural Yoga

The 20th century witnessed a radical transformation of Hatha Yoga, propelling it from an obscure practice of Indian ascetics to a global phenomenon of physical and mental wellness. In this process, asanas were re-contextualized, systematized, and often repurposed. The evolution of *Bhujangāsana* during this period, particularly through the influence of key teaching lineages, exemplifies this modernization.

### The Mysore Lineage: T. Krishnamacharya's Role in Integrating *Bhujangāsana* into Dynamic Vinyasa Practice

Sri Tirumalai Krishnamacharya (1888–1989) is widely regarded as the "father of modern yoga" for his profound influence on how asana is practiced today (Shaw, n.d.). His teachings, developed while under the patronage of the Maharaja at the Mysore Palace, are the source of several major contemporary yoga styles, including the Ashtanga Vinyasa of K. Pattabhi Jois and the alignment-focused method of B.K.S. Iyengar (Sjoman, 1999).

Krishnamacharya's most significant innovation regarding *Bhujangāsana* was that he integrated it into dynamic, breath-synchronized sequences (*vinyasa*). Most notably, *Bhujangāsana* became a key component of many variations of *Surya Namaskar* (Sun Salutation), where it serves as a transitional backbend, often flowing between a prone or low plank position and Downward-Facing Dog (Singleton, 2010). This shift fundamentally changed the pose's character from a static "state" (*sthiti*) to a fluid "process." The emphasis moved from prolonged holding to the smooth, breath-led movement *through* the posture. This dynamic application aligns with the principles of Indian physical culture (*vyayama*) and Western gymnastics, both of which influenced Krishnamacharya's work at the Mysore Palace gymnasium (Sjoman, 1999). His texts, such as the 1934 *Yoga Makaranda* and the later *Yoga Rahasya*, list *Bhujangāsana* within his system of vinyasa-based asana practice, cementing its place in the modern yogic lexicon (Shaw, n.d.).

### Systematization and Pedagogy: The Influence of the Bihar School of Yoga on Technique, Breath, and Energetic Awareness

Another highly influential 20th-century institution, the Bihar School of Yoga founded by Swami Satyananda Saraswati, played a crucial role in systematizing and disseminating the techniques of Hatha Yoga to a global audience. Their approach to *Bhujangasana*, as detailed in the comprehensive manual *Asana Pranayama Mudra Bandha*, represents a modern synthesis of traditional purpose and accessible pedagogy (Saraswati, 1999).

The Bihar School provides meticulous technical instructions for the pose, emphasizing a slow, controlled "uncoiling" of the spine, vertebra by vertebra, starting from the cervical region and moving downward (Saraswati, 1982a). This method encourages deep bodily awareness and spinal articulation. The school also delineates a clear progression, advising beginners to use arm support while encouraging more advanced practitioners to initiate the lift from the back and abdominal muscles, echoing the serpent's own strength (Saraswati, 1982a).

Crucially, this school did not discard the esoteric goals of the classical texts but rather "democratized" them by translating them into practical instructions for a lay audience. For instance, practitioners are guided to first concentrate on the physical sensation of the spinal arch and then, in later stages, to bring their awareness to specific energy centers like the *Vishuddhi chakra* (throat center) (Saraswati, 1982a; Saraswati, 1982b). This pedagogical method bridges the gap between the gross physical body and the subtle energetic body, making the abstract goals of the *Gheranda Samhita* tangible and accessible without the need for secretive, guru-led initiation. The teachings frame the pose with clear therapeutic rationales such as improving spinal health and stimulating abdominal organs while retaining the language of chakras and *prana* (Saraswati, 1999).

### A Taxonomy of Form: The Proliferation of Modern Variations and their Applications

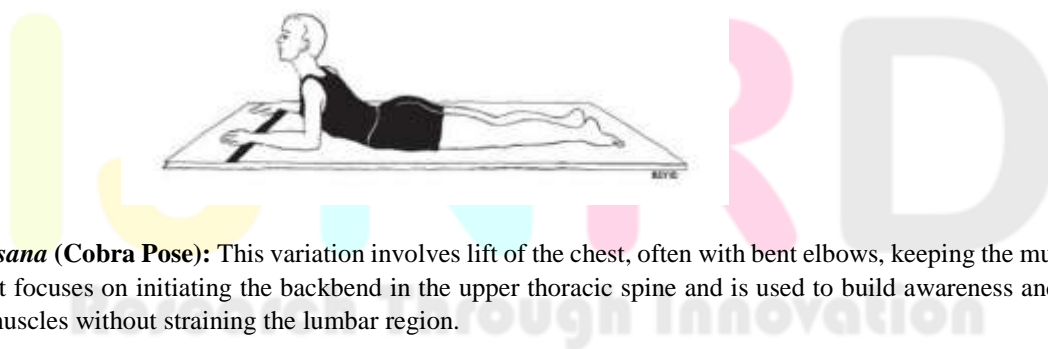
The modern, pedagogical approach to yoga has led to the development of numerous variations of *Bhujangasana*, each designed to modify the intensity and target specific anatomical areas, making the pose accessible to a wider range of practitioners. This proliferation of form underscores the contemporary focus on individualized practice, therapeutic application, and progressive learning.

- ***Sarpasana* (Snake Pose):** This is a preparatory pose for *bhujangasana*. Where one interlocks the fingers and raises the arms as high as is comfortable and by using the lower back muscles, raises the chest as far as possible from the floor.

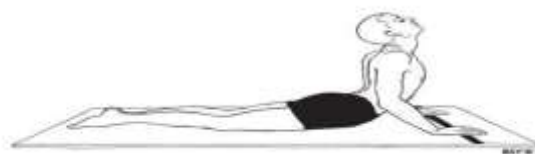


- ***Saral Bhujangasana* (Sphinx Pose):** This is a foundational and gentler variant where the practitioner rests on the forearms with the elbows positioned under the shoulders (Singleton, 2010). This reduces the angle of the backbend and provides stable support, making it an excellent preparatory pose for beginners, a therapeutic option for those with lower back sensitivity, and a common posture in Yin Yoga, where it is held for extended periods (Saraswati, 1999; Singleton, 2010).

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- ***Bhujangasana* (Cobra Pose):** This variation involves lift of the chest, often with bent elbows, keeping the muscular effort minimal. It focuses on initiating the backbend in the upper thoracic spine and is used to build awareness and strength in the back muscles without straining the lumbar region.



- ***Tiryaka Bhujangasana* (Twisting Cobra Pose):** From the basic Cobra Pose, the practitioner twists the upper body to look over one shoulder towards the opposite heel (Saraswati, 1999). This adds a rotational element to the spinal extension, which increases the stretching and massaging effect on the abdominal organs and engages the oblique muscles.



- **Poorna Bhujangasana (Full Cobra Pose):** This is an advanced and deep expression of the posture. From a high cobra, the knees are bent, and the feet are brought towards the back of the head, which is tilted back to meet them (Saraswati, 1982a). This creates an intense, full-body arch, requiring significant flexibility in the entire spine, hip flexors, and quadriceps. The Bihar School describes this form as completing the "energy circuit," recreating the symbolic *ouroboros* within the practitioner's own body (Saraswati, 1982a).



### The Science of the Serpent: Anatomical and Therapeutic Investigations

As *Bhujangasana* became a cornerstone of modern yoga practice, it also became a subject of scientific inquiry. The traditional claims of its benefits have been examined through the lenses of biomechanics, physiology, and clinical research, leading to a detailed, evidence-based understanding of its mechanisms and therapeutic applications. This shift from esoteric explanation to scientific validation is a hallmark of contemporary yoga.

#### A Biomechanical Breakdown: Muscle Engagement and Kinematics of Spinal Extension

Modern anatomical analysis reveals *Bhujangasana* to be a complex posture involving the synergistic action of numerous muscle groups throughout the body. The traditional instruction to "raise the head like a serpent" is achieved through a coordinated sequence of muscular contractions and elongations (Negi et al., 2024).

- **Primary Movers and Spinal Extension:** The primary action of lifting the torso against gravity is powered by the concentric contraction of the spinal extensor muscles. This group, principally the erector spinae (composed of the spinalis, longissimus, and iliocostalis muscles), runs along the length of the vertebral column and is responsible for arching the back (Negi et al., 2024). The arms assist significantly in the lift through the concentric contraction of the triceps brachii, which extend the elbows (Lakra, 2023; Negi et al., 2024).
- **Antagonistic Stretching and Control:** As the back extends, the muscles of the anterior torso must lengthen. The abdominal muscles, particularly the rectus abdominis, engage eccentrically (lengthening under tension) to control the movement, providing crucial stability to the lumbar spine and preventing excessive compression of the vertebrae (Negi et al., 2024). This controlled lengthening also stretches the entire front of the body, including the chest (pectoralis major and minor) and hip flexors (psoas), contributing to the pose's characteristic "heart-opening" quality (Lakra, 2023).
- **Stabilization:** Maintaining the integrity of the pose requires isometric contraction of several muscle groups. The lower body acts as an anchor; the gluteus maximus, hamstrings, and adductor magnus engage to maintain hip extension and prevent the legs from splaying outwards (Lakra, 2023; Negi et al., 2024). In the shoulder girdle, the rotator cuff muscles (infraspinatus, teres minor) and rhomboids work to stabilize the scapulae and externally rotate the shoulders, broadening the chest (Lakra, 2023; Negi et al., 2024). The deep cervical flexors (longus colli) co-contract to support the neck, ensuring the curve of the cervical spine is a smooth continuation of the thoracic spine, preventing injurious hyperextension (Lakra, 2023; Negi et al., 2024).

### Systematic Review of Therapeutic Efficacy

The therapeutic claims associated with *Bhujangasana*, from the ancient promise of "destroying all diseases" to modern assertions of stress relief and improved posture, have been investigated in numerous clinical studies.

- **Chronic Low Back Pain (CLBP):** The most robust body of evidence for yoga's therapeutic effects relates to CLBP. Multiple systematic reviews and meta-analyses have concluded that yoga is a safe and effective intervention for reducing pain and improving back-specific functional disability in individuals with chronic, non-specific LBP (Cramer et al., 2013; Holtzman & Beggs, 2013; Wieland et al., 2017; Zou et al., 2024). Randomized controlled trials that include *Bhujangasana* or its gentler variant, *Saral/Salamba Bhujangasana* (Sphinx Pose), as part of the intervention protocol consistently report statistically significant improvements in pain scores, functional ability (as measured by tools like the Oswestry Disability Questionnaire), and spinal flexibility (Johnson et al., 2020; Kumar & Singh, 2015; Lewis et al., 2019; Patil & Sharma, 2017; Sharma et al., 2017). The proposed mechanisms for these benefits are directly related to the biomechanics of the pose: it strengthens the deconditioned posterior chain muscles (erector spinae), increases the flexibility of the spine and

tight hip flexors, and improves core stability (Lewis et al., 2019). Some preliminary research also suggests that yoga may reduce levels of inflammatory biomarkers such as tumor necrosis factor-alpha (TNF- $\alpha$ ), which could play a role in pain pathways (Lewis et al., 2019).

- **Impact on Other Physiological Systems:** While research is less extensive than for CLBP, numerous studies and anatomical reviews support the therapeutic potential of *Bhujangasana* for other body systems.
  - **Respiratory Function:** The significant stretching of the chest, shoulders, and abdomen in the pose expands the rib cage and stretches the intercostal muscles. This action is believed to increase lung capacity and promote deeper, more efficient breathing, lending credence to its traditional use as a therapeutic practice for asthma (Lakra, 2023).
  - **Digestive Health:** The combination of abdominal stretching and gentle compression against the floor is thought to massage the internal organs. This mechanical stimulation may improve circulation to these organs and help alleviate common digestive complaints like constipation and flatulence (Jadoun and Yadav, 2019; Bindhu T 2023).
  - **Endocrine and Reproductive Health:** The pose is frequently recommended in modern yoga therapy for menstrual irregularities, with the rationale that it tones the ovaries and uterus and improves pelvic circulation (Lakra, 2023). The pressure on the abdomen is also theorized to stimulate the adrenal glands, which may help modulate the body's stress response. For diabetes management, it is proposed that the pose stimulates the pancreas, potentially enhancing insulin production and sensitivity (Himanshu et al., 2024).

### From Kundalini to Cortisol: Bridging Esoteric Goals and Modern Outcomes

The original purpose of *Bhujangasana* is to "arouse Kundalini" which can be reinterpreted through a contemporary neuro-endocrinological framework. The ancient yogis' subjective experiences of "heat" and rising "energy" find intriguing parallels in modern scientific understandings of the stress response and nervous system regulation. The physical effort of the backbend, combined with conscious breath control, directly stimulates the autonomic nervous system. The active phase of lifting into the pose engages the sympathetic nervous system ("fight or flight"). However, the mindful holding and controlled release of the posture can trigger a strong parasympathetic rebound ("rest and digest"), which is known to reduce physiological arousal and promote healing (Zou et al., 2024).

Modern research has demonstrated that regular yoga practice can significantly reduce circulating levels of the primary stress hormone, cortisol, and lower subjective feelings of anxiety (Gangwal et al. 2019). It has also been shown to increase the production of mood-elevating neurotransmitters such as serotonin and dopamine (Longdom P, 2023). Therefore, the ancient goal of "destroying all diseases" finds a modern corollary in yoga's capacity to mitigate the well-documented negative health impacts of chronic stress, a primary contributor to many contemporary lifestyle-related illnesses. The esoteric "serpent power" of Kundalini, once understood as a mystical force, can be seen as a powerful metaphor for the latent capacity of the human nervous system to self-regulate, heal, and move from a state of stress and fragmentation to one of integration and well-being.

### Conclusion: From Esoteric Symbol to Global Therapy

The evolutionary trajectory of *Bhujangasana* is a compelling narrative of adaptation and reinterpretation. This paper has traced its path from a notable absence in the earliest Hatha Yoga texts to its 17th-century emergence in the *Gheranda Samhita* as a specific and potent tool for awakening the esoteric force of Kundalini. The subsequent appearance of the strength-focused *Sarpasana* in the 19th-century *Sritattvanidhi* signaled a growing integration of physical culture within the yogic tradition. The 20th century marked the pose's most radical transformation, as luminaries like T. Krishnamacharya repurposed it from a static, isolated posture into a dynamic component of flowing *vinyasa* sequences, while pedagogical institutions like the Bihar School of Yoga systematized its technique and made its psycho-spiritual benefits accessible to a global audience.

Today, *Bhujangasana* exists in a multifaceted form. It is at once a foundational posture in yoga classes worldwide, a therapeutic intervention supported by a growing body of clinical research for conditions like chronic low back pain, and for some, still a symbol of the coiled serpent energy awaiting spiritual ascent. This journey from an esoteric symbol to a global therapy serves as a powerful microcosm for the broader modernization of Hatha Yoga itself. It illustrates a definitive shift in emphasis from the subtle body to the gross body, from spiritual liberation to therapeutic outcomes, from secretive guru-disciple lineages to open-source mass pedagogy, and from a reliance on scriptural authority to a dialogue with scientific inquiry. The serpent, once awakened only by a select few, has uncoiled into a practice that offers tangible benefits to millions.

Future research could further illuminate this evolution. Comparative clinical trials of the different variations of *Bhujangasana* could help determine their specific therapeutic efficacies. Deeper investigation into the pose's effects on the endocrine and nervous systems could further bridge the gap between traditional claims and modern physiological understanding. Finally, continued historical research into the cross-pollination between yoga and indigenous Indian physical culture traditions like *vyayama* may reveal even more about the complex origins of the dynamic asana practice we know today.

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