

REVIEW ON APPLIED ASPECTS OF *BHUJANGASANA* WITH ITS ANATOMICAL EXPLANATION

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ABSTRACT

Yogasana plays an ideal role to maintain the equilibrium between body and mind. *Ayurveda* specifically deals with it. In *Astang Yoga Acharya Patanjali* mentioned *Asanas* (Posture), which gives *Sthiratwam* (stability) and *Sukham* (happiness/comfortable posture) to person. In recent days *Yoga* has become commercialized and transformed into a mass movement in India. In *Hatha Yoga* description regarding *Asanas* found as to enhance physical and mental fitness of person who practices *Asanas*. *Yoga* is performed through some specific postures called *Asanas*. The benefits of *Asanas* range from physical to spiritual level. *Asanas* not only strengthen the muscles, ligaments, joints and nerves but also maintains the smooth functioning and health of entire body. The effective use of *Bhujangasana*, breathing techniques and meditations have worked wonders on patients afflicted with joints pain down to those suffering from certain serious conditions like spinal disk compression. Knowledge of anatomical principles can aid in understanding the beneficial effects of practicing *Bhujangasana*.

Keywords *Bhujangasana*, *yogasana*, muscles, joints

INTRODUCTION: *Yogasana* plays an ideal role to maintain the equilibrium between body and mind *Ayurveda* deals with the health care and aim of *Ayurveda* is to maintain health of the healthy and to free every person of the world from disease¹. *Ayurveda* covers every illness and every form of health inducing both body and mind. *Ayurveda* explains health as a balanced state of *Dosha*, *Agni*, *Dhatu* and *Mala*². The state of mental well being holds great importance in the definition of health in *Ayurveda*. The science of *Yoga* does not directive where the body ends and the mind begins but approaches both as a single, integrated entity. The key is to integrate the two together practicing *Yoga* has the holistic impact of relaxing the body and calming the mind. The *Gheranda*

samhita is the most encyclopedic of the three classic (*Gheranda Samhita*, *Shiva Samhita*, *Hatha Yoga pradiipika*) ext about *Asana*. *Bhujangasana* was described in *Gheranda Samhita* as one among the 32 most important *Asana*. There are 84 lakhs of *Asana* described by lord *Shiva*. Among them 84 are the best and 32 *Asanas* have been found useful for mankind in this world³. In the practice of *Bhujangasana* whole body shape like a cobra rising up in a graceful arc reaching towards the sky⁴. In some yogic teachings, a coiled snake is used as a symbol for the *Kundalini* energy lying dormant at the base of a spine When this potential power is stimulated it moves upward awakening the *Chakras* and uplifting consciousness. In the posture of *Bhujangasana* role of breathing and

movement of joint is necessary. so attempt is done towards its applied anatomical benefits in this article.

AIM AND OBJECTIVES:

- 1.To know the benefits and anatomical structure involved while practicing *Bhujangasana* in daily life.
- 2.To prevent injury while practicing *Bhujangasana* in daily life.

MATERIALS AND METHODS:

- Classical text book of *Yoga-Asana Gheranda Samhita, Shiva Samhita, Hatha Yoga Pradipika*
- 3 articles related to steps of *Asana*, muscles involvement during performing *Asana* 1 thesis publications and internet media information related to anatomy, benefits, image on *Bhujangasana*.

STEPS OF PERFORMING BHUJANGASANA⁵:

How to perform the *Bhujangasana* with right techniques is one of the important aspects to extract its health benefits. The steps to do *Bhujangasana* (cobra pose) is being mentioned here.

- Lie down on the *navel(Nabhi) region* by keeping your legs together.

- Put your hands/palms besides your shoulder and the head should rest on the ground.
- Inhale & lift trunk up to 30 degree like the hood of serpent. the weight should be on the legs & palms, letter posture will extent up to 60 degree.
- Maintain the position till 10 to 20 seconds with *kumbhak*.
- Come to the original position slowly with deep exhalation.
- Repeat the process for 5 to 10 times.
- Step by step adoption of procedure & the complete lumbosacral extension when achieved (during the headed cobra pose) will be maintained for about 1 minute & slowly coming to the prone position.

PORTION INVOLVED:

Neck, chest, abdomen, back & waist. shoulder joint and elbow joints, hip joints

BREATHING:

Slow inhalation while extension of chest then stay with *kumbhak* and come to normal posture with slow exhalation

DURATION:

Practice upto 10 rounds of 20 second daily in morning, gradually increasing the time of breathing and *kumbhak*.

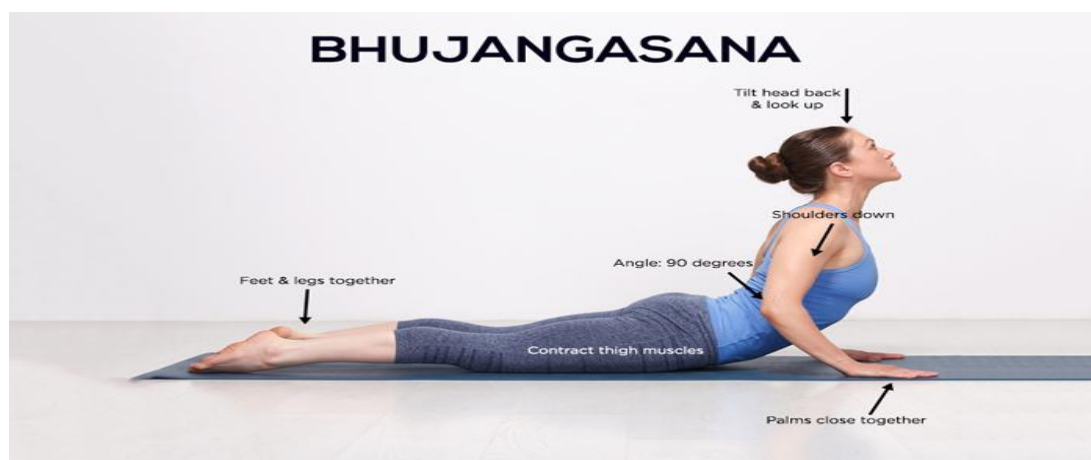


Figure 1 Showing steps of performing *Bhujangasana*⁶

AWARENESS:

Maintain the body weight on palm and legs. Not too hurry slowly and gently perform this *Asana* with proper breathing techniques not to over strain muscle and joints.

Muscles of the chest & abdomen slowly stretched

All the concerned muscles and vertebrae are stretched & relaxed.

EFFECTS^{7,8,9}:

- Neck muscles are stretched & thyroid gland stimulated.
- Neurovascular Functions of spine improved
- Back ache is relieved.
- Helps to reduce the fat in the belly
- It is considered to be the best in the disease of abdomen and cervical disease
- It also helps in menorrhagia, dysmenorrhea in female
- It also increase the flexibility of elbow and hip joints
- It tone up the abdominal and spine muscles
- Chest expansion seen in this asana so it helps in respiratory function and increase capacity of lungs.
- Relieves stress and fatigue
- Opens the thorax region and helps to clear the passages of the heart and lungs Improves circulation of blood and oxygen, especially throughout the spinal and pelvic regions
- Improves digestion
- Strengthens the spine
- Use full in the sciatica
- Elevates mood
- Firms and tones the buttock muscles

ANATOMICAL VIEW OF BHUJANGASANA^{10,11,12} :

A. Joint Actions In *Bhujangasana*

- 1) Spine extension
- 2) Hip extension, internal rotation, adduction
- 3) Knee extension
- 4) Ankle planter flexion
- 5) Shoulder Joint external rotation
- 6) Elbow extension and fore arm pronation.

B. Muscles Involved in *Bhujangasana*¹³

- 1) The Spine: Spinal extensor group- Intertransversarii, Interspinalis and Spinalis works concentrically to create extension.
- 2) Hip Region: The hip is extended in *Bhujangasana*. The hamstrings specially semitendinosus and semimembranosus extend the hips and maintain adduction and internal rotation. The extensor portion of the adductor Magnus along with the gluteus Maximus also extend the hips.
- 3) Knee Joint: Knee is extended in *Bhujangasana*. The vastus lateralis, vastus medialis, vastus intermedialis work to extend the knees.
- 4) Ankle Joint: In *Bhujangasana* ankle joint is planter flexed. Extensor digitorum longus, extensor hallucis longus, tibialis anterior and peroneus tertius belongs to anterior compartment of leg while extensor hallucis brevis belongs to the dorsum of foot.
- 5) Shoulder Joint: Shoulders externally rotated in *Bhujangasana*. The upper limb is kept straight. The scapula is almost at neutral position. The serratus anterior is active to maintain a neutral position of the scapula against the push of the arms.
- 6) Elbow Region: Upper limb is kept straight and the elbow is extended. The fore arm is in pronated position in *Bhujangasana*.
- 7) To maintain the extension of elbow triceps is actively contracted.

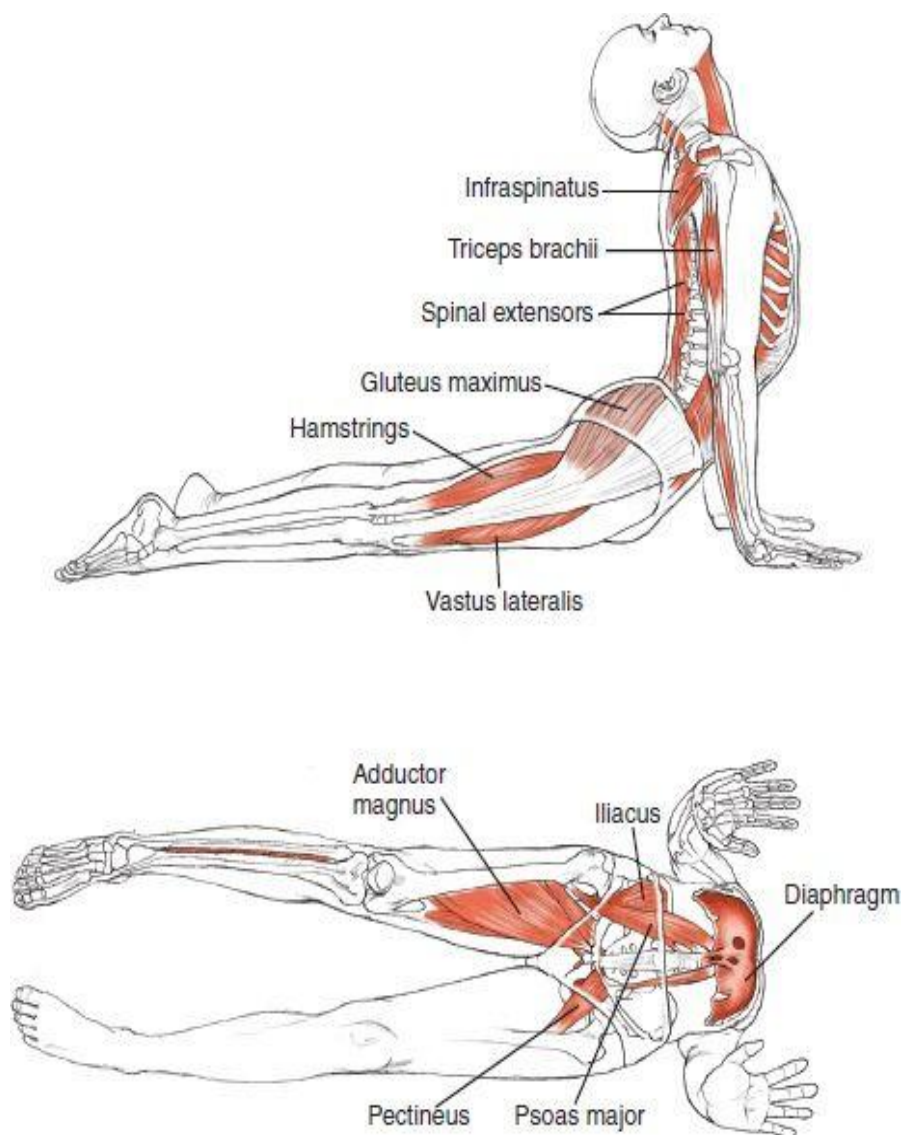


Figure 2 Showing muscles involved in performing *Bhujangasana*¹⁴

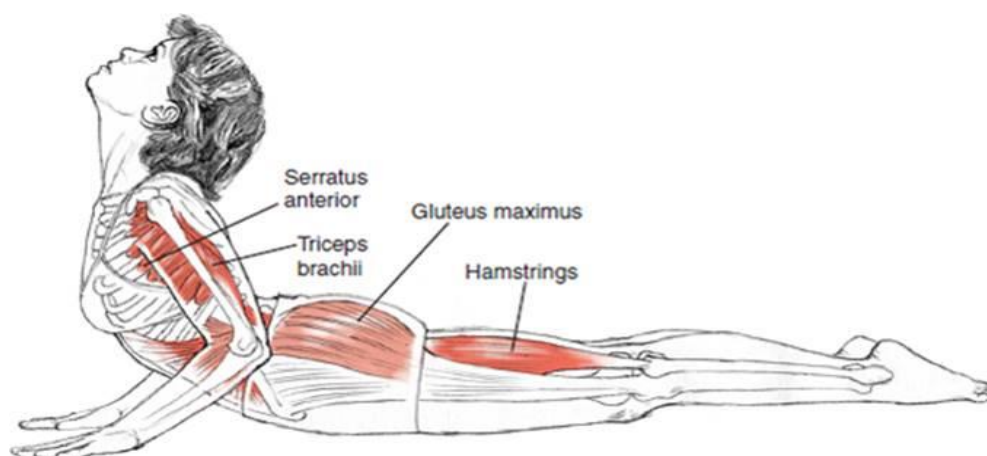


Figure 3 Showing muscles involved in performing *Bhujangasana*¹⁵

DISCUSSION¹⁶:

The lumbosacral angle formation is related to the progressive acquisition of erect posture and the ontogeny of bipedal locomotion. The impact of increasing joint activity and paraspinal muscle activity helps in stature recovery. The pain, stiffness and decrease in the range of movement at the lumbosacral spine is due to structural changes in the L5-S1 joint. The pathology is due to the compression of nerve roots of Sacral plexus. Any postural changes to compensate the stress and strain in the lumbosacral joints results in the changes in the lumbar curvature which results in an increased lumbosacral angle. The movements in the Lumbo-sacral joint brought about by *Bhujangasana* causes the structural changes in the joint which helps in the regeneration & realignment of the bones. *Bhujangasana* involves different steps, At the stage of complete lumbosacral extension (which will be maintained for about one minute), the lumbosacral spine is in its close-packed position which influences the cell shape & physiology & can have a direct mechanical effect on matrix alignment. It exactly help the tissues to gradually & progressively adapt to the new loading conditions

CONCLUSION:

Prevention is better than cure. *Patanjali Yoga* described about eight branches—*Asana* given third place. “*Asana*” secure first place in “*Hatha Yoga*” because it improves physical fitness and mental happiness. *Bhujangasana* helps to strengthen the spine, improves joint flexibility and tone of the abdomen muscles. One of the main benefits of *Bhujangasana* is help in to improve blood circulation. *Bhujangasana* is an *Asana*

which manage the health of human body and improve the spiritual level.

REFERENCES:

1. Agnivesh, Charaka, dridhbala Charaka samhita, vidhyotini hindi commentary; 1st part, Shri Satyanarayan shastri; Chaukhambha bharti academy, Varanasi, (U.P.); edition 2013, page no. 589.
2. Trikamjin Yadavji, Charaka Samhita with Chakrapanidatta Ayurvedadipika commentary. Reprint ed. Varanasi (India) (Chaukhamba Surbharati Prakashana) 2011. pp. 4.
3. Chamanlal gautam editor. Hath yoga pradipika. Sanskrit sansthan Bareilly; Pratham upadesh, p. 28.
4. J.L. Gupta – Rai Bahadur Srisachandra Vasu, editor. Gherand Samhita dwitiyopadesh. Chaukhambha Publication ; Varanasi ; 2003 p. 22.
5. J.L. Gupta – Rai Bahadur Srisachandra Vasu, editor. Gherand Samhita dwitiyopadesh. Chaukhambha Publication ; Varanasi ; 2003 p. 36.
6. https://www.google.com/imgres?imgurl=https%3A%2F%2Fwww.hithyoga.com%2Fwpcontent%2Fuploads%2F2019%2F11%2FBhujangasana.jpg&imgrefurl=https%3A%2F%2Fwww.hithyoga.com%2Fbhujanngasana%2F&tbnid=pHW4Qz1pQWFhPM&vet=12ahUKEwi32vKA05nvAhWZILcAHYPSCHAQMygCegUIARCtAQ..i&ocid=L7Hg_1yTXsDMHM&w=700&h=450&q=bhujangasana%20muscles%20involved&ved=2ahUKEwi32vKA05nvAhWZILcAHYPSCHAQMygCegUIARCtAQ. date of assessment 2/11/2019
7. <https://arogyayogaschool.com/blog/10-health-benefits-of-cobra-pose->

Bhujangasana/ date of assessment 20-8-2017

8. Morse, D. (2007). Yoga for Asthma. *International Journal of Yoga Therapy*, 17(1), 81–88.

9. <https://food.ndtv.com/health/Bhujangasana-get-flexible-and-strengthen-up-with-the-cobra-pose-1419213> date of assessment 23-8-2016

10. <https://fitnessgoals.com/cobra-pose/> date of assessment 22-6-2016

11. Anatomical Exploration & Applied Aspects of Bhujangasana by Dr. Somlata Jadoun, Dr. Sunil Kumar Yadav, *International Journal for Research in Applied Science & Engineering Technology (IJRASET)* Volume 7 Issue IV, Apr 2019.

12. Importance of Bhujangasana in daily life by dr jyoti gangval, dr sanjay kholiya, dr vikash bhatnagar, dr sandeep M lahange, *International journal of Trend in Scientific Research and Development* volume 4 issue 1, December 2019

13. Yoga anatomy / Leslie Kaminoff ; illustrated by Sharon Ellis human kinetics ISBN-10: 0-7360-6278-5 (print) pg 164.

14. <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.ijtsrd.com%2Fpapers%2Fijtsrd29662.pdf&psig=AOvVaw1njbQzOZwwFHZJMq5W86x5&ust=1615050745056000&source=images&cd=vfe&ved=0CAIQjRxxqFwoTCliz4fTme8CFQAAAAAdAAAAABAJ> date of assessment 1/12/2019

15. <https://www.google.com/url?sa=i&url=https%3A%2F%2Fdoctorlib.info%2F anatomy%2Fyogaanatomy%2F11.html&psig=AOvVaw1njbQzOZwwFHZJMq5W86x5&ust=1615050745056000&source=images&cd=vfe&ved=0CAIQjRxxqFwoTCliz4fTme8CFQAAAAAdAAAAABAJ> date of assessment 30/6/2018

16. Study on kati trika Sandhi shareera With special refrence to the effect of bhujangasana in kati grah by Tusharlal S, RGUHS 2011.

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