



IJAPC

Volume 11 Issue 2,
2019

www.ijapc.com

2350-0204

GREENTREE GROUP PUBLISHERS



Anatomical Assessment of “Ustrasana”

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ABSTRACT

‘Yoga’ is derived from Sanskrit word ‘Yuj’ which means ‘to join’ or ‘to yok’. Yoga is performed through some specific postures called *Asana*. Among the eight branches of *Yoga*, the yogic technique properly begins at the third branch that is the *Asana*. The word *Asana* is well known around the world for the yogic posture into which the whole science of *Yoga* is shrinking. Patanjali defines *Asana* as ‘*Sthirasukhatvam*’ in *Yogasutra* which can be translated as stable and agreeable. The benefits of *Asana* range from physical to spiritual level. *Asana* helps the muscles, ligaments, joints and nerves of human body to maintains the smooth functioning and maintain health of the human body.

“*USTRASANA*” was described as one of the 32 most important *Asana* in *GherandaSamhita*. Meaning of word *Ustra* is camel. In *Ustrasana*, the back is curved. The curved shape created in front side of the body look like a camel hump. In this article anatomical structures involved in the *Ustrasana* and how this involvement is beneficial in maintaining the health or in management of any disease is explained.

KEYWORDS

Anatomy, Asana, Joint, Muscle, Ustrasana, Yoga



Greentree Group Publishers

[Received 19/05/19](#) [Accepted 15/07/19](#) [Published 10/09/19](#)



INTRODUCTION

“*Ustrasana*” was described as one of the 32 most important *Asana* in *Gheranda Samhita* (dated around 1650 CE). The *Gheranda Samhita* is the greatest encyclopaedic of the three-classic text about *Asana*. It says that there are 8,400,000 of *Asana* described by *Shiva*. There are many postures as kind of living beings in this universe. Among these postures 84 are the best, and between these 84, 32 poses found beneficial for peoples in the world the 32 *Asana* are mentioned in *Gheranda Samhita*.¹

The name *Ustrasana* originates from the Sanskrit term in which the meaning of “*Ustra*” is camel and the meaning of “*Asana*” is sit, pose or posture.² So *Ustrasana* is “camel pose”. In this posture, the back is curved. The curved shape is formed in front side of the body, looks similar like a camel hump.

NEED OF STUDY

In the contemporary time, one and all has belief about *Asana* practice for the preventive aspect of health. But the lacuna of anatomical explanation of structures involved and their role in benefit achieved is still persisting. The knowledge of anatomy will also help the *Asana* practitioners, to avoid many of possible

musculoskeletal injuries. In this article the essential quest of *Asana* practitioner about the anatomical structures involved in the *Asana* and how this involvement is beneficial in maintaining health or in management of any disease.

AIMS AND OBJECTIVES

- To explore the anatomical structures involved in “*Ustrasana*.”
- To avoid possibilities of injuries while performing *Ustrasana* by understanding the anatomical structures involved in “*Ustrasana*”.

MATERIAL AND METHODS

- Review of *Yoga-Asana* literature from *Yoga Classics* including relevant commentaries.
- Other print media, online information, journals, magazines etc.
- An effort by self will be made to identify muscles taking part in posture.

HOW TO PERFORM “*USTRASANA*”

According to *GherandaSamhita* “Lie on the ground face downwards, turn up the legs and place them towards the back, catch the legs with the hands contract forcibly the mouth and the abdomen. This is called the camel-posture.”³

Following steps should be followed for this *Asana*⁴



- Stand on the knees. Keep the thighs fully straight.
- Keep the knees and feet together.
- Lean in backward direction. Slowly move more backward. Reach the right heel with the right hand, and the left heel with the left hand. Avoid straining the body.
- Push the hips in the forward direction. The thighs should be kept vertical.
- Then bend the head and the spine as backward and as far as possible without straining.
- Relax the body and the muscles of the back.
- Support the body weight equally on the legs and arms.
- Keep the arms in such a way that they anchor the shoulders to maintain the back arch.
- Stay in the same position for as long as you find it comfortable.

Then release the hands from the heels one by one and return to the starting position.

IMAGE: “Ustrasana” final Posture



ANATOMICAL ASPECT OF “*USTRASANA*” -

Joint Positions⁵

- The spine is extended
- The hips are extended and internal rotated.
- The knees are extended.
- The scapula downward rotated, elevated, adducted.
- The arms are external rotated, extended, adducted.
- The elbows extended.

Muscles and ligaments involved in *Ustrasana*⁶-

Arms- The triceps extend the glenohumeral and elbow joints; the trapezius and rhomboids adduct the scapulae. The deltoid and teres major also extend the glenohumeral joint, while the subscapularis protects it anteriorly.

Pectoralis major and minor, coracobrachialis, biceps and deltoid all are stretched.

Legs- The rectus femoris working eccentrically against the weight of the pelvis moving backward and the vastus medialis, lateralis and intermedius are working concentrically to press the shin into the floor. The hamstrings and adductor magnus are also working concentrically mainly to steady the knee and hip joints.



Spine- In the cervical spine, the anterior neck muscles longus capitis, longus colli, rectus capitis anterior, suprahyoid, and infrahyoid work eccentrically to keep the head from collapsing. Also working unconventionally to avoid failing into the lumbar spine are rectus abdominis, external obliques, intercostals, subcostals, iliacus, psoas major and minor.

BENEFITS⁷ OF “USTRASANA”-

- *Ustrasana* is the backbend *Asana* that confronts gravity, it results in the stretching of chest and abdominal muscles, so mainly it works on thoracoabdominal region, making it more flexible and providing strength to the vertebral column.
- Practicing *Ustrasana*, stimulates breathing and blood circulation and helps in restoring energy.
- *Ustrasana* mainly works on the organs like kidneys, adrenal glands and pancreas.
- *Ustrasana* builds immunity by enhancing infection resistance.
- *Ustrasana* provides strength to joints of the limbs and back.
- *Ustrasana* regulates menstrual disorders and relieves from abdominal spasms.

CONTRAINDICATIONS⁸: -

- Headache and migraine.
- High or low blood pressure.
- Lower back or neck injuries.
- Severe constipation or diarrhoea.

- Insomnia
- Menstruation and pregnancy

DISCUSSION

Today every person is busy and stressful in their lives. There is distinct change in today's lifestyle, bad postures and dietary habits which are not good for individual's health. Busier lifestyle and bad posture and faulty dietary habits results in many musculoskeletal and digestive disorders.

In daily routine, people mainly bend to forward and very slightly bend to backwards. This habit generates pressure to the internal organs and diaphragm, which results strain to the internal organ while backbends stretching the chest and abdominal muscles decreasing pressure to the internal organs and allowing deeper breathing and improved circulation.

In *Ustrasana* muscles of pectoral region are stretched. Pectoralis major which is an accessory muscle for inspiration and Pectoralis minor helps in forced inspiration. Abdominal muscles i.e. external oblique and rectus abdominis helps in the breathing process as accessory muscles of respiration. These muscles are also protecting the internal organs. Furthermore, along with back muscles they provide postural support to the body. Thus, our body posture is improved with regular practice of



Ustrasana. *Ustrasana* preliminary a back-bending *Asana* that teach us to go against gravity. It strengthens our nervous system.

CONCLUSION

Ustrasana is very helpful *Asana* for now a day's lifestyle. There is large number of populations is suffering from lifestyle disorders. Musculoskeletal disorders are increasing because of busy and hectic lifestyle. Life of every person becoming more stressful. *Yoga* and *Asana* is very helpful in these disorders.



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