

# A REVIEW STUDY ON EFFECTS OF *YOGA* INVERSIONS WITH SPECIAL REFERENCE TO *SIRSHASANA*

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## **ABSTRACT**

*Yoga* poses where heart is higher from the ground than the head are called inversions. *Sirshasana* or headstand is one of them. We spend most of our waking hours either sitting or standing, with the head above the heart. Headstand inverts and balances this habitual position, potentially affecting a variety of physiological processes. There are four major systems in the body that the practice of inversions is said to positively influence: cardiovascular, lymphatic, nervous, and endocrine. Headstand can also have musculoskeletal benefits, including strengthened paraspinal muscles and improved alignment of the vertebral column. In fact, when we are turning upside down during inversions we are actually defying gravity which effects our body to a great extent.

**Key words**-Inversion, *Sirshasana*, Gravity.

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## **INTRODUCTION**

The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by individuals themselves, and as *Yoga* is the best lifestyle ever designed, it has potential in the prevention, management, and rehabilitation of prevalent lifestyle disorders. Yogic lifestyle, yogic diet, yogic attitudes, and various yogic practices help humans to strengthen themselves and develop positive health, thus enabling them to withstand stress better. *Yoga* helps to attain the steadiness of the body.

Regularity of the *Asana* can help one to have a strong, body with increased capacity to withstand the any sort of the illness. It helps to improve the inner consciousness. It also helps to boost up self-confidence improves concentration, creativity, and coordination. *Asana* is the third rung in the ladder of the practice of *Yoga*. If the *Yama* and *Niyama* are the foundation of *Yoga*, *Asana* may be regarded as its threshold. 'Asana', literally, means a seat. Here 'seat' does not mean a cushion or some such thing that is spread on the ground. *Asana* is a pose of the body or the posture which it assumes at the commencement of the practice. It is called a 'seat', because it is a posture of sitting and not standing. *Sirshasana* or the head stand pose is the most important among inverted *Asana*. In Sanskrit the word 'sirsha' means 'head' and 'asana' means pose. *Sirshasana* is considered the king of all *Asana* and is usually done at the end of the *Yogaasana* practice. While there exist many *Asana*, such as the 'Sirsha', etc., there is only one set of postures which can be taken as aids in meditation. There are many other *Asana* like *Sirshasana*, *Sarvangasana*, etc., need not deter us from a choice of the *Asana* for meditation.<sup>1</sup> *Sirshasana* is a type of postural *Asana* (or posture) in which the body is completely inverted (headstand), and held upright supported by the forearms, while the crown of the head rests lightly on the floor. The practice of *Sirshasana* is postulated to increase blood flow to the brain, improving memory and other intellectual functions.<sup>2</sup>

## **HOW TO PERFORM SIRSHASANA**

**Stage 1:** Sit in *Vajrasana*. Close the eyes and relax the whole body. After a few minutes, open the eyes, bend forward and place the forearms on a folded blanket with the fingers interlocked and the elbows in front of the knees. The distance between the elbows should be equal to the distance from each elbow to the interlocked fingers, forming an equilateral triangle. Place the crown of the head on the blanket between the interlocked fingers. Wrap the hands around the head to make a firm support so that it cannot roll backward when pressure is applied.

**Stage 2:** Lift the knees and buttocks off the floor and straighten.

**Stage 3:** Slowly walk the feet as close as possible towards the trunk and head, gradually moving the back towards the vertical position. Bend the knees slightly, press the thighs against the abdomen and lower chest. Transfer the body weight slowly from the toes onto the head and arms, maintaining a steady balance. Raise one foot off the floor about 20 cm, carefully balance, then raise the other foot and balance on the head and arms.

**Stage 4:** Bending the knees, gradually raise the lower legs in a controlled movement. Adjust the trunk slightly to counterbalance the weight of the legs. Fold the legs back so the heels move towards the buttocks. To accomplish this movement contract the muscles of the Lower back. The knees are now pointing down with the legs together. Maintain the position for a few seconds, being aware of complete balance before proceeding.

**Stage 5:** Raise the knees to the vertical position. Keeping the heels near the buttocks, slowly straighten the hips so that the thighs move up and away from the torso. Raise the knees until they point directly upward and the thighs are in line with the trunk. Balance the body.

**Stage 6:** Slowly straighten the knees and raise the lower legs. The whole body should be in one straight line with the feet relaxed. This is the final position. Close the eyes and balance the whole body, relaxing in the final position for as long as is comfortable.

**Stage 7:** Return to the starting position. Slowly bend the knees and lower the body with control, in the reverse order, until the toes touch the floor. Remain with the head on the ground in the kneeling position for a short time, then slowly return to the upright position.

### **Contra-indications:**

*Sirshasana* should not be practiced by people with neck problems, headache or migraine, high blood pressure, heart disease, thrombosis, arteriosclerosis, chronic catarrh, chronic constipation, kidney problems, impure blood, severe near-sightedness, weak blood vessels in the eye, conjunctivitis, chronic glaucoma, inflammation of the ears or any form of blood hemorrhage in the head. It should not be practiced during pregnancy or menstruation.

### **Benefits:**

This *Asana* is very powerful for awakening *Sahasrara chakra* and therefore it is considered the greatest of all *Asana*. *Sirshasana* revitalizes the entire body and mind. It relieves anxiety and other psychological disturbances which form the root cause of many disorders such as asthma, hay fever, diabetes and menopausal imbalance. It also helps to rectify many forms of nervous and glandular disorder, especially those related to the reproductive system. This *asana* reverses the effect of gravity on the body. Strain on the back is thus alleviated and the reversed flow of blood in the legs and visceral regions aids tissue

regeneration. The weight of the abdominal organs on the diaphragm encourages deep exhalation so that larger amounts of carbon dioxide are removed from the lungs.<sup>3</sup>

The ancient books have called *Sirshasana* as king of all *Asana* and reasons are not hard to find. When we were born normally the head comes out first then the limbs. The head is the centre of *Sattvic* qualities which control discrimination, the trunk of *Rajasic* qualities which controls passion, emotions and actions and region below the diaphragm of *Tamasic* qualities which controls sensual pleasures like enjoyment of food and drink, and thrills and pleasures of sex. Regular practice of *Sirshasana* makes healthy pure blood flow through brain cells. This rejuvenates them so that thinking power increases and thoughts become clearer. The *Asana* is tonic for people whose brains tire quickly. It ensures proper blood supply to the pituitary and pineal glands in the brain. Our growth, health and vitality depend on proper functioning of these two glands. People suffering from loss of sleep, memory and vitality have recovered by regular and correct practice of this *asana* and have become fountains of energy. The lungs gain the power to resist any climate and stand up to any work, which relieves one from colds, coughs, tonsillitis, halitosis and palpitations. It keeps the body warm. Coupled with *Sarvangasana* movements it is a boon to people suffering from constipation. Regular practice of *Sirshasana* will show marked improvement in hemoglobin content of blood.<sup>4</sup>

There are four major systems in the body that the practice of inversions is said to positively influence: cardiovascular, lymphatic, nervous, and endocrine.

#### **Effect on cardiovascular system**

When one goes against the gravity it helps venous return. In normal standing position venous return relies on muscular movement and gravity. Inversions help in better circulation. At the same time the oxygenated blood flows to brain, sensory organs and face.

#### **Effect on lymphatic system**

Lymphatic system acts as sewage system of the body. Lymph picks up toxins, excess proteins and bacteria's and carries them to lymph nodes to be eliminated. As our body relies on gravity and muscular action for venous return, in the same way, both are required to move the lymph. So inversions can help us to flush the system.

#### **Effect on endocrine System**

The effect of inversions on the intricate endocrine system, the body's glandular system of hormone delivery, has been much touted, but is perhaps the least understood: Shoulder stand is widely recommended for menopausal and premenopausal women because it is assumed that it stimulates the thyroid and parathyroid glands, which secrete hormones that regulate one's metabolism. In Headstand, the

pineal and pituitary glands (which sit behind the eyes in the center of the skull) are upended 180 degrees, directly over the fontanelle. We know that the pineal and pituitary glands are responsible for growth and sex hormones.

### **Effect on Nervous System**

Inversions have an effect on the nervous system. Headstand and handstand are energizing and stimulating the nervous system and creating heat in the body. These poses are great if one is suffering from stress and insomnia. Inversions may also affect the movements of cerebrospinal fluid (CSF), which flows from the brain to the spinal cord. The top of the skull receives intense pressure in Headstand, which, when properly done, may promote elasticity in the cranial bones, thus stimulating the production of CSF in the ventricles of the brain.

Moreover these poses have psychological benefits too. Once we properly make an inversion it is a great confidence booster. Every time we become stronger and get to the next phase the poses have ability to remind us of our greatness.<sup>5</sup>

## **DISCUSSION**

When we turn upside down the normal physiology and anatomy of body is altered. Inversions are extremely helpful if one is suffering from anxiety, fear and stress. Combining headstand with slow breathing helps relieve stress. Moreover turning upside down increases blood flow to brain. This improves mental function and increases sense of focus. Inverting the body sends nutrient rich blood to head and eyes. This helps prevent macular degeneration and other eye diseases. Headstand is an awesome pose to optimize nutrient flow to head and scalp thereby improving nutrient delivery to hair follicles. This posture helps improving upper body strength and muscular endurance. When we allow the effects of gravity to be reversed on digestive system it will help to move stuck material release, trapped gases as well as improve blood flow to all important digestive organs increasing nutrient delivery and absorption to cells. Turning upside down helps squeeze adrenal glands which are important for secreting stress hormones. The cleaner the adrenal glands are the optimal they will function, this helps adapt to stress better. Long hours of standing can cause edema in legs. Reversing the effects of gravity on bodily fluids helps flush out built up water in legs and relieving edema. Inversions stimulate lymphatic system and thereby helping remove toxins from the body.

## CONCLUSION

Inversions can be immensely beneficial for our body if done under proper guidance. They have beneficial effects on major systems of the body mainly cardiovascular,lymphatic,endocrine and nervous system.The circulatory system is benefited.Stress,anxiety and fear are lowered to great extent.Increased blood flow to brain enhances concentration and focus.Hair and eyes are benefited.Strength of muscles of upper body including arms,shoulders and back increases.Lymphatic system is stimulated hence toxins are easily removed from the body. Thus keeping the contraindications in mind,inversions help to enhance the health of an individual to a great extent.

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