

THE EFFECT OF ARDHA MATSYENDRASANA AND BHUJANGASANA ON CERVICAL SPINE WITH SPECIAL REFERENCE TO CHRONIC NECK PAIN

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ABSTRACT

In global public health, chronic neck pain is the major problem due to sedentary lifestyle. As the prevalence rate of chronic neck pain has been reported 20 % in the worldwide. Previous studies suggested that yoga reduces the chronic pain and gives flexibility and strength to the cervical spine. The present article deals with the effect of *Ardha matsyendrasana* and *Bhujangasana* to relieve the pain in the management of chronic neck pain. As the literary sources were taken from the Ayurveda and yoga, research articles from journals and relevant internet sites were availed. Neck pain and movement restriction were significantly lower in the yoga group and in the control group. The *Ardha matsyendrasana* and *Bhujangasana* is selected for analysis which relieves chronic neck pain.

Keywords: *Ardha matsyendrasana*, *Bhujangasana*, Chronic Neck Pain.

INTRODUCTION

As yoga is the main part and ayurveda believes that the healthy key for the life.¹ Yogic Practice is a science which includes the culture of the body the mind as well as the spirit. Yoga provides a strong moral foundation to men's life on which they build their physical, mental, intellectual and spiritual superstructure, and prove themselves to be a man or a woman in the real sense of the term.² The neck or cervical spine which is mainly coordinated with the nerve, bones, joints and muscles and if there is any dysfunction in it then it causes number of problems during the movement of neck. Sometimes there may be irritations along with the neural pathway which is also cause chronic neck pain. Chronic neck pain are mostly found in adult age but now a days it occurs in the youth also due to the improper posture of sitting,

faulty sleeping habits and due to lack of exercise which required for the strengthen and stretching the cervical spine. Chronic neck pain may cause due to doing work on sitting table, sudden jerks on cervical region during travelling, improper sitting posture, faulty sleeping habits, taking additional load below the neck these are some factors which are responsible for chronic neck pain.³ yoga is one of the best and important treatment for chronic neck pain and in chronic neck pain there is mostly supine and sitting posture yogasana plays effective achieving the goal of positive health and relieving the chronic neck pain.⁴ There may be sometime abnormal structures in the neck due to chronic neck pain.⁵ Sometimes, cervical degenerative changes may cause chronic neck pain. Mostly cervical degenera-

tive changes occur above the 50 years. Yoga can relieve the neck pain with degenerative changes.⁶ yoga is widely performed to get rid from the chronic neck pain and which focuses on the specific body postures or *asanas* while incorporating mindful breathing and performing meditation.⁷ yoga teaches the art of relaxation, relieving muscular and nervous tension and leads to increased energy. *Yoga* incorporates the body, mind, and spirit to achieve harmony and balance with a consciousness. It is now associated with a form of exercise in which learned to control the body and mind through a series of *asanas*.⁸

Aim and Objectives

1. To study the role of *Ardha matsyendrasana* and *Bhujangasana* in the management of chronic neck pain.
2. To apply the principle of anatomy and physiology to understand *yogasana* health and ability to communicate with each other.

Material and Method

The study was conducted in the Anekanta Swadhyaya mandir to clinically assess the structure of prushthavamsa of subjects. This is an Observational study. The study was conducted in 2 years. In this study cases were selected by convenient sampling and snowball sampling technique. 60 participants were enrolled in this study. *Yogasana* performing participants were recruited from Anekanta Swadhyaya mandir and other Yoga Centre. Subjects in *yogasana* performing group were selected from Wardha city.

All sorts of references has been collected and compiled from various available Ayurvedic and yogic classic texts like Samhita, available commentaries and text books along with modern science. Research articles from various websites related to *Yogasana* were accessed. All matter was analysed for the discussion and attempt was been made to draw some conclusions.

Methodology:-

Over a period of 2 years, 60 participants fulfilling the inclusion criteria were enrolled in the study. *Yogasana* performing and *yogasana* non-performing males from the Anekanta Swadhyaya mandir and any other yoga centre. The subjects for *Yogasana* performing group were selected from Anekanta Swadhyaya mandir and other yoga centre and for *Yogasana* non-performing group were selected from wardha city.

Inclusion criteria

- 1) Only male participants
- 2) Age Group- 40 to 60 years
- 3) Males performing *Yogasana Ardha matsyendrasana* and *Bhujangasana*
- 4) Since not less than 3 years
- 5) Same socio economic group.
- 6) Participants whose job profile includes table work at least 5 hrs/day who were willing to give consent for the research study.

Exclusion Criteria:-

- 1) Subjects not falling in the age group of 40-60 years.
- 2) Individuals with Kyphosis, Scoliosis, Lordosis.
- 3) Accidental injury.
- 4) Individuals who had under gone spinal anaesthesia.
- 5) Individuals with Metabolic disorder.
- 6) Individuals with Osteoporosis

Observation and results

The physical examination of the spine was performed through inspection, palpation and interrogation. In this study, 30 participants *yogasana* performing for a period of more than five years and 30 *yogasana* non-performing subjects, all males were evaluated on various parameters pain, stiffness and movements.

There are three general types of the neck pain.

Acute: pain that lasts less than 4 weeks.

Sub-acute: pain that lasts 4 to 12 weeks.

Chronic: pain that lasts 3 or more month

Table 1: Physical examination of cervical in yogasana performing and yogasana non - performing

Physical examination cervical	Yogasana performing	Yogasana non-performing
Pain during movement	2	5
Radiating pain	1	2

In the physical examination, pain during movement and radiating pain in cervical region were found 2 and 1 yogasana performing subjects while in the yogasana non-performing were 5 and 2 respectively.

It suggested that there is relieving in pain in yogasana performing as compared to yogasana non performing subjects.

Table 2: Muscles involved in Ardha matsyendrasana and Bhujangasana⁹

Sr no	Name of muscles	Origin	Insertion	Function
1	Splenius capitus	Lower half of the nuchal ligament and spinous processes of the 7 th cervical vertebra and first three thoracic vertebrae	Mastoid process of the temporal bone.	The muscle acts as a shaker of the head, causes neck extension and lateral flexion.
2	Sternocleidomastoid	Upper part of the anterior surface of the manubrium at sternal head. Superior surface of the medial one third of clavicle.	Lateral surface of the mastoid process of the occipital bone, from its apex to its superior border, and by a thin aponeurosis to the lateral to the lateral half of the superior nuchal line.	Bilaterally flexion: flexion of the head and neck, extension of the head and neck. Unilaterally: rotation of the head to opposite side, lateral flexion.
3	Rectus capitus posterior major	Spine of axis	Lateral part of the area below the inferior nuchal line.	Acting together the two muscles extend the head.
4	Rectus capitus Posterior minor	Posterior tubercle of atlas	Medial part of the area below the inferior nuchal line	Extend the head.
5	Obliquus capitus (Superior oblique)	Transverse process of the atlas	Lateral area between the line	Extend the head Flex the head laterally
6	Obliquus capitus (inferior oblique)	Spine of axis	Transverse process of atlas	Mainly postural extend the head

Ardha - matsyendrasana-(half spinal twist pose)



This position there is a strong twist on the spine. The right arm is pressed against the left knee and the left arm is wrapped behind the back, leading to an increased twist on the body. The chest is open and spine is erect. One side of the abdomen is compressed and the other side is stretched. The right leg and knee remains on the floor. The left knee should be close to the right armpits. All parts can contribute to this twist—both right and left sides of the front and both right and left sides of the back, at different layers of muscle. The Spine will have the most balanced rotation when in neutral extension. It increases the elasticity of the spinal nerves and improves the functioning of

the spinal cord. Spinal extensors to maintain extension and resist flexion of the spine against the pressure of the arm.

Bhujangasana (Cobra pose)



Bhujangasana cobra pose:-In this position the pressure is felt on the arms and hands as well as the lower back. Over time this pressure can gradually be placed more on to the lower back. One should try to raise the body up with the help of the spine. Once the final position is attained the arms are straight, the chest is forward and open, the shoulders and neck are back and the heels are together. Bhujangasana is very helpful in counteracting any habitual distorting of the normal spinal curves. The muscles along the cervical spine are strengthened helping to support the spinal column. Bhujangasana works on splenius capitis cervicis, longissimus concentrically to create extension.¹⁰

DISCUSSION

Ayurveda believes in “Prevention is better than cure”, so it’s time to educate mankind about the need of introducing yogic exercise in daily routine life style. But for practicing yogasana it is essential to acquire knowledge about Sharira. Exercises for chronic neck pain can strengthen back of neck muscles. They help support cervical spine, relieving pain. Chronic neck pain exercises serve to strengthen the back of muscles in order to provide more support for the neck. Stretching exercises for chronic neck pain target muscles that cause pain when they are tight and inflexible. When patients engage in a regular program of gentle strengthening and stretching exercises, they can recover more quickly from a flare up of chronic neck pain. *Ardha matsyendrasana* and *Bhujangasana* plays a vital role in maintaining the healthy status for neck. Neck region containing the group of muscles –splenius capitis, sternocleidomastoid, Rectus capitis, (posterior major), Rectus capitis (posterior minor), obliquus capitis superior (superior oblique), obliquus capitis inferior (inferior oblique) get stretched releasing of this muscles while doing this *Ardha- Matsyendrasana* and *Bhujangasana*. Stretched muscles gets tensed which may lead to an increase in the stretched of the muscles. It engages a muscle that is stretching and releasing.

In *Ardha Matsyendrasana*, Tensioning of nerves establishes correct whole body positioning (e.g. curvature of the spine) in order to maximize neural tensioning especially of those nerves involved with the

correct functioning of muscles that are being stretched, strengthened or relaxed. *Ardha Matsyendrasana* and *Bhujangasana* work by safety stretching muscles and all other soft tissues which provides flexibility that also improves the core strength of the human body. *Ardha Matsyendrasana* and *Bhujangasana* is to relieve the stiffness in the neck while twist the position.

CONCLUSION

Yoga is important as a preventive measure for several disorders. It plays a major role in promotion of positive health for physical, mental and spiritual levels and in rehabilitation. The *Ardha-matsyendrasana* and *Bhujangasana* practice plays major role in disease of cervical region. The practices of *Ardha matsyendrasana* and *Bhujangasana* increase the quality of life and relieving of pain. Both asanas are helpful for strengthen and stretching the muscles of the neck which gives stability and normal functioning of the neck region during movement.

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