ABSTRACT:

Yoga is essentially a spiritual discipline based on an extremely subtle science which focuses on bringing harmony between mind and body. In yoga sutras Acharya Patanjali defines asana as to be seated in a position that is firm but relaxed, as Paschimottanasana is particularly relevant to increase the flexibility of vertebral column. Using different research database with the key word Paschimottanasana a comprehensive search of the research literature from core scientific. These studies were integrated in this review. Paschimottanasana searched through ancient literature and yoga literature fulfilled the aim of this article establishing the versatile effect of the Paschimottanasana on the flexibility of vertebral column.

Keywords- Yogasanas, Paschimottanasana, Vertebral column, Flexibility, Stability.
INTRODUCTION

Paschimottanasana is the forward bending pose which helps to reduce spinal cord related disease like Spondylitis, Slip disc etc. Due to these posture back muscle as well as hip muscle gets strengthened. Along with that spinal cord get nourished;

Due to posture of this asana, pressure of spinal cord increases so that blood supply at that site also gets increased; become of that vertebral column get nourished as well as flexible. It bears the brunt of upper body weight and hence it is prone for wear & tear.

Review Of Paschimottanasana :-

Paschim = west- west side of the body
Uttan = stretch Asana
= posture
The front side of the body is called the east side, while the back side is called the west side, in this asana the complete west side is stretched from the heels to the head and is therefore called Paschimottanasana.

➢ Procedure:-

Sit on the floor with the legs straight in front of the body, put your hands on the thighs. Bring your respiration to normal then inhale and raise both the arms straight above your head, after that slowly exhale and lower the arms on the thighs. Relax the whole body, especially the back muscles. Slowly bend the body forward.

➢ If possible, without any strain try to touch your forehead to the knees; Try to grasp the big toes with the fingers and the thumbs. If this is impossible then hold the heels, Try to remain in this position from 15 to 60 seconds. Then Inhale and come back into the sitting position with your arms stretched out. Then at last exhale and lower your arms. Repeat this asana to get maximum benefits.

A) Benefits of Paschimottanasana:

1.) Paschimottanasana makes the breath flow through the susumna, stimulates the gastric fire, makes the loins lean and remove all the diseases of human being.

2.) The spinal nerves which pulls during this asana gives huge energy to the body and also helps to strengthened the spinal cord.
B) **Anatomical focus:** - especially focused on back, hips, hamstrings and abdominal muscles

- olved in this asana are - Back muscles, Hips muscles, Hamstrings and Abdominal muscles.
- While doing this Asana, there occurs a large extent of stretch in hamstrings and hip muscles (gluteus maximus) thus increasing the blood flow of that particular area. As body moves forward causing stretch thus toning the hamstrings and shaping the calf muscles.
- The neck muscles involved in this process also get strengthened.

**Figure No.-2-Showing Muscle involve in Paschimottanasana.**

Also make sure that you should sitting in the Dhandaasana (Staff Pose) Bring your arms straight out to the sides and up over your head to lengthen the spine. Always bend the spine from the base.

If you cannot hold your toes then hold the ankles. You should be in relaxed position whenever you’re progressed in the Aasna. A few deep breaths will be very useful to practice at the beginning and in long term practices, it helps in lengthening and relaxing the spine as well as relaxing the hips and hamstrings.

**Do:**
- Reach the hands forward and take hold of the big toes with index and middle finger. If this is not possible simply place the palms of the hand on the floor next to the legs.
- Bend forward in the waist.
- You can rest your head just beyond your knees and your hands on floor.

**Do not’s:**
- Do not bend the knees.
- Move slowly and do not bounce to achieve the level while performing the pose.
- The asana tones the anterior part of the body and thus creates pressure on abdomen if you have any recent abdominal and spinal surgery please avoid to perform this asana. Thus this asana will helps you for improving the functions of intra-abdominal glands too.

**PROBABLE MODE OF ACTION**

*Paschimottanasana* (forward bending pose) helps to reduce spine related ailments like Spondylitis, Slip disc etc. and reduces back pain and muscle stiffness. Due to these postures back muscle as well as hip muscles gets strengthened.

Along with this the Pressure...
on spinal cord increases so that blood supply is enhanced and spinal cord get nourished as well, because of that vertebral columns get nourished in manner flexibility to these muscle gets increased.

➢ Asana are slow, steady and non-violent processes which include relaxation technique, asana emphasize on deep breathing, relaxed movements and mental concentration.

Action of Asana

Stiffness in the vertebral column

Practicing (Paschimottan asana)

Gentle stretching & pressure is experienced on lower vertebra Ligaments , muscles ,joints tendons of vertebral column lubricated by this Aasna

Improve blood circulation & nutrient supply. Release tension & help to tone the nervous system which is closely related to the spine.

Toxins are removed & Prana beings to flow.

Body becomes flexible to perform this asana.

Action of Paschimottanasan

Paschimottanasana

By clearing the pressure on vertebra column entire spine become stretched and relaxed.

Stretching and swimming movements induces a feeling of lightness & may be used to relieve Physical & mental tension at any time during the day.

It helps to exercise the muscles of the side of the waist and also the massaging effect on internal organs.

Develops physical & mental balancing ensuring health of the body.

DISCUSSION

There's a good chance you'll make the following mistakes. Jerky motions of the upper portion of the body bring the forehead to the knees, body or by the use of force Making the most of gripping the toes or thighs, or
contracting the muscles the muscle of the stomach Correction is a possibility.\textsuperscript{5} should be done in such a way: Avoided on purpose. Rather than using intimidation, in order to achieve the optimal final stage of the project It is recommended that you do a detailed examination of the asana.\textsuperscript{6} The object of this posture will be defeated if the legs are bent at the knees.\textsuperscript{7} As a result, knee bending should be stopped at all times. Certain parts of the body are stretched or pulled beyond their flexibility in the final stage of \textit{Paschimottanasana}. The stretch or pull is more pronounced in the back of the knees (hamstring muscles) and around the waist.\textsuperscript{8} The stretch or pull is more pronounced in the back of the knees (hamstring muscles) and around the waist. Assume a body posture that allows you to tolerate and enjoy a stretch or pull. By coercion, one does not adopt an unpleasant and tense pose. Getting to the end of the process Many factors influence \textit{Paschimottanasana}, factors such as age, body rigidity, and fatty deposits\textsuperscript{9} around the abdomen, and the upper and lower limbs' relative lengths sections of the human body Those whose legs are swollen longer as compared to the upper part of the It will be difficult for the body to achieve the ideal.\textsuperscript{10}

**CONCLUSION**

For improving the flexibility of vertebral column \textit{Paschimottan} is best amongst all the \textit{Asana’s}. To gain the benefits, you must practice asana, regularly over a period of time and the benefits will last longer. There are many types of physical exercises but the yogic system of asana is the most complete and helpful for body as well as mind, benefiting far more than just the physical body. Healthy individual advised \textit{Asana} to stretches the vertebral column, spine, trunk muscles, ligaments, joint etc. It tones the spinal nerve and promote the flexibility vertebral column as well as spine. Final conclusion drawn is that \textit{Paschimottanasana} are significantly effective in improving flexibility of vertebral column.

**Acknowledgment:** Nil.

**Financial Support:** Nil.

**Conflict of Interest:** Nil

**REFERENCES**

5. https://www.healthline.com/health/plantar-flexion
7. https://yogainternational.com/article/view/yoga-therapy-for-your-knees1/