

The Role of Asana in the Management of Musculo- Skeletal Pain of Spinal Region Caused by Stress with Special Reference to Makarasana, Shalabhasana and Marjari Asana

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Abstract: Introduction- The effectiveness of some yoga poses, such as Makarasana (Crocodile Pose), Shalabhasana (Locust Pose), and Marjari Asana (Cat-Cow Pose), in treating back pain and stress is examined in this study. In today's society, spinal pain and stress are prevalent issues that are frequently exacerbated by stressful jobs and sedentary lives. This study looks into the therapeutic advantages of these three postures in improving overall health and symptom relief. Through a detailed review of the literature and empirical analysis, this study aims to shed light on the beneficial usage of specific yoga poses in therapeutic contexts.

Material and Methods- Review of Yoga-Asana literature from Yoga Classics including relevant commentaries, Other print media, online information, journals, magazines, books, etc.

Result-Finding the original textual reference for the asanas and their practical benefits in daily life was the goal of the current study, which reviewed ancient writings. Additionally, it examines how particular asanas are performed about the textual reference for spine or back diseases. As a result, we discovered that some particular asanas are more appropriate and helpful for all spinal problems. The following asanas are beneficial for disc herniation, degenerative discs, neck and back discomfort, swelling, spondylolisthesis, arm or leg pain, stiffness or rigidity, etc.

Discussion-The objective of the present study is to review the ancient texts and find the original text reference for the asanas and their benefits in daily life. Also to analyze the procedure of selected asanas based on textual reference for back or spinal disorders.

Keywords: Makarasana, Shalabhasana, Marjari asana, Spinal pain, Spinal disorders, Cervical Spondylosis, Back Pain, Lower backache, Stress management, Yoga therapy, Asanas, etc.

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Introduction: A collection of mental, physical, and spiritual exercises known as yoga were practiced in ancient India. Asanas are done as a kind of physical activity that treats clinical indications and symptoms and promotes health. According to yoga philosophy, doing asanas daily will give us the power to transcend the dualities in our existence. According to the Patanjali Yoga Sutra, an asana is a position that provides stability and comfort ("sthira sukham asanam"). This can be achieved by performing asanas with the least amount of effort possible and concentrating on contemplating the infinite ("pratyahara shantihya and ananta samapatti").

All schools of yoga, except Hatha Yoga, employ asanas, which are primarily meant for the advanced stage of meditation. Hatha yoga employs asanas to balance the "Tridosha" and prime the body for advanced pranayama, which wards off all illnesses. The most well-liked yoga school at the moment among the several that are available is the Hathayoga stream.[1]

Review of Yoga: According to the Pathanjali Yogasutra, practicing yoga asana daily will help one transcend mental and bodily dualities. The physical parts of the asanas should be performed with the least amount of effort possible to maximize the benefits of yoga; similarly, limitless contemplation should be practiced effortlessly to achieve mental calm. Vyadhi is one of the main barriers to yoga. Disease, or Vyadhi, results from an imbalance in the Tridosha's homeostasis. Several Asanas and Kumbhakas are advised by the Hatha Yoga stream to cleanse the body and subtle energy channels in our bodies. It follows that our bodies build resistance and immunity when we practice asanas regularly. [1,4] This impact is being validated through research studies in this area.

Numerous beneficial effects of yoga have been established for the body. Yoga, as opposed to physical exercise, improves pain tolerance and coping mechanisms by increasing bodily awareness.[2] Patients receive comprehensive treatment from medical yoga. According to studies by Vijayaraghava A. et al. and Nagarathna R. et al., yoga lowers inflammatory markers.[3,4] These have been crucial in helping those with neck pain, LBP, and arthritis realize benefits.[2,8] Yoga is another evidence-based treatment for LBP that has at least modest benefits, according to the American Pain Society.[5]

Long-term improvements for low back pain have also been reported by Sherman et al. and Williams et al., lasting up to six months following the conclusion of the yoga intervention.[6,7] According to Manik et al., the long-term (8 weeks) and short-term (2 weeks) intervention groups showed the greatest reduction in disability from back pain caused by lumbar spondylosis when compared to the rapid relief practice group.[8]

Satyanand et al. conducted a randomized control trial on the effect of yogasana on Cervical spondylosis.[9] In addition to the intervention, the patients were given analgesics and anti-inflammatories for the entire duration of three months. The authors concluded that combining yoga poses with traditional drugs increases their effectiveness. The scientists also note that yoga has a dual effect of improving physical health and reducing psychosomatic diseases because stress and sadness are significant predictors of muscle tone, especially in the neck region. Yoga lowers sympathetic activity as shown by autonomic indices, oxygen consumption, and breathing volume, according to the findings of another study by Vempati et al.[10]

Sugumar et al. also looked at the benefits of a type of yoga, simplified Kundalini yoga, among individuals suffering from cervical spondylosis in a different study.[11] The experimental group followed a 60-minute plan that included 20 minutes of yoga, 20 minutes of meditation, and 10 minutes of relaxation. After three months, the researchers discovered that practicing yoga was far more successful than other therapies at treating neck stiffness and discomfort. After eight weeks of treatment, we likewise observe a decrease in NDI scores in our patient group, and the effects are observed at different intervals.[12]

Asana: Originally used to refer to a type of seated meditation posture, the term "asana" was later used to refer to any position used in hatha and modern yoga for physical exercise, including standing, reclining, inverted, twisting, and balancing poses.

Makarasana : Chapter 2, Verse 40 of the 17th-century Gherand Samhita describes Makarasana. Half-tone descriptions and illustrations are included in the Yogasopana Purvacatuska from 1905. The terms makara (meaning "crocodile") and asana (meaning "posture") are the origin of the word.

Review of Makarasana : The second chakra, svadisthana, is connected to the makar. The svadisthana chakra, situated slightly above the tailbone, is linked to the water element, the unconscious mind, and intensely felt emotions. To reach your greatest potential, you need to free yourself from the unconscious grip of latent samskaras, which are housed in the Svadisthana chakra.[13]

According to a quote from B. K. S. Iyengar, studying asana is about understanding and transforming oneself via posture, not about perfecting posture. Although makarasana is a straightforward pose on the physical level, it can help you transform yourself by giving you a better awareness of your unconscious processes.[14]

The hip and sacral muscles are stretched in Makarasana. The shoulder and spine are deeply relaxed in the makarasana. Those with sciatica slipped discs, and some forms of lower back pain will find great relief from this asana. It is a calming asana that is typically performed after performing other asanas since it relieves the tension brought on by performing other asanas.[15]

Benefits of Makarasana: The reduction of stress and low back pain, the gradual stretching of the paraspinal muscles, and the strengthening of the diaphragm are the main advantages of this posture, which focuses more on awareness and comfort than strength or agility. Furthermore, the makarasana form is ideal for developing increased breath awareness. Pregnancy and any other condition that makes abdominal pressure uncomfortable are contraindications.

Makarasana mostly affects the musculoskeletal system directly. The entire spinal column is bent back, with special attention paid to the lumbar and cervical regions. Standing up normally causes the body's weight to be transferred to the spinal column, which compresses the discs primarily. The compression is released by the backward bend, which provides the intervertebral discs with more room. Furthermore, weight is a function of gravity, and when one is lying down, as in Makarasana, the earth receives the pull of gravity from the thighs and abdomen. By stretching the anterior spinal muscles, makarasana relieves backache and neck pain by releasing spasms in the muscles. In short, makarasana can be of help in any type of neck pain and backache.[16]

The primary muscle involved in breathing is the diaphragm. It divides the chest cavity from the abdominal cavity and is attached to the ribs, the lumbar vertebrae, and the lower back. Because the arms are positioned overhead, the crocodile pose immobilizes the chest and releases tension in the back and belly because you are resting on the floor. Additionally, the breath does not fall into the lower abdomen since the abdomen is pressed onto the floor.

Shalabhasana : The second chapter of the Gheraṇḍasaṃhitā describes thirty-two postures, one of which is Shalabhasana. It is performed in a prone position, pressing the ground with the hands on either side of the chest, and raising the legs together nine inches into the air. This is called Shalabhasana by distinguished sages.[17]

Review of Shalabhasana: The student, according to Swami Kuvalayananda ji, should lie faceup on his seat with his sole pointed upward and his fingers clenched. He stretches out his hands till his shoulders and the backs of his fists make contact with the ground. Then, striving to exhale completely while moving his lower extremities backward, he

stiffens his whole body, putting all of his weight on his hands and chest. The wrists are especially affected by the weight of the lifted legs. The exercise consists of keeping your knee straight and rigid while holding your breath.[18]

Dhirendra Brahmachari suggests reclining on the abdomen with the body raised as high off the ground as possible, both above and below the waist, with the palms put close to the shoulders and the feet linked. From the waist to the feet, the body should be in an upright position.[19]

B.K.S. Iyengar goes on to clarify Lay completely extended on your stomach with your face pointing downward, just as in Shalabhasana. Turn your arms back. Exhale deeply, then lift your chest, head, and legs as high as you can without contacting the floor. It is improper to have the hands and rib cage resting on the ground. The front of the abdomen, which bears the weight of the body, is the only area of the body in contact with the ground. Contract your buttocks and extend your thigh muscles. Verify that both of your legs are fully extended, touching your thighs, knees, and ankles. Rather than bearing your entire weight on your hands, stretch them to strengthen your upper back muscles. As long as you can, maintain your posture while breathing normally. Lifting the legs and torso off the ground is challenging at first, but as the abdominal muscles get stronger, it gets easier.[20]

Benefits of Shalabhasana: An excellent exercise for strengthening the pelvis and abdomen is Shalabhasana. Shalabhasana strengthens the lower back and pelvic organs and improves backache, moderate sciatica, and slipped discs, provided the condition is not too severe. While toning and harmonizing the activities of the colon, stomach, liver, and other abdominal organs, it also enhances appetite. It makes the muscles in the buttocks taut and triggers the body to spontaneously do the Vajroli Mudra. This pose enlarges the chest and makes the waist strong and flexible. It is also very good for the shoulders and abdomen. It helps with constipation and enhances digestion.

This pose helps with digestion and eases gas and flatulence. The position eases discomfort in the sacrum and lumbar regions because the spine becomes elastic when it is extended back. Those with slipped discs have, in my experience, benefited from practicing this asana regularly without needing to need medical intervention or forced rest. Exercise helps maintain the health of the prostate gland and the bladder.

In *Shalabhasana* spine is extended and all extensors of the back are contracted. This helps strengthen and provides flexibility to the spine and back muscles.[21]

Marjari Asana: A cultural asana, Marjari Asana is a combination of two different asanas. This asana was created by modern yogis as a variation of Marjari Asana; it is not based on any ancient yogic writings. Along with the back of the body, it benefits the abdominal and pelvis. Cat Pose (Marjariasana) is a mild backbend that lengthens the back of the body, eases stiffness in the neck, and loosens up the spine. The Sanskrit terms marjari, which means cat, and asana, which means stance, are the source of the posture's name. Cow Pose, also known as Bitilasana, is a mild backbend that lengthens the front of the body, eases stiffness in the neck, and loosens up the spine.[22]

Review of Marjari Asana: Our research concludes that, when combined with conventional treatments, the eight-week home-based yoga program known as "Specific Group of Asana" can help reduce pain and impairment in patients. Larger, more comparable, and multicentric trials are necessary to prove this as a therapy option. This study was based on some specific yogic practices which are Skandha Chakra (Shoulder Socket Rotation), Greeva Sanchalanasana (Neck Movements), Makarasana (Crocodile Pose), Advasana (Reversed Corpse Pose), Jyestiska Asana (Superior Posture), Marjari Asana (Cat Stretch Pose).[12]

Our research is the first to demonstrate that a yoga intervention significantly affects the levels of serotonin and BDNF in serum in patients with persistent low back pain. We suggest that these neuromodulators may mediate the therapeutic effects of yoga on chronic low back pain in the nociceptive pathway. This study was based on specific yogic practices included with the marjari asana.[23]

It is our experience that yoga provides a straightforward, efficient, and long-lasting treatment for this problematic disease, therefore this resignation need not be the case. We've discovered that many people with chronic back pain, who had given up on a life without pain following a diagnosis of early osteoarthritis or incurable spinal degeneration, can overcome their condition and prevent subsequent recurrences, within a week of bed rest, 90% of back pain cases will heal, and within a day or two, there will be significant alleviation. The challenge then shifts to preventing recurrence, which is where yoga comes in very handy. In this study, marjari asana is also included for back pain management.[24]

Benefits of Marjari Asana : Marjariasana, or Cat Pose, offers numerous benefits for overall health and wellness. It increases the flexibility and strength of the spine by alternately bending and rounding the back, thereby promoting healthy posture.[25] The asana gently massages the digestive organs, improving digestion and stimulating kidney

and adrenal gland function. It also reduces stress and tension, thereby having a calming effect on the mind. Practicing Marjariasana can relieve back pain and stiffness, especially in the lower back, and increase blood circulation throughout the body. It serves as an excellent warm-up exercise, preparing the body for more advanced yoga postures.

Conclusion : The usefulness of yoga postures including Makarasana, Shalabhasana, and Marjari Asana in relieving stress and spinal pain is investigated in this study. Ancient Indians used these poses to improve their health and to provide them stability and comfort. The Patanjali Yoga Sutra states that by engaging in asanas daily, we can transcend dualities and concentrate on contemplation. Except for Hatha Yoga, all schools of yoga employ asanas for advanced meditation, balancing the "Tridosha" and priming the body for more difficult pranayama. Makarasana, Shalabhasana, and Marjari Asana not only ease tension at the diaphragm's attachment point in the lower back and mid-torso, but they also help induce relaxation through diaphragmatic breathing. These tension-prone areas are caused by weak or stiff muscles across the pelvis and spine, poor posture, and irregular breathing patterns. Furthermore, diaphragmatic tightness may be a sign of distorted and dysfunctional states of tension in the muscles that last long after the initial stimulus has faded, as the breath is a reflection of the mind. The lower back, which serves as the connecting element between the chest and pelvis and bears weight as well as conveying energy, is also prone to stress. It is affected by breathing patterns and the diaphragm.

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