

**ANATOMICAL EXPLORATION OF *GOMUKHASANA* AND
VASISTHASANA IN ROTATOR CUFF INJURIES****Dr. Kunj Biharee Saini*¹ and Dr. Sandeep Madhukar Lahange²**¹MD Scholar, Dept. of *Sharir Rachana*, NIA, Jaipur.²Assistant Professor, Dept. of *Sharir Rachana*, NIA, Jaipur.Article Received on
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Rachana, NIA, Jaipur.**ABSTRACT**

Yoga focuses on harmony between mind and body. To achieve this, *Yoga* uses movements, breath, posture, relaxation and mediation in order to establish a healthy, lively and balanced approach to life. According to *Ayurveda*, the human body contains *Asthi*, *Sandhi*, *Snayu*, *Peshi* ect. This supports and helps in movement and locomotion. Every sports person in his career suffers from various sports injuries, especially of rotator cuff injuries. The rotator cuff muscles control rotation of the shoulder. The rotator cuff is a group of four muscles that stabilizes the upper arm bone in the shoulder socket

and allows the shoulder to rotate. The tendons of these muscles often become irritated, or they can be torn due to a traumatic injury or repetitive motion, especially in combination with weakness in the muscles that stabilize the shoulder blade and anchor the rotator cuff. Rotator cuff injuries more common in swimmers, rock climbers, golfers, and tennis players. Recently research studies proved that *Yoga's* are very effective in sports, health and fitness related fields such as aerobic training, strength training, body building and endurance sports. *Yoga* is useful for all type of sports to help prevent injuries. One gets extra agility which helps avoid damage, provides more strength and improves a player's ability to react to a situation. *Yoga* works not only at physical level but also at psychological level, ensuring well-rounded development. Many *Yoga* poses such as *Gomukhasana*, *Vasisthasana* prevention and healing by strengthening the muscles around the shoulder joint and restoring range of motion to the rotator cuff, you can create a stronger, more supportive structure to move from and decrease your chance of injury-or facilitate your recovery.

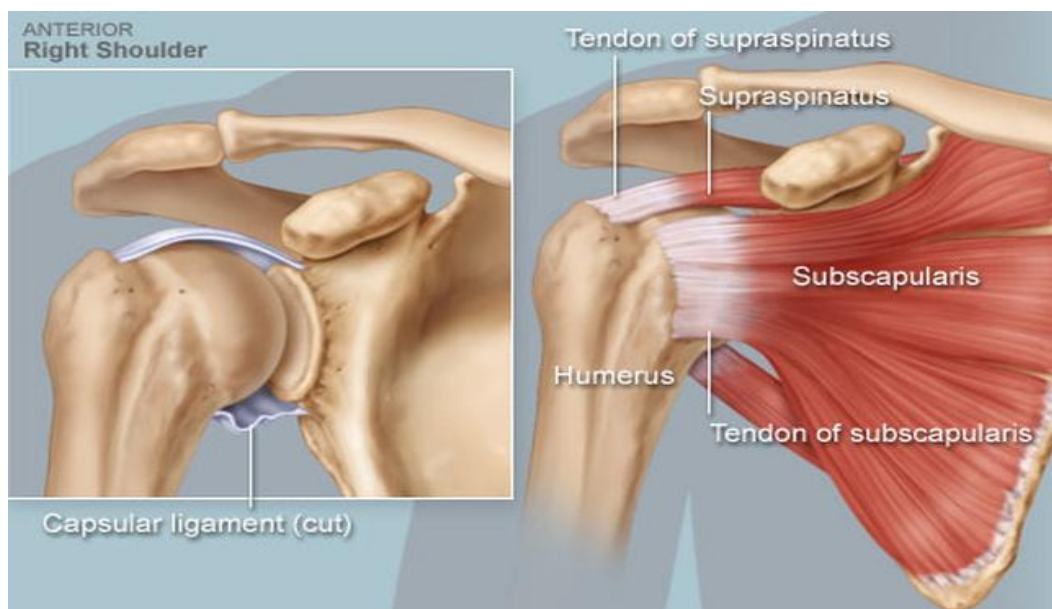
KEYWORDS- *Yoga*, sports injuries, rotator cuff injuries, *Gomukhasana*, *Vasisthasana*.

INTRODUCTION

Yoga is the science of right living and, as such, is intended to be incorporated in daily life. It works on all aspect of the person: the physical, vital, mental, emotional, psychic and spiritual. *Asana* means state of being in which one can remain physically and mentally steady, calm, quiet and comfortable. *Yogasana* became tools to higher awareness, providing the stable foundation necessary for the exploration of the body. *Asanas* have been evolved over the centuries so as to exercise every muscle, nerve and gland in the body. They secure a fine physique, which is strong and elastic without being muscle-bound and they keep the body free from disease. They reduce fatigue and soothe the nerves. Many athletes and sportsmen also possess superb physiques and have great control over the body. *Yoga* becomes the integrating principle for the study of anatomy. Additionally, for yoga practitioners, anatomical awareness is a powerful tool for keeping our bodies safe and mind grounded in reality. The reason for this mutually illuminating relationship between yoga and anatomy is simple. The deepest principles of yoga are based on subtle and profound appreciation of how the human system is constructed. The subject of the study of yoga is the self and the self is dwelling in a physical body. The rotator cuff muscles control rotation of the shoulder. They consist of the infraspinatus, teres minor and supraspinatus which rotate the shoulder outwards and the subscapularis which is one of the muscles which rotate the shoulder inwards. These rotator cuff muscles are put under a great deal of strain especially in throwing events and **racket sports** where your arm is above your head a lot. A sudden sharp pain in the shoulder would indicate a possible rupture of a tendon, while a gradual onset is more likely to be inflammation. *Gomukhasana*, *Vasisthasana* are important role in rotator cuff injuries. Because of these asana anatomically involvement muscles of rotator cuff i.e. supraspinatus, infraspinatus, teres minor and subscapularis.

Rotator cuff injuries

According to *Ayurveda*, the human body contains *Asthi*, *Sandhi*, *Snayu*, *Peshi* ect. This supports and helps in movement and locomotion. Tendon of the rotator cuff muscles (the supraspinatus, infraspinatus, teres minor and subscapularis) blend with the joint capsule and form a musculotendinous collar that surround the posterior, superior and anterior aspect of the glenohumeral joint. This cuff of muscle stabilizes and holds the head of the humerus in the



glenoid cavity of the scapula without compromising the arm's flexibility and range of motion. The rotator cuff also provides strong lateral stability and prevents this part of the lateral capsule from being nipped during joint movements.

The rotator cuff is a group of four muscles that stabilizes the upper arm bone in the shoulder socket and allows the shoulder to rotate. The tendons of these muscles often become irritated, or they can be torn due to a traumatic injury or repetitive motion, especially in combination with weakness in the muscles that stabilize the shoulder blade and anchor the rotator cuff.

Common in: Swimmers, yoga practitioners, rock climbers, golfers and tennis players.

Symptoms: Because the rotator cuff involves four muscles and their tendons, a wide range of symptoms can be associated with it. Generally, pain is felt over the top of the shoulder, but it can extend to almost anywhere around the shoulder joint itself, including the shoulder blade or the armpit.

Poses for Prevention and Healing: By strengthening the muscles around the shoulder joint and restoring range of motion to the rotator cuff, you can create a stronger, more supportive structure to move from and decrease your chance of injury—or facilitate your recovery.

***Gomukhasana* (Cow Face Pose)**

What it does: Stretches the entire rotator cuff with a combination of internal and external rotation of the arms. (If your shoulders are tight, you can do this pose in a warm shower or grab on to a strap or towel if you can't reach your hands.).

How to: From a seated or standing position, reach your left arm straight out to the left, parallel to the floor. Rotate your arm inwardly; the thumb will turn first toward the floor and then point toward the wall behind you, with the palm facing the ceiling. This movement will roll your left shoulder slightly up and forward and will round your upper back. With a full exhalation, sweep the arm behind your torso and tuck the forearm in the hollow of your lower back, parallel to your waist, with the left elbow against the left side of your torso. Roll the shoulder back and down; then work the forearm up your back until it feels parallel to your spine. The back of your hand will be between your shoulder blades.



Inhale and stretch your right arm straight forward, parallel to the floor. Turn the palm up, inhale and stretch your arm straight up toward the ceiling, palm turned back. Bend your elbow and reach down for the left hand. If you can, clasp your hands. If you can't reach, start over with a towel or strap in your overhead hand. Hold for 5 to 10 minute and then repeat on the other side.

***Vasisthasana* (Side Plank Pose)**

What it does: Strengthens the muscles of the rotator cuff and teaches them to work as an integrated unit.

How to: Come onto your forearms, with your elbows under your shoulders and your feet together. Roll onto the edge of your right foot and turn your right forearm in 45 degrees. Hug your right arm bone into the socket and press the base of your right index finger into the

floor. Lift and lengthen the sides of the rib cage and extend your left arm up. Hold for 5 to 10 minutes; then repeat this variation of Side Plank on the left side.



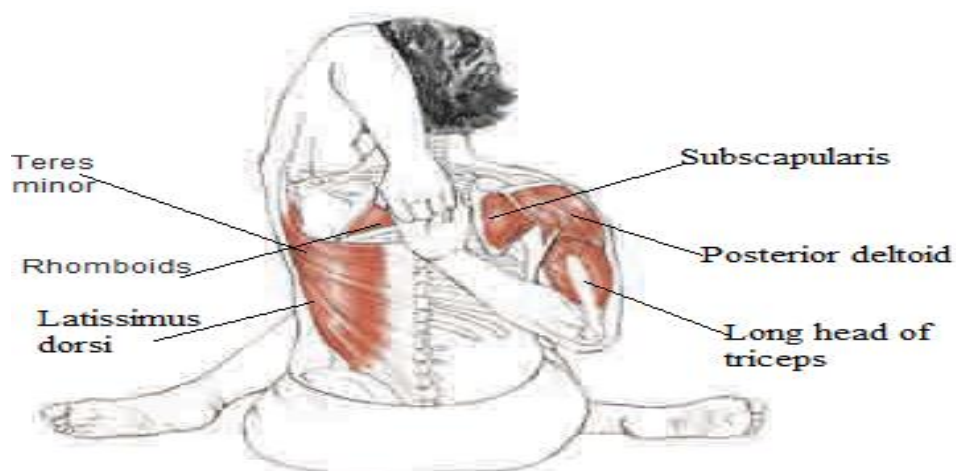
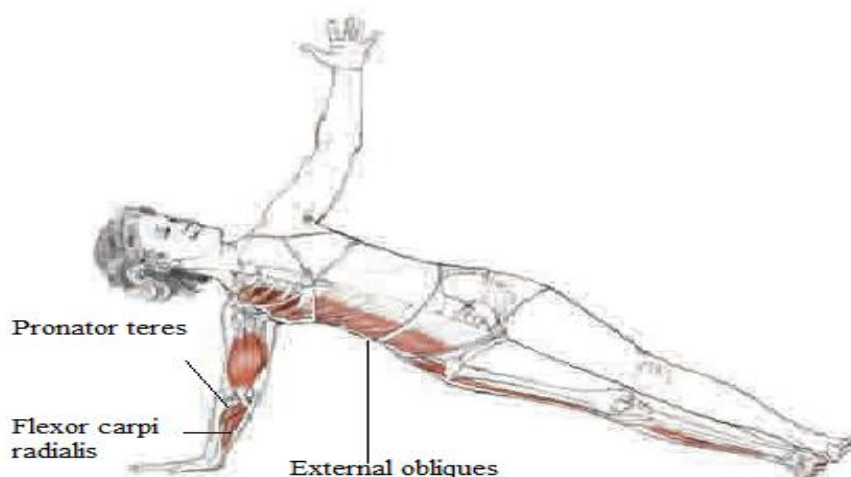
Joint action

Gomukhasana

Mostly neutral spine, with slight extension in the thoracic spine because of the arm position. Top arm: scapula upward rotation, elevation, adduction; glenohumeral joint external rotation and flexion; elbow flexion; forearm pronation. Bottom arm: scapula downward rotation, adduction, depression; supination. Legs: hip flexion, external rotation, adduction; knee flexion; ankle plantarflexion.

Vasisthasana

Spine neutral; hip neutral extension, adduction and internal rotation; knee extension; ankle dorsiflexion and feet everted against the pull of gravity; scapula neutral (abducting against the pull of gravity); glenohumeral lateral abduction, external rotation; elbow extension; bottom hand—forearm pronation, wrist dorsiflexion; top hand—forearm neutral, wrist neutral extension.

Gomukhasana*Vasisthasana***DISCUSSION**

- ☐ Regular practice of *Gomukhasana*, *Vasisthasana* Prevent Rotator cuff injuries in persons who participate in throwing events and racket **sports** where your arm having vigorous movements in various directions.
- ☐ Rotator cuff injuries involve 4 muscles which are Supraspinatus, Infraspinatus, Teres minor and Subscapularis.
- ☐ Rotator cuff injuries results in two forms Rotator cuff tear and Tendinopathy.
- ☐ Proper practice of *Gomukhasana*, *Vasisthasana* in regular basis for 5 to 10 minutes every day gives Strength, Stability, Flexibility and Mobility to the muscles involved in Rotator Cuff and prevents it from tear. Due to the free and flexible movement there are very rare chances of Tendinopathy.

- ❑ *Gomukhasana* and *Vasisthasana* are important role in rotator cuff injuries. Because of these Asana anatomically involvement muscles of rotator cuff i.e. supraspinatus, infraspinatus, teres minor and subscapularis.

CONCLUSION

Rotator cuff injuries involve 4 muscles which are Supraspinatus, Infraspinatus, Teres minor and Subscapularis. Rotator cuff injuries results in two forms Rotator cuff tear and Tendinopathy. Proper practice of *Gomukhasana*, *Vasisthasana* in regular basis for 5 to 10 minutes every day gives Strength, Stability, Flexibility and Mobility to the muscles involved in Rotator Cuff and prevent it from tear. Due to the free and flexible movement there are very rare chances of Tendinopathy. *Yogasana* have been evolved over the centuries so as to exercise every muscle, nerve and gland in the body. They secure a fine physique, which is strong and elastic without being muscle-bound and they keep the body free from disease. They reduce fatigue and soothe the nerves. Many athletes and sportsmen also possess superb physiques and have great control over the body. *Yoga* becomes the integrating principle for the study of anatomy. Additionally, for yoga practitioners, anatomical awareness is a powerful tool for keeping our bodies safe and mind grounded in reality. The reason for this mutually illuminating relationship between yoga and anatomy is simple. The deepest principles of yoga are based on subtle and profound appreciation of how the human system is constructed. The subject of the study of yoga is the self and the self is dwelling in a physical body.

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