

## AN ANATOMICAL INTERPRETATION OF KUKKUTASANA

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### Abstract-

Anatomy is really very important while practising yoga. Anatomical awareness can prevent peoples from jerk and any injury while practicing yoga asana. Nowadays there is a lot of awareness about yoga Asana. A lot of people are learning yoga through social media or other sources, due to which those people have more chances of injury. Knowing one's own anatomy is very important for the proper benefits of Yoga Asana. Kukkutasana is a type of Hatha yoga, which is very useful in removing abdominal and digestive system related problems.

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### INTRODUCTION-

Nowadays, due to hectic lifestyle in everyone's life has increased a lot, at that time people's attention is getting attracted towards Yoga Asana. The total 8 steps of yoga were told in the Ancient Yoga texts. Yoga was done in the old time to achieve accomplishment, but in the recent era , yoga is being used as exercise. Lots of people learn yoga through social media and yoga trainers but those yoga trainers don't know about anatomy. Therefore, by doing yoga asanas without knowing the anatomy, there are more chances of harm than benefit. And the benefit of Asana will be available only when there is stability in it while doing Asana.

In Sanskrit Kukkut means Cock or Rooster and Asana means sit, Pose or Posture. Kukkutasana or cock Pose is named so since it looks like a cock. Taking the posture of Padmasana and carrying the hands under the thighs, when the Yogi raises himself above the ground, with his palms resting on the ground, it becomes Kukkutaasana.<sup>1</sup> In Gheranda samhita Sitting on the ground, cross the legs in the padmasana posture, thrust down the hands between the thighs and the knees stand on the hands, supporting the body on the elbows. This is called the Cock-posture.<sup>2</sup> In Vasistha samhita and Hathratnavali<sup>3</sup> kukkutasana described similar as Hath yoga Pradipika, Adopt Padmasana, insert hands in between the knees and thighs and fixing the palms on the ground and suspending oneself is known as Kukkutasana.<sup>4</sup> According to Swami Satyananda Saraswati, Sit in padmasana. Insert the hands between the calves and thighs, near the knees. Gradually push the arms through the legs up to the elbows. Place the palms of the hands firmly on the floor with the fingers pointing forward. Keeping the head straight and the eyes fixed on a point in front, raise the body from the floor, balancing only on the hands. Hold the back straight. Remain in the final position for as long as is comfortable. Return to the floor and slowly release the arms, hands and legs. Change the leg position and repeat the pose.<sup>5</sup>

### IMPORTANCE AND USES OF KUKKUTASANA-

It strengthens arms and chest, improves digestion and liver; removes fat from hands and feet and makes them strong. Destroy the worms of the stomach<sup>6</sup>.The practice of this asana makes the hands, the arms, and the forearms as well as the elbows extremely strong. The asana is particularly useful for gunners and riflemen and for all those who have to use their arms. The practice of this asana combats laziness helps to carry on with little sleep, and early rising becomes easy. The yogis have

remarked that the practice of the Cock posture is bound to be more rewarding than the practice of eating cocks! The practice of the asana makes the body firm. Persons with weak and narrow chests or with crooked arms must practice it. Those who develop tremors or cramps while writing, or those who get easily tired, should also practice this asana. It has been held to be useful for all: householders, mendicants, yogis, soldiers, policemen, farmers, and musicians<sup>7</sup>.

This posture strengthens the arm and shoulder muscles and stretches the chest. It loosens up the legs and develops a sense of balance and stability. It is used in the process of *Kundalini* awakening due to the stimulation of *Mooladhara Chakra*.

Practice note: The arms and wrists must be strong enough to support the body. People with a lot of hair on their legs may find it difficult and painful to insert the arms between the thighs and calves. If oil is applied to the legs or the legs are shaved this will ease the problem. Those with a lot of fat or muscle on the legs will also have difficulty<sup>8</sup>.

### Description of *Kukkutasana*

- Technique Sit in *Padmasana*.
- Insert the right arm between the right thigh and calf muscle, and the left arm between the left thigh and calf muscle.
- Place the palms of the hands firmly on the ground with the fingers pointing forward.
- Balance the weight of the body on the hands and raise the body off the ground.

### ANATOMICAL EXPLANATION OF ASANA-

#### Joint Positions in *Kukkutasana*

- Ankle is plantar flexed and foot is inverted.
- Knee joint is flexed and Leg laterally rotated.
- The hips are flexed, abducted and externally rotated.
- The lumbar and thoracic spines are erect.
- Elbow joint flexed and pronated

#### Muscles and ligaments involved in *Kukkutasana*.

##### Ankle and foot region

The muscles stretched in *Kukkutasana* are similar to *Padmasana* and *Siddhasana*. But in *Kukkutasana* the position of foot is at a higher level compared to *Siddhasana* and there is more stretching happening in ankle joint. The muscles of anterior compartment of leg are stretched here. The big toe is being held by the hand from back; hence the interphalangeal and metacarpophalangeal joints of big toe are also flexed. This stretches the extensor hallucis brevis muscle.

##### Ligaments of ankle joint

The foot is inverted hence the lateral collateral ligaments are stretched here these, includes

Anterior talofibular ligaments (ATFL)  
Posterior talofibular ligaments (PTFL)  
Calcaneofibular ligament

##### Knee Joint

As the position of ankle is higher, there is more lateral rotation and stress on the ligaments is high. The muscles are more stretched especially the medial rotators of knee.

### Ligaments of knee joint

The ligaments of knee joint are under maximum stretch and stress in *Padmasana*. The chances of ligament tear are more common in this *Asana* and are not advisable to practice *Padmasana* without attaining needed flexibility. In this position the maximum pressure is on the following ligaments

Lateral collateral or fibular collateral ligament. (LCL)  
anterior cruciate ligament (ACL)  
Posterior cruciate ligament (PCL)  
Medial and lateral meniscus

LCL can be injured during both flexion and external rotation of the knee. In lateral rotation, the ACL is lengthened and stretched over the PCL. There is a possibility that the ACL can tear when the knee is flexed and either internally or externally rotated. Of the two menisci, the medial meniscus is the one most commonly torn. One of the most common ways to tear the meniscus is to rotate a completely flexed knee

### Pelvis and Hip region

*Kukkutasana* places more stress on hip joint, As the knee joint is a hinge type of synovial joint, the placement of feet on thighs forces the hip joint into extreme lateral rotation, and with the initial flexion and abduction it places the hip joint in a stressed and unusual position.

During the abduction of hip joint the adductors are under a lot of stretch. In *Kukkutasana* to keep the hip joint in its position the abductors, external rotators and the flexors will be in active contraction. Majority of these muscles are present in the gluteal region

### Ligaments of hip joint

The hips are flexed, abducted and externally rotate. This position puts more pressure on ligaments. The ligaments more stretched are

Ischiofemoral ligament  
Pubofemoral ligament

### The Spine: Thoracic and Lumbar

To maintain an upright shape, the erector muscles contract to extend the spine, and the psoas muscles contract to pull the anterior lumbar spine forward. Since the hands are crossed at the back to catch hold of the toes, there is more straightening of the spine especially the thoracic region. There is a tendency of the spine to move in posterior direction and hence to counter that there is more stress on psoas major muscles to maintain the upright posture. The abdominal muscles also resist the spinal extension and the contract to stabilize the trunk.

### Cervical Region

Cervical spine flexed. Sternocleidomastoid acting together draws the head forwards and so help to flex the cervical part of the vertebral column and it is important in creating the lock formed in *Jalandhara Bandha*. Rectus capitis anterior, longus capitis and longus colli flexes the head at the atlanto-occipital joints.

The upper fibres of Trapezius are stretched most. The other muscles stretched are splenius capitis, splenius cervicis, semispinalis capitis and longissimus capitis. The latter two are part of erector spinae muscle. These muscles help to extend the head and are stretched in this case.

## Elbow region

The upper limb is kept straight, hence the elbow is extended. To maintain this position Triceps brachii is actively contracted. Since the forearm is also supinated, the supinators are actively contracted. Biceps brachii supplied by musculocutaneous nerve and supinator supplied by posterior interosseous nerve are actively contracted.

## DISCUSSION ON KUKKUTASANA-

Kukkutasana stretches entire upper body including the stomach, chest, arms and shoulder. This helps in smooth flow of blood to these areas which strengthen and tone the muscles. Cockerels pose tone biceps and triceps muscles with its regular practice. In the asana, entire body weight is on arms which not only increases blood circulation but keeps them toned. With the increased blood flow, the muscles get the required nutrition that results in their growth

## CONCLUSION

In Kukkutasana, After taking the posture of *Padmasana* and carrying the hands under the thighs, when the Yogi raises himself above the ground, with his palms resting on the ground. In *kukkutasana* wrist joint, shoulder joint, ankle joint and knee joint are under more stress. The muscles of flexor compartment of forearm, anterior compartment of arm, the anterior compartment of leg, anterior and medial compartment of thigh is stretched the most. Dorsal radioulnar ligament, dorsal radiocarpal ligament, dorsal radial metaphyseal arcuate ligament have chances of tear if this asana done under incorrect position

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