

# PHYSIO-ANATOMICAL EXPLANATION OF ASANA ON KNEELING POSE

## ABSTRACT

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Asana (Yoga Pose) is the third limb of *Ashtanga Yoga*. In a simple word, the meaning of *Asana* is 'to seat'. Definition of *Asana* according to *Maharishi Patanjali 'Yog Sutra'*: – "*Sthira sukham Asanam*". Which means practicing yoga with the capability (strength) in a relaxed way, which gives rise to harmony with the physical body. *Yogasanas* have an important role in the development of the physical, mental and spiritual personality, whereas other exercises only have a physical effect on the muscles and bones. In comparison to *Asana*, the Physical exercises are performed quickly and with lots of hard breathing. Whereas *yogasana* are performed slowly with concentration and relaxation. In *Yogasanas* both the external and internal systems are influenced so that the endocrine glands; nervous system and internal organs as well as muscles are encouraged to function well. Thus *Asanas* have a physical and psychoneurotic impact that is useful in natural process infirmities. *Yoga Asanas* cover the basic positions of standing, kneeling, forward bends, turns, reversals, backbends and resting. There are more than 840,000 poses in yoga. When kneeling, the body's weight is on the knees, shins, and parts of the feet. Kneeling brings the center of gravity closer to the ground and makes certain activities, such as gardening, less stressful for the spine. In yoga, kneeling poses are often used to help open the hip and knee joints. When the body's weight is taken off the feet and legs, the pelvic muscle attachments can be stretched because they no longer stabilize the body weight high off the ground. Kneeling also provides a stable base from which the center of gravity can be raised up so the spine can fully extend—most beautifully expressed in poses such as camel (*ustrasana*). A position that's frequently used to counterpose strong spinal extensions is child's pose, the kneeling position that produces mild, even spinal flexion and lowers the center of gravity. In this article I am trying to explain the physio-anatomical basis of some kneeling pose asana like *Veer asana*, *Ustra asana*, *Balasana*, and *Simhasana*.

**KEYWORDS:-** *Asana*, *yogasana*, *kneeling pose asana*

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## INTRODUCTION

*Asana* is a state of being in which you can remain stable, quiet and comfortable, calm, physically and mentally. Definition of *Asana* according to *Maharishi Patanjali 'Yog Sutra'*: – "*Sthira sukham Asanam*". Which means practicing yoga with the capability (strength) in a relaxed way. Most of the people link *Asana* with gymnastic exercises or bodybuilding techniques. This is a totally wrong concept. *Asana* are not designed for developing or growing huge unnecessary muscles. Weightlifting, gymnastic exercise and many other exercises are not suitable for everyone. People in any age group can perform the *Asana*. *Yogasana* is different from other exercises. In *Yogasana* both the external and internal systems are influenced so that the endocrine glands; nervous system and internal organs as well as muscles and joints are encouraged to function well. Thus *Asana* have a physical and psychoneurotic impact that is useful in natural process infirmities. They'll be done by each healthy and unhealthy person, young and old peoples very easily. They're most helpful for increasing concentration and meditation. Different systems of physical culture increase the toxins within the body, whereas *Asana* removes the poisonous substance in various ways from the body. *Yogasanas* cover the basic positions like standing, sitting, kneeling forward bends, turns, reversals, backbends and resting. There are more than 840,000 poses in yoga.

## Effect of Asana (yoga pose)

### **Physical Benefits of Yoga Pose-**

The necessary glandular system is controlled so the right quantities of the various hormones are secreted from all the glands within the body. This has repercussions on our physical well-being moreover as on our cognition towards life. On getting diseased of one organ of body whole body system is affected directly or in indirectly. Therefore, it is important that this method is maintained in peak condition. Morbid organs will be repaired, rejuvenated and inspired to hold out their traditional duty through regular practice of *Asana*. The muscles and bones, nerves, glands, metabolism, excretory, nervous and circulatory systems are coordinated in order that they assist each other in a better way. *Asana* build the body's system versatile and able to alter itself simply according to changes of surroundings. To summarize, we will say that *Asana* maintain the chassis at an optimum state and motivate an unhealthy body to become healthy.

### **Mental Benefits of asana (yoga pose)**

*Asana* make our mind strong enough to absorb shocks and give the power to endure pain and unhappiness. By this, the power of determination and concentration are developed. Equilibrium and coordination with environment and other essentialness turns into the ordinary perspective after the customary routine of *Asana*. You will be able to face the sorrow, pressure, and obstacles of the world with peace, without being disturbed. Power of concentration and meditation and power of logical thinking is improved by regular practice of *asana*.

### **Spiritual Benefits of asana (yoga pose)**

*Asana* (yoga pose) is a unit nearly a necessity for religious aspirants to awaken their psychic schools. *Asana* ought to be considered the sorts of meditation and psychic purification. *Yogasanas* ought to be schooled within the complete manner delineate within the *tantras*, with attention to the relating focuses incorporated into the takeover.

### **ASANA ON KNEELING POSE**

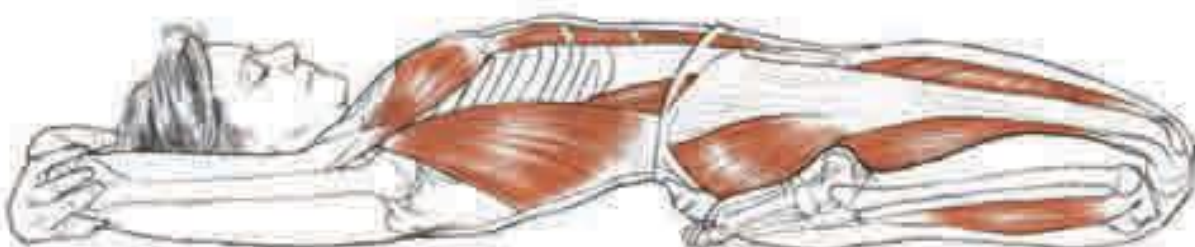
This position is also associated with "lowering oneself" in the sense of meekness or worship. This probably evolved from the fact that when kneeling, a person is defenseless and unable to flee. Even the proud, upright stance of kings and pharaohs is tempered by their frequent depiction in this humble position. In yoga, kneeling poses are often used to help open the hip and knee joints. When the body's weight is taken off the feet and legs, the pelvic muscle attachments can be stretched because they no longer stabilize the body weight high off the ground.

### **DISCUSSION-**

Some of the kneeling pose asana like *Supt-Veerasana*, *Balasana*, *Simhasana*, and *Ustrasana* are to be explained physio-anatomically in this article.

### **PHYSIO-ANATOMICAL EXPLANATION**

#### **SUPT-VEERASANA-**



Reclining hero is a released hip opener position in which the goal is to relax as much as possible into gravity. The lower abdominal muscles can be activated to prevent hyperextension in the lumbar spine and to lengthen the psoas major.

There are many variations for the arm position in this pose—at the sides, reaching overhead, and propped up on the elbows (for the less flexible). If the latissimus dorsi is tight, reaching the arms overhead can increase the hyperextension of the spine because of the attachment of the Latissimus dorsi in the lower back. Because hip extension in internal rotation is more challenging than in external rotation for most people, *supta-virasana* “forces” the pelvis to be honest about how open the groins truly are. This pose often begins as spinal extension, especially

If there is tightness in the hip flexors, because the internal rotation of the legs is bound into place by the weight of the body.

If the hip extensors are tight and the pose is “pushed,” the force can be transmitted either into the lower back or into the knees. In either case, the pose should be supported in a way that allows for maximum hip extension; getting down to the floor is less important.

Because the knees are at risk, keeping the feet active and avoiding supination is important for maintaining integrity in the knee joints.

This can be an excellent pose for sciatic and lower-back pain, if done with attention to the internal rotation and extension in the hips. If poorly executed, the pose can exacerbate lower back pain.

### **Breathing Pattern-**

The tautness in the psoas and abdominal wall creates both posterior and anterior pressure in the abdominal cavity. This effect is magnified when activating the abdominal muscles to flatten the lumbar curve. The resulting breathing patterns would favor movements above and below the abdominal pressure. Emphasizing thoracic breath movements at the base of the rib cage helps to mobilize the upper spine and shoulder girdle. Focusing on pelvic floor movements assists in releasing tension in the hips, groin, and gluteal region

### **Benefits of Supta Virasana (Reclined Hero Pose)**

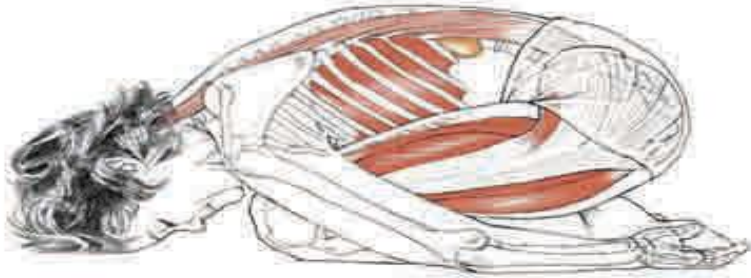
- Strengthens and stretches your quadriceps.
- Beneficial in the treatment of sciatica.
- Reclined Hero pose helps in sleeping disorders like insomnia.
- Improves digestion.
- It helps to relieve menstrual pain symptoms.
- Stretches your abdomen, deep hip flexors, ankles and thighs.
- Asthma and other diseases like arthritis can also be treated by this pose.
- It is beneficial in headaches, colds, flat feet, infertility, and menstrual problems etc.
- This asana stretches the abdominal organs and the pelvic region.

### **BALASANA-**



In Sanskrit, meaning of *Bala* is ‘child’ and the meaning of *Asana* is seat, pose or posture. This *Asana* is a counter posture for different *asana* and is normally attempted prior and then afterward *Sirsasana*. *Balasana* is a curve or bend

pose, which extends and discharges the spine and lower back. You can utilize this posture as a warm-up represent, a resting posture or a counter stance for a back bend exercises. In this *asana*, the body confronts the floor in a fetal position. The knees and hips are bowed with the shins on the floor. In this your chest can lay either on the knees or the knees can be spread to about the width of a yoga tangle, permitting the mid-section to go between the knees. The head is extended forward towards the ground – the brow may touch the ground. The arms might be extended forward before the head or in reverse towards the feet.



On doing this asana joints actions like full spinal flexion (maybe slight cervical extension, depending on the head position or the length of the neck); hip flexion, neutral rotation, adduction; knee flexion; ankle plantar flexion; scapula abduction and downward rotation;

Glenohumeral internal rotation; elbow extension; forearm pronation occurs.

Basic principle involved behind this *asana* is that the Gravity draws the yielding body deeper into this position.

The challenge of this pose is to bring the sitting bones to the heels and the forehead to the floor. To do so, lengthening of muscles like the extensors of the spine, gluteus maximus, piriformis and other rotators, hamstrings, gluteus medius and minimus (because of hip adduction), tibialis anterior, peroneus tertius, extensor digitorum longus and brevis, and extensor hallucis longus and brevis in the feet occurs.

### **Obstacles and Notes**

Variations include widening the knees (hip abduction), which can create more neutral extension in the spine and make room for the belly; extending the arms overhead; clasping the heels with the hands; crossing the arms under the forehead; and turning the head to one side.

Sometimes there is congestion in the front of the hip joints, which can be caused by using the hip flexors to pull the body down toward the thighs, rather than allowing gravity to create that action.

Restriction can also be felt in the tops of the feet, if the extensors of the toes are tight or if there is a lack of mobility in the bones of the foot. Additionally, weakness in the intrinsic muscles of the foot will often result in cramping in this, and similar positions (such as *virasana* and *vajrasana*).

### **Breathing**

With the hips fully flexed, or adducted, and the front of the torso resting on the anterior surface of the thighs, the movement of the breath in the abdomen and anterior rib cage is greatly restricted. This necessitates more movement in the back of the waist and rib cage. That's why if there is tightness in those places, this pose can feel suffocating

### **Benefits of Balasana (Child Yoga Pose)**

- It stretches the lower back and relaxes spine.
- It strengthens and stretches thighs, ankles and muscle of hips.
- It gives calmness to mind, and slower down the level of stress and fatigue.
- It is useful in back pain.

## SIMHASANA-



It is a type of Basic kneeling jaw stretch asana.

The basic principle involved in this is the lengthening activation of the tongue which lifts the hyoid bone; activates the digestive system; and activates the hyoid muscles, sternum, rectus abdominis, pubic bone, and pelvic floor. A strong exhalation (lion's roar) activates the three diaphragms: thoracic, pelvic, and vocal. The platysma muscle can also be contracted in *simhasana*. The superior and medial rectus muscles of the eye both contract to direct the gaze inward and upward.

Stretching of Jaw muscles occurs like: temporalis, masseter, lateral and medial pterygoids and tongue.

### Notes

*Simhasana* stimulates and releases a host of oft-overlooked muscles. The tongue and jaw can be thought of as the front of the neck, and cervical tension can frequently be related to tightness in these structures. Additionally, the platysma is toned during *simhasana*. Aside from the cosmetic advantages (a weak platysma is associated with wrinkly throat skin), consciously contracting this muscle increases the ability to relax it during inspiratory efforts. As a variation, this pose can also be done from kneeling.

### Benefits of Simhasana (Lion Pose)

The *Simhasana* is beneficial for the face and also the throat, that isn't typically benefited in other yoga posture.

- Best exercise for face, eyes, tongue and throat.
- Clears the Vocal cords.
- Properly opens the Respiratory tract.
- Strengthens Fingers and hands.
- Prevents soreness of the throat.
- Useful for tonsils, thyroid and other problems related to throat.
- Beneficial in unclear pronunciation and in ear problem.
- It cures foul smell of breathe.
- Helpful for improving the tone of the voice.
- Give relief in back pain.

### CONCLUSION

When kneeling, the body's weight is on the knees, shins, and parts of the feet.

Kneeling brings the center of gravity closer to the ground and makes certain activities, such as gardening, less stressful for the spine. Without proper care, however, kneeling can be stressful for the knee joints.

Those people who are unable to do asana in standing pose or supine pose can do asana in kneeling pose with ease and proper care. Problems like persistent leg cramps and sciatica (*supt veerasana*), shoulder drop and hunch back (by *ustrasana*) etc. can be treated easily by doing these *asana*. Kneeling also provides a stable base from which the center of gravity can be raised up so that the spine can be fully extended which is most beautifully expressed in poses such as camel pose (*ustrasana*) and pigeon pose (*kapotasana*). A position

that's frequently used to counter pose strong spinal extensions is child's pose, the kneeling position that produces mild, even spinal flexion and lowers the center of gravity. In this way , we can see that how kneeling pose asana affect our joints and muscles and cures disease by regular practice.

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