

## Hip Openers

Due to the typical Western lifestyle, many people suffer from hip problems such as arthritis or rheumatoid arthritis, or they have a limited opening in the hip joint. Often there is a lack in both the muscular tone needed to have correct functioning of the hips as well as lack of flexibility. This can cause difficulties in daily life, overall health and especially for physical activity. A large part of the population spends their working day sitting in front of a computer, sitting in a car, or doing another type of sedentary job. Among the many problems caused by spending extended periods of time in such a position, one of them is loss of flexibility in the hips. By keeping our hip joints still in a seated position we gradually lose our natural range of movement. This can be seen dramatically when a sedentary person approaches yoga for the first time. Just trying to sit for a few minutes with their legs crossed at the beginning of the practice becomes an intense exercise. In order to redevelop openness in the hips and restore a healthy hip functioning we need to look at the range of movements the hip performs and ways to improve each of these.

In this paper I will discuss the seven movements of the hip joint, the muscles involved, the importance of each one, asanas which target the type of movement and benefits of each in other daily activities. The seven types of hip movement are flexion, extension, abduction, adduction, external rotation, internal rotation and circling. The hip uses a combination of these movements to bring the leg into different positions, therefore in many asanas work on several different movements. I would also like to note that the concept of performing asanas is to prepare the body to calmly and comfortably sit for extended periods of time in meditation. The openness of the hips is essential to this goal and is one of the greatest prohibiting factors for many people. Though in this paper I will focus on a more Western mindset of functionality in daily life, the overall objective of opening the hips in yoga is to sit in padmasana, or another meditative asana comfortably, so that the mind is not distracted by bodily discomfort.

The first type of hip movement is flexion. Flexing the hip is the movement of raising the thigh towards the chest. The muscles involved in this action are the ileo-psoas, rectus femoris, and sartorius. This movement helps in most everyday movements of walking, bending, and even comfort in sitting. Depending on whether the movement is active or passive and if the leg is extended or bent changes the range and ease of this movement. It is important to both stretch and to strengthen this articulation. Some of the asanas that help increase the flexion of the hip are padahastasana (standing forward fold), adho mukha svanasana (downward facing dog), pashimottanasana (seated forward fold), parsvottasana (triangle position facing the leg), adho mukha virasana (hero pose folding forward), janu sirasana (head to knee pose).

The second type of hip movement is extension. Extending the hip is the movement of bringing the leg towards the back of the body. The muscles involved in this action are the gluteus maximus, semitendinosus, semimembranosus, biceps femoris and the adductor magnus. This movement is important for standing in an erect position, walking and most physical activities. Some of the asanas that help increase the extension of the hip are ardha chakrasana (half wheel bending backwards), virabhadrasana 1 (warrior one pose), virabhadrasana 3 (warrior three pose), urdva mukha svanasana (upward facing dog), supta virasana (lying hero pose), ustrasana (camel pose), dhanurasana (boat pose) and salabhasana (cricket pose).

The third type of hip movement is abduction. Abduction of the hip is the movement of lifting the leg sideways towards the side of the body, separating the thighs. The muscles involved in this action are the gluteus maximus, gluteus medius, gluteus minimus, and tensor fascia lata. This movement is important for moving side to side during physical activity. Some of the asanas that help increase the abduction of the

hip are uttihita trikonasana (triangle pose), uttihita parsvakonasana (extended triangle), virabdrasana 2 (warrior two pose), ardha chandrasana (half-moon pose), frog pose and baddha konasana (butterfly pose).

The fourth type of hip movement is adduction. Adduction of the hip is the movement of bringing the leg across the body, in front of or behind the opposite leg. The muscles involved in this action are the adductors magnus, brevis and longus, and the pectineus and gracilis. This movement is important for side to side mobility and for stability. Some of the asanas that help increase the adduction of the hip are kapotasana (pigeon pose), garudasana (eagle pose), gomukhasana (cow face pose), parvritta trikonasana (twisted triangle pose) and parvritta parsvakonasana (twisted extended triangle pose), vakrasana (seated twist with one leg extended) and ardha matyandrasana (seated twist crossing legs).

The fifth type of hip movement is external rotation. External rotation of the hip is the movement of rotating the toes outward, away from one another when standing. The muscles involved in this action are the piriformis, gemellus superior, obturator internus, gemellus inferior, obturator externus and quadratus femoris. This movement is important for opening the leg when the knee is bent and having a greater range of movement. Some of the asanas that help increase the external rotation of the hip are kapotasana (pigeon pose), uttihita trikonasana (triangle pose), uttihita parsvakonasana (extended triangle), virabdrasana 2 (warrior two pose), ardha chandrasana (half-moon pose), vrikshasana (tree pose) and baddha konasana (butterfly pose).

The sixth type of hip movement is internal rotation. Internal rotation of the hip is the movement of rotating the toes inward, towards one another when standing. The muscles involved in this action are the tensor fasciae latae, gluteus medius and gluteus minimus. This movement is important to assist in the extension of the hip when we are walking or running as it helps assure the correct rotation of the pelvis. Some of the asanas that help increase the internal rotation of the hip are garudasana (eagle pose) and supta virasana (lying hero pose).

The seventh type of hip movement is circling. Circling the hip is the movement of creating large circles rotating the femur in the hip socket. Many muscles are involved in this action all of which are mentioned above. This movement is important for the overall agility of the hip socket and fluidity in movement. There are many exercises that can be done before or during an asana practice to help the circling of the hip, such as making clockwise and counterclockwise rotations of the hip while on the hands and knees, rolling the hips in a circular motion while standing and opening the leg from Uttihita hasta padangustahasana (standing big toe hold) in front of the body to the side of the body.

When creating a practice it is important to incorporate all seven types of movement to create an overall feeling of hip openness. For each type of hip movement there are asanas designed to work the articulation with different intensities. In general, asanas performed with the legs extended work more intensively than those with the knees bent. In conclusion I would also like to mention the importance of protecting the knee when performing hip opening exercises. Often in hip opening positions, such as padmasana, the knee is forced into an internal rotation because of lack of mobility in the hip. This should be avoided. The function of the knee is to bend and extend in a linear motion, not to twist. As a rule of thumb, if there is any knee discomfort when performing hip opening asanas, gently come out of the position.

## Resources

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