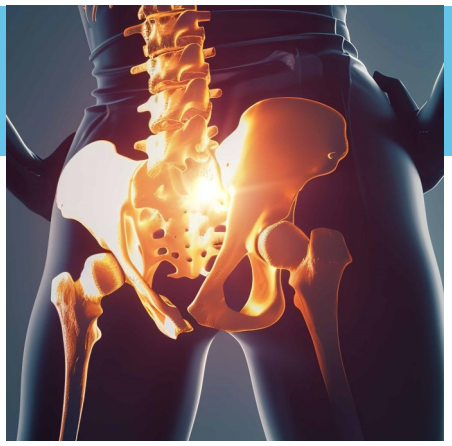
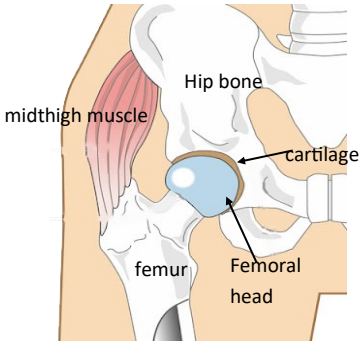
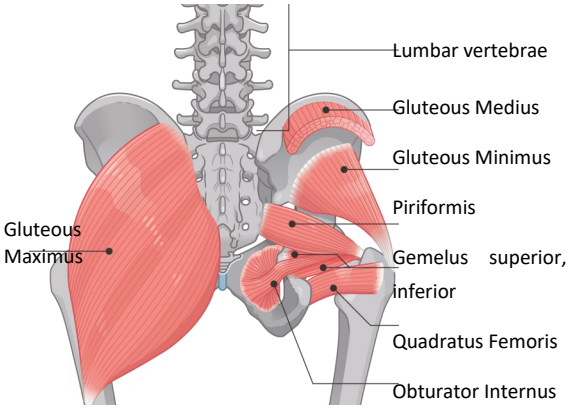
Mechanism of the hip joint



The hip joint is the largest joint in the human body. Its movements are very complex, acting like a cushion that absorbs force, and working together with surrounding ligaments and muscles to enable vertical, horizontal, and rotational movements.





There is a bowl-shaped indentation in the pelvis near the hip joint that connects to accommodate the ping-pong ball-shaped tip of the femur (femoral head). The surfaces of the acetabulum and femoral head are covered with a cushion called articular cartilage, which allows the joints to move smoothly without pain, allowing smooth movements such as walking, running, and sitting.

[Gluteus medius]

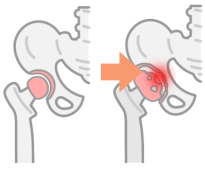
It is said that 3 to 4 times the force of your body weight is applied to your hip joints just by walking normally. To support this force, there are many ligaments and muscles attached that connect the head of the femur to the hip bone. Among these, the gluteus medius, which connects the pelvic bone and femur, is a very important muscle when standing and walking. The reason why you can maintain your balance when standing on one leg is because these muscles are working properly.

[If the movement of the hip joint is poor...]

Not only are many tendons gathered around the hip joint, but there are also large arteries that supply blood to the lower body, many lymph nodes, and large nerves. When the area around the hip joint becomes stiff, it puts pressure on blood vessels and lymph nodes, impeding their flow, which can lead to pain, sensitivity to cold, and numbness. If the movement of the hip joint, which should normally be able to move freely, is restricted, it can cause knee pain and lower back pain, as well as a variety of other symptoms.

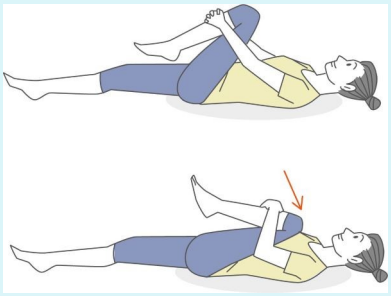
Osteoarthritis

``Osteoarthritis of the hip'' is the most common hip disease among adults, and is more common in the elderly, with the number increasing year by year. There is cartilage between the femur and hip bone. When the cartilage decreases and the bones rub directly against each other, causing pain and bone deformity, the bones and hip joints no longer move smoothly. This causes pain when standing up or bending deeply. Although it can be improved with exercise therapy, hip replacement surgery may be required at the discretion of a specialist.



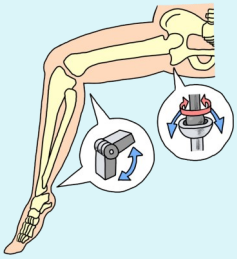
Hip stretch

① Lie on your back, stretch your right leg straight, hold your left knee with both hands, and pull it toward your chest for a count of 5 seconds.
② Slowly lower your left leg, bend your right leg in the same way, support it with both hands, and pull it toward your chest. Be aware of the stretch from your buttocks to the outside of your thighs. Do this three times alternately.



Three major joints of the lower limbs

There are three joints in the lower limbs, known as the three major joints: the hip joint, which connects the pelvis and femur, the knee joint, which connects the femur and lower leg, and the ankle joint, which connects the lower leg to the foot. .



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