

Injuries and Disorders of the Lower Extremities

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DESCRIPTION

The bodily portions below the waist are referred to anatomically as the lower extremities. The hip, thigh, knee, leg, ankle, and foot are all included in this. The lower extremity is essential for sustaining the body's weight, preserving stability and balance, and enabling mobility. It is a complicated structure that is vulnerable to several injuries and illnesses.

The thigh bone (femur) and pelvis are joined by the hip joint, which is a ball-and-socket joint. It has a great range of motion that enables motions like walking, running, and jumping. It is one of the body's biggest and most stable joints. A robust network of ligaments, tendons, and muscles surrounds the hip joint and cooperate to offer stability and support.

The hip joint is susceptible to damage and degenerative disorders like osteoarthritis. The area of the lower extremities between the hip and the knee is known as the thigh. It is made up of numerous powerful muscles, such as the quadriceps and hamstrings that cooperate to move the leg and bear the weight of the body. In contrast to the hamstrings, which are found on the back of the thigh and are responsible for flexing the knee joint, the quadriceps are situated on the front of the thigh.

The thigh bone (femur) and the shin bone (tibia) are joined at the knee *via* a hinge joint. With several components that might be hurt or destroyed, it is one of the body's most intricate and sensitive joints. The Medial Collateral Ligament (MCL) and Anterior Cruciate Ligament (ACL) are two of the ligaments that act together to stabilise the knee joint and limit excessive joint movement. The quadriceps and hamstrings, as well as other muscles that cooperate to move the leg and maintain stability,

support the knee joint. The area of the lower extremities between the knee and the ankle is known as the leg. It is made comprised of the tibia and fibula, two bones that cooperate to sustain the weight of the body and enable mobility. Numerous muscles surround the leg as well, including the calf muscles (gastrocnemius and soleus), which are in charge of the ankle joint's plantar flexion.

The hinge joint that links the leg to the foot is the ankle joint. The tibia, fibula, and talus bones are part of it, along with a number of ligaments and tendons that cooperate to offer stability and support. Dorsiflexion (raising the foot upward) and plantar flexion (pressing the foot downward) of the foot are movements controlled by the ankle joint.

When one is standing, walking, or running, the lower extremity that makes contact with the ground is the foot. More than 100 muscles, tendons, and ligaments operate in concert with 26 bones, 33 joints, and more than 100 other structures to support and enable movement. The hindfoot, which contains the heel and ankle, the midfoot, which includes the arch, and the forefoot, which includes the toes, make up the three sections of the foot.

Lower extremity injuries are frequent, especially in athletes and those who participate in high-impact sports like running and leaping. Strains, sprains, fractures, dislocations, and rips of ligaments and tendons are typical lower extremity injuries. Numerous things, including overuse, inadequate conditioning, and bad technique, and trauma, can result in these injuries. Peripheral artery disease, gout, osteoarthritis, and rheumatoid arthritis are among the illnesses that can affect the lower extremities.

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