



The Impact of Knee Osteoarthritis: Symptoms, Causes and Progression

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DESCRIPTION

Knee Osteoarthritis (OA) is one of the most common forms of arthritis, affecting millions of people worldwide. It is a degenerative joint disease that primarily affects the cartilage within the knee joint, leading to pain, stiffness and reduced mobility. The development of the disease can result in significant consequences on a person's quality of life. Osteoarthritis is a degenerative joint disease characterized by the breakdown of articular cartilage, the smooth tissue that covers the ends of bones in a joint. In knee osteoarthritis, the cartilage begins to dissolve decreasing causing friction between the bones. Over time, the loss of cartilage causes pain, swelling and decreased joint mobility. In advanced cases, the bones may begin to rub directly against each other, leading to the formation of bone spurs (osteophytes) and further joint damage.

Causes and risk factors

The exact cause of knee osteoarthritis is multifactorial. However, several factors have been identified as contributing to the disease's formation and development. Aging is one of the most significant risk factors for knee osteoarthritis. The condition is more common in older adults because cartilage becomes less resilient and more susceptible to damage and fracture with ageing. A family history of osteoarthritis increases the risk of obtaining the disease. Certain genetic factors may contribute individuals to cartilage degeneration. Excess weight is a significant risk factor for knee osteoarthritis. The knees remain a significant portion of the body's weight and excess weight increases the mechanical stress on the knee joints. This stress accelerates cartilage breakdown and increases the symptoms of osteoarthritis.

Previous knee injuries, such as fractures, ligament tears, or meniscal damage, can predispose individuals to osteoarthritis.

Even after healing, injured joints may not function as well as before, leading to abnormal joint mechanics and increased degeneration on the cartilage. Occupations or activities that involve repetitive knee movements, such as squatting, kneeling, or heavy lifting, can increase the risk of knee osteoarthritis. Athletes, manual laborers and individuals engaged in high-impact sports are particularly vulnerable. Women are more susceptible than men to develop knee osteoarthritis, especially after the age of 50. Hormonal changes, especially during the menopause, can raise the probability. Congenital or acquired deformities of the knee joint, such as bow legs (varus deformity) or knock knees (valgus deformity), can alter the distribution of weight across the joint and it can create asymmetrical damage on the cartilage.

Symptoms of knee osteoarthritis

Pain is the most frequent symptoms of knee osteoarthritis. It is usually described as a deep, aching pain that worsens with activity and improves with rest. In the early stages, the pain may be intermittent, but as the disease progresses, it can become constant and more severe. Stiffness in the knee joint, especially after periods of inactivity or in the morning, is another hallmark of osteoarthritis. This stiffness usually improves with gentle movement but may return after prolonged rest or moving. Swelling around the knee joint is common in osteoarthritis. It may be due to the accumulation of synovial fluid (a natural lubricating fluid in the joint) or the formation of bone spurs. The swelling can contribute to pain and a feeling of tightness in the knee. As osteoarthritis progresses, the knee joint may lose some of its flexibility. This reduced range of motion can make it difficult to perform daily activities, such as walking, climbing stairs.

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