

Anterior knee pain — Many factors can cause this problem

By David Bertone, PT, OCS

A common complaint of athletes is anterior knee pain which can quite often be disabling and limit participation in their chosen sport. There are many factors for this problem including overuse, acute trauma through a direct blow to the knee or underlying biomechanical factors in the foot, ankle, knee hip or spine that can be contributing to this complaint.

Anterior knee pain can be classified by symptoms located below, behind, on top, above or along the sides of the knee cap (patella). Some of common reasons for sudden pain in this area are from a patella subluxation or dislocation when the knee cap travels out of its normal tracking system with the thigh bone. This can cause immediate pain, swelling and difficulty walking which requires a period of immobilization in a brace to allow the structures to stabilize and heal. During this period of time, the principals of RICE (rest, ice, compression, and elevation) are used to control the pain and swelling. Following this period, exercises can be started under the guidance of a physical therapist to regain the mobility of the knee and improve the muscle strength and function of the entire leg. A return to sports is only attempted when cleared by their physician in consultation with the treating therapist to ensure tolerance for running, agility and jumping activities.

Another reason for anterior knee pain can simply be overuse of the surrounding tissues. This can often be classified as tendinitis or an inflammatory process where the soft tissues around the knee respond to repetitive stress by entering a state of pain and microscopic swelling. One must look at their training and game schedule along with proper rest periods to prevent this problem. Another factor for these overuse knee injuries is unwillingness to cross train by the athlete. They tend to get caught up in their chosen

sport by playing it 12 months out of the year and rarely perform other sports or activities that would create balance and strength in multiple directions. You must consider the balance between strength and flexibility of the entire leg and trunk complex, since this factor can be a primary reason that overuse and pain develops around the knee. Tight hamstrings, quadriceps, hip muscles and calves can change the mechanics of running and direct repetitive stress to the knee region.

This leads me to the final point I wanted to make when discussing anterior knee pain. It is important that your medical professional examine the entire complex from your foot to your spine since any biomechanical faults along this chain can often lead to knee pain. Researchers have examined this area extensively and found that each part of the lower extremity can transmit unnecessary forces to the knee. Flat feet, bow legged or knocked knee, hip and thigh bone rotations, and scoliosis can be factors that should be addressed when treating someone with knee pain. Your physical therapist can assess the entire lower extremity chain and recommend the appropriate combination of stretching, strengthening, footwear, bracing or taping to address each area to reduce their influence on your symptoms.

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