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Preventing and rehabilitating MCL Injuries

By Tyler Dyck

Certain sports--like skiing, ice-skating, or roller blading--are unique in the fact that they require the foot to be incased in a hard protective boot, while the knee and leg are required to twist and remain fluid and in motion. While this helps to protect the ankle, side-to-side and rotational forces can often get re-directed toward the knee and result in damage to the supporting structures. One of the most common injuries in these sports occurs in the medial collateral ligament or MCL for short, located on the inside of the knee.

The knee joint is actually composed of three individual joints connecting the thighbone (femur), shin (tibia), kneecap (patella) and the fibula. The largest joint of the three connects the femur to the tibia through soft tissue strands called ligaments. Ligaments are tough connective tissues that attach bone to bone to provide stability. There are four main ligaments in the knee but the MCL is featured here because of its high risk of injury in these sports.

Why is the MCL at high risk? In ice hockey for instance, common blows to the knee are from the outside forcing the knee inward. These side-ways forces will bowstring the inside of the knee subsequently spraining the MCL. A similar form of injury can occur from a collision with another person or structure while roller-blading. In skiing, a common scenario is when you catch your tip and your ski rotates outward while your knee stays facing forward. This outward rotational force of the lower leg on the knee will also cause an MCL sprain. Depending on the severity of the sprain, you may experience swelling and pain along the inside of your knee soon after the injury. More severe sprains may also have difficulty with side-to-side or twisting movements, and have a feeling of instability.

Until you receive a proper assessment by a skilled health care professional you should use the RICE principle of injury management: rest, ice, compression and elevation.

A physiotherapist will first assess all the structures in your knee to determine the injury. If an MCL sprain is suspected the therapist will then grade its severity. Physiotherapists generally grade ligament sprains on a scale of one to three: a grade one sprain is usually painful to palpate but very little to no laxity (looseness) is felt when stretched. A grade two sprain usually is quite painful to palpate and moderate laxity is present when stretched. A grade three sprain may actually be pain free when stretched and the examiner will feel significant laxity. As the knee joint is complex, injuries to this area often affect more than one structure. This would also be determined during the assessment and you may find yourself with more than just a sprain to your MCL.

Physiotherapy management of the injured MCL through the first 1-2 weeks would involve use of anti-inflammatory modalities, such as high volt pulsed current, maintenance exercises, and the

use of a brace or taping for protection of the injured ligament. As the acute inflammatory phase ends, your physiotherapist will prescribe additional exercises to progress the strength and mobility in the injured leg while the ligament begins the healing process. Once the ligament healing allows you to participate in most activities of daily living, sport specific exercises will be added to your program. With most grade one and two sprains, a course of good rehabilitation can permit you to get back to your activity within 4-6 weeks time.

For further information on this topic please contact the Fawzia Sultan Rehabilitation Institute (FSRI) in Hawally at 264-2862, or check out our website at www.rehabinstitutekuwait.com

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