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Jumper's Knee

By Tyler Dyck

Patellar tendonitis, commonly referred to as 'Jumper's Knee,' is a breakdown of the soft-tissue connecting the knee cap (patella) to the shin bone. We see this condition quite frequently in the clinic, and it tends to affect people participating in any activity involving repetitive squatting movements, or repeated jumping. This would include volleyball and basketball players, garbage truck drivers, gardeners, runners, construction workers, and dancers just to name a few.

Excessive physical stress can cause micro-tears in the fibers that make up a tendon. The body recognizes this and sends inflammation to the tendon to start the healing process. Special cells start to lay down new tissue (a form of scar tissue) and clean up damaged tissue. Pain, swelling, redness, heat, and loss of function are common signs associated with this inflammatory process. When inflammation occurs in the tendon connecting the kneecap to the shin bone, we call it patellar tendonitis. Your physiotherapist can help you rehabilitate from this injury in many ways.

First, the inflammation in the tendon needs to be resolved. Icing the injured tendon for 10 minutes at a time, several times a day, will help this process. Be sure to ice with the tendon in a lengthened position (knee bent) so that the new tissue your body is laying down has good length. The proper use of a patellar strap can also help in decreasing the inflammation. A patellar strap is a piece of neoprene or tubing that is attached just below the knee cap directly on the patellar tendon. It helps to decrease the forces traveling through the tendon, therefore limiting the amount of inflammation created during the day. Also, your physiotherapist may use modalities in the clinic such as ultrasound or high voltage current that may help to speed up removal of the inflammation.

Second, the new tissue your body has put down on the injured tendon needs to be re-modeled so it is aligned along the lines of stress and has appropriate length. This can be accomplished with physiotherapy techniques such as deep transverse friction massage and appropriate stretching exercises for the quadriceps muscle group in the front of your thigh.

Third, the new tissue needs to be strengthened in a controlled environment. Before you jump back into activities that will stress the tendon, your therapist will guide you

through appropriate strengthening exercises that will stress and strengthen the injured tendon. Activities might include resisted exercises such as squats, leg press, lunges, and also plyometric type exercises involving repetitive jumping and bounding.

Other strategies your physiotherapist may employ include analyzing the alignment of your whole lower extremity, and screening the biomechanics of surrounding joints (hip and ankle), muscles and ligaments. There are often secondary instigators of patellar tendonitis such as excessively tight quadriceps muscles that increase the potential for the patellar tendon to break down, or poor arch control in the foot that can increase the angle of force through the knee and respective patellar tendon. Your physiotherapist may also revise factors such as your training progression, or modify the way you perform certain activities such as squatting in the garden.

Depending on the severity of the patellar tendonitis, in about 4-6 weeks you'll be jumping for joy and back doing the activities you love once again.

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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