

Quadriceps Tendinopathy

Overuse or alignment problems within the structure of the knee can cause strain, injury and irritation of the quadriceps tendon and muscle. In turn, pain, swelling and weakness occurs in the knee joint. These problems can affect individuals of all ages, but most people who have an overuse injury of the knee are involved in volleyball, soccer and running activities.

More recently the name quadriceps tendinopathy was originally known to medical professionals as quadriceps tendonitis. With tendonitis its termed as an inflammation, but tendinopathy means pathology of the tendon. Some research has been released that questions the inflammatory part of this condition. However, many therapists still believe there is an inflammatory component to this condition.

Quadriceps tendinopathy is a common sports injury. It affects runners and jumpers, and can lead to a quadriceps tendon tear. You will rarely see this injury in non-sports people.

There are different explanations for quadriceps tendinopathy, including biomechanic causes such as gait imbalance, foot problems or knee issues, or problems further up such as hip joint or lower back problems. It can also be caused by muscle imbalance between the quadriceps and the hamstrings, with one being over-dominant (usually the quadriceps) and one being too weak (usually the hamstrings).

Quadriceps Tendinopathy Anatomy

The leg is the lower limb in the body that supports the body whenever standing, as well as providing the ability to run, walk, jump and perform various other movements. It extends from the hip joint all the way down to the ankle, which includes the largest of all bones in the body. The leg has five different sections: the upper leg, lower leg, knee, foot and ankle.

The upper part of the leg begins at the hip and goes all the way down to the knee. The main bone in this region is the femur, which is actually the largest bone throughout the entire body. The head of the femur forms the ball-and-socket joint for the hip. The base of the bone creates part of the knee. It is in this part of the leg that the quadriceps lie. The four quad muscles meet above the patella to form the quadriceps tendon. This tendon attaches the quads to the patella. As the muscles work together, they help to straighten the knee.

How to Treat Quadriceps Tendinopathy:

1. Anti-Inflammatory Medication

The first line of defense is to decrease inflammation to the knee. To do so, an anti-inflammatory medication is often prescribed. When the injury is the result of overuse, this medication can help to control pain and inflammation. However, medication is only really a short term solution and the underlying cause must be addressed. Many therapists also believe that using ice, heat or a combination of both is more natural and hence preferential to anti-inflammatories.

2. Rest or Reduce Activity

Based upon the severity of the symptoms, rest or a reduction in activity is often required. Once the pain isn't present any longer, you can slowly return to normal activities, providing the pain doesn't return. Try reducing the frequency or intensity of the activity.

3. Physical Therapy

In the early stages of the condition, physical therapy can often help to decrease inflammation and pain. Soft tissue massage and friction techniques may be used to ease tightness in the quadriceps. The therapist might also employ ultrasound, electrical stimulation and ice to minimize pain and control the amount of swelling in the area. A certain degree of inflammatory response is needed to promote a good healing response.

You will also be provided with a series of different flexibility, stretching and strengthening exercises to help correct any issues with the muscle.

Other treatments that may help are ultrasound, LASER, acupuncture, and other forms of electrotherapy.



Tips:

- Whenever exercising or training, make sure you have the proper footwear to prevent injury.
- If you are overweight, you might want to consider losing a few pounds until you are able to reach a healthy weight for your height and build.
- For those who participate in sports, know your limits and do everything you can to avoid overusing the muscles and joints. This is especially true when starting a new sport, or trying to increase participation too quickly.
- Chronic injuries to the tendon are more common in those between 30 and 50 years of age.
- Repeated trauma to the tendon can cause it to have trouble with being able to heal itself. Try to protect the area as much as you can to prevent an injury from occurring in the first place. Chronic tendon problems can last months. Seek treatment from a sports therapist or physical therapist.