



Quadriceps Muscle Strain/Tear

What is a Quadriceps Muscle Strain?

A quadriceps strain or tear is where the muscle fibres in the front of your thigh are suddenly overloaded and a degree of damage occurs in the muscle. The quadriceps are made up of four main muscles that connect from the front of your knee and join up near your hip. Quadriceps muscle tears are most common at the point in which the muscle connects to the tendon. The tears can range in severity from a mild strain to severe tear of the muscle fibres.

Why does it happen?

Quadriceps tear is an acute injury that usually occurs during sporting activities, particularly those that involve running, jumping and kicking. Quadriceps tears are generally caused by sudden overload, muscle fatigue, muscle weakness, an imbalance between quadriceps and hamstring strength, a poor training program or insufficient fitness.

What will a physiotherapist do?

The physiotherapist will determine the extent of your quadriceps strain, assess contributing factors and complete a biomechanical assessment. The physiotherapist will provide information in regards to the estimated time of recovery, appropriate rehabilitation methods and advice regarding RICE and No HARM principles.

The physiotherapy can employ treatments such as soft tissue therapy, dry needling, electrotherapy, ice or heat, compression garments, joint mobilisation, provide a home exercise program and advice regarding activity modification. Commencing an exercise program including quadriceps range of movement, muscle strengthening and stretching is essential in the management of quadriceps muscle injuries. The physiotherapist will develop an exercise program for you to complete which will involve gradual progressions before return to sport.

What about sport?

It is important that before return to sport a thorough rehabilitation process has been undertaken to avoid re-injury. This will involve graduated strengthening exercises, running, agility and sport-specific drills throughout the rehabilitation stage. Guideline of days before return to sport with quadriceps strain is as follows;

- Strain or minor muscle tear: 2 - 4 weeks
- Medium to large tear: 6 - 12 weeks
- Complete rupture (rare): 12+ weeks

Outcome

Quadriceps muscle strains usually have a good recovery if appropriate rehabilitation is undertaken. Patients may be at greater risk of re-injury secondary to scar tissue formation and inadequate recovery.