



## **Hamstring Injuries**

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Hamstring injuries provide a significant challenge for the athlete and the treating clinician. There is conflicting evidence in relation to risk factors, causes, treatment and return to sport. Hamstring injuries have a propensity to recurrence, even where accurate diagnosis and optimal treatment have been provided. It is important that athletes and coaches understand that once a player returns to play from a hamstring injury, the risk of a further hamstring injury remains elevated for the remainder of the season.

Factors that are thought to increase the risk for an initial hamstring injury include muscle fatigue, inadequate muscle strength, inadequate muscle flexibility and poor biomechanics. A recent knee injury is thought to predispose to hamstring injury on the same side.

Once a hamstring injury is suspected, the first step is to gain an accurate diagnosis. Inflammation or injury in the lumbar and sacral regions can cause referred pain which very strongly mimics the symptoms of hamstring injury. The treatment will vary considerably depending on whether there is an actual hamstring tear present. For this reason, it is very common for professional athletes to undergo an MRI scan at about three days post injury to assess whether there is a true hamstring injury present. There is also evidence that the pattern of signal seen on an MRI of a hamstring tear can be used to predict time to return to sport.

Once a definite hamstring tear has been diagnosed, it is important that optimal treatment is provided. This includes addressing any possible contributing factors such as lower back stiffness, nerve irritation, poor flexibility and poor strength. A painful hamstring injury will cause the athlete to limp and there will often be associated wasting of nearby muscle groups such as the quadriceps and gluteal (buttock) muscles. Strengthening of all these muscle groups, and not just the hamstring muscles, is critical for a successful return to sport. Any biomechanical disadvantages such as leg length discrepancy, poor pelvic control, and abnormal foot biomechanics need to be considered in the rehabilitation program.

In summary, accurate diagnosis is essential in the first instance, followed by a logical and comprehensive rehabilitation program. Even with optimal treatment however, the recurrence rate during the remainder of the season is estimated to approach 30%.