



HAMSTRING STRAIN

WHAT IS A HAMSTRING STRAIN?

A hamstring strain is where there is an increase tension in the muscle at the back of the thigh, which results in muscle fibre failure and tearing.



ANATOMY:

The hamstring muscle group consists of 3 muscles named the semimembranosus, semitendinosus and biceps femoris. These muscles originate from the ischial tuberosity (sitting bone) and attach slightly below the knee. The role of these muscles is to extend the hip and flexion the knee.

INJURY CLASSIFICATION:

Hamstring tears have different levels of severity and are grouped into the following categories:

- Grade 1: Overstretching of the muscle fibres without tearing;
- Grade 2: Tearing of the muscle fibres with some fibres still intact;
- Grade 3: Complete rupture of the muscle fibres

SIGNS AND SYMPTOMS:

- Pain when stretching the hamstring
- Pain or uncomfortable sensation while sitting (if proximal tear)
- Pain during walking especially at heel strike
- Sudden pain during exercise
- Bruising to the back of the leg
- Pain when bending forward
- Depression where the tear is or associated lump in close proximity

DIAGNOSIS:

A thorough subjective examination will look at the current history of the condition including aggravating and easing factors, mechanism of injury, previous hamstring injury, training regime and more. Objective diagnosis will often include the following:

- Pain on hamstring contraction
- Pain on hamstring stretch
- Pain on palpation of the affected hamstring
- Decreased muscle strength



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PHYSIOTHERAPY TREATMENT OPTIONS:

- Deep tissue massage
- Dry needling
- Biomechanical review and subsequent improvement strategies;
- Joint mobility techniques including mobilization and manipulation;
- Electrotherapy;
- Stretching techniques;
- Nerve mobility treatment
- Kinesio taping
- Muscle strengthening exercises;
- Inflammation and scar guidance

PROGNOSIS:

Healing timelines will vary depending on age, associated strength and previous hamstring injury:

Grade 1 tears usual heal in 1-3 weeks; grade 2 between 4-8 weeks and grade 3 tears can take between 3-6 months to heal.