

# LUMBAR RADICULOPATHY

## Diagnostics

### Patient History

- The patient history for patient with back related leg pain should clarify reasons for suspecting serious pathology (“red flags”) including symptoms of cauda equine syndrome.
- The patient history for patient with back related leg pain should clarify the localisation, duration and intensity of back pain and leg pain.
- The patient history for patient with back related leg pain should clarify if the localisation of leg pain follows the distribution of a dermatome.
- The patient history for patient with back related leg pain should clarify if leg pain is aggravated from sneezing, coughing, laughing, or a hard bowel movement.

### Physical Examination

- The examination of patients with back related leg pain should include Straight Leg Raise and Crossed Straight Leg Raise Test and tests of deep tendon reflexes, muscle strength and sensation.
- A rectal examination should be performed in case of symptoms that indicate possible cauda equine syndrome.
- The diagnosis of radiculopathy should be based on a combination of tests.
- The patient history and objective findings (positive and negative) should be registered in the patient record.

Nerve root	Muscle test	Sensibility	Deep tendon reflex
L4	Knee extension (Quadriceps femoris)	Lateral femur to medial crus	Patella
L5	Ankle dorsal flexion 1 <sup>st</sup> toe extension Heel walking test (Tibialis anterior + Extensor halluces longus)	Lateral crus across dorsal foot to 1 <sup>st</sup> toe	Hamstring
S1	Ankle plantar flexion Toe walking test (Triceps surae)	Lateral food and 5 <sup>th</sup> toe	Achilles

## **Cauda Equina Syndrome**

- Cauda equine syndrome can manifest itself in one or more of the following: Loss of sensation or paraesthesia of inner thighs or genitals, difficulty when trying to urinate, loss of sensation when passing urine or a bowel motion, difficulty with stopping or controlling the flow of urine or bowel motion, reduced muscle strength in the legs corresponding to more than one nerve root.

## **Monitoring**

- In the acute phase patients with suspected radiculopathy should be closely monitored for signs of aggravation.

## **Imaging**

- Imaging is not generally indicated within the first 6 weeks of radiculopathy.
- MRI is the preferred imaging modality in the diagnosis of radiculopathy.
- X-ray may be considered for differential diagnostic.
- Indication for imaging should be registered in the patient records.

## **Treatment**

- Patients should be informed about the diagnosis, the expected course and prognosis, and the importance of staying active. Activities which aggravate leg pain should be modified in the acute phase.
- Short-lasting bed rest can be used as an exception in case of severe acute pain.
- The treatment can include motor-control exercises, directional exercises and spinal manipulation/mobilisation.

## **Referrals**

- Patients with signs of cauda equine syndrome or with severe or worsening muscle weakness should be referred for surgical assessment immediately (today).
- The option of a second opinion by a multidisciplinary team or a surgeon should be discussed with patients who have substantial symptoms for more than 4-8 weeks despite non-surgical care.