

## MUSCULOSKELETAL

### LUMBOSACRAL RADICULOPATHY

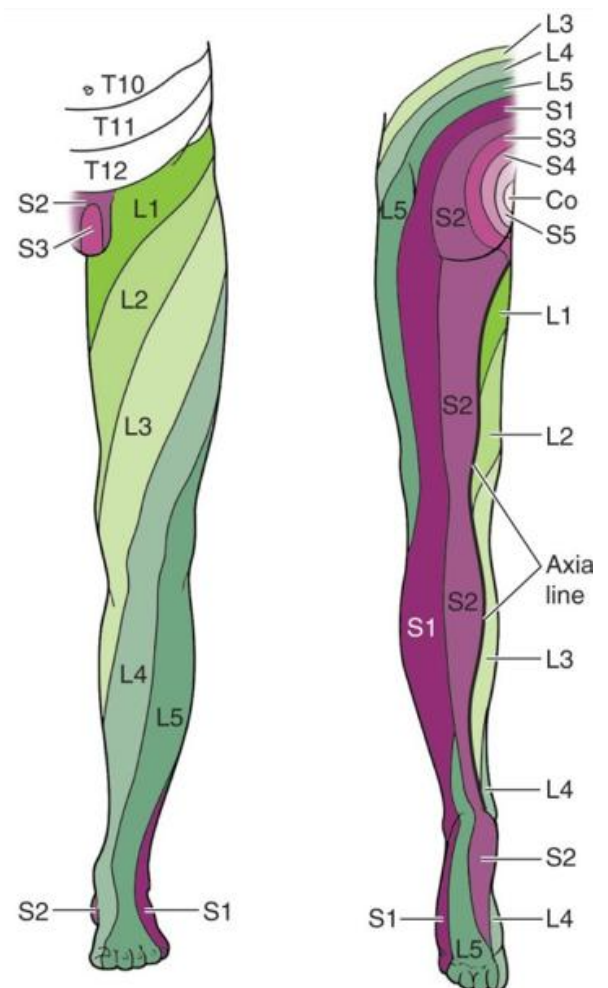
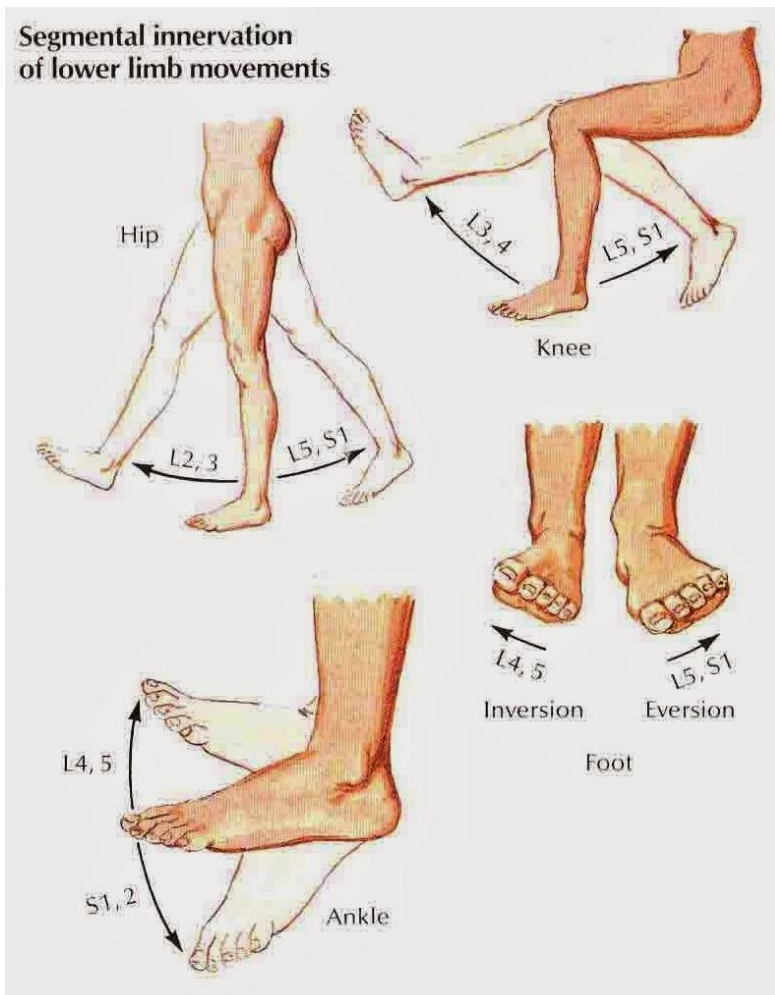
Radicular pain is pain due to irritation of a nerve root. Compression of a lumbosacral nerve root causes radicular back pain and is a common presentation to ED. L5 and S1 radiculopathies are most common.







#### Causes of Radiculopathy

- Disc prolapse.
- Spondylosis.
- Mass lesion (tumour, abscess)
- Infection (CMV, VZV)
- Infarction of nerve root (esp. in diabetes)

#### Myotomes and Dermatomes

Nerve root compression causes motor and sensory disturbance in a distribution innervated by the nerve root i.e. in myotomes and dermatomes. Note that strength may be preserved due to innervation of a muscle by multiple nerve roots.



Nerve root				Examination Findings	
	L4	L5	S1	<p>The most common lumbosacral radiculopathies are shown opposite.</p> <p>Straight leg raise will usually be limited (30-60 degrees rather than 80-90 degrees). Note that pain on SLR should be in a dermatomal distribution, not confined to the back or hamstring.</p> <p>Exclude serious causes such as AAA, ischaemic limb, pyelonephritis, renal colic and discitis. Check:</p> <ul style="list-style-type: none"><li>• Temperature.</li><li>• GI masses/tenderness.</li><li>• Peripheral pulses.</li><li>• Urinalysis.</li></ul> <p>Always consider cauda equina:</p> <ul style="list-style-type: none"><li>• Bilateral leg weakness or sensory disturbance.</li><li>• Saddle anaesthesia.</li><li>• Urinary/faecal incontinence.</li></ul>	
Pain					
Numbness					
Motor weakness	Extension of quadriceps	Dorsiflexion of great toe and foot	Plantar flexion of great toe and foot	<b>Indications for Urgent Imaging</b> <ul style="list-style-type: none"><li>• Symptoms of cauda equina.</li><li>• Rapidly progressive neurological deficit.</li><li>• Suspected neoplasm.</li><li>• Suspected epidural abscess.</li></ul>	
Screening exam	Squat and rise	Heel walking	Walking on toes		
Reflexes	Knee jerk diminished	None reliable	Ankle jerk diminished		
<b>Management</b>					
<p>Do not perform an x-ray unless you suspect a fracture. X-rays will not show discs, cord compression or nerve root compression and will not rule out malignancy or infection.</p> <p>If there are indications for urgent scanning (see box above) discuss with orthopaedics, take bloods and arrange an MRI.</p> <p>In the absence of an indication for urgent scanning, most patients can be discharged with analgesia and advice to keep mobile. Most radicular back pain will settle given time; persistent symptoms warrant follow up by the GP and consideration of imaging at 4-6 weeks.</p> <p>Always advise the patient to reattend if symptoms of cauda equina develop.</p>					