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## Canadian Family Medicine Clinical Card

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Sherlock KM  
Keegan DA



# Low Back Pain

97% of non-specific back pain is mechanical back pain (70% lumbar strain, 10% degenerative changes of discs/facets)  
→ resolves without intervention in 4 wks

Movement	Myotome
Hip flexion	L1 / L2
Knee extension	L3 / L4
Ankle dorsi flexion	L4/L5
Ankle plantar flexion	S1

Red Flag	Possible Cause	Management
Hx of Ca + new back pain; Unexplained weight loss; Duration > 6wks; Age >70	Cancer	MRI (if high suspicion) CBC, ESR, CRP
Long use of corticosteroids; Unexplained fever; IV drug use	Infection	MRI (if high suspicion) CBC, ESR, CRP
Bladder/bowel dysfunction Saddle numbness	Cauda Equina Syndrome	<b>Immediately refer to spinal surgeon</b>
Age >70yrs Significant trauma Minor trauma >50yrs Prolonged use of corticosteroids Osteoporosis	Vertebral Fracture	Plain Xray - Anteriorposterior and lateral views
Morning stiffness Improves with exercise Younger age	Undiff. Spondyloarthritis or Ankylosing Spondylitis	Plain Xray - Anteroposterior view HLA-B27 testing
Focal neurological deficit Duration > 6 wks Hx of trauma	Nerve root entrapment - many causes including herniated disc, spinal stenosis, spondylolithesis	MRI or CT

### PHYSICAL EXAM CLUES

Test	Description of test	Test is + if	Dx to think about
Straight leg raise	Lift leg with straight knee	Pain reproduced	Sciatica, nerve root entrapment
FABER	Flex, abduct, externally rotate knee	SI joint pain	Osteoarthritis
Thomas	Hand under lumbar spine, flex opposite knee, observe angle between femur and table	Angle > 0	Flexed hip contracture
Romberg	Patient stands feet together, arms outstretched at 90°, eyes closed	Loss of balance	Pathology of dorsal columns or vestibular system
Schober	March 5cm below and 10cm above L5, patient bends forward, measure distance between marks	Distance increase <5cm	Muscle tightness, ankylosing spondylitis, scoliosis

**Key References:** Bradley WG, et al. Low back pain. AJNR Am J Neuroradiol. 2007;28(5):990-2. Chelsom J, Solberg CO. Vertebral osteomyelitis at a Norwegian university hospital 1987-97: clinical features, laboratory findings and outcome. *Scand J Infect Dis.* 1998;30(2):147-51. Chou R, et al. (2010). Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society. Retrieved from [www.acponline.org/clinical-information/guidelines](http://www.acponline.org/clinical-information/guidelines). Jarvik J, Deyo RA. Diagnostic evaluation of low back pain with emphasis on imaging. *Ann Intern Med.* 2002;137(7):586-97. Rudwaleit M, et al. How to diagnose axial spondyloarthritis early. *Ann Rheum Dis.* 2004;63(5):535-43.