Lumbar disorders: mechanical lumbar disorders

> Non-specific LBP > Radiculopathy > Spinal claudication > Acute cauda equina syndrome > Scoliosis

Clinical condition	Signs and symptoms	Investigations	Management	Referral
Non-specific LBP (with or without leg symptoms) May include: > spondylosis > strain > sprain > discogenic pain > facet joint arthropathy, > osteoporotic compression fracture > congenital disease (severe kypohosis/ scoliosis), spondylolysis, spondylolisthesis.	**Subjective assessment** > Predominantly LBP of varying intensity > May complain of LL pain – usually less severe than LBP and not extending beyond the knee > Aggravated by mechanical loading or sustained positions. Eased by rest and analgesics/NSAIDs > Acute onset may relate to a specific incident or be insidious. May be acute, episodic or chronic **Objective examination** > Lumbar movements may provoke local pain and/or stiffness and show variable limitations in ROM. Proximal referral of pain may occur > Neurological assessment is normal > Neurodynamic tests (eg SLR) are negative	Investigations should be considered if symptoms persist beyond 12 weeks (in the absence of red flags). Plain XR is indicated after 12 weeks if no prior XR. If ongoing medical concerns or patient anxieties consider self-funded MRI.	> Encourage early activation, provide education and advise that bed rest for longer than two days may be harmful > Recommend conservative management involving activity pacing and regular exercise for general physical conditioning > Narcotic analgesia should be avoided (see analgesia guideline) > Surgical intervention is rarely indicated for non-specific LBP > Consider community services to address smoking cessation and weight loss > CBT is worthwhile for the management of chronic LBP	Consider referral to Spinal Outpatient Services/ Neurosurgery Department after 12 weeks if XR/ MRI reveals significant or unexpected pathology or patient is considering surgical treatment.
Radiculopathy	**Subjective assessment** > Pain is predominantly in the LL in a dermatomal distribution (usually single leg only). May occur with or without LBP > Altered sensation is localised to a single dermatome and weakness in the corresponding myotome may be reported	MRI should be considered if radicular symptoms have been present for >4-6 weeks and are severe enough to consider surgical intervention. Consider earlier investigations if neurological deficit is severe or progressive.	> Encourage early activation and advise that bed rest for longer than two days may be harmful > Recommend conservative management involving activity pacing and regular exercise for general physical conditioning	Spinal/Neurosurgery opinion is appropriate if symptoms persist beyond three months (in cases of persisting neurological deficits and predominantly LL pain). Earlier opinion is indicated if acute significant neurological deficit eg foot-drop.

Document updated: September 2021

Government of South Australia
SA Health

Differential diagnoses – mechanical lumbar disorders

Clinical condition	Signs and symptoms	Investigations	Management	Referral
	> Symptoms are aggravated by mechanical loading or sustained positions. Simple analgesics and NSAIDs may provide minimal relief > Acute onset frequently relates to a specific incident. May be episodic or chronic		> A trial of low-dose neuro-modulating medication may be worthwhile (see analgesia guideline) > Evidence suggests that surgical decompression can reduce short-term symptom severity in selected cases > Consider community services to address smoking cessation and weight loss	
Spinal claudication	**Subjective assessment** > Pain/sensory loss/weakness of LLs, usually bilateral and asymmetrical. Not distinctly dermatomal, often accompanied by LBP > Symptoms are increased by walking or standing, eased by sitting, lying or flexion at the waist **Objective examination** > Neurological assessment is often normal. AJ reflexes may be absent, may have mild weakness; usually L5/S1 distribution. May have signs and symptoms of single/multiple radiculopathies > Exclude vascular cause (examine pulses) > Cauda equina syndrome is uncommon and associated with marked neurological disability	MRI is the screening modality of choice for the diagnosis of spinal claudication. Immediate investigation required if severe or progressive neurological deficits. Consider investigation if symptoms are of sufficient duration (often several months) and severity to consider surgical intervention.	> Conservative management involving activity pacing and regular exercise for general physical conditioning is recommended in most cases > Epidural intervention may be considered > Surgical decompression may be indicated in cases of severe and progressive gait limitation or by the presence/progression of neurological deficits	Consider referral to the Spinal Outpatient Services/ Neurosurgery Department if surgical opinion is required.

Document updated: September 2021

Lumbar disorders: mechanical lumbar disorders

Clinical condition	Signs and symptoms	Investigations	Management	Referral
Acute cauda equina syndrome	**Subjective assessment** > Severe local back pain that may radiate into saddle area and down one or both LLs > Bowel and bladder dysfunction – urinary retention, bowel incontinence, etc > Erectile dysfunction > Saddle anaesthesia **Objective examination** > Lower extremity muscle weakness +/- reduced or absent lower extremity reflexes. Widespread sensory deficits may be present	Urgent MRI scanning is required.	> Immediate referral to Emergency Department > Urgent surgical decompression may be indicated	Immediate referral to Emergency Department. Contact the spinal registrar/ fellow on call via the RAH switchboard: Tel. 7074 0000.
Scoliosis > idiopathic > neuromuscular > congenital	**Subjective assessment** > Frequently reports noticeable asymmetry > Pain may indicate some underlying pathology in other structures > Restrictive pulmonary disease may be seen in early onset (less than eight years old) idiopathic scoliosis, severe neuromuscular or severe congenital scoliosis **Objective examination** > Spinal curvature, malalignment or asymmetrical posture observed > The presence of neurological signs or symptoms increases the likelihood of a non-idiopathic cause	Standing full length postero-anterior X-ray of the spine to confirm clinical diagnosis. A Cobb angle of greater than (or equal to) 10° of curvature is diagnostic of scoliosis.	> Management options include observation, bracing or surgery. Management depends on the magnitude of the curve and the risk of progression > Conservative management (observation) is usually indicated if the Cobb angle is less than 20° > Referral for specialist opinion is suggested if Cobb angle is greater than 20° or has increased by 5 degrees in one year.	For specialist opinion, please refer children under the age of 18 years to the Spinal Clinic, Women's and Children's Hospital, North Adelaide. Tel: 8161 7000. For adults, please refer to the Orthopaedic Spine Service with updated erect imaging and referral complete. Tel: 7074 0000 Fax: (08) 7074 6247 Email: HealthRAHOPDReferrals@sa.gov.au

Document updated: September 2021