## Lower back pain

**Background**

- Most low back pain is 'mechanical' and self-limiting; however some back pain is sinister (i.e. caused by malignancy, osteoporotic fracture or due to spinal cord/cauda equina compression) and it is important to pick these people out.

**Red Flag Symptoms in lower back pain**

- Patient
  - Age <20 or >55
  - Current or recent infection (especially TB, but staph and others will infect the spine)
  - Immunosuppression (infection)
  - Abdominal mass (malignancy)
- Symptoms
  - Acute onset in elderly (think osteoporotic fracture)
  - Constant or progressive pain
  - Pain at night
  - Pain when supine (pain usually improves on lying flat in mechanical back problems)
  - Morning stiffness
  - Fever, high sweats, weight loss (malignancy)
  - Thoracic back pain
  - Bilateral or alternating symptoms
  - Neurological abnormalities (weakness, numbness)
  - Sphincter disturbance (incontinence of urine and faeces)
  - Leg 'claudication' (? Spinal stenosis)

**Features of inflammatory back disease**

- Insidious onset
- Onset at young age
- Worse in the morning
- Improves with exercise

**Examination of the patient with back pain**

- Look for kyphosis/scoliosis
- Spinal tenderness
- Lumbar forward flexion (Schober's test) and lateral flexion
- Neurological examination
  - Including DRE if suspecting cauda equina
- Straight leg raise
- Systemic examination

**Indications for MRI in lower back pain**

- If suspecting:
  - Cord compression
  - Cauda equina
  - Infection
  - Malignancy

- Acute fracture
- Inflammatory back disease

**Treatment of lower back pain**

**If red flags positive:**

- Analgesia (see below)
- MRI
  - No indication for lumbar XR unless suspicion of lumbar fracture (e.g. elderly patient with trauma, likely or known osteoporosis or long term steroids)
- Refer to neurosurgeons.
  - Summary of indications for neurosurgical review
    - Cauda equina [bilateral or alternating root pain into lower legs, saddle anaesthesia, loss of anal tone].
    - Cord compression [bilateral pain, LMN signs at level of compression and UMN and sensory signs below, loss of anal tone]
    - Nerve root compression and mechanical symptoms not responding after 6-10 weeks
    - Progressive pain or severe neurological deficit

**If no red flags:**

- Analgesia
  - Regular paracetamol
  - NSAIDS – ibuprofen or diclofenac
    - Consider PPI cover, especially in over 65 year olds.
    - Ensure patient knows to stop PPI when NSAIDS stopped.
  - Tramadol 50mg QDS PRN
    - Generally more appropriate than codeine as these patients are often young so transient confusion with tramadol less likely.
    - Tramadol is also less constipating than codeine.
  - Gabapentin (can be given from the outset)
    - Start at 150mg at night. Titrate over a few days to 300mg TDS.
    - Can go up to 3.6g daily in severe cases.
  - If there is clear paraspinal muscle spasm (can usually feel this) then a short course of PRN low dose benzodiazepines as reasonable.
    - 2mg PRN max TDS
  - Avoid oramorph if possible
- Education
  - Return to normal activities and gentle exercise is much better than bed rest
  - Avoid precipitants (heavy lifting, poor posture)
  - Give basic advice on posture
- Address psycho-social issues
- Safety net
  - Warn re red flag symptoms
  - Refer to physiotherapy if not improving