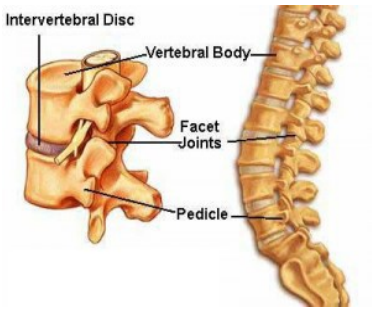
Spine

Anatomy



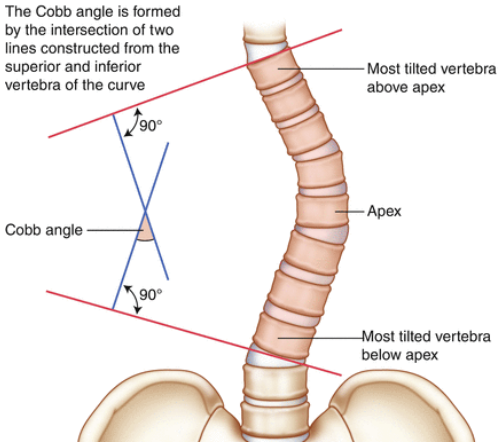
Exam Pearls + Special Tests

Straight leg raise: patient lying supine → flex at hip w/ knee straight (best if cervical spine flexed and ankle dorsiflexed) → assess for sciatic pain (sign of herniated disc)

Common Diagnoses

Scoliosis

Description/ Mechanism	• Lateral curvature of the spine ≥ 10 degrees • Causes: idiopathic (80%) vs congenital vs. neuromuscular
Diagnosis	• Adam's forward bend test + inclinometer • Shoulder/torso asymmetry, rib prominence, paraspinal muscle prominence • XR: Cobb Angle ≥ 10 degrees
Management	• <= 25 degrees → observation • 25-45 degrees + skeletal immaturity → bracing • >45 → consider surgical intervention



Spine continued on next page →

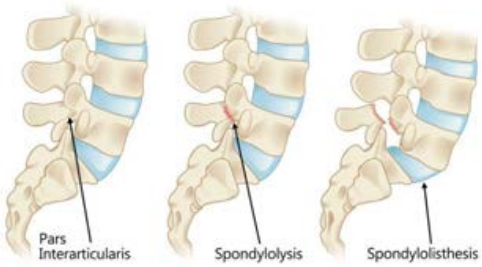
Spine

Common Diagnoses

Spondylolysis and Spondylolisthesis

Description/ Mechanism

- **Spondylolysis**: bony defect in pars interarticularis (usually L4 and L5)
- **Spondylolisthesis**: displacement of vertebral body relative to inferior vertebral body
- Cause: repetitive microtrauma
- Most common causes of back pain in children >10 years old; often in athletes engaged in sports w/ repetitive extension, flexion, and rotation



Signs/ Symptoms

- Low back pain that worsens w/ activity, improves w/ rest
- Spondylolisthesis: may have radicular or cauda equina symptoms

Diagnosis

- MRI is now study of choice
- XRays: poorly sensitive and do not assess acuity
  - Might be required prior to MRI
  - Standing AP, lateral, oblique views: visualize defect
  - Flexion and extension views: assess stability

Management

- Spondylolysis and low grade spondylolisthesis → conservative (rest from sports for ≥ 3 months, NSAIDs, PT, back bracing)
- Higher grade spondylolisthesis (or failure of conservative management) → consider surgical intervention

Spondyloarthropathies

Signs/ Symptoms

- Insidious onset
- Often misdiagnosed w/ recurrent strains/sprains
- Pain worse at night, improves w/ activity

Mild Traumatic Brain Injury (Concussion) & Graduated Return-to-Sport Program

Refer to ED Mild TBI section on page 257