

# Back Pain and The Adolescent Patient

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# Back pain in adolescents is common

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Incidence increases with age.

Risk factors include: minimal physical activity, intensive sports, genetics, psychosocial factors and smoking.

Adolescent competitive athletes, in strenuous sports with a high level of competition and a high amount of time spent on strenuous sports have more back pain

More common in girls

Most are probably benign, self limiting and don't present for medical attention

Of those who seek medical attention there is a higher incidence of organic conditions

A portion will develop chronic low back pain in later life(10-15%)

# Causes

- Mechanical low back pain
- Adolescent idiopathic scoliosis
- Pars oedema / spondylolysis / spondylolisthesis
- Scheuermann disease
- Tumor 1° or 2° (bone, cord, brain, leukaemia, lymphoma)
- Infection
- Spondyloarthropathy
- Neurodegenerative
- Functional pain

# red flag signs

- Fevers/chills
- Skin infection
- Trauma
- Unrelenting night/rest pain
- Morning stiffness > 30 – 60 mins
- Progressive motor or sensory disturbances
- Failure to improve after 3 – 6 weeks rest
- Saddle anaesthesia, bilateral leg pain, bowel bladder disturbance
- Unexpected weight loss
- Immunosuppression
- Chronic oral steroid use

# History and Physical Exam

## History

Do they look well?

Have you a child who appears ill, pain which is constant, localised, with night pain?

Have you a sporty adolescent who has pain that can be related to an acute trauma or is it an activity related pain problem?

Is the history classic sciatica with typical leg pain?

Is there a family history of back pain? Scoliosis? Ankylosing spondylitis/sacroiliitis? NF?

## Physical Exam

### Expose and examine

Where exactly is the pain?

Is there deformity?

Have they normal flexibility of the spine? Are the hamstrings tight?

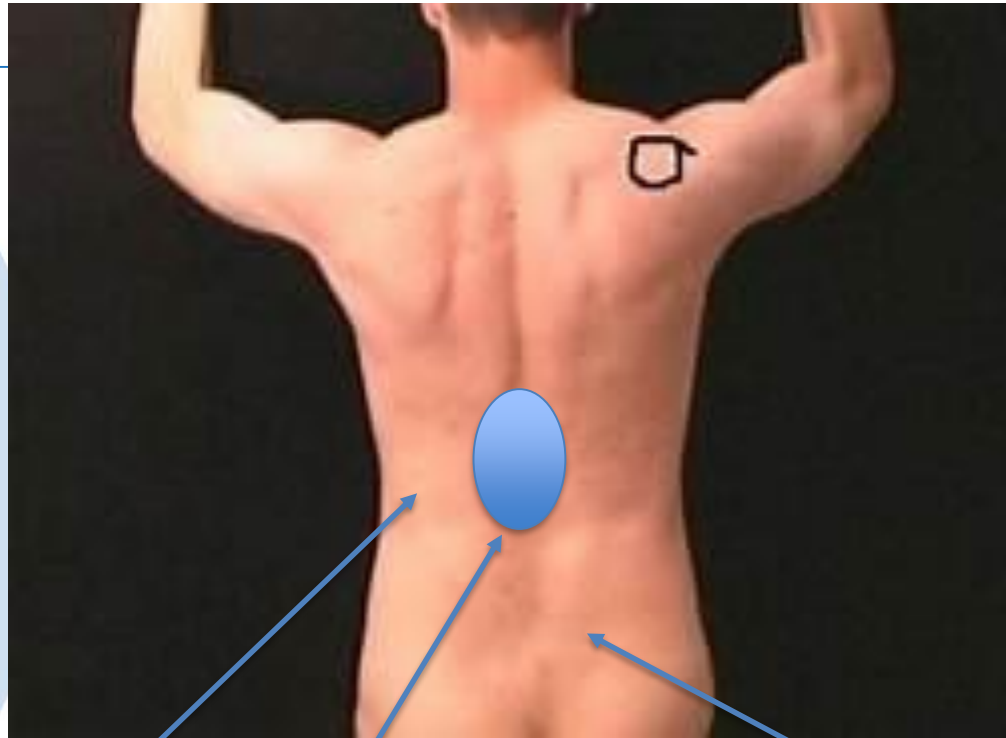
Is the gait pattern normal? Can they heel walk, toe walk, squat and bunny hop without difficulty?

Is the neurological exam symmetrical and normal?



kyphosis

scoliosis



Renal pain?

Thoracolumbar junctional pain  
more common in adolescents

L5 pars pain often very  
localised and can put finger  
on the spot

# Investigations

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Guided by Working diagnosis as to cause of pain.

Plain xray

Short course of physio

Any neurological signs MRI studies

CT scan, Bone scan, SPECT CT, EMG

bloods

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Back pain with normal imaging

Deformity: scoliosis / kyphosis/schuermann disease

Degenerative disc disease/disc prolapse

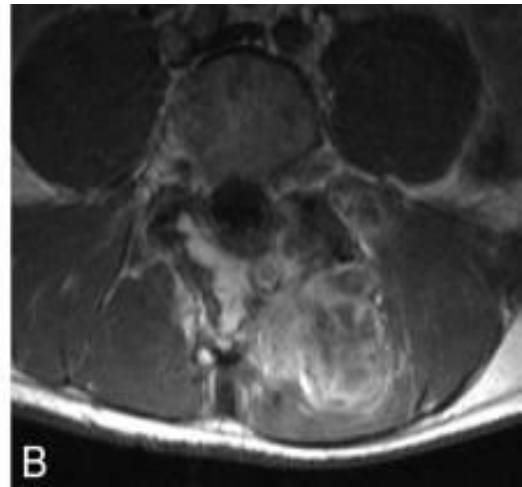
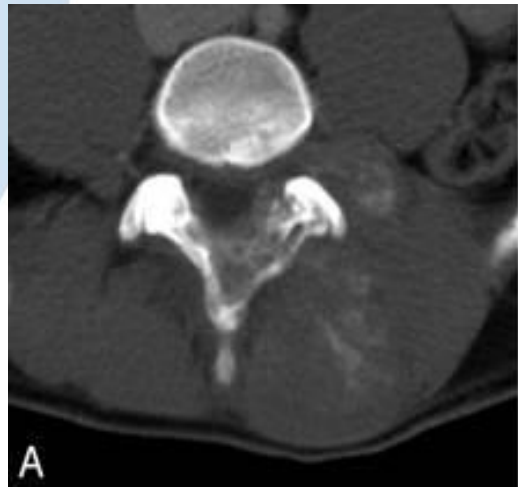
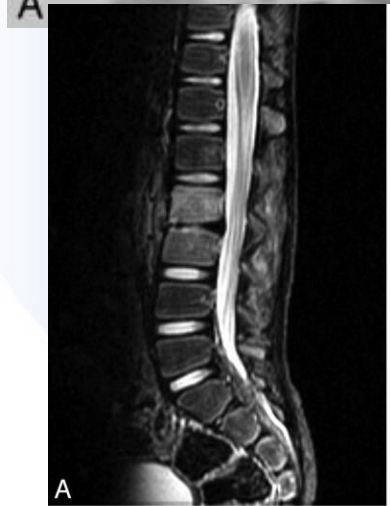
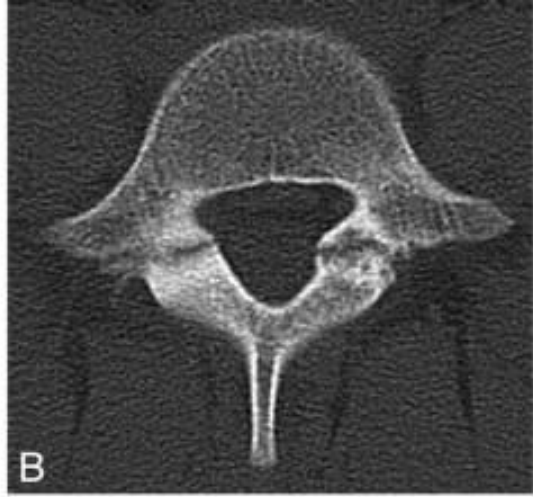
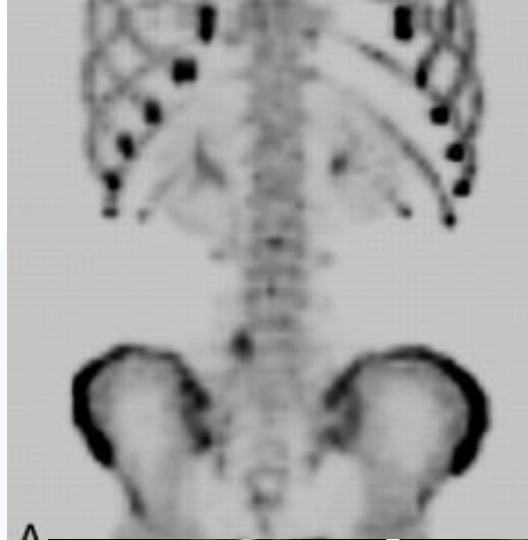
Pars oedema/pars fracture/ spondylolisthesis

Discitis

Tumors

Epidural abscess

Renal disease







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- Adolescent with back pain,
    - not resolving
    - or has any associated sinister features
    - or clinical findings
      - Deformity
      - Abnormal neurological signs
  - We are happy to investigate and offer a treatment plan
  - Thank you