Back Pain

J. Scott Delaney, MDCM, FRCPC, FACEP, CSPQ

FACULTY DISCLOSURE

Dr. Delaney

has no affiliation with the manufacturer of any commercial product or provider of any commercial service discussed in this CME activity.

Learning Objectives

By the end of this workshop you will be able to:

- Identify red flags
- Consider the diagnoses you must rule out
- Classify Walking Back Pain into 2 easy categories
- Prescribe proven treatments
- Diagnose a back pain "embellisher”

The Good News

- 90-95% acute back pain: nil acute
- Don’t need exact diagnosis

The Bad News

- 5-10% of patients have a more serious condition

Very high risk medicolegally

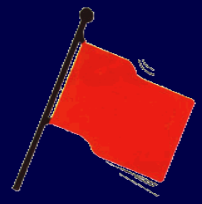
The *"Must Not Miss"* List

- Vascular
- Malignancy
- Infectious Processes
- Spinal cord compressive syndromes

Mr. Ouchieback

- 32 y/o male with lower back pain for 4 days
- Hurts when he bends forward
- Pain worse at end of day and better at night
- Wants pain medication
- Are you worried?

Red Flags - “OLD CAARS”



- **PMH**

- **O**nset
- **L**ocation
- **D**uration
- **C**ontext
- **A**ssociated sx
- **A**ggravating factors
- **R**elieving factors
- **S**ocial

Physical Examination

- Abnormal Vital signs
- Pulsatile abdominal mass
- Spinous process tenderness (percussion)
- Focal neurological signs
- Decreased rectal tone
  - Post void residual

Mr. Ouchieback

- Normal exam except mild pain over lower lumbar area bilaterally on palpation
- Pain gets worse and he feels tight with flexion

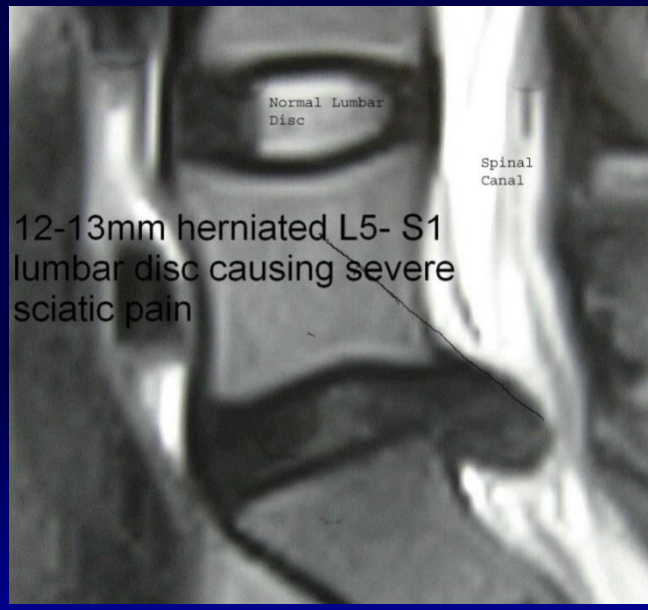
Walking Back Pain Made Easy

Does the pain get worse with

FLEXION or **EXTENSION** ?

Worse with Flexion

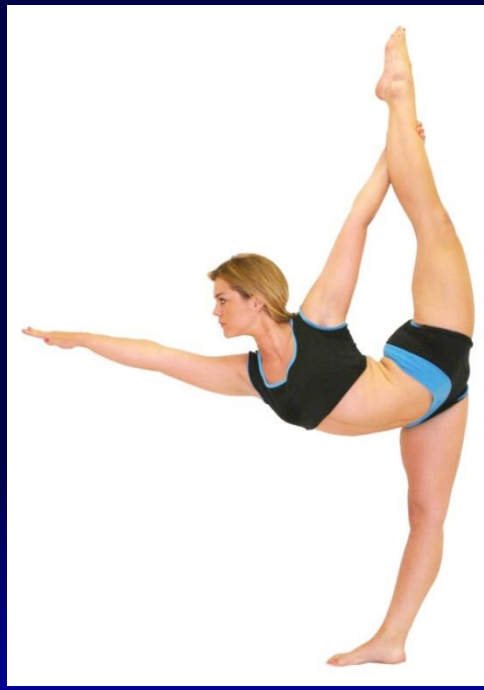
- **Disc herniations**
  - Radiation of the pain down leg
  - Worse with prolonged sitting (especially in a car)
  - If hip pain: possible “piriformis syndrome”



- **MSK strains**
  - Worse and most stiff in the morning
  - Better once warmed up

Worse with Extension

- **Facet Joint irritation**
  - Worse when standing
  - No problems sitting for hours
- **Spondylolysis**
  - Young athletes, repetitive extension sports
  - Muscles keep them in hyperextension when standing
- **Spinal stenosis**
  - Tennis: cannot serve but can return serves all day



Hey Delaney, why should I care?”

- Won’t I treat them all the same?
- Simple: treatment advice
  - If they are worse in flexion, they need to be in extension and work on extension exercises
  - If they are worse in extension, they need to be in flexion and work on flexion exercises (+/- brace)

Sport Med Helpful Hints

- **Swollen joints or muscles/tendons stiffen up when left in same position for period of time**
  - Worse in morning
  - Better with movement (after warmed up)

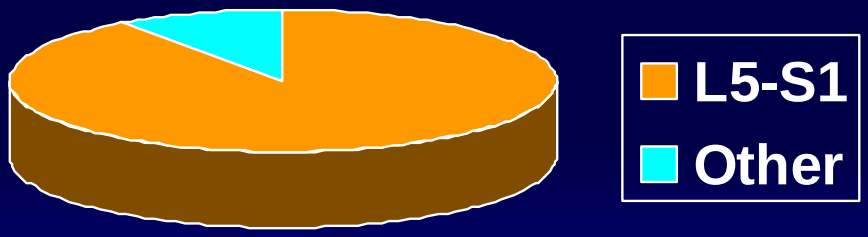
- **Probably not a disc if worse in the morning but better after moving around**

What if Mr. Ouchieback…

- Can barely get out of bed; needed help to get to your office (no appointment of course)
- Painfully moved onto bed in your office
- Wants pain meds prescription NOW!!
  - but doesn't want to be touched

Can you examine him... *sure!*

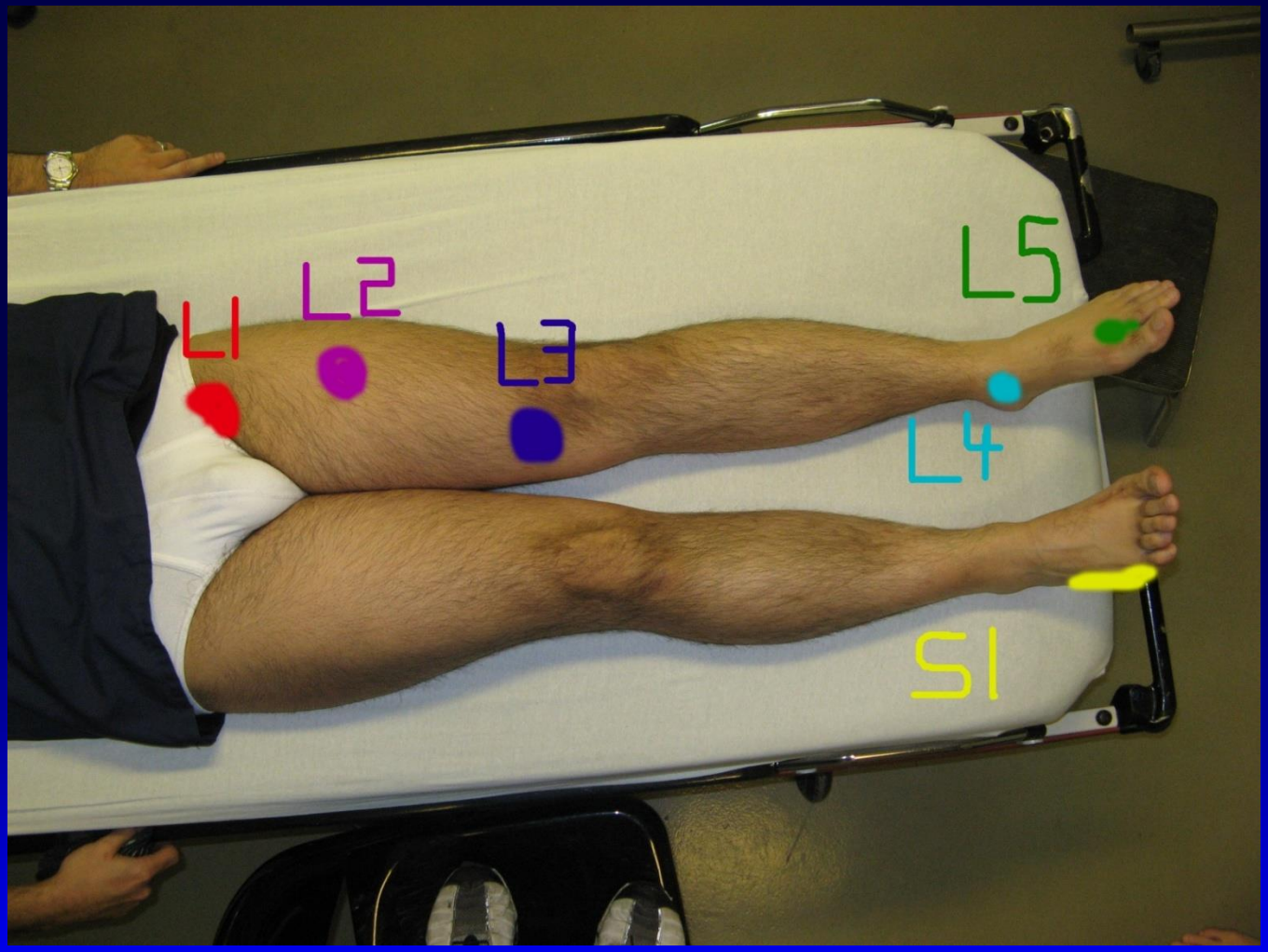
Neurological Exam



L5-S1 Neuro Exam:

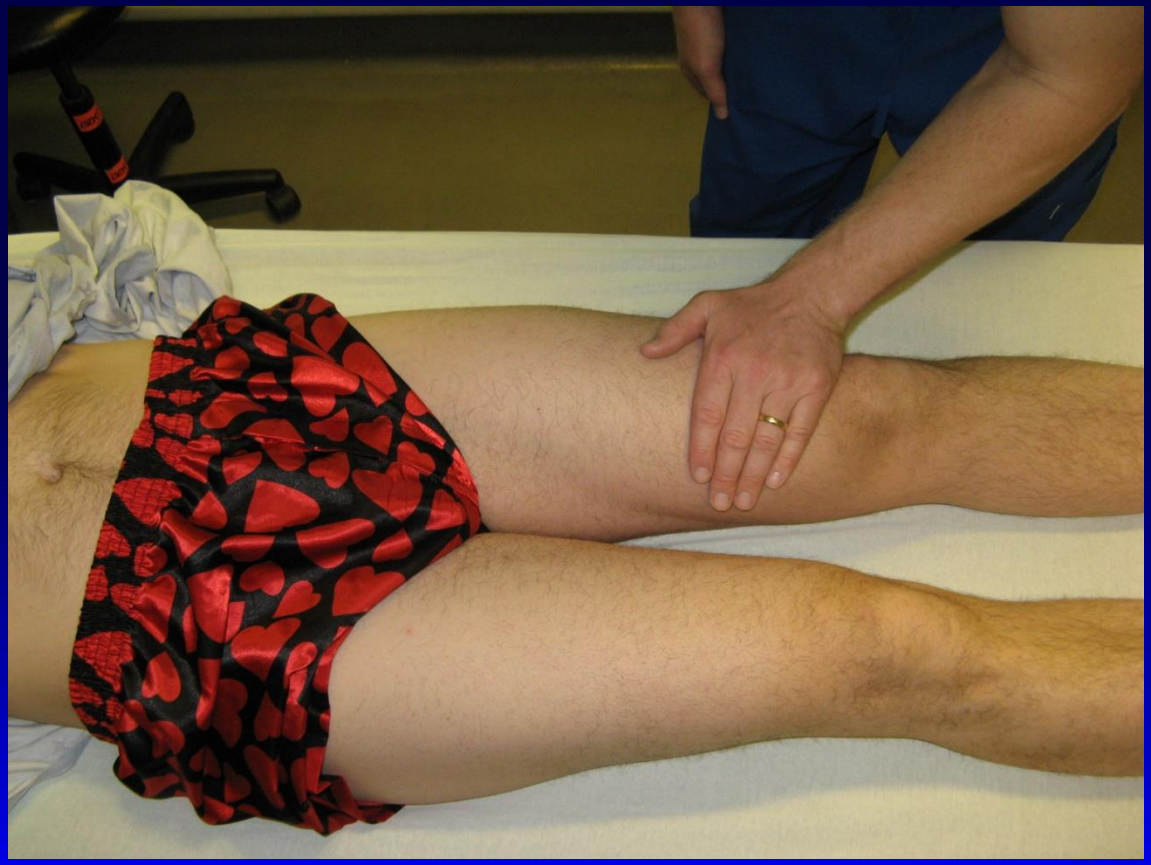
- **Motor**: plantar flexion or eversion of foot
- **Sensory**: lateral foot
- **DTR**: Achilles

Sensory Dermatomes



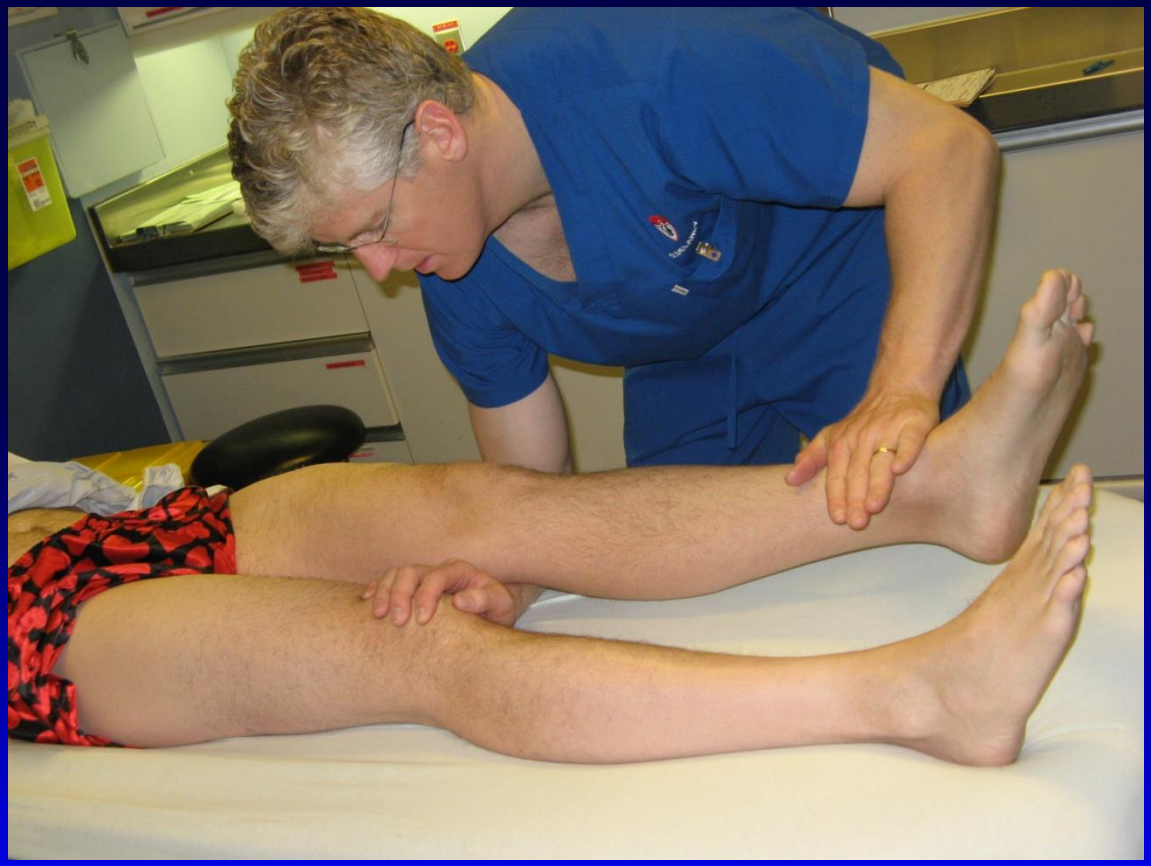
Motor- L1 and L2

- Hip Flexion- Iliopsoas



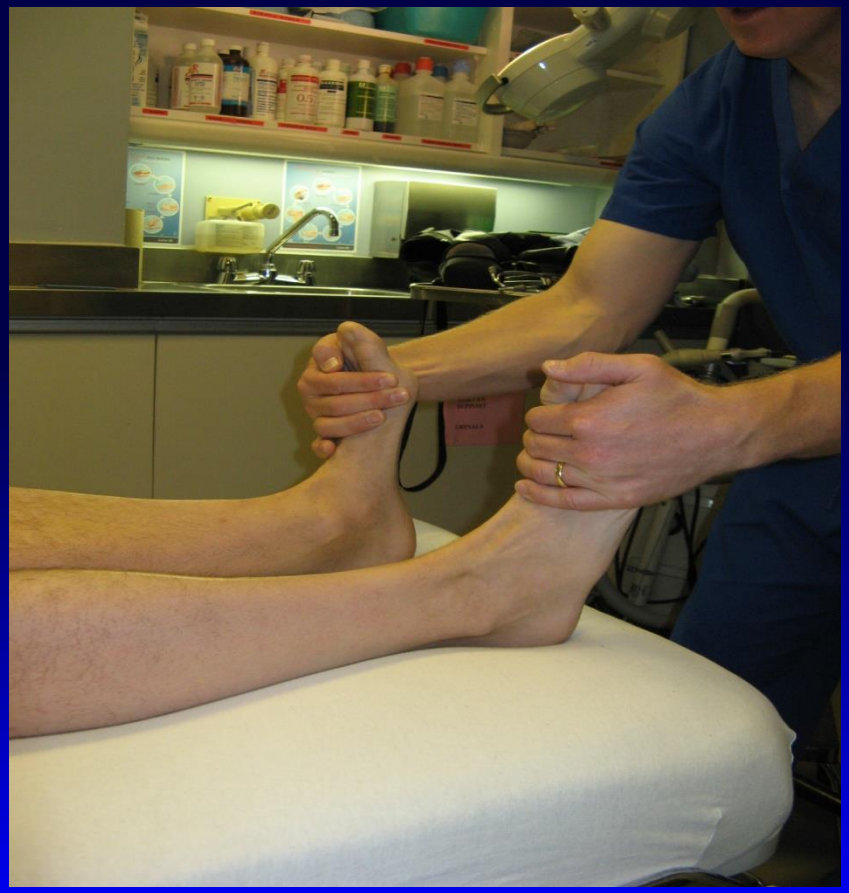
Motor- L3

- Knee extension- Quadriceps



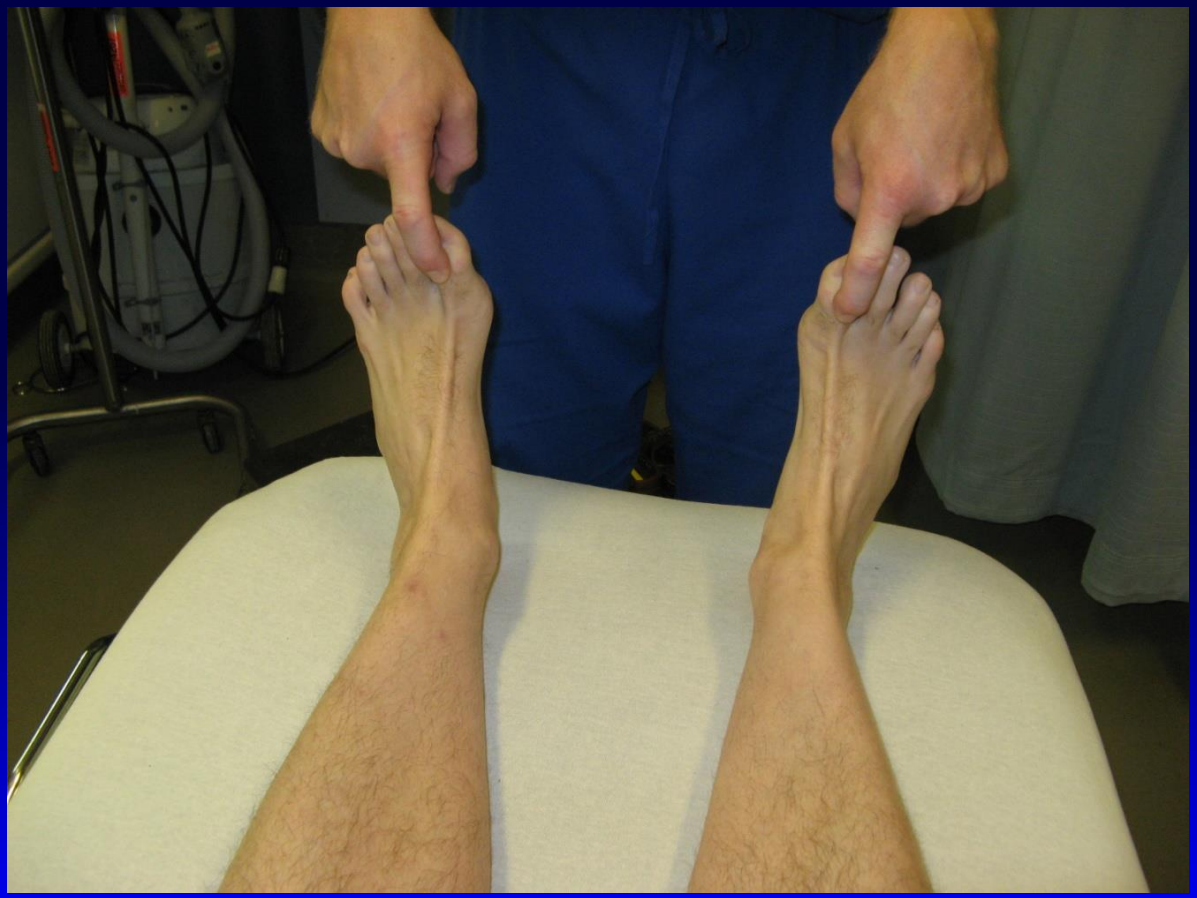
Motor- L4

- Foot dorsiflexion- Tibialis Anterior



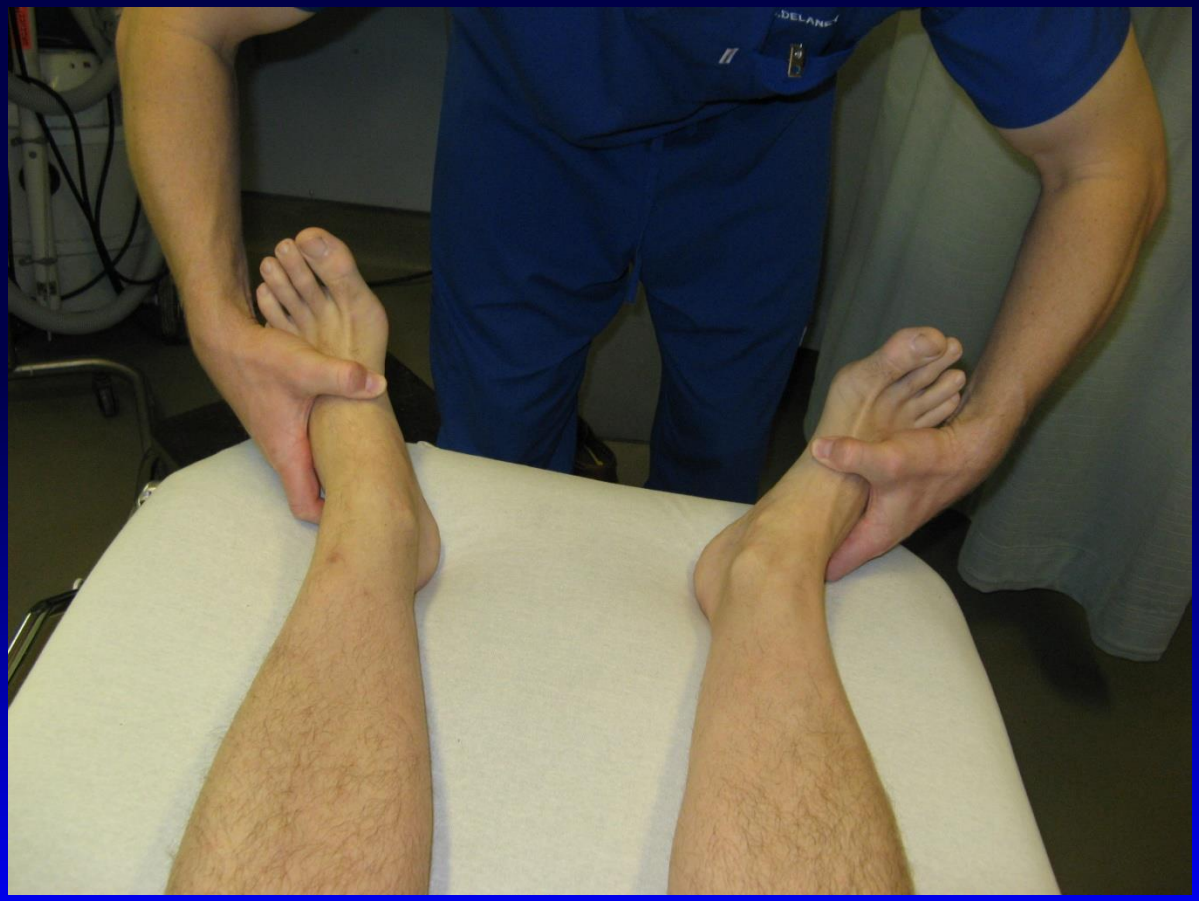
Motor- L5

- Extend 1st toe- Extensor Hallucis Longus



Motor- S1

- Foot eversion- Peroneus Long + Brevis



Treatment

- Most/all MSK “back strains" can be treated the same in the office

Analgesia

- Narcotics
- Acetaminophen
- NSAIDS*

Cochrane - Proof

- Early mobilization
- Heat
- Muscle relaxants*

Cochrane - No proof

- Ice
- Oral steroids
- Gabapentin
- Physiotherapy
- Spinal manipulation*
- Massage
- TENS
- Lumbar brace
- Acupuncture

Mr. Ouchieback

- What if you think our patient is “embellishing” his pain?

Waddell signs

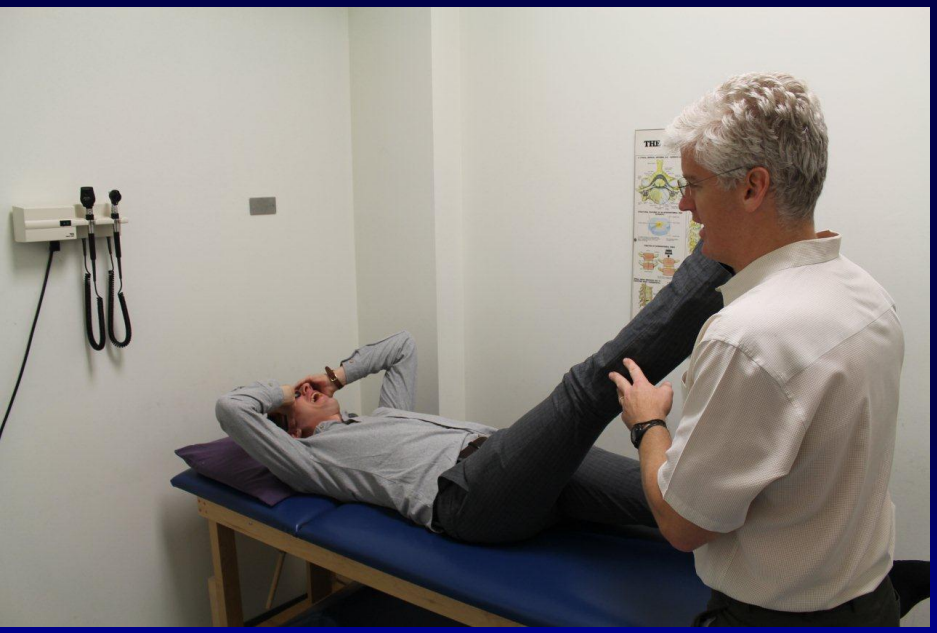
- Superficial tenderness
- Axial loading
- Simulated rotation
- Distracted straight leg raise
- Cogwheeling weakness
- Other (non-anatomic tenderness, overreaction)

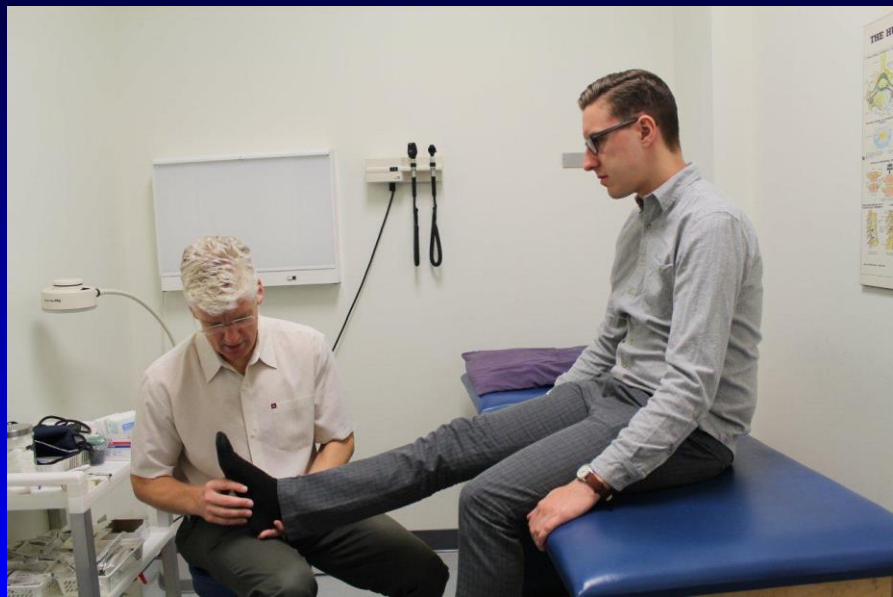
Superficial Tenderness

Axial Loading

Simulated Rotation

Distracted Straight Leg Raise





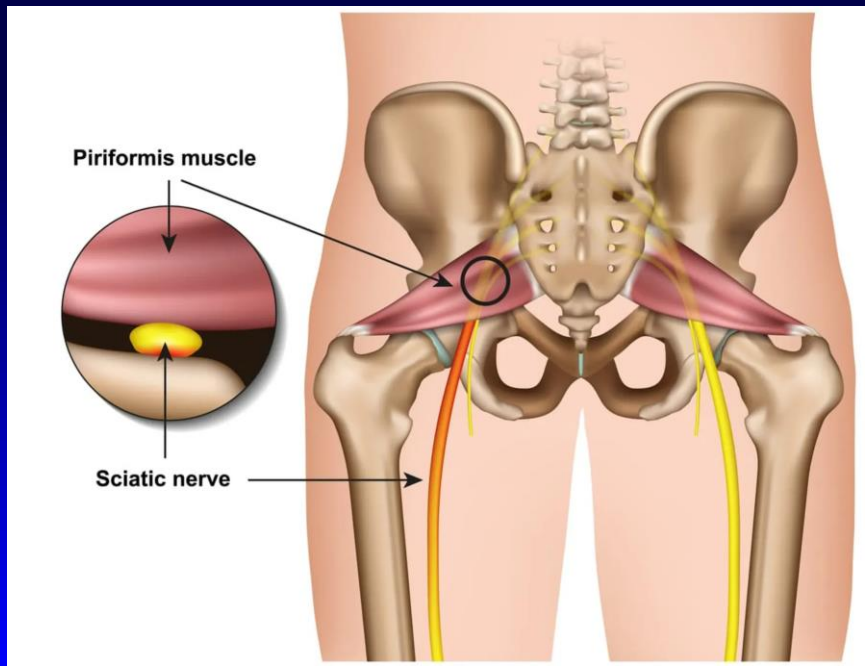
Miss No response to Physio

- Back and butt pain for 6 months
- Seeing physio for back- no response
- Still sciatic pain
- Less butt pain when running* but gets butt pain and sciatica when sitting at desk

- * Sport Med Helpful Hint

Piriformis Syndrome

- Tight piriformis muscle compresses your sciatic nerve
- Palpation = pain and sciatica
- Plan
  - ***Decrease swelling***
  - ***Stretching***
  - ***Strengthening***
-



Mrs. Lumbego

- 68 y/o woman with worsening midline T and L back pain
- Pain is 8 to 10 weeks duration
- Day and night, not changed by movement
- Remote history of breast cancer
- No trauma

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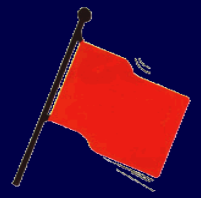
  - Distended bladder
  - Leg weakness bilaterally



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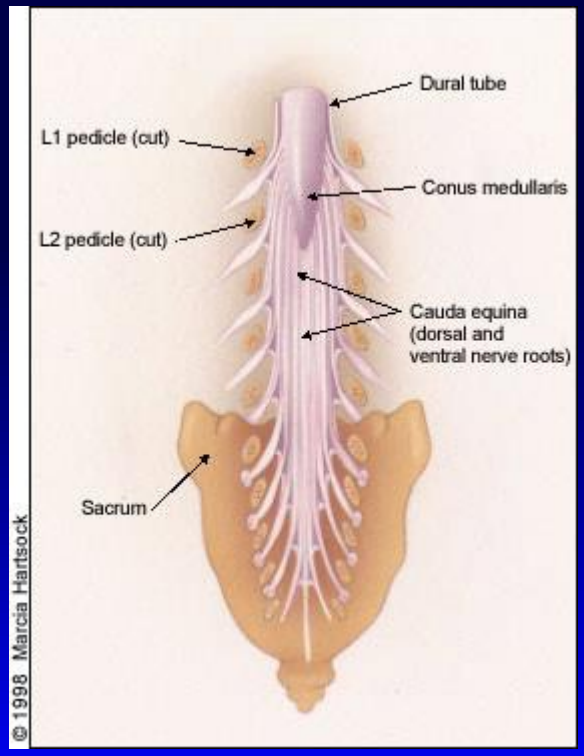
Cauda Equina Syndrome (CES)

- Acute stenosis of the lumbar spinal canal leading to compression of neural elements below L1



Cauda Equina Syndrome

- Bilateral symptoms usual
- “Saddle” anaesthesia
- Urinary retention
- Fecal incontinence
- Anal tone (decreased or absent)
  - –Post void residual

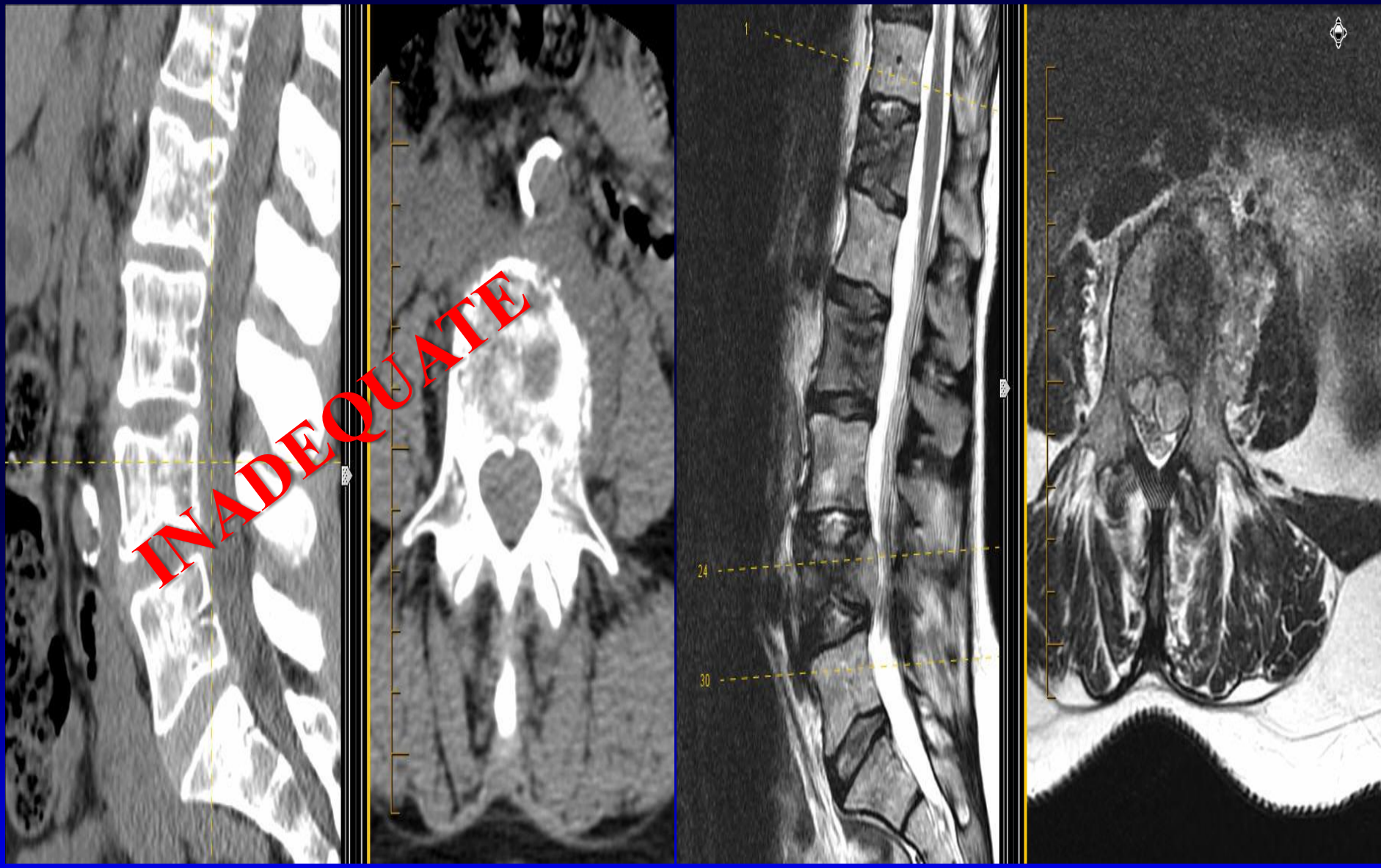
Mrs. Lumbego

- How do we image her canal?
  - MRI
  - CT myelogram
  - Myelogram (old school!)

- Always image the **ENTIRE SPINE**

  10% have silent epidural mets distant from the symptomatic site

CT MRI



Delays...

- Best predictor of long-term outcome is deficit at the time of treatment

Deficit in = Deficit out

Take Home Points

- **Know the Red Flags** 
- **Visualize the Spinal Canal when needed**
- **Walking back Pain is either worse with flexion or extension**
- **Beware of Cauda Equina**
- **Analgesia, heat and early mobilization for most acute MSK back pain**

Questions ???