

AN OSTEOPATHIC APPROACH TO LOW BACK PAIN

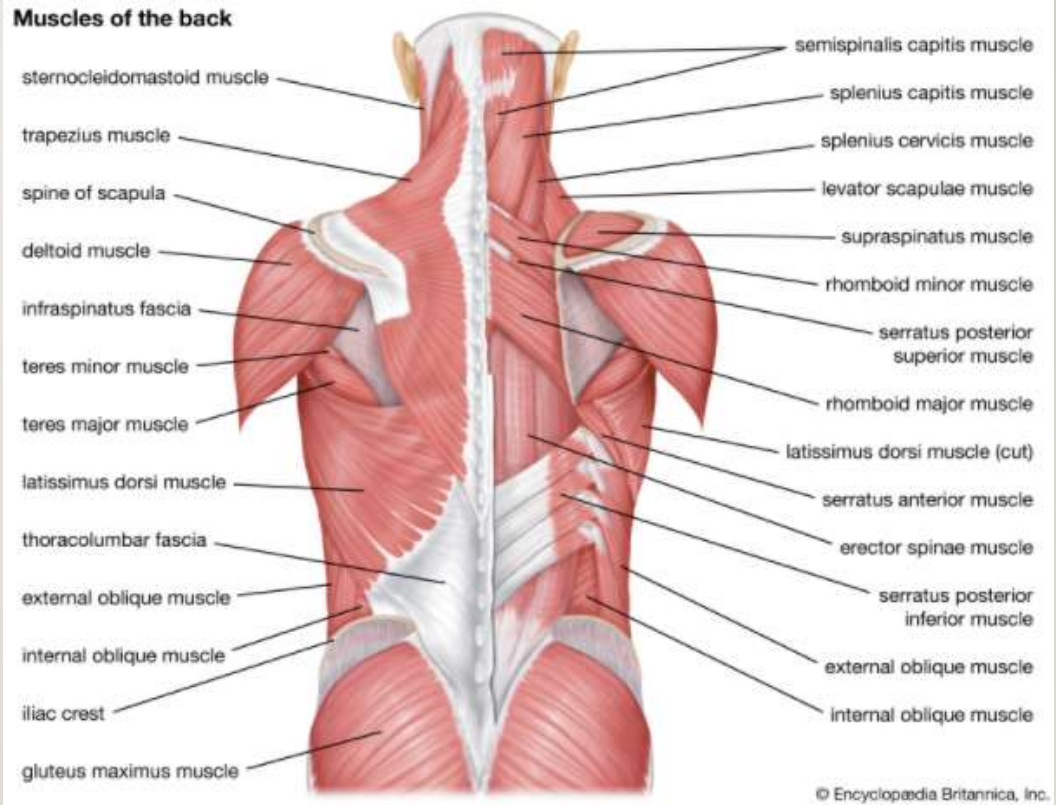
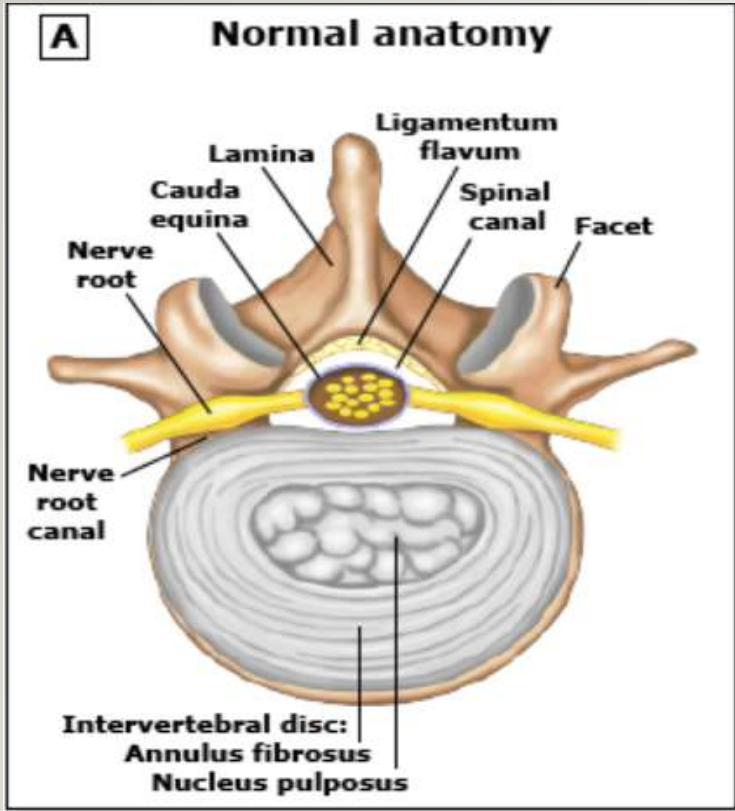
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INTRO

- Effects: 84% of adults have low back pain at some time in their lives^{1,2}
- Risk factors: smoking, obesity, age, female sex, physically strenuous work, sedentary work, psychologically strenuous work, low educational attainment, Workers' Compensation insurance, job dissatisfaction, and psychologic factors such as somatization disorder, anxiety, and depression^{3,4}

BACK TO THE BASICS: NORMAL ANATOMY



ETIOLOGIES

- Nonspecific
- Serious
- Less Serious
- Other

ETIOLOGIES

- Nonspecific Back Pain
 - Absence of specific reliably identifiable underlying condition

ETIOLOGIES

- Serious
 - Spinal cord compression
 - Cauda equina compression
 - Metastatic cancer
 - Spinal epidural abscess
 - Vertebral osteomyelitis

ETIOLOGIES

- Less Serious
 - Vertebral compression fracture
 - Radiculopathy
 - Spinal stenosis

ETIOLOGIES

OTHER

- Ankylosing spondylitis
- Osteoarthritis
- Scoliosis and hyperkyphosis
- Transitional vertebra
- Beyond the spine:
 - Pancreatitis
 - Nephrolithiasis
 - Pyelonephritis
 - AAA
 - Herpes zoster
 - Piriformis Syndrome
 - SI joint dysfunction
 - Psychologic stress

INITIAL EVALUATION

GOAL: EVALUATE FOR SIGNS OR SYMPTOMS THAT INDICATE NEED FOR IMMEDIATE IMAGING AND FURTHER EVALUATION

HISTORY

- OLDCAAARTS
- Constitutional symptoms
 - unintentional weight loss, fevers, nighttime sweats
- Neurological symptoms
 - weakness, falls or gait instability, numbness or other sensory changes, or bowel/bladder symptoms
- Drugs
 - Prescribed: corticosteroids
 - Illicit: IV?
- Past medical history
 - Cancer
 - Bacterial infections
- Past surgical history
 - Spine surgeries, epidural...

PHYSICAL

- Inspect – scoliosis or hyperkyphosis?
- Palpate/percuss – vertebral or paravertebral tenderness?
- Neuro exam – sensation, strength, reflexes
- Special Maneuvers – Straight leg raise
- Non-organic signs – psychologic?
- Other – PVR, lymphadenopathy?

OSTEOPATHIC EXAM

- Lumbar
 - Type 1 (TONGO)
 - Type 2 (flexion/extension component)

OSTEOPATHIC EXAM

INNOMINATES

- ASIS
- PSIS
- Medial Malleoli
- Pubic symphysis/tubercles
- Ischial tuberosity
- Iliac crest

SACRUM

- Seated flexion/compression
- Lumbar lordosis
- Sacral sulcus
- Inferior lateral angle
- Lumbar spring
- Respiratory motion
- Sidebending passive
- 4 point passive

LABS

- ESR <20
 - Infection very unlikely
- CRP
- CBC

IMAGING



LIMITED UTILITY

- In those without associated symptoms
 - no difference in short term (3mo) or long term (up to 1y) term outcomes regarding pain or function¹⁷
 - 65yo+ without radiculopathy: no difference in disability at 1y¹⁸
 - Greater likelihood of back surgery, opioid treatment, greater costs (by ~\$3000) at one year¹⁹
 - Red herrings: disc herniations, OA, spinal stenosis, annular fissures, etc.

TYPES

- XR AP and lateral
 - No benefit with additional views¹⁶
- MRI w/ and w/o
 - Infection and malignancy
- CT w/
 - for poor MRI candidates

RESERVE IMAGING

- American College of Physicians
- American Pain society
- American Board of Internal Medicine “Choosing Wisely Campaign”

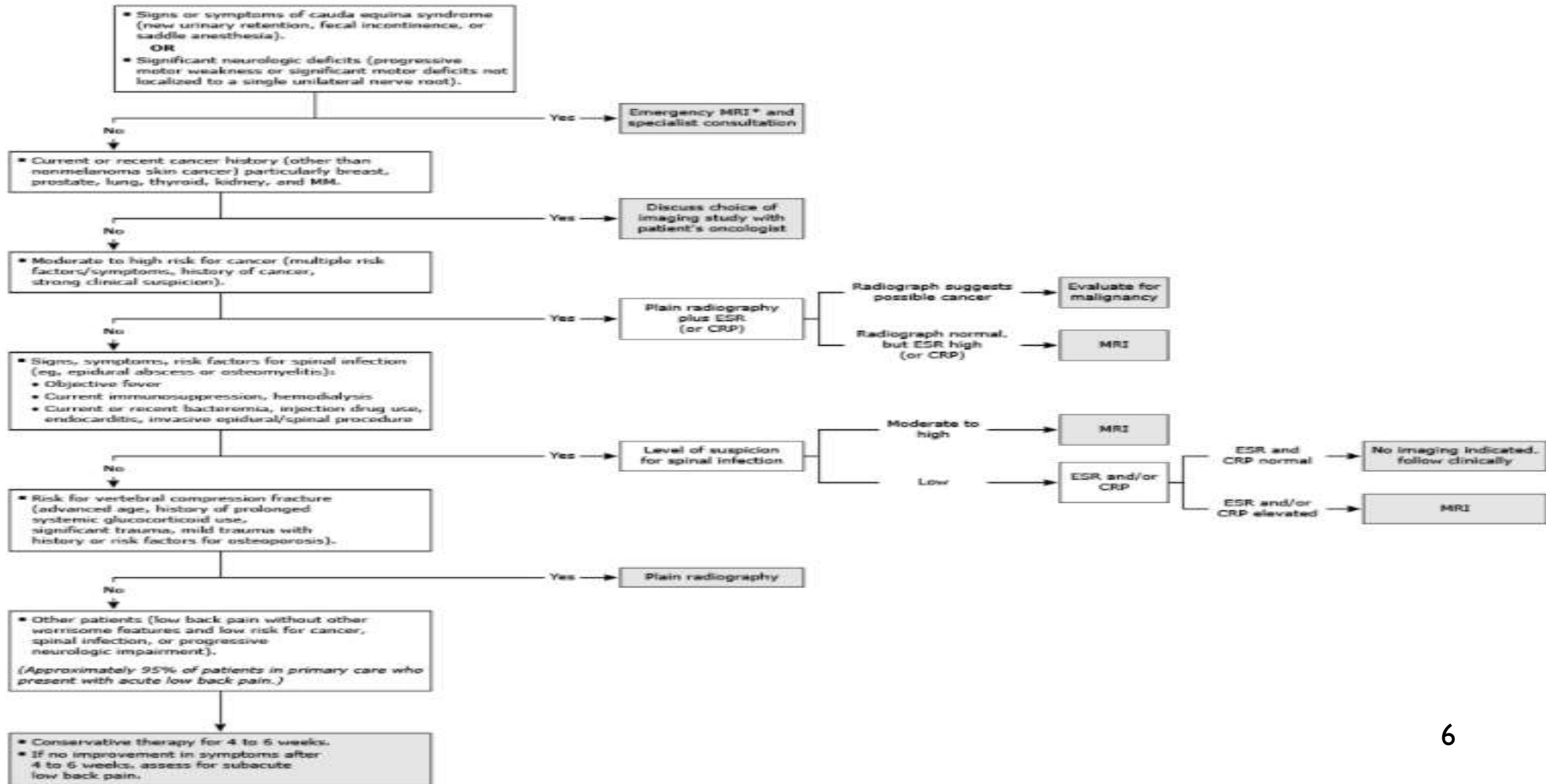
RED FLAGS

- Sx of spinal cord compression, cauda equina compression
- Progressive/severe neurologic deficits
- SSx/risk for spinal infection
- Hx of malignancy
- Risk for compression fracture

Acute low back pain: Considerations for imaging

This algorithm is intended to assist with the evaluation of patients with acute (<4 to 6 weeks) low back pain in whom imaging is being considered. Most patients (95%) will not require immediate imaging.

Exclusion: History of significant trauma.



NONPHARMACOLOGIC APPROACH

- In the absence of red flag symptoms
 - Goal of care = short term symptomatic relief
 - Nonpharmacologic:
 - Heat... less evidence for ice
 - Massage
 - Acupuncture
 - Prescribed exercise and PT

*Caution against bed rest: more pain and slower recovery

OMT

- Lumbar
 - Muscle Energy
 - Type I – NU DR
 - Type II Flexed – FDDR
 - Type II Extended – SUUE
 - HVLA
 - OB Roll

PHARMACOLOGIC APPROACH

- NSAIDs
 - Ibuprofen 400-600mg QID
 - Naproxen 250mg-500mg BID
 - Meloxicam 7.5-15mg Daily
- Acetaminophen
 - Mixed efficacy¹¹

Consider combining, though limited evidence

PHARMACOLOGIC APPROACH

- 2nd line options
 - Non-benzo muscle relaxants
 - Cyclobenzaprine
 - Methocarbamol
 - Carisoprodol
 - Baclofen
 - Chlorzoxazone
 - Metaxalone
 - Orphenadrine
 - Tizanidine

AVOID Benzos: not effective in improving pain or functional outcome, and potential for abuse ¹²

PHARMACOLOGIC APPROACH

- Refractory or Severe Pain
 - Opioids
 - Few benefits
 - Avoid >3 day duration, rarely more than 7 days of therapy
 - Tramadol
 - Few days up to 2 weeks
 - Less constipation and dependence
 - Caution Serotonin Syndrome

OPTIONS WITHOUT PROVEN BENEFIT FOR ACUTE

NONPHARMACOLOGIC

- Traction
- Lumbar supports
- Yoga
- Paraspinal injections – including trigger points, epidurals, facet injections

PHARMACOLOGIC

- Antidepressants
- Systemic glucocorticoids
- Antiepileptics
- Topicals
- Herbals

PATIENT EDUCATION

- The prognosis for acute low back pain is excellent; only one-third of patients seek medical care at all. Of those who present for care, 70-90% percent improve within seven weeks.^{13,14,15}
- Recurrences are common, don't get discouraged as prognosis remains optimistic.
- Motivate toward prevention of recurrence

QUESTIONS?



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