

Should we be doing Spine Surgery?



ENT Specialist for Lions



Fighting a Porcupine



What about Spine Surgery?

Long-term success rates

Complication risks

Iatrogenic consequences

Actual benefits



30 year old male

Single vehicle motorbike accident



Frankel Grade Description

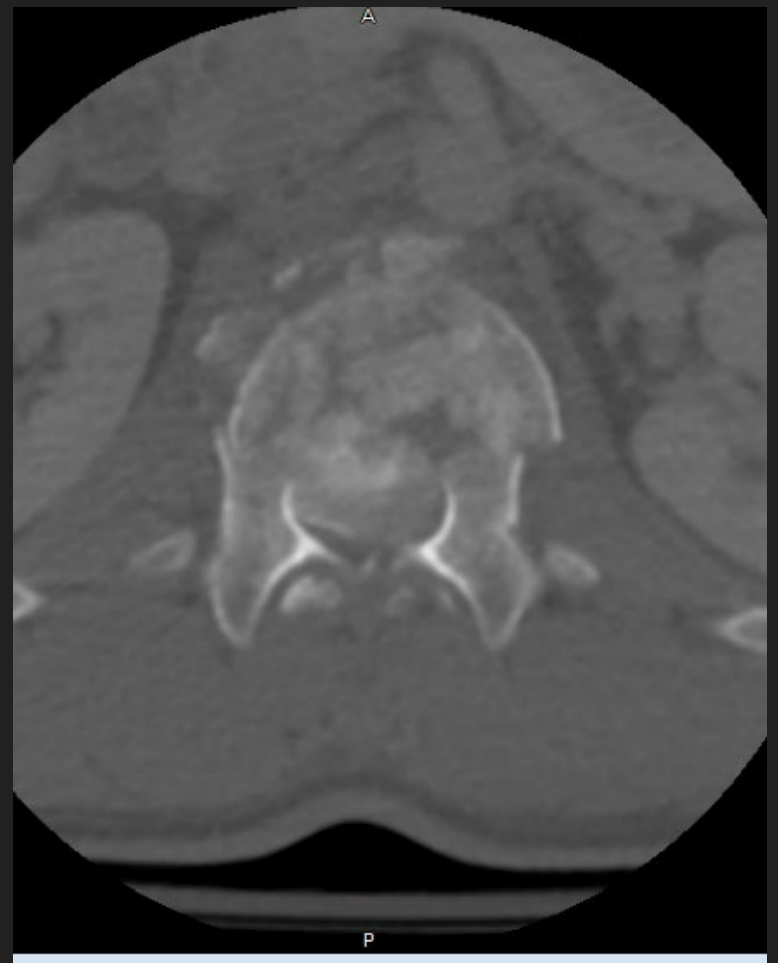
A	complete motor and sensory loss
B sensory loss	complete motor and incomplete
C functional strength	incomplete motor loss with non-
D strength	incomplete motor loss with functional
E	no motor or sensory abnormalities



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Probability of independent walking = 8.3%





Should we be doing spine surgery?



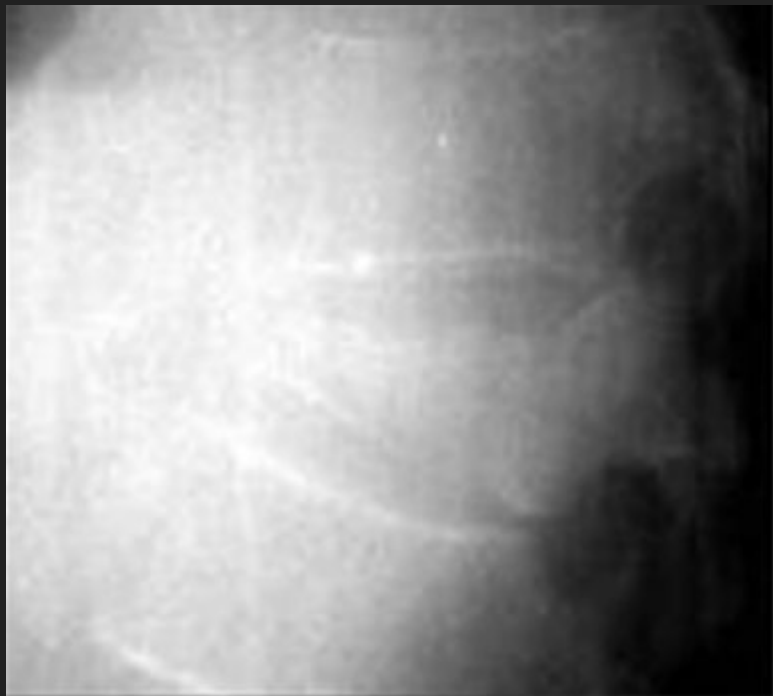




Kyphoplasty



Kyphoplasty







Should we be doing spine surgery?



Vertebral height better restored within 2 weeks of fracture

Corrects sagittal alignment but does not correlate with post-op pain relief

22% reduction in mortality at 10 years



Back Pain and/or Sciatica

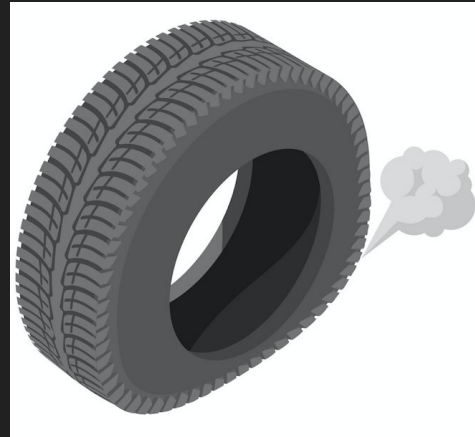


Post-surgical Spine Syndrome

“The outcome of lumbar spinal surgery does not meet the pre-surgical expectation of the patient and surgeon”

Success rate:

Primary surgery	50%
Second surgery	30%
Third surgery	15%
Fourth surgery	5%



74.6% of low back spine surgeries fail to alleviate back pain

Journal of Pain Research, 2016

9% goals allowed by average NHL goaltender

24.4% average MLB batting average

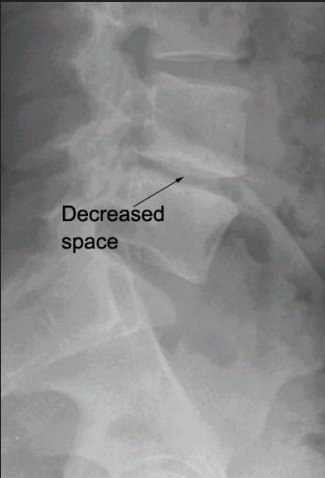
45.6% average NBA field goal percentage





Should we be doing spine surgery?





Decreased space
↓

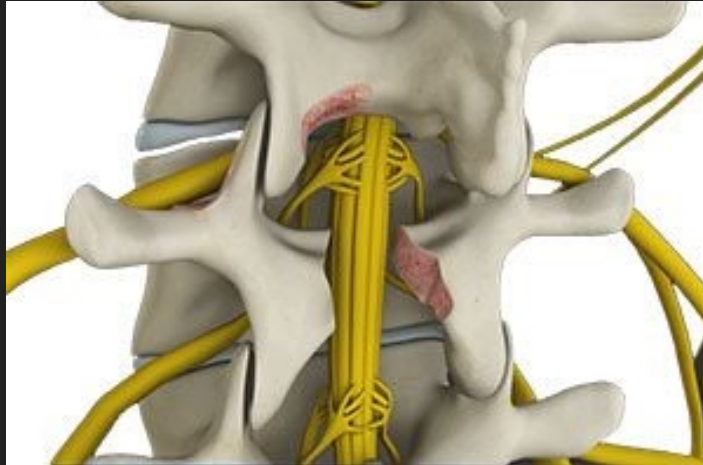
Spine surgery can only accomplish two goals:

- 1) Decompress a pinched nerve
- 2) Stabilize a painful joint



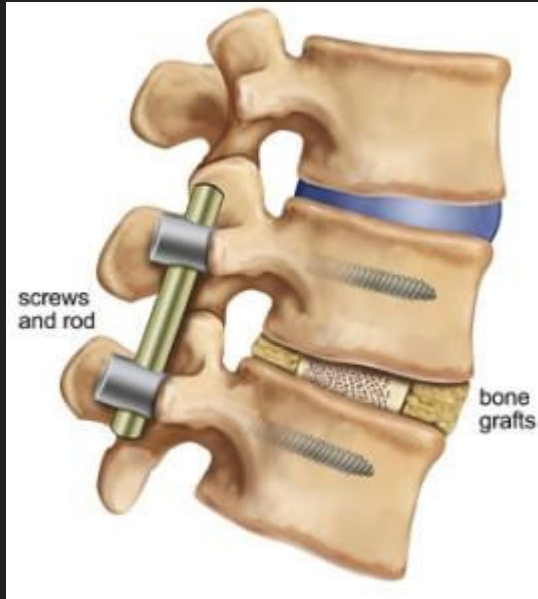
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Complications:

Infection
malfunction

DVT
dysfunction

Nerve Damage
syndrome

Bleeding

Anaesthesia

Pulmonary issues

Dural Tear

Hardware

Trans

Pseu

Blind

Epidural Hematoma

Pseudomeningocele



Factors that preclude a negative outcome:

Depression

Poor psychosocial well-being

Smoking

Obesity

Age

Hypertension

WCB



Conservative treatments:

Heat and ice

Pain medication

Epidural Steroid injections

TENS

Lifestyle changes

Physical therapy

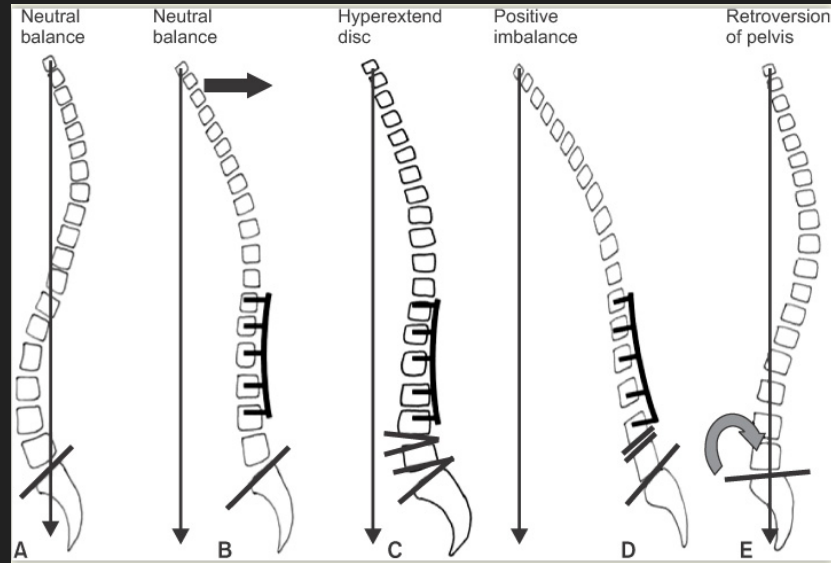


Iatrogenic Surgical Outcome:

New segmental instability

Loss of sagittal balance

Reduced sacral tilt



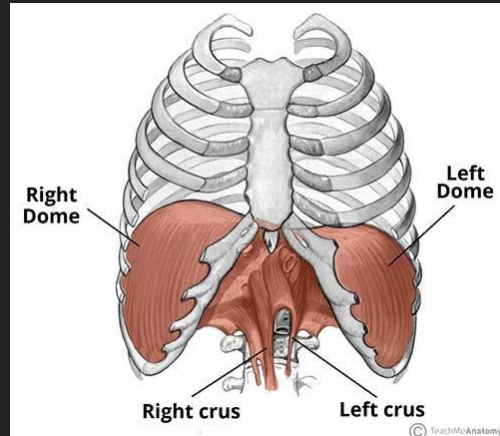
Myofascial system especially paraspinal muscle spasm or hypotrophy

Causes referred pain and simulates radiculopathy



Diaphragm Dysfunction

... a complex myofascial and aponeurotic girdle surrounding the torso. On the posterior body wall, the central point of this girdling structure is the thoracolumbar fascia (TLF), a blending of aponeurotic and fascial planes that forms the retinaculum around the Paraspinal muscles of the lower back and sacral region.



Pathology selection:

Avoid multi-level disease

Predominantly axial/mechanical pain vs radicular pain



Perplexities of Spinal Disease

Very few clinical signs have a high predictive value in identifying the source of pain

Multifactorial sources



Imaging

Plain x-rays

Lateral Dynamic erect radiographs

MRI

CT

Bone scan



Surgical Procedures:

Discectomy

Laminectomy

Foraminotomy

Fusion

Vertebroplasty and kyphoplasty

Artificial Disc Replacement



Spinal Cord Stimulation



