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# Disclosure

- I have something to Disclose (Website)

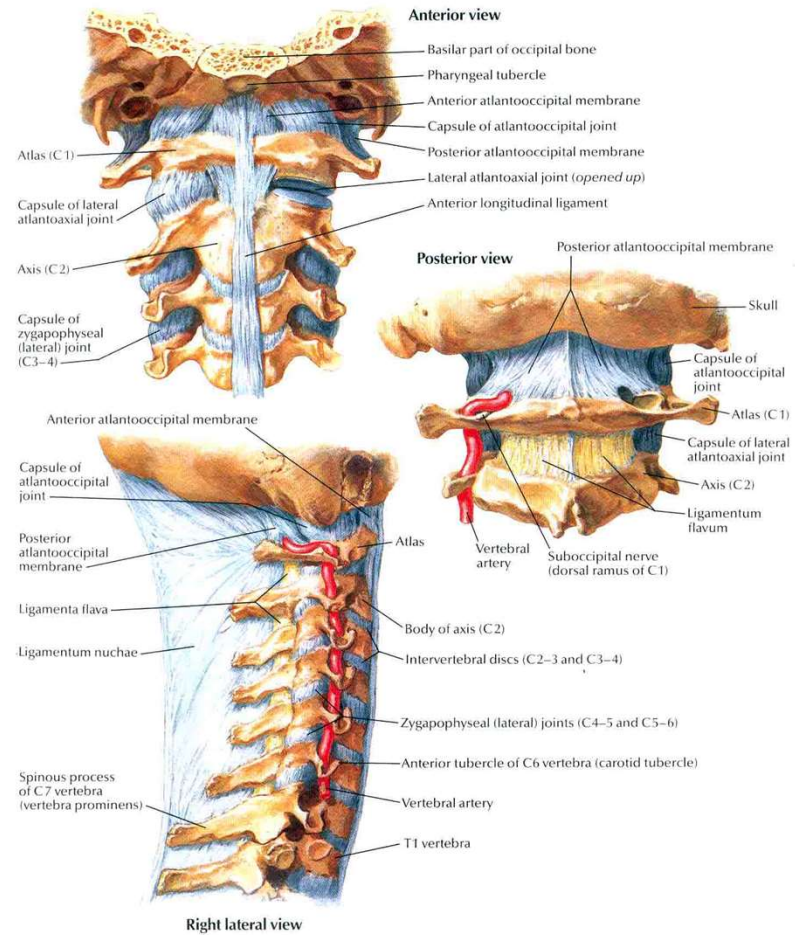
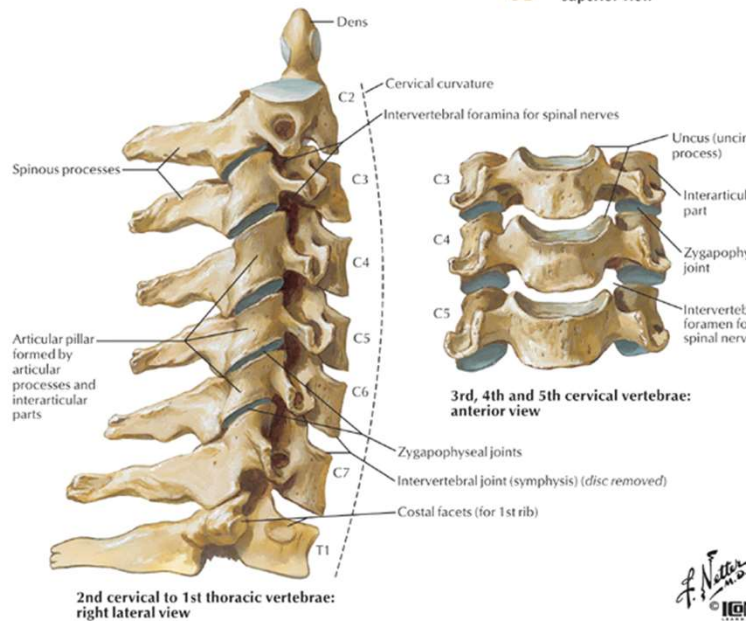
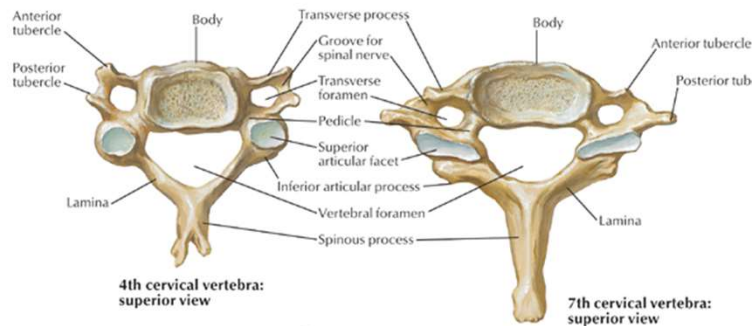
**2023**

**Work Related Injuries  
Workshop**

# Anatomy

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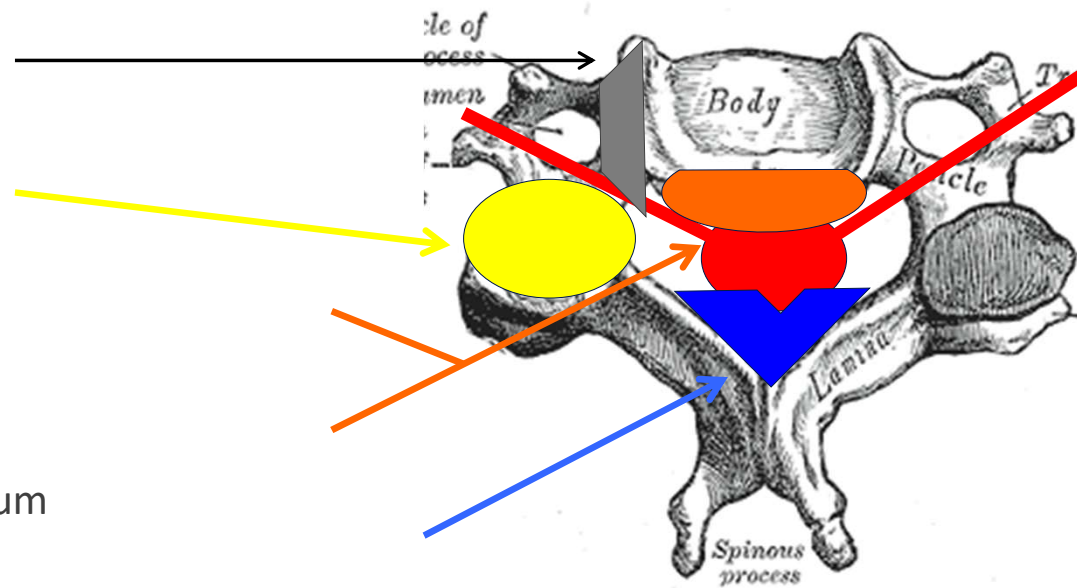
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# Radiculopathy/ Myelopathy - Pathophysiology:

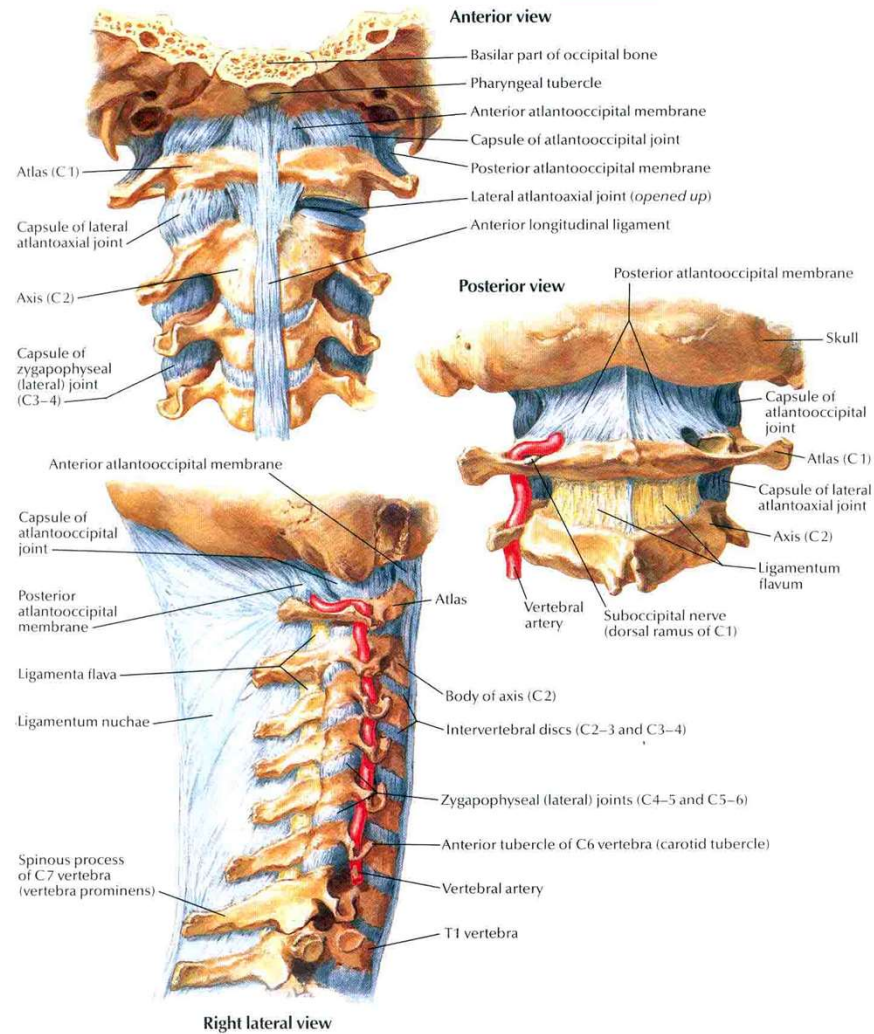
- Direct Mechanical compression NRoot/Cord:

- Uncus joint
- Facet joint
- Disk Osteophyte Complx
- Disc Herniation - OPLL
- Infolding Ligamentum flavum



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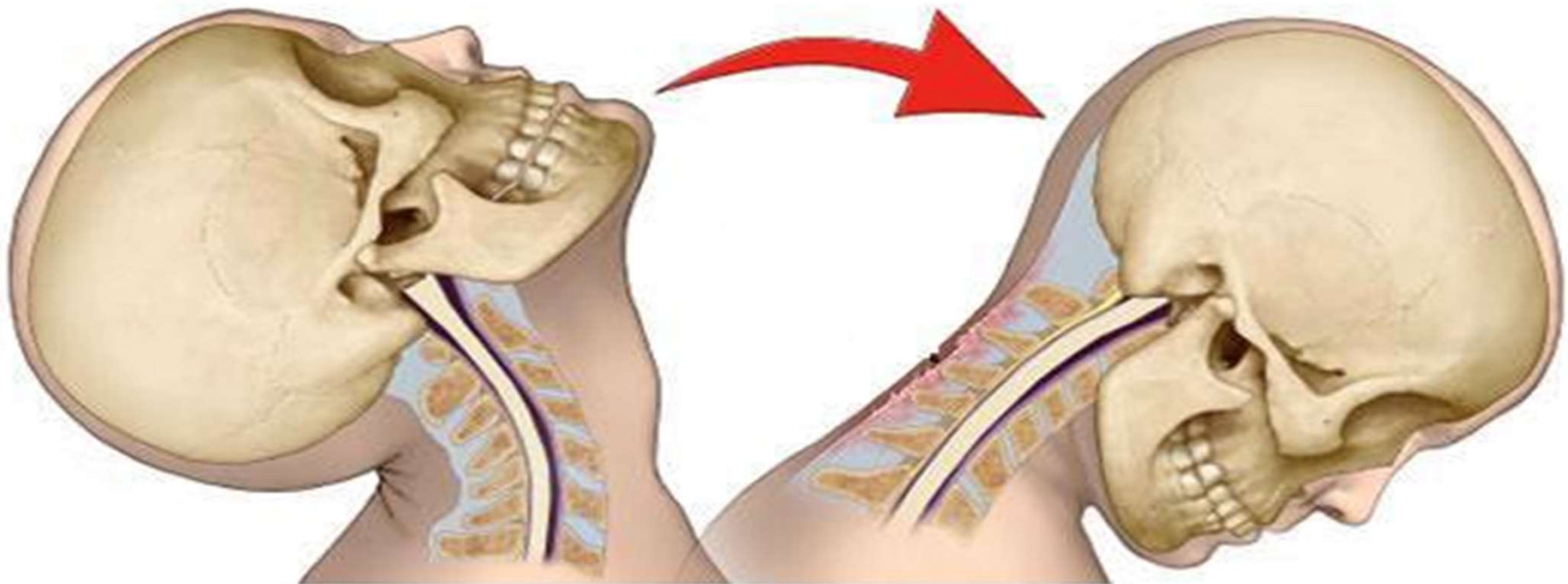




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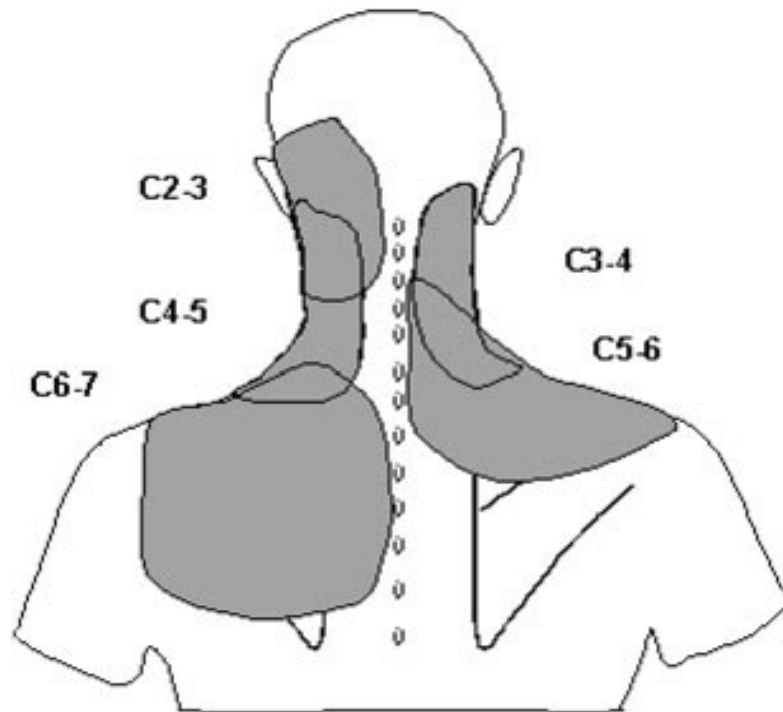
# Cervical Sprain / Whiplash



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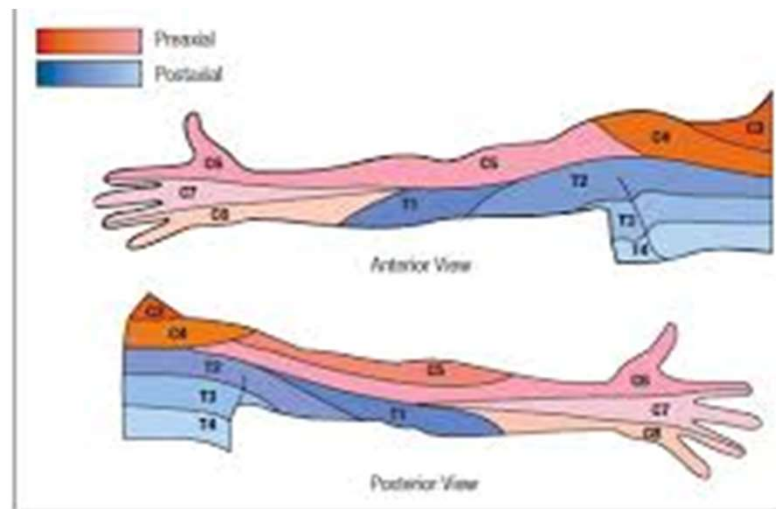
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# Discogenic Pain (Spondylosis)



# Cervical Radiculopathy

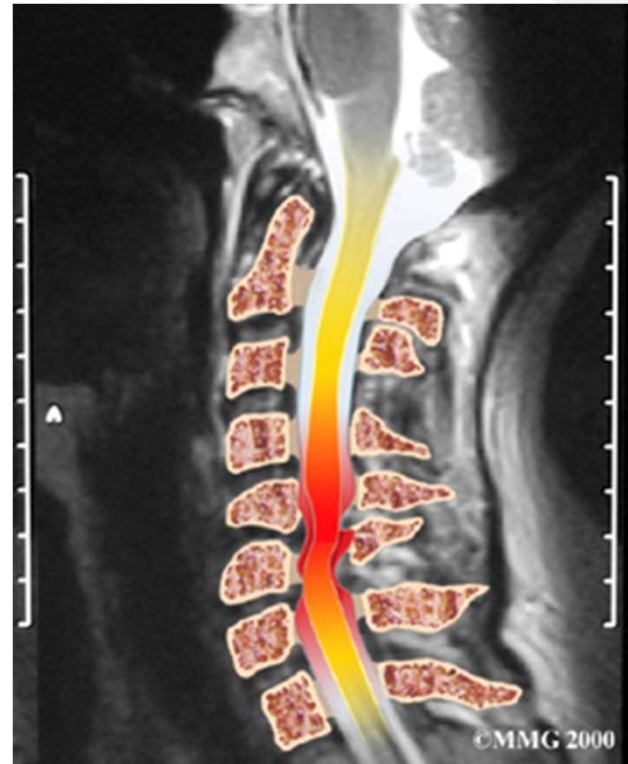
- PINCH'ed NERVE
- Pain is often accentuated by maneuvers that stretch the involved nerve root. Some examples include:
  - Coughing
  - Sneezing
  - Reaching





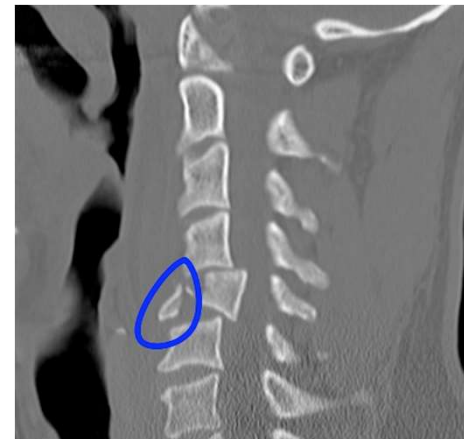
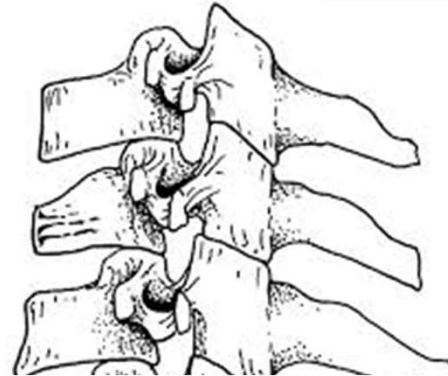
# Spinal Cord Compression: Myelopathy

- Neck Pain
- UE:
  - Radiculopathy
  - Weakness/N/T
  - Clumsiness
- LE:
  - Loss of Balance
  - Frequent Falls
  - Gait disturbances



# Cervical Fractures

- Vertebral Body:
  - Compression fractures
  - Burst fractures
- Facet fractures
  - Subluxation
  - Dislocation



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# Facet Fractures / Dislocation



# MANAGEMENT - Terminology

- Axial Neck Pain (without neurologic deficits):
  - Typically conservative mgmt (PT)
  - Facet block? RFA?
- Arm Pain: Radiculopathy
  - PT/ Traction / Injections
  - Surgery: if conservative management fails
- Surgery: Weakness, Myelopathy, Instability (Fracture, Stenosis, HNP, Infection, Tumor, etc)

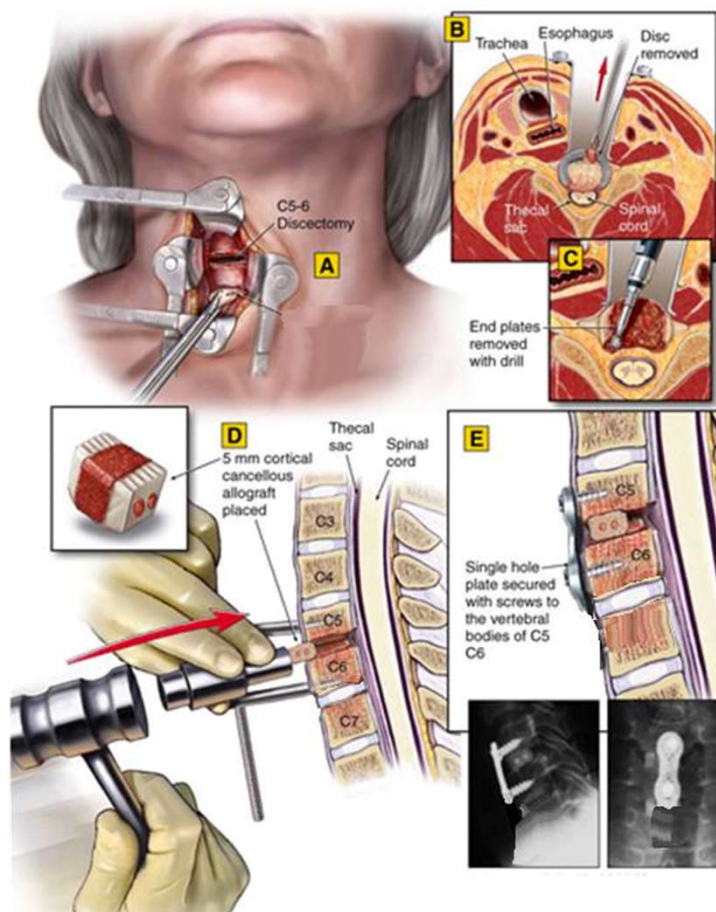
# Surgical Options - Terminology

- Anterior cervical discectomy and fusion (ACDF)
- Anterior cervical corpectomy and fusion (ACCF)
- Cervical disk arthropasty – replacement (cTDR)
  
- Posterior cervical laminotomy - Foraminotomy
- Posterior cervical laminectomy & Fusion
- Posterior cervical laminoplasty

# ACDF

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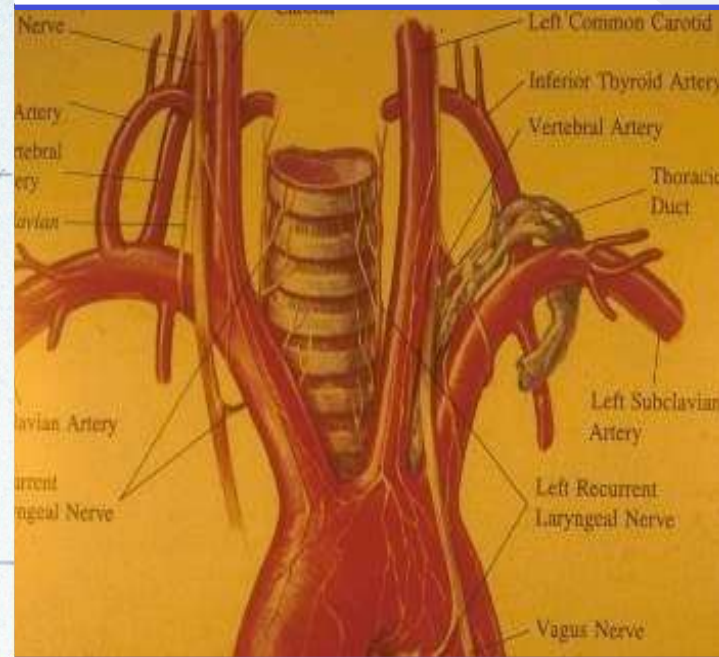
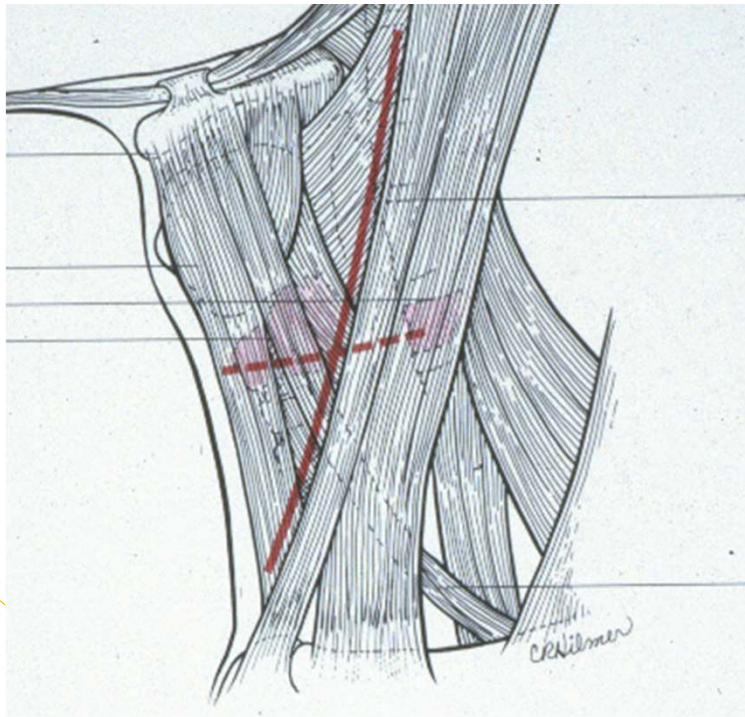


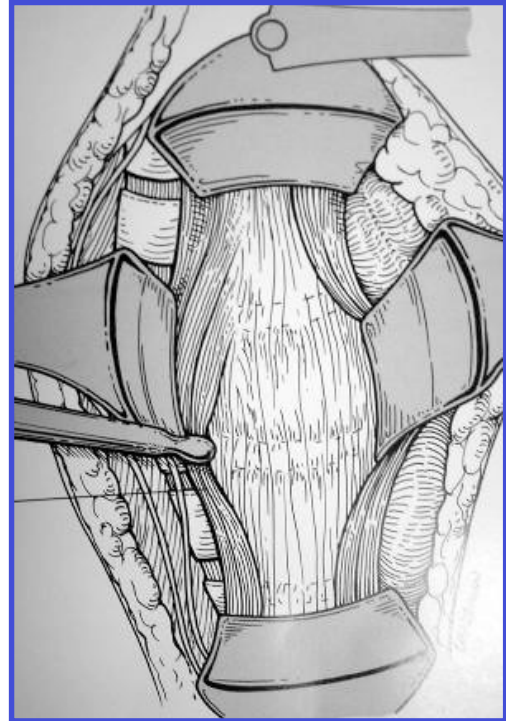
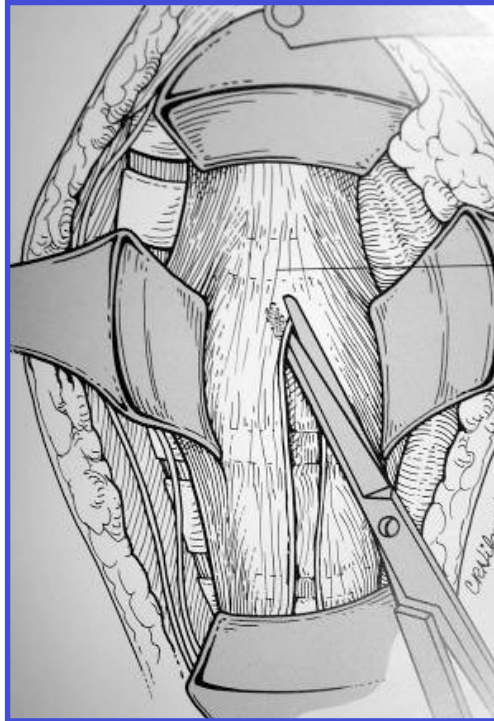
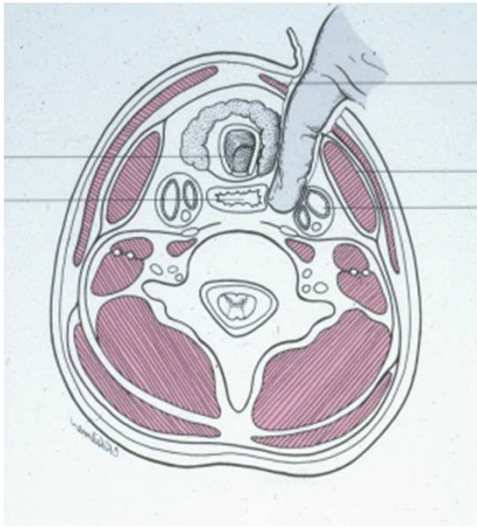
# Positioning and Anatomy

- Mild Neck extension



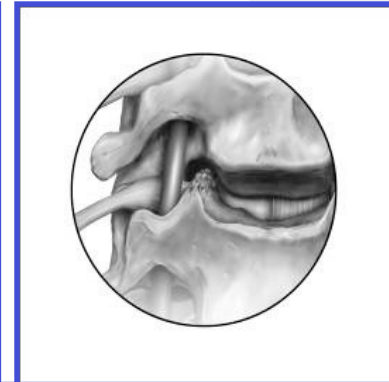
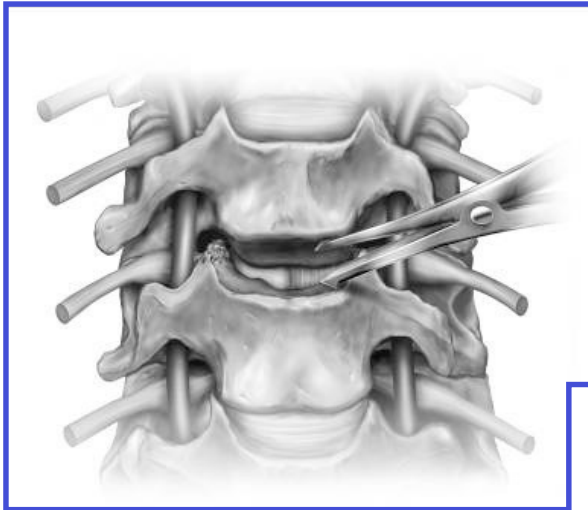
# Anatomy



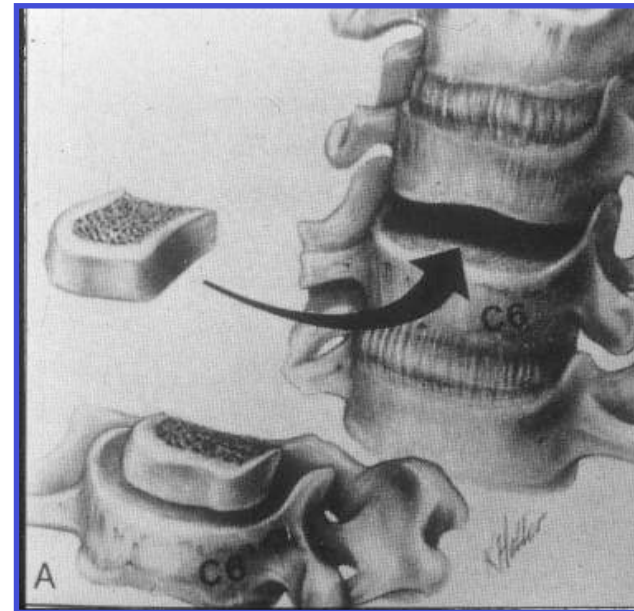
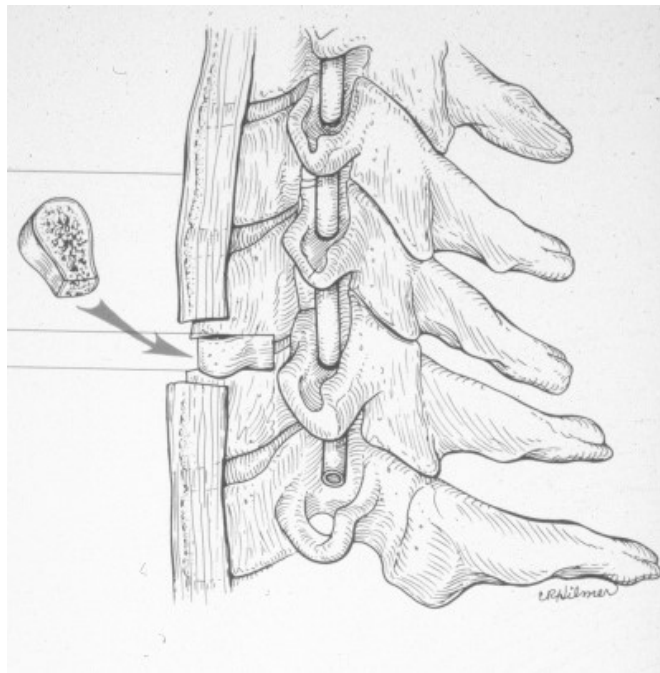


## Discectomy and Decompression

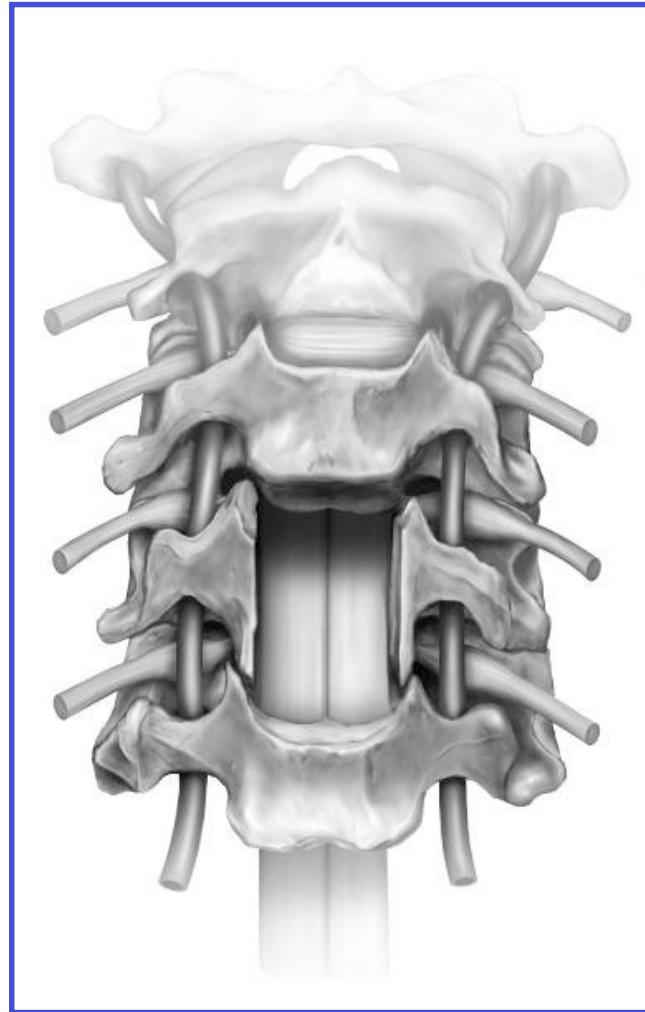
- HT: 5-10mm
- W: 10-15mm
- Depth: 12-17mm



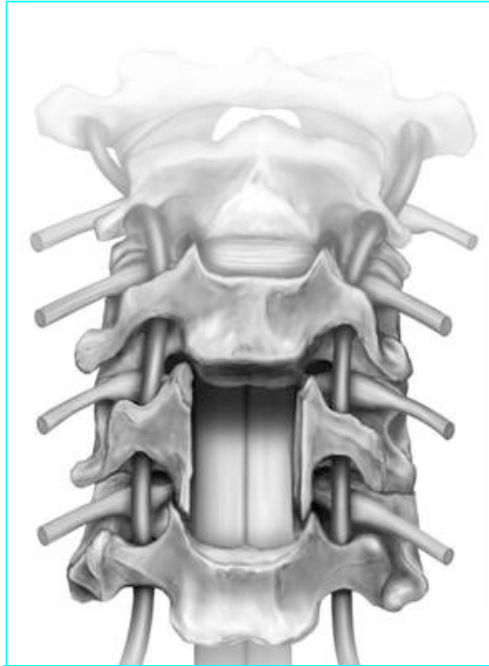
## Bone Graft Placement



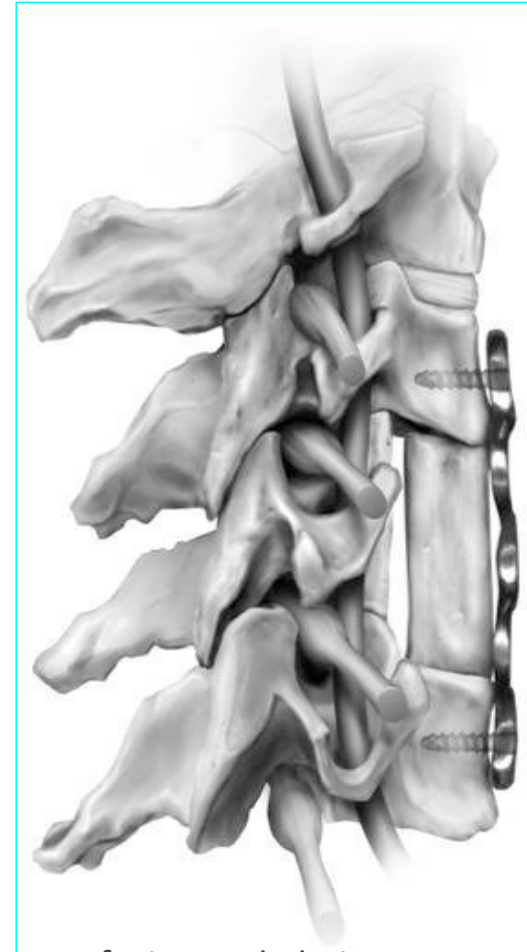








corpectomy



fusion and plating

# Anterior Plating

Anterior  
View



Lateral  
View



# Cervical Disc Arthroplasty

- Artificial disc replacement
- Preserves ROM
- Decrease risk of adjacent DD
  - ***Decrease Reoperation rate***
    - 1 level: ACDF 17.3% vs cTDR 4.5%
    - 2 level: ACDF 21% vs. cTDR 7.3%



*Jackson JNS 2016 (5 yr f-up)*

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## 45 y F with C7 radiculopathy

