BACK

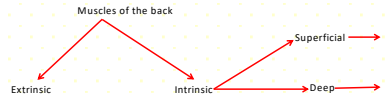
1

Learning outcomes

1. Identify the superficial and deep muscles of the back
2. Name the different part of the vertebrae and understand the clinical manifestations following fractures
3. Understand the anatomy of the spinal cord and the meninges and their applied anatomy
4. Describe the anatomy of the ligaments of the spine
5. Describe the anatomy of the intervertebral disc and their applied anatomy
6. Describe the anatomy of the spinal cord lesions.

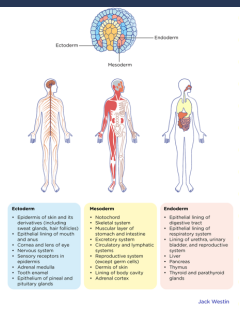
2

Muscles of the back



3

Innervation - Muscles of the back



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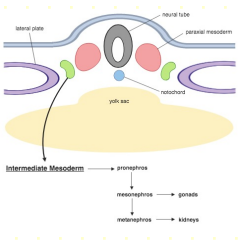

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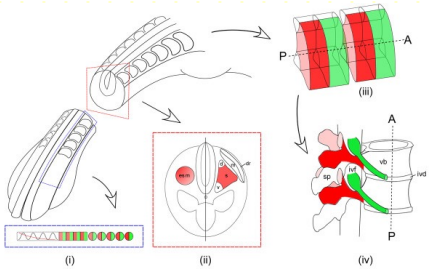
Segmentation of somites



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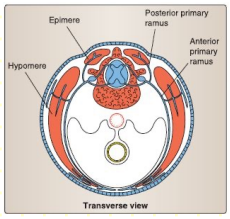
Innervation of back muscles



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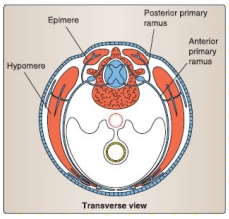
Innervation of back muscles



https://www.youtube.com/watch?v=Az6yzmel4fU

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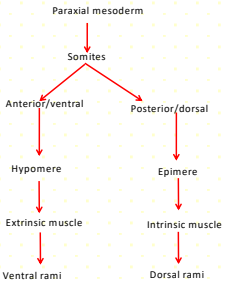
Muscles of the back



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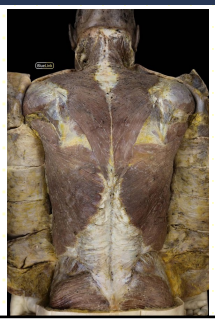
Extrinsic muscles



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Intrinsic muscles

11

Intrinsic muscles

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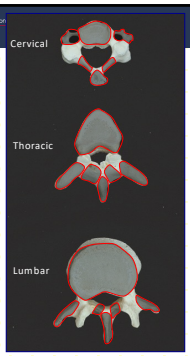
Vertebrae



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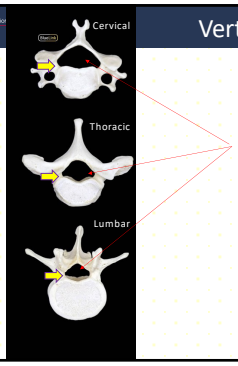
Vertebrae



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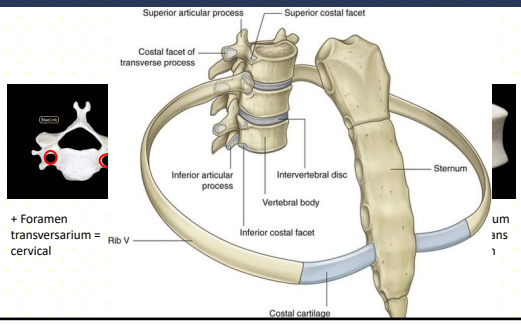
Differentiation/classification



+ Foramen transversarium = cervical

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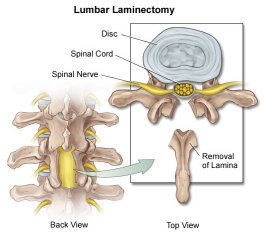
Laminectomy



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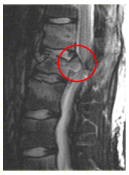
Indications for Laminectomy

Spinal tumour

Disc prolapse



Fractured vertebrae

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Curvature of the spine

Curvature of spine

Primary

Secondary

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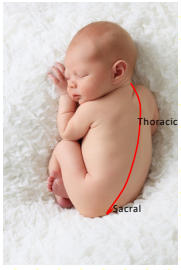
Curvature of spine



Primary curvature

First cervical secondary curvature

Second lumbar secondary curvature

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Pathology

Kyphosis

Lordsosis

Scoliosis

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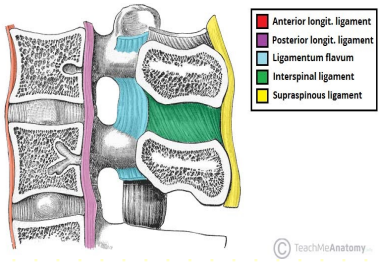
Ligaments



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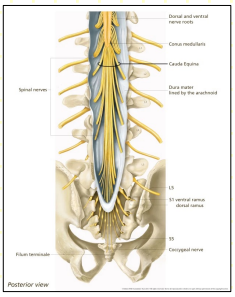
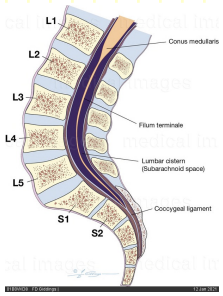
Spinal cord





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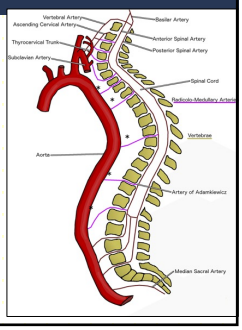
Blood supply of the spinal cord



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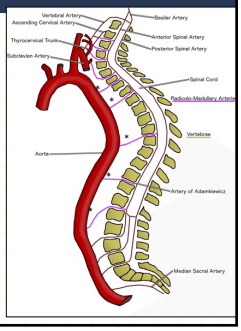
Blood supply of the spinal cord

Region	Arteries
C1-C6	
C7-T1	
T2 to T9	
T8 to conus medularis	



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Applied anatomy

A 68-year-old man came with a history of sudden onset of paraplegia 14 days back, after an episode of severe abdominal pain that radiated to the back. There was no history of fever or trauma. On examination, he had flaccid paralysis of both lower limbs, with loss of bowel and bladder control. The deep tendon reflexes were absent. Clinically, the paraplegia was localised to the T8 level and was presumed to be of vascular origin. Which segmental artery might be involved in this patient?

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Applied anatomy

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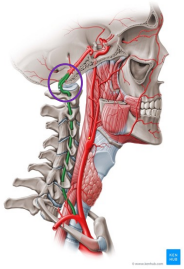

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https://youtu.be/UrmuAJkvapA

https://www.youtube.com/watch?v=Fvd1eYwbZjA

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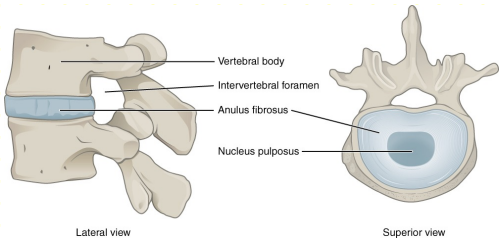
Intervertebral disc



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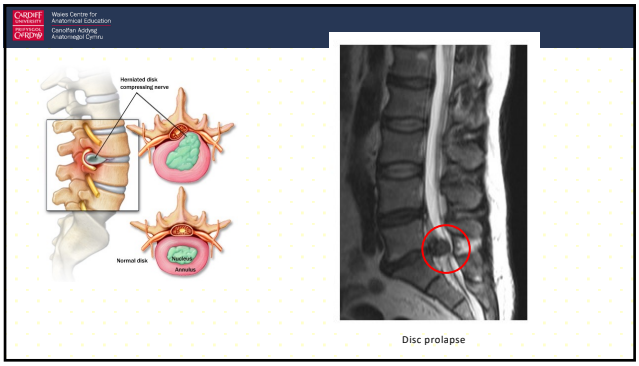
Herniated disk compressing nerve
Normal disk
Nucleus
Annulus
Disc prolapse

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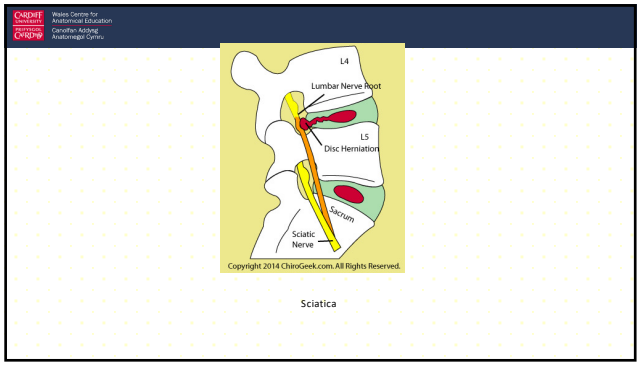
L4
Lumbar Nerve Root
L5
Disc Herniation
Sacrum
Sciatic Nerve
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Sciatica

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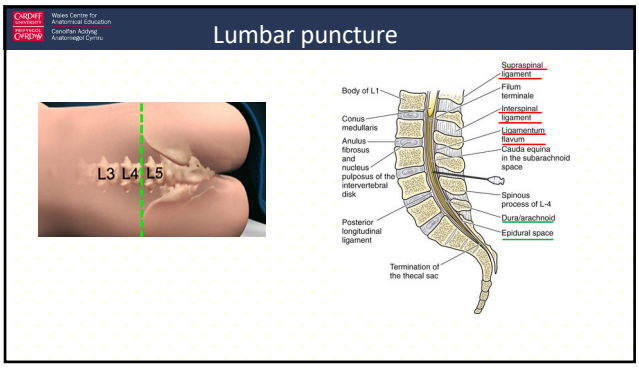
Lumbar puncture
L3 L4 L5
Body of L1
Conus medullaris
Anulus fibrosus and nucleus pulposus of the intervertebral disk
Posterior longitudinal ligament
Termination of the thecal sac
Supraspinal ligament
Filum terminale
Interspinal ligament
Ligamentum flavum
Cauda equina in the subarachnoid space
Spinous process of L-4
Dura/arachnoid
Epidural space

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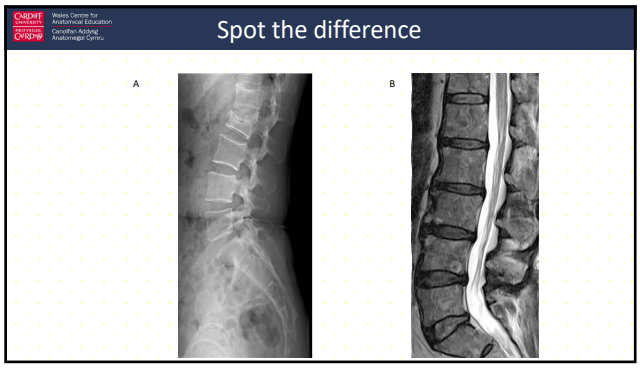
Spot the difference
A
B

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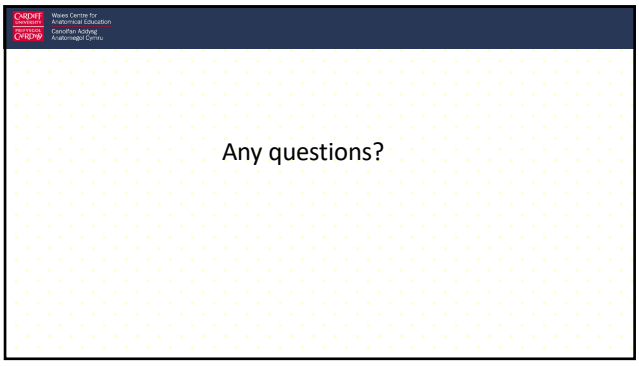
Any questions?

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