

August 28, 2026 - Dr. Krebs (claudia.krebs@ubc.ca)

Dissector

Objectives:

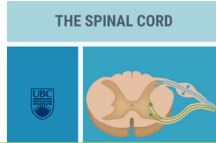
- Identify the three meninges
- Identify the parts of a typical vertebra
- Describe how a spinal nerve exits the vertebral column
- Describe the borders of an intervertebral foramen
- Identify the parts of a typical spinal nerve
- Describe the level at which the spinal cord terminates in an adult
- Describe the level at which the subarachnoid space terminates in an adult
- Describe a simple somatic reflex arc
- Identify a spinal ganglion

Resources:

Here are the e-tutorials and videos to prepare for the lab - click the green buttons to access them.



The Back (Module)



Spinal Cord (Module)



Spinal Cord (Video)

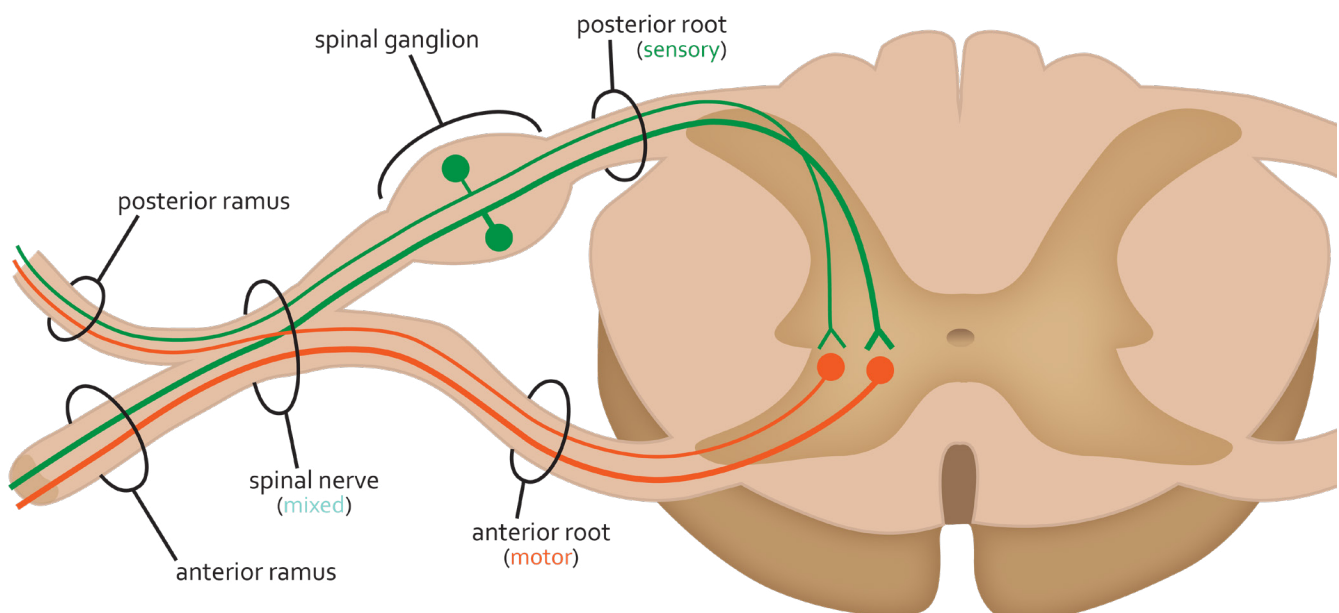


Spinal Nerves (Video)

Spinal Nerve:

- ☐ Anterior and posterior roots
- ☐ Spinal ganglion
- ☐ Spinal nerve
- ☐ Anterior and posterior rami

Be able to indicate the sensory and/or motor components contained in each of these structures



Schematic of Spinal Nerve Components

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Use these 3D scans to prepare for the lab. Please note the following structures on these prosections:

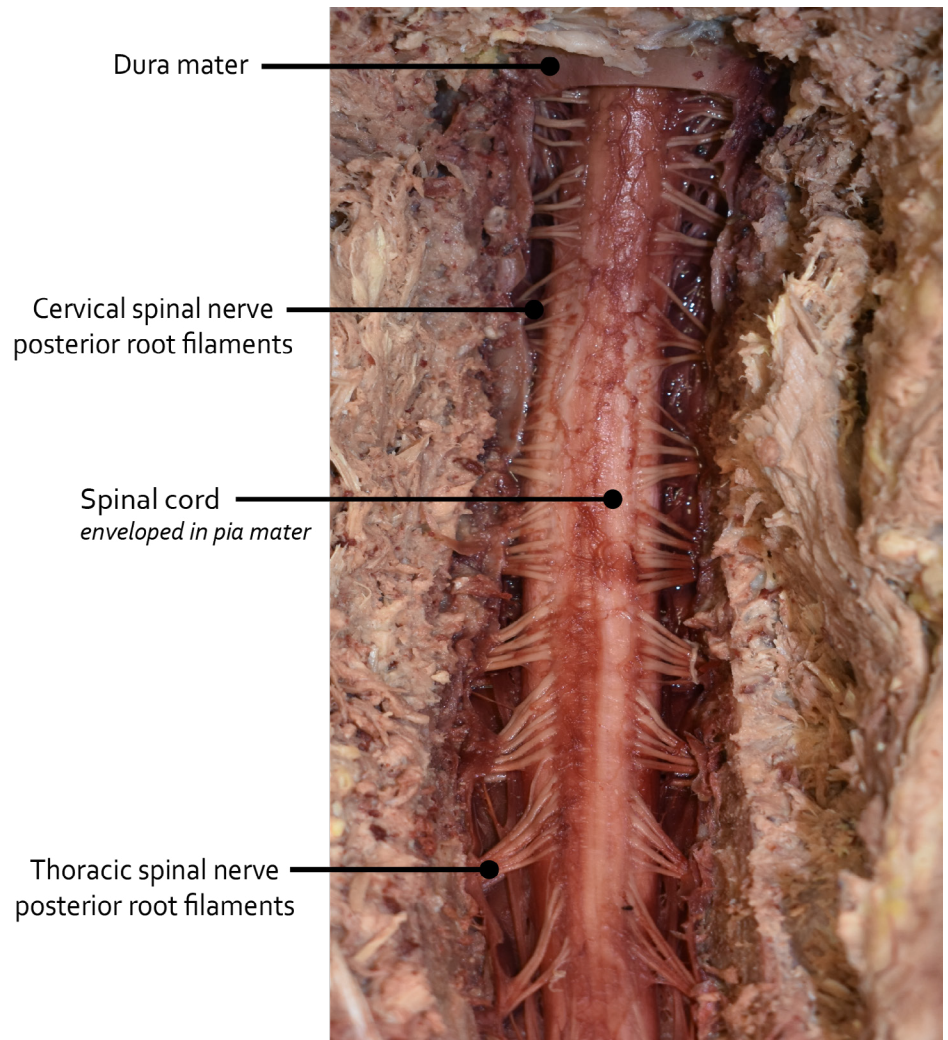
Hide Labels

Thoracic Spinal Column (3D)

- position of the thoracic vertebrae relative to each other
- articulation with the ribs
- intervertebral discs
- vertebral foramen
- position of the spinal nerves

Posterior Thoracic Wall (3D)

- erector spinae muscles (as a group)
- position of spinal cord
- position of spinal ganglia
- posterior rootlets
- cervical enlargement of spinal cord
- dura mater



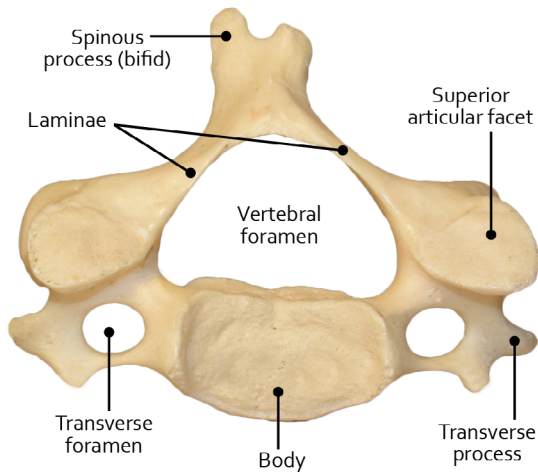
*Dissection of Thoracic Spinal Cord in situ
(UBC Body Donation Program)*

Typical Vertebra:

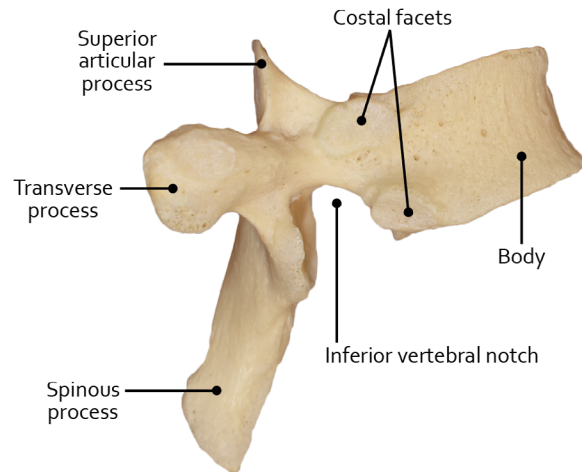
- ☐ Body
- ☐ Pedicles
- ☐ Laminae
- ☐ Spinous process
- ☐ Superior and inferior articular processes
- ☐ Superior and inferior vertebral notches
- ☐ Vertebral foramen
- ☐ Positions of intervertebral discs
- ☐ An intervertebral foramen (describe borders and contents)

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Use these labeled images to orient yourself to the specimens in the virtual lab:

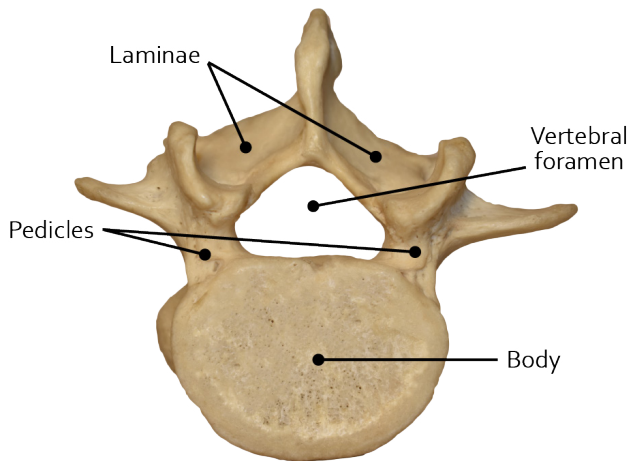


Cervical Vertebra
(superior)



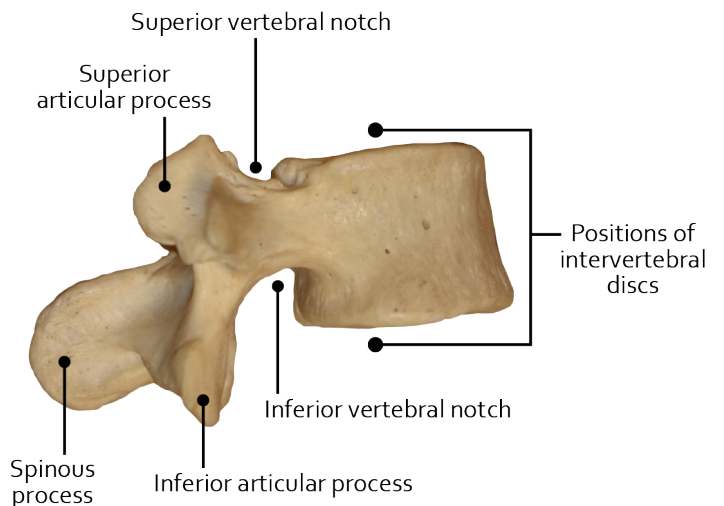
Thoracic Vertebra
(lateral)

Hide Labels

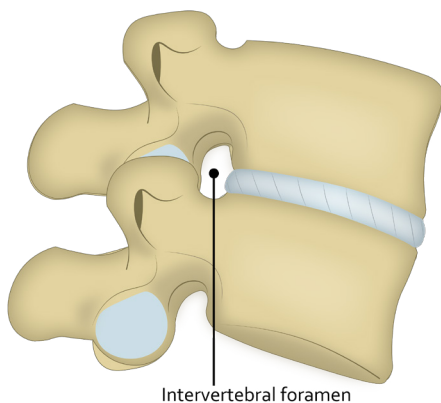


(inferior)

Lumbar Vertebra



(lateral)



Identify these structures on the following specimens in the virtual lab:

Lumbar Vertebra (3D)

Thoracic Vertebra (3D)

Cervical Vertebra (3D)

Rib (3D)

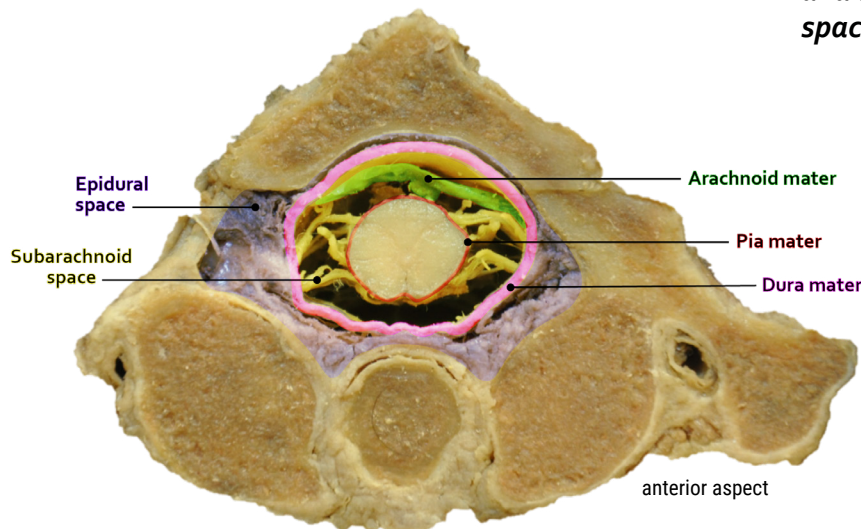
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Spinal Cord:

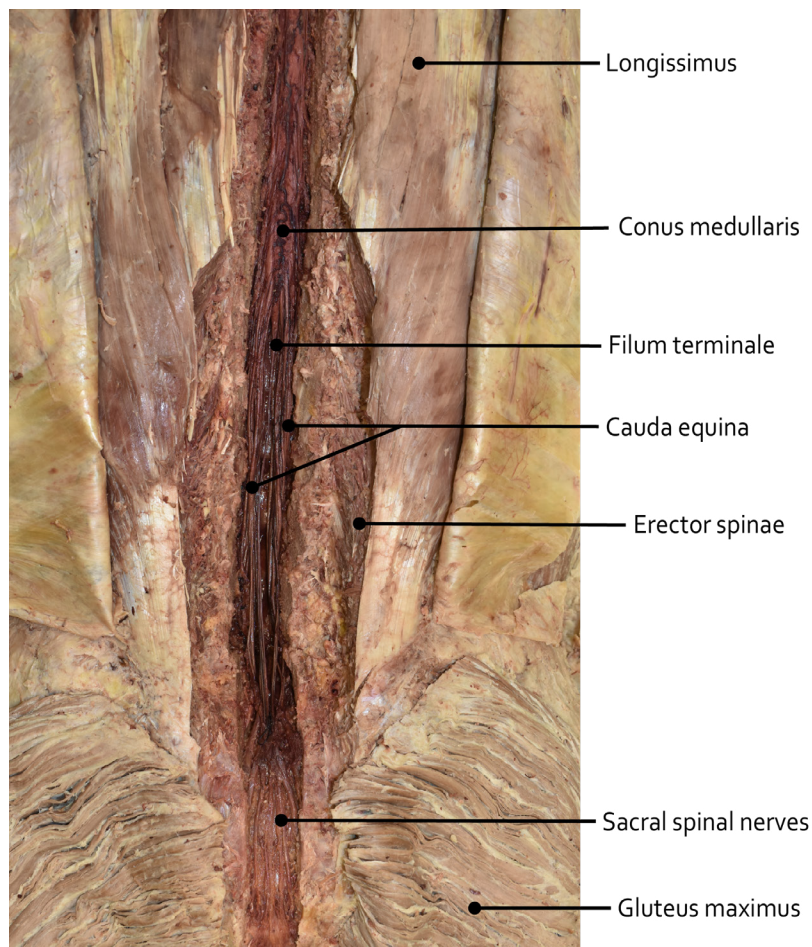
- ☐ Spinal dura, arachnoid and pia
- ☐ Subarachnoid space and epidural space
- ☐ Cauda equina and filum terminale

Be able to indicate, in children and adults, at which vertebral level the **spinal cord** terminates:

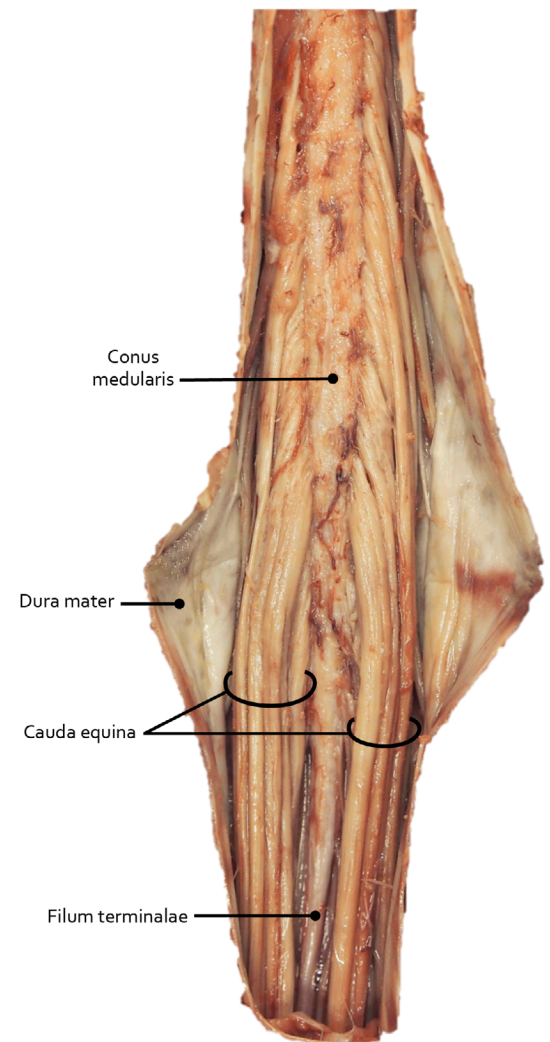
and at which vertebral level the **subarachnoid space** terminates:



Cervical Spinal Cord (cross-section)



Dissection of Lumbar Spinal Cord in situ



Terminal Portion of Spinal Cord

Hide Labels

LAB 2 DISSECTOR

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Note: Tables with an even table number will be working on the thoracic region and those with an odd table number will be working on the lumbar region of the vertebral column.

Lumbar Group

1. *Palpate the vertebrae, find vertebral level T12 (the last origin point of trapezius):*
 - Make a rectangular incision, starting with a midline incision at the origin of the trapezius muscle and continue inferiorly until 3 to 4 vertebrae have been exposed
2. *Make vertical incisions one inch on each side of the midline.*
3. *Go as deep as you can until you hit the transverse processes on either side of the midline incision and remove the intrinsic muscles of the back (erector spinae, etc.).*
4. *Using your hammer and chisel, chisel through the laminae of the vertebrae to expose the spinal cord:*
 - You should be able to remove the entire roof of the vertebral canal
5. *Angle the chisel medially and try not to cut through the dura mater underneath.*

Notes:

- You may find the "bone crushers" helpful in cutting through and levering the bone out
 - Make sure you do not enter the abdominal cavity
 - Note any epidural fat external to the dura mater
 - Note spinal ganglia (=dorsal root ganglion, DRG) emerging laterally between two vertebrae and the spinal nerve
6. *Using scissors cut open dura mater medially and reflect the tissue on either side of the incision.*

Note: Dorsal (sensory) and ventral (motor) rootlets and the denticulate ligament which separates the two.

Thoracic Group

1. *Repeat the same steps as above **except:***
2. *Begin incision just below the midline origin of the rhomboid major and superiorly expose 3 to 4 vertebrae as above.*

