

Neuroanatomy

04 Spinal Cord & Brain Stem

Ch 04: Spinal Cord

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4. Chapter: Neuroanatomy 04 Spinal Cord & Brain Stem

1. Neuroanatomy 04 Spinal Cord & Brain Stem Questions

4.1.1. White matter is a collection of myelinated and unmyelinated axons t...

Author: Stephen Voron

White matter is a collection of myelinated and unmyelinated axons that conduct signals from one area of gray matter to another. What cell bodies can be recognized in white matter?

Please choose only one answer:

- Cell bodies of glial cells.
- Cell bodies of ependymal cells.
- Cell bodies of pial cells.
- Cell bodies of neurons.

Check the answer of this question online at QuizOver.com:

Question: [White matter is a collection of myelinated Stephen Vo @University](#)

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4.1.2. The spinal nerves consist of ventral and dorsal roots. Where are th...

Author: Stephen Voron

The spinal nerves consist of ventral and dorsal roots. Where are the cell bodies of the axons in each root?

Please choose only one answer:

- Ventral and dorsal root cell bodies are in ganglia, (clusters of cell bodies outside the CNS).
- Ventral and dorsal root cell bodies are in the gray matter of the cord.
- Ventral root cell bodies are in the gray matter of the spinal cord and dorsal root cell bodies are in ganglia.
- Ventral root cell bodies are in ganglia and dorsal root cell bodies are in the gray matter of the spinal cord.

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4.1.3. How do the meninges cover the spinal cord?

Author: Stephen Voron

How do the meninges cover the spinal cord?

Please choose only one answer:

- The pia, arachnoid, and dura cover the spinal cord in tight, closely apposed layers.
- The dura, arachnoid, and pia of the brain and spinal cord are continuous. All three layers loosely cover the spinal cord.
- The dura, arachnoid, and pia all cover the spinal cord; the dura and arachnoid are tightly connected with each other.
- Only the dura mater continues down from the brain to cover the spinal cord, protecting it from the surrounding bone.

Check the answer of this question online at QuizOver.com:

Question: [How do the meninges cover the spinal cord Stephen Vo @University](#)

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4.1.4. The spinal pia forms collagenous ligaments that anchor it to the du...

Author: Stephen Voron

The spinal pia forms collagenous ligaments that anchor it to the dura. These are the denticulate ligaments. What is their spatial relationship to the dorsal and ventral roots?

Please choose only one answer:

- The denticulate ligaments form a scalloped series of attachments between the ventral and dorsal roots in the cervical regions.
- The denticulate ligaments are located below the dorsal roots on each side of the spinal cord.
- The denticulate ligaments form a continuous sheet-like attachment above the dorsal roots.
- The denticulate ligaments attach between the exits and entrances of the ventral and dorsal roots forming each spinal nerve.

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Question: [The spinal pia forms collagenous ligaments Stephen Vo @University](#)

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4.1.5. Concerning spinal nerve C-8, which of the following is true?

Author: Stephen Voron

Concerning spinal nerve C-8, which of the following is true?

Please choose only one answer:

- C-8 enters/exits between vertebrae C6 and C7.
- C-8 enters/exits between vertebrae C7 and C8.
- C-8 enters/exits between vertebrae T1 and T2.
- C-8 enters/exits between vertebrae C7 and T1.

Check the answer of this question online at QuizOver.com:

Question: [Concerning spinal nerve C-8 which of the Stephen Vo @University Ch](#)

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4.1.6. What cord segments comprise the conus medullaris, and what do they ...

Author: Stephen Voron

What cord segments comprise the conus medullaris, and what do they innervate?

Please choose only one answer:

- The conus consists of lower sacral and a small coccygeal segment that innervates the perineum.
- The conus consists of the lumbar and sacral segments which innervate the lower part of the body from the pelvis down.
- The conus consists of S1-S5 and 3-4 coccygeal segments and innervates the pelvic area.

Check the answer of this question online at QuizOver.com:

Question: [What cord segments comprise the conus medullaris Stephen @University](#)

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4.1.7. What does the cauda equina (Latin for horse's tail) represent?

Author: Stephen Voron

What does the cauda equina (Latin for horse's tail) represent?

Please choose only one answer:

- The ventral roots that extend from the lower spinal segments down to their various exits from the vertebral canal.
- The dorsal roots that extend from their various entrances into the vertebral canal up to the proper segment of the cord.
- Both dorsal and ventral roots within the subarachnoid space below the conus medullaris.

Check the answer of this question online at QuizOver.com:

Question: [What does the cauda equina Latin for horse's Stephen Vo @University](#)

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4.1.8. Which of the following is/are true regarding this structure?

Author: Stephen Voron

Which of the following is/are true regarding this structure?

Please choose only one answer:

- It is attached to the conus medullaris.
- It is a continuation of the pia and ependyma of the spinal cord.
- It penetrates the dura at the end of the dural sac (vertebra S2).
- It terminates as the coccygeal ligament fusing with the periosteum of the coccyx.
- All of the above.

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4.1.9. If it were necessary, as it sometimes is, to insert a needle into t...

Author: Stephen Voron

If it were necessary, as it sometimes is, to insert a needle into the subarachnoid space to sample CSF, where is a relatively safe point for needle insertion?

Please choose only one answer:

- Between C-7 and T-1.
- Between L-3 and L-4.
- Between L-1 and L-2.
- Between T-12 and L-1.

Check the answer of this question online at QuizOver.com:

Question: [If it were necessary as it sometimes is to Stephen Vo @University](#)

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4.1.10. What is true regarding the cervical (circle) and lumbar enlargement...

Author: Stephen Voron

What is true regarding the cervical (circle) and lumbar enlargements of the spinal cord? (Scroll down to see all choices).

Please choose only one answer:

- The extensive innervation required by neck structures, such as the larynx and pharynx, and by lower abdominal structures such as the bladder and reproductive organs cause an increase in gray and white matter.
- The cord is larger because an increased number of axons and cell bodies is required in the cervical and lumbar regions to innervate the skin and muscles of the appendages.
- There is an increase in white matter in the cervical region and an increase in gray matter in the lumbar region.
- There is an increase in gray matter in the cervical region because of the increased motor innervation of the arms and an increase in white matter in the lumbar region because of the increased sensory innervation of the genitalia.

Check the answer of this question online at QuizOver.com:

Question: [What is true regarding the cervical circle Stephen Vo @University](#)

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4.1.11. Consider this nucleus, where do its axons exit the medulla?

Author: Stephen Voron

Consider this nucleus, where do its axons exit the medulla?

Please choose only one answer:

- Between the pons and medulla.
- Laterally, between the ventral and dorsal roots, these axons are then known as "lateral roots".
- Between the two pyramids.
- At the sulcus limitans.
- Between the pyramid and the olive.

Check the answer of this question online at QuizOver.com:

Question: [Consider this nucleus where do its axons exit Stephen @University](#)

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4.1.12. How do the axons of the nucleus of XII exit the cranial cavity?

Author: Stephen Voron

How do the axons of the nucleus of XII exit the cranial cavity?

Please choose only one answer:

- Through the Hypoglossal canal.
- Through the Foramen Magnum.
- Through the Stylomastoid Foramen.
- Through the Condylod canal.
- Through the Jugular Foramen.

Check the answer of this question online at QuizOver.com:

Question: [How do the axons of the nucleus of XII exit Stephen Vo @University](#)

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4.1.13. Nucleus XII: where do its axons terminate?

Author: Stephen Voron

Nucleus XII: where do its axons terminate?

Please choose only one answer:

- On the palatoglossus and other striated muscles of the tongue as well as the palatine glands.
- On the intrinsic and extrinsic muscles of the tongue and taste buds on the anterior two thirds of the tongue.
- On the genioglossus and other muscles of the tongue.
- On the striated tongue muscles and pharyngeal mucosa.

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Question: [Nucleus XII: where do its axons terminate Stephen Vo @University](#)

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4.1.14. Where do the axons of this nucleus terminate?

Author: Stephen Voron

Where do the axons of this nucleus terminate?

Please choose only one answer:

- Muscles of pharynx and larynx.
- Postganglionic parasympathetic cell bodies.
- Smooth muscle of viscera.

Check the answer of this question online at QuizOver.com:

Question: [Where do the axons of this nucleus terminate Stephen Vo @University](#)

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4.1.15. This nucleus contributes axons to CN's IX and X. Which one of the f...

Author: Stephen Voron

This nucleus contributes axons to CN's IX and X. Which one of the following statements is true?

Please choose only one answer:

- This nucleus has to do with the sensory innervation of the larynx and pharynx.
- This nucleus contains cell bodies of axons that provide motor innervation to the infrahyoid muscles.
- Neurons in this nucleus innervate striated muscles of the larynx and pharynx and are therefore critical for both phonation and swallowing.
- This nucleus contains parasympathetic preganglionic cell bodies providing innervation to the smooth muscle in the pharyngeal and esophageal regions.

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Question: [This nucleus contributes axons to CN's IX and Stephen @University](#)

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4.1.16. Of the following nuclei, which is the source of the preganglionic p...

Author: Stephen Voron

Of the following nuclei, which is the source of the preganglionic parasympathetic axons traveling with this cranial nerve?

Please choose only one answer:

- Inferior salivatory nucleus.
- Facial nucleus.
- Superior salivatory nucleus.
- Nucleus ambiguus.
- Dorsal motor nucleus of vagus.

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Question: [Of the following nuclei which is the source Stephen Vo @University](#)

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4.1.17. Of the following muscles, which is innervated by axons from this nu...

Author: Stephen Voron

Of the following muscles, which is innervated by axons from this nucleus?

Please choose only one answer:

- Buccinator.
- Lateral pterygoid.
- Orbicularis oris.
- Levator palpebrae superioris.

Check the answer of this question online at QuizOver.com:

Question: [Of the following muscles which is innervated Stephen Vo @University](#)

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4.1.18. Our facial and pharyngeal muscles are derived from the muscles of t...

Author: Stephen Voron

Our facial and pharyngeal muscles are derived from the muscles of the embryonic gill arches. Are there any other examples?

Please choose only one answer:

- No, there are not any other branchiomic (gill) arch muscles.
- Yes, the tensor palatini, stapedius, splenius capitis longus and the intrinsic muscles of the larynx are also branchiomic.
- Yes, the cricothyroid, muscles of mastication, tensor tympani, stapedius and the intrinsic muscles of the larynx are also branchiomic.

Check the answer of this question online at QuizOver.com:

Question: [Our facial and pharyngeal muscles are derived Stephen @University](#)

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4.1.19. Name this nucleus:

Author: Stephen Voron

Name this nucleus:

Please choose only one answer:

- Hypoglossal.
- Dorsal Motor Nucleus of X.
- Ambiguus.
- Spinal Accesory Nucleus.

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Question: [Name this nucleus: Stephen Vo @University of Utah Ch 04: Spinal Quest](#)

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4.1.20. This foramen is:

Author: Stephen Voron

This foramen is:

Please choose only one answer:

- Foramen Rotundum.
- Foramen Ovale.
- Stylomastoid Foramen.
- Internal Auditory Meatus.

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Question: [This foramen is: Stephen Vo @University of Utah Ch 04: Spinal Cord](#)

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4.1.21. The abducens nucleus innervates:

Author: Stephen Voron

The abducens nucleus innervates:

Please choose only one answer:

- The lateral rectus and obicularis oculi muscles.
- All the muscles of facial expression.
- Muscles derived from gill arches.
- Postganglionic parasympathetic neurons.
- Striated muscle for lateral gaze.

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4.1.22. The muscle lettered B is innervated by:

Author: Stephen Voron

The muscle lettered B is innervated by:

Please choose only one answer:

- Cranial Nerve III.
- Cranial Nerve IV.
- Cranial Nerve VI.

Check the answer of this question online at QuizOver.com:

Question: [The muscle lettered B is innervated by: Stephen Vo @University of](#)

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