

Neuroanatomy

05 Somesthetic Sensation

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4. Chapter: Neuroanatomy 05 Somesthetic Sensation

1. Neuroanatomy 05 Somesthetic Sensation Questions

4.1.1. What is a dermatome?

Author: Stephen Voron

What is a dermatome?

Please choose only one answer:

- The area of skin supplied by axons from a single ventral horn.
- A surgical instrument used to section bodies.
- The area of skin innervated by a dorsal root ganglion.
- A region of sensory-motor cortex associated with one area of skin.
- Any skin area densely innervated by C-fibers.

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

Question: [What is a dermatome Stephen Vo @University of Utah Ch 05: Somesthetic](#)

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4.1.2. What is the significance of the dermatome?

Author: Stephen Voron

What is the significance of the dermatome?

Please choose only one answer:

- It enables the clinician to differentially diagnose muscle disease.
- It enables the clinician to locate lesions affecting the spinal cord or spinal nerves.
- It allows a clear distinction between a distal and proximal lesion along a peripheral nerve.
- All of the above.
- None of the above.

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

Question: [What is the significance of the dermatome Stephen Vo @University](#)

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4.1.3. Regarding this poorly myelinated tract:

Author: Stephen Voron

Regarding this poorly myelinated tract:

Please choose only one answer:

- It consists of first order sensory axons with ascending and descending branches which run longitudinally for 1 to 3 segments.
- It is made up of second order sensory axons which ascend ipsilaterally to the gracile nucleus in the medulla.
- It contains axons responsible for the monosynaptic reflex.

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Question: [Regarding this poorly myelinated tract: Stephen Vo @University of](#)

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4.1.4. What forms this commissure of the spinal cord?

Author: Stephen Voron

What forms this commissure of the spinal cord?

Please choose only one answer:

- Second order spinothalamic tract (anterolateral system) axons.
- Local interneurons.
- Both of the above.
- Neither of the above.

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

Question: [What forms this commissure of the spinal cord Stephen @University](#)

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4.1.5. Should the region of the central canal expand, as it did in this ca...

Author: Stephen Voron

Should the region of the central canal expand, as it did in this case of syringomyelia, what will happen ?

Please choose only one answer:

- The local monosynaptic Ia motoneuron reflexes will be impaired or missing.
- The pressure may impair or destroy the anterior white commissure and hence cause a bilateral loss of pain and thermal sensation in the corresponding dermatomes.
- The pressure will destroy the dorsal columns resulting in a loss of fine touch and vibratory sense.
- There will be no clinical problem.

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

Question: [Should the region of the central canal expand Stephen @University](#)

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4.1.6. How are the dermatomes represented in the anterolateral system?

Author: Stephen Voron

How are the dermatomes represented in the anterolateral system?

Please choose only one answer:

- They are represented somatotopically with the sacral axons more superficial, and the cervical segments more medial.
- There is no somatotopic organization of the anterolateral system.
- They are represented somatotopically such that as one progresses from the pial surface inward one encounters cervical, thoracic, lumbar and then sacral axons.

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

Question: [How are the dermatomes represented in the Stephen Vo @University](#)

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4.1.7. In the medulla, where is the anterolateral system located with resp...

Author: Stephen Voron

In the medulla, where is the anterolateral system located with respect to the nucleus ambiguus?

Please choose only one answer:

- It is dorsal to the nucleus ambiguus.
- It is medial to the nucleus ambiguus.
- It is ventral to the nucleus ambiguus.
- It is lateral to the nucleus ambiguus.

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

Question: [In the medulla where is the anterolateral Stephen Vo @University](#)

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4.1.8. What is the functional significance of the dorsolateral fasciculus ...

Author: Stephen Voron

What is the functional significance of the dorsolateral fasciculus or Tract of Lissauer?

Please choose only one answer:

- It is a tract associated with the sympathetic chain.
- It contains axons involved in spinal reflexes and intersegmental integration.
- Both.
- Neither.

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

Question: [What is the functional significance of the Stephen Vo @University](#)

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4.1.9. If this tract is surgically interrupted at the level of the inferio...

Author: Stephen Voron

If this tract is surgically interrupted at the level of the inferior colliculus, what dermatomes would be affected ?

Please choose only one answer:

- C1 through T5 of the ipsilateral side.
- All dermatomes on the contralateral side.
- All dermatomes on the ipsilateral side.
- T5 through S5 of the contralateral side.
- T5 through S5 of the ipsilateral side.

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

Question: [If this tract is surgically interrupted at Stephen Vo @University](#)

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4.1.10. The cuneate fasciculus is located at this level of the spinal cord.

Author: Stephen Voron

The cuneate fasciculus is located at this level of the spinal cord.

Please choose only one answer:

- True.
- False.

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

Question: [The cuneate fasciculus is located at this Stephen Vo @University](#)

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4.1.11. The dorsal columns are organized:

Author: Stephen Voron

The dorsal columns are organized:

Please choose only one answer:

- Somatotopically with the medial fibers representing the cervical and the lateral fibers representing sacral dermatomes.
- With medial fibers representing sacral regions and lateral fibers cervical regions.
- There is NO somatotopic organization of the dorsal columns.

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

Question: [The dorsal columns are organized: Stephen Vo @University of Utah](#)

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4.1.12. Where are the cells of origin for the circled axons ?

Author: Stephen Voron

Where are the cells of origin for the circled axons ?

Please choose only one answer:

- In the dorsal horn of the spinal cord.
- In the dorsal root ganglia.
- In the dorsal column nuclei.
- In the intermediolateral cell column.

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

Question: [Where are the cells of origin for the circled Stephen @University](#)

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4.1.13. A patient complains of numbness of the fingers which progresses to ...

Author: Stephen Voron

A patient complains of numbness of the fingers which progresses to loss of temperature sensation bilaterally. This condition results from:

Please choose only one answer:

- Damage to the dorsal columns.
- Bilateral compression of the anterolateral system.
- Damage to the spinothalamic tract.
- Interruption of the anterior white commissure.

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

Question: [A patient complains of numbness of the fingers Stephen @University](#)

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4.1.14. Occlusion of this artery is often associated with:

Author: Stephen Voron

Occlusion of this artery is often associated with:

Please choose only one answer:

- Aphasia.
- Slurred speech.
- Hoarseness.
- Stuttering.

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

Question: [Occlusion of this artery is often associated Stephen Vo @University](#)

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4.1.15. Axons in this tract convey information from dermatones:

Author: Stephen Voron

Axons in this tract convey information from dermatones:

Please choose only one answer:

- On the ipsilateral side of the body.
- On the contralateral side of the body.
- From both sides of the body.

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

Question: [Axons in this tract convey information from Stephen Vo @University](#)

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4.1.16. At his level the cuneate fasciculus is:

Author: Stephen Voron

At his level the cuneate fasciculus is:

Please choose only one answer:

- Present in the dorsal columns.
- Absent in the dorsal columns.

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

Question: [At his level the cuneate fasciculus is: Stephen Vo @University of](#)

Flashcards:

<http://www.quizover.com/flashcards/at-his-level-the-cuneate-fasciculus-is-stephen-vo-university-of?pdf=1505>

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4.1.17. Sensory dissociation is the loss of pain and temperature with spari...

Author: Stephen Voron

Sensory dissociation is the loss of pain and temperature with sparing of vibration, joint position, and fine touch. By knowing the location of the two pathways that carry the information, and knowing where the second order axons cross, you conclude that this will most likely occur at which level:

Please choose only one answer:

- Thalamus.
- Midbrain.
- Pons.
- Medulla.

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

Question: [Sensory dissociation is the loss of pain and Stephen Vo @University](#)

Flashcards:

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4.1.18. Unilateral obstruction of the deep thalamic perforating vessels wou...

Author: Stephen Voron

Unilateral obstruction of the deep thalamic perforating vessels would result in:

Please choose only one answer:

- Loss of all somatic sensation ipsilaterally.
- Loss of all somatic sensation contralaterally.
- Loss of all fine touch and vibration sensation ipsilaterally.
- Loss of all fine touch and vibration sensation contralaterally.

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

Question: [Unilateral obstruction of the deep thalamic Stephen Vo @University](#)

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4.1.19. A patient suffers loss of sensation from the face and upper body. T...

Author: Stephen Voron

A patient suffers loss of sensation from the face and upper body. The obstructed vessel is most likely:

Please choose only one answer:

- Anterior cerebral artery.
- Middle cerebral artery.
- Posterior cerebral artery.
- Internal carotid artery.

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

Question: [A patient suffers loss of sensation from the Stephen Vo @University](#)

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