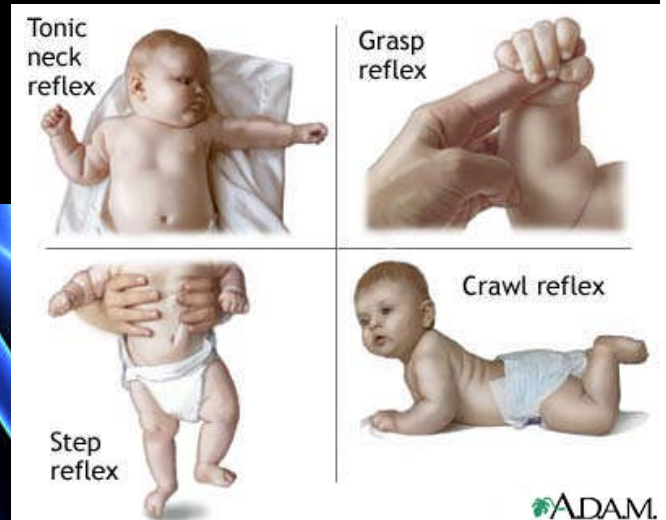
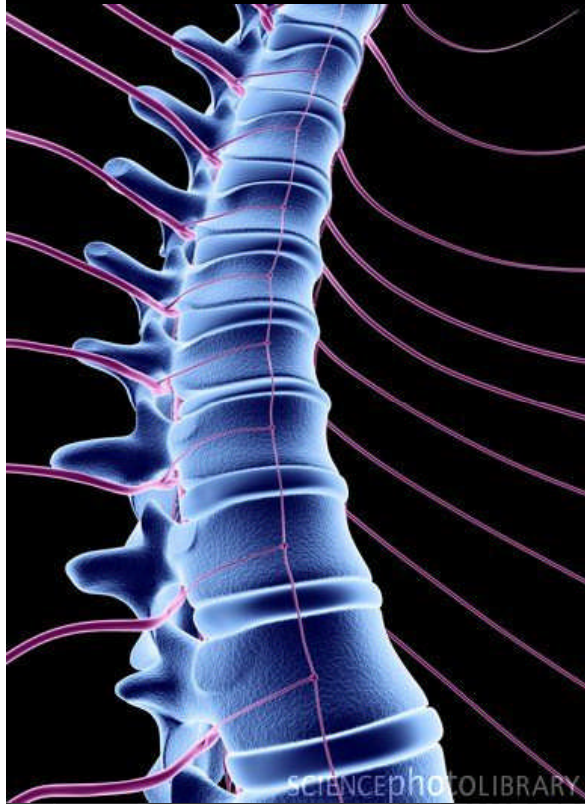


# THE SPINAL CORD, REFLEXES, AND THE SPINAL NERVES



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# Question 1



- How many Spinal Nerves (total) are present in the human body? \_\_\_\_\_
- Name the four regions and the amount of nerves present within that particular region.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

# Question 2

-  Individual reflexes may vary in complexity. \_\_\_\_\_  
\_\_\_\_\_ involve *simple* neuronal pathways in which  
sensory neurons synapse directly with motor  
neurons.
-  \_\_\_\_\_ \_\_\_\_\_ involve more complex pathways and  
integrative centers, with one or more *interneurons*  
between the sensory and motor neurons.

### Question 3

The \_\_\_\_\_ is/are somatic or musculocutaneous areas served by fibers from specific spinal nerves.

- A. Dermatomes
- B. Pia Mater
- C. Dura Mater
- D. Cauda Equina

# QUESTION 4

- ▶ Define, in your own words, the definition of a reflex.
  - ▶ *Think:*
    - ▶ *Stimulus*
    - ▶ *Threshold*
- ▶ List the five basic components of a reflex arc.

## QUESTION 5

What parts of the spinal cord do nerves of the limbs enter and leave?

- A. Cervical and lumbosacral enlargements
- B. Lumbar enlargement
- C. Cauda equina
- D. Cervical enlargement

While performing the 'Single Ladies' dance ,  
Beyonce trips on her heel, twists one ankle by  
falling off 2 steps of the stage but manages to shift  
her weight back in order to discontinue the fall.  
What reflexes did she demonstrate to the  
audience? Be specific!

- A. Polysynaptic reflex and withdrawal reflex
- B. Monosynaptic and cross extensor reflex
- C. Withdrawal reflex and cross extensor reflex
- D. withdrawal and cross extensor reflex

## Question 6

# Question 7

Jeff has given a student in this class, a blow to the stomach. The victim is now feeling he/she can hardly breath. Which plexus has been disturbed?

Hint : near the pancreas

- A. Solar plexus
- B. Lumbar
- C. Sacral
- D. Cervical



## Question 8

A resident diagnosed a patient who improperly used their crutches, resulting in crutch paralysis. What nerve has been compressed and damaged?

Did he make the correct decision?



- A. Axillary nerve
- B. Ulnar Nerve (correct)
- C. Radial nerve
- D. Median Nerve

## Question 9

Name the space between the Dura Mater and the arachnoid mater; contains small amounts of serous fluid.

# Question 10

Name the space that separates the dura mater from the periosteum of the vertebral canal; contains blood vessels, connective tissue, and fat.

# Question 11

- We mentioned earlier that a reflex is a automatic response to a stimulus produced by a reflex arc. Name five major reflexes.

## Question 12

- Two part question
  - Name the five major plexuses formed by the spinal nerves.
  - Name five major nerves of the brachial plexus.

# Question 13

What is the space which contains the CSF, located between the Arachnoid Mater and the Pia Mater?

# Question 14

Conus Meullaris and numerous nerve extending inferior from it make up this Spinal Cord Component.

## QUESTION 15

What are the deep clefts that partially separate the two halves of the Spinal Cord?







## QUESTION 16

What innervates most of the deep muscles of the dorsal trunk and is responsible for the movement of the vertebral column?

## Question 17

The ventral root enlarges to form the ganglion.

- a. true
- b. false

# Question 18

What is found in the central canal?

- a. Ependymal cells
- b. Sensory neurons
- c. CSF
- d. both b and c
- e. both a and c



# Question 19

Put these in order of how the reflex arc works:

- a. afferent neurons
- b. interneurons
- c. receptor
- d. efferent neurons
- e. effector

## Question 20

What role do spinal cord interneurons play in reflexive withdrawal from a painful stimulus?

- a. inhibit or excite motor neurons
- b. they innervate opposing pairs of muscles and control their activity
- c. they inhibit sensory neurons so that they no longer respond to the painful stimulus