

# Flex Therapist CEUs

## Upper Motor Neuron Lesions and Prolonged Ankle Stretching

1. The most remarkable results associated with the Upper Motor Neuron lesions (UMN) such as Stroke (CVA), Spinal Cord Injury and traumatic brain injuries are which of the following?

- A. Gait irritability and numbness
  - B. Muscle spasticity and numbness
  - C. Gait irritability and muscle spasticity
  - D. Hypotonia
- 

2. The inability of stroke patients to perform active dorsiflexion results from all of the following, except:

- A. The spastic gastrocnemius
  - B. The spastic soleus
  - C. Weakness of the tibialis posterior
  - D. Weakness of the tibialis anterior
- 

3. Stretching can help prevent complications following UMN lesions that can be explained by:

- A. The neurophysiological effects
  - B. The effects of viscoelastical properties
  - C. Stiffness and ROM
  - D. Stretching can help prevent complications following UMN lesions that can be explained by the neurophysiological effects, the effects of viscoelastical properties, stiffness and ROM, and preventing contractures
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4. Why is it important to conduct studies during the chronic stage of recovery?

- A. The chronic stage avoids the confounding effect of rapid spontaneous recovery.
  - B. The subjects at this stage have already reached the plateau stage of their recovery which avoids contamination of co-intervention.
  - C. It important to conduct studies during the chronic stage of recovery for both (a) and (b).
  - D. Studies should not be conducted during the chronic stage of recovery.
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5. After using a single session of isokinetic or isotonic stretching, the changes in gait parameters among patients reached a statistical significance, suggesting that a single session of 20 minutes of stretching is sufficient to make significant changes in the gait kinetic and kinematic parameters.

- A. True
  - B. False
- 

6. After a 4-week intervention program, a randomized non-controlled study showed a significant change in all of the following, except:

- A. Active range of motion
  - B. Passive range of motion
  - C. Ankle stiffness degree
  - D. Comfortable walking speed
- 

7. Spasticity reduction is considered one of the most desired outcomes in rehabilitation in general and specifically after using stretching.

- A. True
  - B. False
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8. A study showed that the degree of spasticity may change according to the position of the subject (knee flexed or extended), which might affect the task being performed.

- A. True
  - B. False
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9. It has been reported that an application of prolonged muscle stretch for \_\_\_\_\_ minutes using a constant stretching force, approximately 80% of the torque measured at the maximal passive ROM dorsiflexion position, significantly reduces both components of the ankle joint torque.

- A. 15
  - B. 30
  - C. 45
  - D. 60
- 

10. Electromyography studies have shown that the reflex-mediated increase in muscle tone reaches its maximum between 1 and \_\_\_\_\_ months after stroke, after which the eventual increased resistance to passive stretch is proposed to be due to intrinsic changes of the muscles.

- A. 3
  - B. 6
  - C. 9
  - D. 12
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