Flex Therapist CEUs

Spinal Cord Injury - Correcting Seated Posture

1. The inability to control the motions of the spine and pelvis can:

A. Severely compromise upper-limb workspace.
B. Increase the risk of pressure sore development.
C. Adversely affect manual wheelchair propulsion and completion of many activities of daily living.
D. All of the above.

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2. A strategy for compensating for paralysis of the core hip and trunk muscles is to adopt a 'C'-shaped kyphotic posture, which achieves static stability by shifting the center of mass of the trunk backward within the base of support. This posture, however, can contribute to which of the following?

A. Reduced ventilation.
B. Increased pressure on bony prominences, internal organs, and intervertebral discs.
C. Pressure sores, skeletal deformities, and back pain.
D. All of the above.

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3. Stiffening the otherwise paralyzed trunk and hip extensor muscles with continuous electrical stimulation can correct kyphotic seated posture, expand bimanual workspace, improve ventilation, alter interface pressures, statically stabilize the trunk, and improve manual wheelchair propulsion efficiency.

A. True
B. False

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4. When the controller is active with a threshold set to approximately 42 degrees, the subject is able to lean forward to what degree before the higher level of stimulation automatically returns them to an erect seated posture?

A. 42 degrees
B. 57 degrees
C. 69 degrees
D. 80 degrees

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5. The controller is designed to facilitate movement to a desired set point and maintain a specific seated posture away from nominal sitting.

A. True
B. False

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6. Analysis of the upper-limb effort showed that any type of stimulation significantly reduces the amount of force exerted by the arms to return to an upright posture.

A. True
B. False

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7. With the controller active, a significant reduction in the upper-limb effort required to restore an erect posture implies that:

A. The subject's muscles reached full recruitment at lower levels of stimulation and the righting pattern was unable to provide a sufficient increment in muscle force.
B. Continuous stimulation pattern may have improved posture by stiffening the subject's trunk rather than extending it.
C. Both (A) and (B).
D. None of the above.

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8. This control scheme may be more beneficial for individuals with lower-level injuries who have more intact voluntary control.

A. True
B. False
