NPTE Stroke Rehab Quick Reference

ANPT Student Corner

The ANPT Student Corner offers concise, clinically focused videos and podcasts to help students translate evidence-based neurorehabilitation concepts into practice. Topics include spasticity management, gait impairments, assistive device use, and more. These resources are especially useful for preparing for NPTE-style reasoning and clinical applications. Link here

Core NPTE Resources (FSBPT)

NPTE Candidate Handbook & Sample Questions: here

NPTE-PT Test Content Outline: here

NPTE-PTA Test Content Outline: here

Practice Exam & Assessment Tool (PEAT): here

The NPTE reflects current physical therapy practice, supported by survey data on commonly used textbooks. Textbooks Referenced in Current Practice: here

Core Set of Outcome Measures (ANPT)

6 recommended outcome measures across settings/populations: here

- Berg Balance Scale
- 10-Meter Walk Test
- 6-Minute Walk Test
- Functional Gait Assessment
- Five Times Sit to Stand Test
- Activities-specific Balance Confidence (ABC) Scale

Stroke EDGE Documents

Summarize evidence-based outcome measures for individuals' post-stroke (balance, gait, motor recovery, participation, quality of life). Here

Clinical Practice Guidelines (ANPT: Stroke Specific)

• Locomotor CPG (Hornby, 2020): Evidence-based strategies for improving walking after chronic stroke, incomplete SCI, and TBI.

• AFO/FES CPG (Johnston, 2021): Guidance on device selection post-stroke; both AFO and FES may improve gait and function, with choice individualized and reassessed over time.

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Sample NPTE-Style Questions (Student Corner Inspired)

INTERVENTION QUESTION EXAMPLES:

1. A patient post-stroke demonstrates increased extensor tone in the paretic gastrocnemius during stance. Which intervention is MOST appropriate in the early stage of recovery?

A) Sustained standing stretch of the plantarflexors
B) Repetitive, task-specific gait training with manual cues
C) Serial casting to prevent contracture
D) Isolated stretching during strengthening sessions

Rationale: Best answer is (B). Functional, repetitive gait practice addresses abnormal tone in context, promotes motor learning, and enhances neuroplasticity. Supported by evidence, which recommend task-specific training as the most effective early stroke rehab strategy. Sustained stretch (A) may be useful for tone inhibition, but passive, not optimal as the primary early recovery intervention. Serial casting (C) is used for fixed contracture prevention/management, not first-line in early recovery with emerging tone. Stretching (D) as part of exercise can help maintain flexibility, but it is not a primary strategy to reduce abnormal tone or retrain gait. These option addresses impairments at the body-structure level but does not directly target the activity limitation (gait). ***See Stroke SIG: Spasticity After Stroke: A Student-Focused Episode – Episode 27***

2. What is the PRIMARY benefit of a hemiwalker acutely post-stroke?

A) Provides long-term independence for all mobility needs
B) Promotes weight-bearing through paretic side
C) Provides maximum stability but limits pelvic rotation
D) Eliminates all compensatory movement patterns

Rationale: Best answer is (B) A hemiwalker allows for early gait training by encouraging loading of the affected limb while providing stability. This supports neuroplastic recovery and reduces learned nonuse. (A) is not correct, as hemiwalker is typically a transitional device for early recovery, not a long-term solution. Independence is usually achieved with a less restrictive device (cane) or no device over time. (C) is not correct, hemiwalkers do provide stability, but not "maximum stability" (which would be a walker). The limitation of pelvic rotation is not the primary consideration in acute post-stroke rehab. No assistive device fully eliminates compensations (D); rather, they reduce fall risk and encourage safer mechanics while recovery progresses. ***See Stroke SIG student corner: Episode 9 Part 1: Hemiwalkers Acutely Post-Stroke***

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EXAMINATION QUESTION EXAMPLE :

3. A patient demonstrates hip hiking and circumduction during swing on the hemiparetic side. What impairments MOST likely underlie this gait pattern?

A) Weak hip flexors and plantarflexor hypertonicity
B) Hamstring contracture and glute med weakness
C) Knee hyperextension and limited ankle dorsiflexion
D) Quad weakness with excessive dorsiflexion

Rationale: Best answer is (A). Hip hiking and circumduction are common compensations for inadequate limb clearance in swing. Weak hip flexors limit limb advancement; plantarflexor hypertonicity restricts dorsiflexion, increasing the need for compensatory strategies. Hamstring contracture (B) would cause limited knee extension, not primarily circumduction. Gluteus medius weakness leads to Trendelenburg gait, not hip hiking/circumduction. Knee hyperextension (C) occurs in stance due to quadriceps weakness or plantarflexor spasticity, not swing. Limited dorsiflexion can impair clearance, but without hip flexor weakness this would more likely cause steppage gait (excessive hip/knee flexion), not circumduction. Quadriceps weakness (D) contributes to difficulty controlling knee extension in stance, not swing clearance. ***See Shumway-Cook, chapter 15***

4. A physical therapist was examining postural control in a post-stroke patient. The therapist applied an unexpected nudge to the patient's mid-thoracic area. What type of postural control was being examined?

A) Reactive postural control
B) Proactive postural control
C) Sensory integration
D) Static balance

Rationale: Best answer is (A). Reactive postural control refers to automatic, compensatory responses to an external disturbance, such as an unexpected nudge. These strategies occur after the perturbation to restore balance (e.g., stepping, trunk righting). Proactive (B) postural control is anticipatory—engaging muscles before a predictable movement or self-initiated disturbance, such as activating core muscles before lifting an object. The scenario describes an unexpected, externally applied nudge, so proactive control does not apply. Sensory integration (C) involves using and weighting information from visual, vestibular, and somatosensory systems to maintain balance. While important, the therapist's action in this case specifically tested the patient's *response* to a perturbation rather than their ability to integrate sensory inputs. Static balance (D) refers to maintaining a steady position (e.g., quiet sitting or standing without perturbations). The therapist was not assessing quiet stance, but instead the patient's capacity to recover from an externally applied push. ***See Shumway-Cook, chapter 7***

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FOUNDATIONS FOR EVAL/DIFFERENTIAL DX/PROGNOSIS QUESTION EXAMPLE:

5. A patient who had a stroke presented with paralysis of the tongue on the lesioned side and paralysis of the arm and leg on the side contralateral to the lesion. What type of stroke or stroke syndrome is this presentation consistent with?

*A) Vertebrobasilar Artery Syndrome
B) Middle Cerebral Artery Stroke
C) Lacunar Stroke
D) Internal Carotid Artery Syndrome

Rationale: Best answer is (A). Vertebrobasilar artery syndrome, specifically medial medullary syndrome, produces ipsilateral tongue weakness (due to hypoglossal nerve involvement) and contralateral hemiparesis of the arm and leg (due to corticospinal tract involvement). This pattern matches the presentation described. Middle cerebral artery stroke (B) typically presents with contralateral face/arm weakness greater than leg involvement, along with potential aphasia or neglect, but not ipsilateral tongue paralysis. Lacunar stroke (C) produces small vessel infarcts leading to pure motor or pure sensory syndromes, but does not cause cranial nerve signs like tongue weakness. Internal carotid artery syndrome (D) can cause large cortical deficits or MCA distribution signs but again does not typically produce ipsilateral tongue paralysis with contralateral hemiparesis. ***See O'Sullivan & Schmitz, chapter 15***

6. A physical therapist in an inpatient setting examined a patient who had a stroke two days prior to the exam. The therapist wanted to administer a test that would predict discharge setting. Which of these outcome measures would BEST help predict discharge setting?

A) Orpington Prognostic Scale
B) Stroke Impact Scale
C) Berg Balance Test
D) Fugl-Meyer Motor Test

Rationale: Best answer is (A). The Orpington Prognostic Scale is specifically designed to predict discharge destination after stroke when administered in the early acute phase (within the first 2 weeks). It combines motor, proprioception, balance, and cognition scores, and is recommended by StrokeEDGE for prognosis and discharge planning. The Stroke Impact Scale (B) is a patient-reported outcome measure that evaluates perceived participation and quality of life post-stroke; it is not designed for predicting discharge setting. The Berg Balance Test (C) measures static and dynamic balance in standing but does not provide predictive value for discharge planning. The Fugl-Meyer Motor Test (D) is a detailed impairment-based measure of motor recovery after stroke, useful for tracking progress but not intended to predict discharge setting. ***See Stroke EDGE documents***

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