

# STROKE

## Fundamental Items Checklist (PHASE A):

- ☐ Clinical presentation based on vessel or location ACA, MCA, PCA, PICA, AICA, basilar, lacunar infarcts
- ☐ Pathophysiology of ischemic, hemorrhagic, aneurysm, A-V malformation
- ☐ Lacunar infarcts and common sites
- ☐ Lacunar infarcts and common syndromes (pure motor hemiparesis, pure sensory stroke, dysarthria “clumsy hand,” and ataxic hemiparesis)
- ☐ Cardiac complications following stroke
- ☐ Influences on intracranial pressure (e.g. position changes, volume of blood, CSF pressure)
- ☐ Cortical lobe function: parietal lobe (and sensory cortex), temporal lobe, insula
- ☐ Lateral, 3rd, and 4th ventricle location, function, and pathophysiology
- ☐ Frontal lobe function: motor cortex, precentral, superior frontal, middle frontal, and inferior frontal gyrus
- ☐ Sensory cortex, visual cortex
- ☐ Right versus Left hemisphere lesions
- ☐ Visuo-spatial disorders
- ☐ Brainstem function: midbrain, pons, medulla, location & function of cranial nerve nuclei
- ☐ Cranial nerve location, course, and function, how to test
- ☐ Tissue Plasminogen Activator (tPA)
- ☐ Aneurysm, atrial-venous malformation causes, incidence, implications
- ☐ Transient Ischemic Attack (TIA)
- ☐ Central nervous system vasculitis
- ☐ Vascular dementia vs vascular cognitive impairment vs Alzheimer’s Disease

## Articles from the ANPT Resource List (PHASE B):

### Cerebrovascular Accident

- ☐ Clinical Practice Guidelines to Improve Locomotor Function Following Chronic Stroke, Incomplete Spinal Cord Injury, and Brain Injury. Hornby et al, *J Neurol Phys Ther.* 2020
- ☐ A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke, Johnston et al, *J Neurol Phys Ther.* 2021
- ☐ The Effects of Virtual Reality Training on Function in Chronic Stroke Patients: A Systematic Review and Meta-Analysis, Lee et al, *BioMed Research International.* 2019
- ☐ Aerobic Exercise Recommendations to optimize best practices in care after stroke, MacKay-Lyons et al, *Physical Therapy*, 2020
- ☐ Barriers and facilitators to aerobic exercise implementation in stroke rehabilitation: A scoping review, Moncion et al, *J Neurol Phys Ther*, 2020
- ☐ Adding electrical stimulation during standard rehabilitation after stroke to improve motor function. A systematic review and meta-analysis, Sharififar et al, *Ann Phys Rehabil Med.* 2018
- ☐ Robot-assisted therapy for upper extremity motor impairment after stroke: a systematic review and meta-analysis, Wu et al, *Physical Therapy* 2021

### Wheelchair, Seating & Assistive Technology

- ☐ Effectiveness of the Wheelchair Skills Training Program: a Systematic Review and Meta-Analysis, Keeler et al, *Disabil Rehabil Assist Technol*, 2019

- ☐ Power Mobility Training Methods for Children: A Systematic Review, Kenyon et al, *Pediatr Phys Ther*, 2018
- ☐ Aspects of manual wheelchair configuration affecting mobility: a review, Medola et al, *J Phys Ther Sci*, 2014

### Clinical Items Checklist (PHASE C):

- ☐ Recommended Outcome Measures specific to setting and ICF level specific to CVA (if applicable)
- ☐ Cutoff values of Recommended Outcome Measures for fall risk specific to CVA (if applicable)
- ☐ Aerobic exercise recommendations and High Intensity Training for patients with CVA
- ☐ Concept of least restrictive assistive device and least restrictive orthotic
- ☐ Benefits and disadvantages of common devices (e.g. quad cane handles uneven surfaces poorly)
- ☐ ICF level of Recommended Outcome Measures, (e.g. the Berg is an Activity Level measure)
- ☐ Gait speed and how it correlates with functional ability (e.g. what speed is needed for safe community ambulation?) and fall risk cutoff
- ☐ Clinical signs of shoulder subluxation from paresis & precautions if present
- ☐ Arm slings (e.g. Givmohr sling)
- ☐ Shoulder pain with limb paresis vs neurogenic pain conditions
- ☐ Intrinsic vs extrinsic learning
- ☐ Clinical signs of undiagnosed dysphagia and silent aspiration
- ☐ Relationship of dysphagia and pneumonia
- ☐ Risk factors for stroke (modifiable and unmodifiable), how physical therapists can impact stroke risk
- ☐ Prognosis of different forms of stroke (e.g. hemorrhagic vs ischemic)
- ☐ Functional Electrical Stimulation
- ☐ Optimal intensity of exercise to maximize neuroplastic changes
- ☐ Principles that drive neuroplasticity (rehab factors)
- ☐ Indicators for and against the use of AFO and KAFO
- ☐ Modified Ashworth Scale scoring and reliability
- ☐ Indications and contraindications to early mobilization
- ☐ Benefits of early mobilization & negative effects of extended bed rest
- ☐ MRI vs CT scan, advantages and disadvantages of each imaging technique in the context of acute CVA
- ☐ Types of aphasia
- ☐ Types of motor apraxia, speech apraxia, dysphagia, aspiration
- ☐ Agraphia, alexia, hypersomnolence, graphesthesia, prosopagnosia, anomia, topographic disorientation, visual agnosia
- ☐ Clinical signs of embolism/thrombosis (i.e. pulmonary and lower leg)
- ☐ Common gait patterns after hemiparesis (e.g. circumduction, steppage, vaulting, Trendelenburg, etc)
- ☐ Types of feedback and best time to provide feedback
- ☐ Pushers Syndrome (clinical signs and treatment), Wallenberg Syndrome, Horner's Syndrome
- ☐ Weber's Syndrome, Benedict's Syndrome
- ☐ Clinical signs of delirium, Urinary tract infections and association with delirium
- ☐ Continuous monitoring stroke units vs intermittent monitoring

- ☐ Impact on length of hospital stay after stroke
- ☐ Discharge location and decision-making: home, institution, acute rehabilitation, subacute rehabilitation
- ☐ Mortality after stroke (inpatient and outpatient)
- ☐ Screening measures for safety prior to starting high intensity aerobic exercise
- ☐ Constraint Induced Movement Therapy (CIMT)

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