

# LIMITING SECONDARY COMPLICATIONS OF STROKE IN THE LATE ACUTE TO CHRONIC PHASE

Complication	Intervention	Implication
Neurologic recurrent stroke, hemorrhage, seizure	Monitoring and managing comorbidities, risk factors: HTN, DLD, DM, substance use	Identify and recognize neurologic changes early, medically reduce/optimize contributing factors for prevention of future neurologic injury
Thrombotic/embolic events, deep venous thrombosis, pulmonary embolism	Screening dopplers Medical prophylaxis with subcutaneous heparin, lovenox Mobility promotion with SCDs, OOB at least TID	Prevent DVTs/PEs for decreased morbidity, mortality
Dysphagia, malnutrition	Speech/swallow therapy and retraining Nutrition assessment Dietary counseling Feeding tube management	Minimize risk of aspiration (pneumonia, pneumonitis) Optimize nutritional status Improve quality of life
Spasticity	Elevate affected extremities Encourage passive ranging, stretching, strengthening Brace/splint to prevent contracture: e.g. resting hand splints, PRAFOs with kickstands Pharmacology: baclofen (oral or intrathecal), benzodiazepines, dantrolene, clonidine, botulinum toxin	Maximize active range, functionality, independence; maintain passive range for assisted ADLs, hygiene; prevent pain; prevent contracture
Shoulder/hip derangement or dislocation, subluxation, impingement	Elevate affected extremities Encourage passive ranging, stretching, strengthening Clinically assess, examine, image, diagnose Pharmacology: oral or injected analgesics, anti-inflammatories	Maximize active range, functionality, independence; maintain passive range for assisted ADLs, hygiene; prevent pain
Osteoporosis	Nutritional assessment, counseling Physiotherapy with education Pharmacology: nutritional supplements	Reduce the risk of nutritional deficiencies, falls, fractures
Skin breakdown	Turn every 2 hours Cushion pressure dependent areas Reassess and stage wounds regularly Wound care and cleaning daily Nutrition assessment, counseling Pharmacology: barrier topicals, antibiotics/antifungals	Prevent skin breakdown and ulceration Minimize risk of infection or injury, prevent pain
Neurogenic bladder/bowel	Timed voids every 2-4hours Post void residuals ISC volumes > 150 mLs Bladder scan for retention > 6 hours ISC volumes > 350 mLs Education, nutrition, behavioral counseling/training Pharmacology: anticholinergics, alpha blockers, mirabegron, botox	Maximize independence of bowel/bladder programs for both continent and incontinent patients Prevent skin breakdown, infection and injury (UTI, AKI) Prevent constipation, ileus; Improve education of patient and caregivers
Pain CRPS, central, neuropathic	Physiotherapy: desensitization (tactile massage, garments), ranging, strengthening, neurologic retraining Pharmacology: e.g. antiepileptics, SSRIs, SNRIs, TCAs, topicals	Prevent pain, promote functionality and independence Minimize emotional distress
Mental health	Psychologic assessment and counseling Pharmacology: SSRIs, SNRIs, TCAs, anxiolytics	Minimize risk of depression, anxiety, adjustment disorders associated with stroke and functional decline

Abbreviations: ADL, activity of daily living; DLD, dyslipidemia; DM, diabetes mellitus; DVT, deep venous thrombosis; HTN, hypertension; PE, pulmonary embolism; SCD, sequential compression device; PRAFO, pressure relief ankle foot orthosis; SSRI, selective serotonin reuptake inhibitor; SNRI, selective norepinephrine reuptake inhibitor; TCA, tricyclic antidepressant.