Impairments and Functional Limitations:
ADL, IADL, work and leisure impairment
Impaired sit-to-stand, transfers, bed mobility and gait
Hemiparesis, hemiplegia
Impaired postural control
Impaired coordination
Limited activity tolerance and endurance
Fall risk
Sensory deficit
Central post-stroke pain
Language disorders (aphasia, dysarthria, dyspraxia)
Dysphasia
Visual and perceptual impairment
Cognitive impairment
Behavioral disorders (depression, lability, low frustration tolerance, impulsivity)
Bladder and bowel dysfunction
Secondary complications - bio-mechanical shoulder pain (biceps tendonitis, rotator cuff impingement, adhesive capsulitis, tendonitis, shoulder-hand syndrome or subluxation); edema (upper and lower extremity); pressure sores; joint contractures; depression; DVT's; aspiration pneumonia.

Assessments:
Arnadottir OT-ADL Neurobehavioral Evaluation (A-ONE) (Arnadottir 1990)
Assessment of Motor and Process Skills (AMPS) (Fisher et al 1993)
Chedoke-McMaster Stroke Assessment Scale (Gowland 1993)
Modified Ashworth Scale (Bohannon & Smith 1987)
Stroke Impact Scale (Duncan 1999)

Occupational Therapy Intervention:
ADL, IADL, work and leisure training including but not limited to...
- Use of compensatory techniques (task modification; one-handed techniques; hand-over-hand guiding; task segmentation; end chaining).
- Recommend and/or provide adaptive equipment (rocker knife, inner lip plates, holders for books or playing cards, stabilizing devices for activities that traditionally require two-handed performance (e.g., cutting vegetables, cleaning dentures), and keyboards adapted for one-handed computer use.
- Safely incorporate affected extremity with all activities.
- Instruct in pacing and energy conservation strategies.

Train in safe and efficient functional mobility (sit to stand; bed mobility skills; transfers; ambulation and wheelchair mobility) during ADL and IADL tasks.
Occupational Therapy Toolkit

Stroke

Occupational Therapy Intervention:

Improve postural control
• Focus on stability, weight shifting, body awareness, trunk rotation & elongation.
• Have patient turn toward affected side when reaching.
• Set up room so the patient must physically move to their affected side.
• Provide reach-grasp-hold-carry-place activities; in standing and sitting; with and without support.

Provide functional balance activities to increase balance confidence with ADL tasks.
• Graded activities in sitting and standing, supported and unsupported.

Improve upper extremity function
• Use a variety of approaches according to the needs of the patient
• Provide early mobilization and positioning.
• Incorporate task-oriented training.
• Provide opportunities to use and move the arm all day (use of ball bearing feeder, mobile arm support, overhead suspension sling).
• Provide constraint-induced movement therapy (CIMT) for patients who demonstrate at least 20 degrees of wrist extension and 10 degrees of finger extension, and have minimal sensory or cognitive deficits.
• Provide an arm and hand strengthening exercise program (spasticity is not a contraindication)
• Provide weight bearing exercises and activities.
• Functional electrical stimulation
• Electromechanical/robotic devices.
• Mirror therapy

Provide activities and exercises to uninvolved side to prevent loss of ROM and strength.

Manage spasticity
• Prevent contractures (specifically shoulder external rotation, ankle dorsiflexion and hip internal rotation)
• Provide PROM, SROM and stretching exercises
• Proper positioning in bed, chair and during mobility
• Provide splinting to protect hand/wrist. Resting hand splint for flaccid to mild tone. Spasticity splint for moderate to high tone.

Prevent or manage hand edema
• Active self-range of motion exercises in elevation
• Positioning to elevate hand
• Retrograde massage
Occupational Therapy Toolkit

Stroke

**Occupational Therapy Intervention:**

Prevent or manage hand edema
- Gentle grade 1-2 mobilizations for the hand and fingers
- Compression garment

Prevent or manage shoulder pain
- Avoid overaggressive therapy, avoid overhead pulleys
- Mobilize and strengthen the scapula.
- Position arm with cubital fossa facing up, 45° abduction and comfortable external rotation.
- Provide firm support devices such as lap trays and arm troughs
- Range of motion exercises should not move the shoulder beyond 90 degrees of flexion and abduction unless there is upward rotation of the scapula and external rotation of the humeral head.
- Manage orthopedic conditions (biceps tendonitis, impingement syndrome, adhesive capsulitis, rotator cuff tendonitis, shoulder-hand syndrome).
- Functional Electrical Stimulation

Instruct patient and caregivers in proper care of the affected extremity.
- Prevention and control of edema.
- Passive ROM exercises.
- Self-ROM exercises.
- Protection and support of the affected arm during bed mobility, transfers and ambulation using slings, pocket, or by therapist and during wheelchair use by using hemi tray or arm troughs.
- Proper positioning in bed and chair.
- Care and use of positioning splints.

Teach compensatory strategies for perceptual deficits.

Provide cognitive retraining and training in the use of compensatory strategies.

Provide education about fall risk and prevention strategies.

Community Integration
- Address ability to drive safely. Provide referral to driving rehab specialist and/or explore alternative transportation options.
- Vocational rehabilitation strategies to assist the return to work if appropriate
- Leisure and social participation intervention,
- Complete a comprehensive, performance-based home assessment. Recommend and/or provide home and activity modifications.
Occupational Therapy Toolkit

Stoke

Occupational Therapy Intervention:
Educate patient and caregivers about stroke, availability of community resources and encourage participation in support groups.

Assist in developing self-management skills (effective communication, positive coping strategies, stress reduction, physical activity and exercise, medication management, healthy eating, good sleep habits and making informed decisions about medical and alternative treatments, prevention of secondary complications).

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## Occupational Therapy Toolkit

### Stroke

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