3 Body Function – Physical

3.1 Movement and Motor Recovery

There are many considerations that are crucial to promoting safety and optimizing recovery when working with people who have had a stroke. The TACLS Quick Reference Guides were developed from the TACLS resource and can be used as quick reference to help *support healthcare providers* and informal caregivers who may not typically work with and care for people who have had a stroke.

> We recommend reviewing the full **TACLS resource** for more complete information: **strokebestpractices.ca/resources/professional-resources/tacls**

Quick reference guide highlights

- **Always follow the current care plan for the person that you are working with**.
- There are many factors that can influence motor control (the ability to move parts of the body) and recovery after a stroke. It can be a long and frustrating experience. Recovery time after stroke is variable from one person to another.
- Stroke often affects **motor control**. Movement is usually affected on the side of the body opposite to where to stroke occurred in the brain. A stroke in the brainstem can affect movement on both sides of the body.
- Muscles in the face, trunk, arm and leg on the affected side of the body may be weak after a stroke. **Muscle weakness** can vary in severity and lead to difficulty moving a limb, movement in general, difficulty completing activities of daily living (ADL), a painful shoulder, and/or increased risk of falls and potential injuries.
- Stroke can interfere with **muscle tone**. Normal muscle tone enables controlled movements, the ability to hold a position and stops muscles from being pulled down by gravity.
- Often immediately after stroke, muscles become low tone and are in a state of flaccidity. Over time, muscles may develop high tone and lead to spasticity. Both flaccidity and spasticity interfere with moving a limb and movement in general. Always handle flaccid or spastic limbs carefully. See **TACLS – Shoulder Care** and **TACLS – Positioning** for more information.
- **Apraxia** is a motor discoordination and motor planning impairment. It can affect movement on both sides of the body (not just the affected or weak side). Apraxia can affect the ability to carry out daily activities even if the person has the physical ability to perform the movements. See **TACLS – Praxis** for more information.
- **Fatigue** is a very common effect of stroke and can be experienced at any point during recovery. Post-stroke fatigue does not necessarily improve with rest or sleep. Members of the stroke team such as an occupational therapist and physiotherapist can suggest ways to help the person conserve energy, cope with fatigue and participate in recovery, and help restore energy and wellness. **See TACLS – Fatigue** for more information.

- A person may have **limited** or **no sensation** in some parts of the body, which can affect quality of movement and safety. Changes in sensation can result in a person being unaware of the position and movement of limbs, unaware of pressure and/or pain, and/or feeling less sensitive to touch which can impact fine motor control. See **TACLS – Sensation** for more information.
- After a stroke, a person may experience **changes in vision and visual perception** and may also experience unilateral spatial neglect. This can result in a change of adaptation, the ability to make sense of what we see, respond appropriately, and make correct judgements when moving in the surrounding environment. See **TACLS – Vision and Visual Perception** for more information.

Promoting motor recovery

- Incorporate the affected limbs into daily activities as soon as safely possible. Even small movements can be used to help accomplish tasks.
- Rehabilitation therapists can provide guidance on appropriate activities that are meaningful, safe, and goal-oriented, aiming to enhance motor control and restore sensorimotor function.
- Carry out rehabilitation activities in the program developed by the rehabilitation therapist. They will provide all necessary training required to complete the activities with the person you are caring for. Some activity examples include:
  - Range of motion and/or muscle strengthening exercises.
  - Balance activities.
  - Visual perceptual activities.
  - Constraint Induced Movement Therapy (CIMT): forces usage of the affected limb by restraining the use of the unaffected limb.
  - Mental imagery: imagining the movement to reinforce practice of the task even at rest.

Always follow the current care plan and do not implement any new activities without talking to the rehabilitation therapistt.

Note: This information represents some of the priorities of care related to movement and recovery; consult the physician, nurse, occupational therapist and/or physiotherapist for any questions or concerns regarding movement and motor recovery.

References:

1. Canadian Stroke Best Practice Recommendations: **www.strokebestpractices.ca**, **Rehabilitation and Recovery Following Stroke**, 6th edition
2. Canadian Stroke Best Practice Recommendations: **www.strokebestpractices.ca**, **Mood, Cognition and Fatigue following Stroke**, 6th Edition, Section 3
3. Taking Action for Optimal Community and Long-Term Stroke Care (TACLS) – **Movement and Motor Recovery**