



Taking Action for Optimal Community and Long-Term Stroke Care ***A Resource for Healthcare Providers***

Chapter 6: Activities and Participation
Section 6.4: Mobility

Updated November 18 2020



- Taking Action for Optimal Community and Long-Term Stroke Care is for informational purposes only and is not intended to be considered or relied upon as medical advice or a substitute for medical advice, a medical diagnosis or treatment from a physician or qualified healthcare professional. You are responsible for obtaining appropriate medical advice from a physician or other qualified healthcare professional prior to acting upon any information available through this publication



TACLS Overview



Overview



Taking Action for Optimal Community and Long-Term Stroke Care

A resource for healthcare providers

- This presentation has been developed to complement the information provided in Taking Action for Optimal Community and Long-Term Stroke Care
- TACLS content is aligned with the most current Canadian Stroke Best Practice Recommendations (www.strokebestpractices.ca)
- Some of the best practice recommendations are included in this resource for quick reference. For the full Canadian Stroke Best Practice recommendations visit: www.strokebestpractices.ca
- As you consider the following information, always ensure that you are practicing and working within your scope of practice and seek advice from qualified and appropriate team members as needed

COVID-19

- In light of COVID-19, resources are being shifted across the healthcare continuum to help meet ongoing and changing needs.
- There may be some variability in the staff who would typically work with patients who have had a stroke.
- There are many **considerations** that are key to **promoting safety** and **optimizing recovery** when working with individuals who have had a stroke.
- TACLS can be used to help **support healthcare providers** and may be helpful to informal caregivers during this time by providing key information, skills and guidance when providing care to individuals who have had a stroke in any setting, from acute inpatient care to the community.

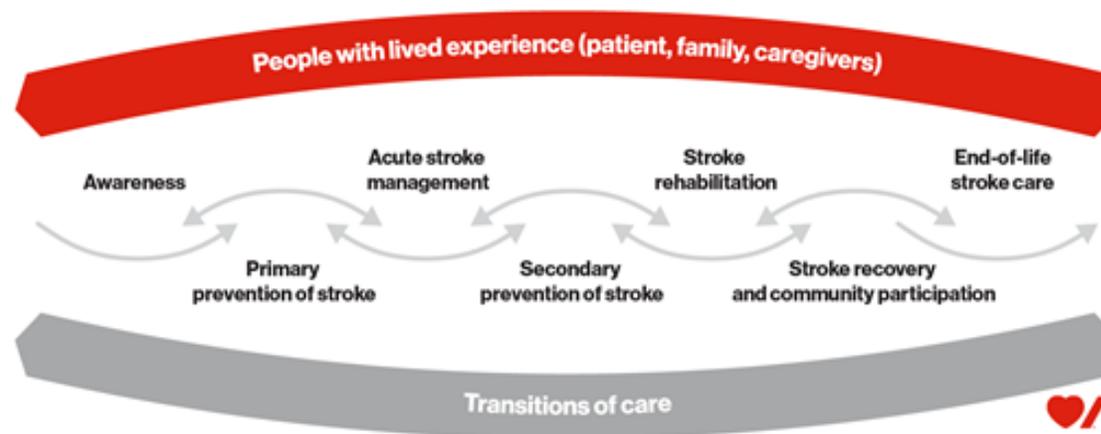
Purpose and Use of TACLS

- TACLS slide presentations are designed to be used as a resource, in conjunction with the TACLS manual, for informing and educating healthcare providers about how to care for individuals who have had a stroke across care settings
- Informal caregivers may also find these resources helpful
- TACLS content is aligned with the Canadian Stroke Best Practice Recommendations (www.strokebestpractices.ca)



Target Audience

- **Healthcare providers** who care for individuals who have had a stroke and are in **acute care, inpatient rehabilitation, or community settings** (such as at home or in long-term care)
- **Informal caregivers**, such as **family members**, may also find **these resources helpful** as they provide practical information to deliver safe and appropriate care



Your Role as Part of the Stroke Team

- There have been major advances in treatment and care of individuals with stroke. The types of care received in the early days following a stroke can have a direct and significant impact on outcomes
- Your role, **observations** and your ability to **communicate effectively** within the team is **vital** to helping the individual with stroke get the best possible **care** and experience the best possible **recovery**
- Your **support** can help individuals **adjust** to the **changes** that stroke brings, find new ways to help them thrive as they recover, and learn and adapt to “the new normal” that is life after stroke

Your role

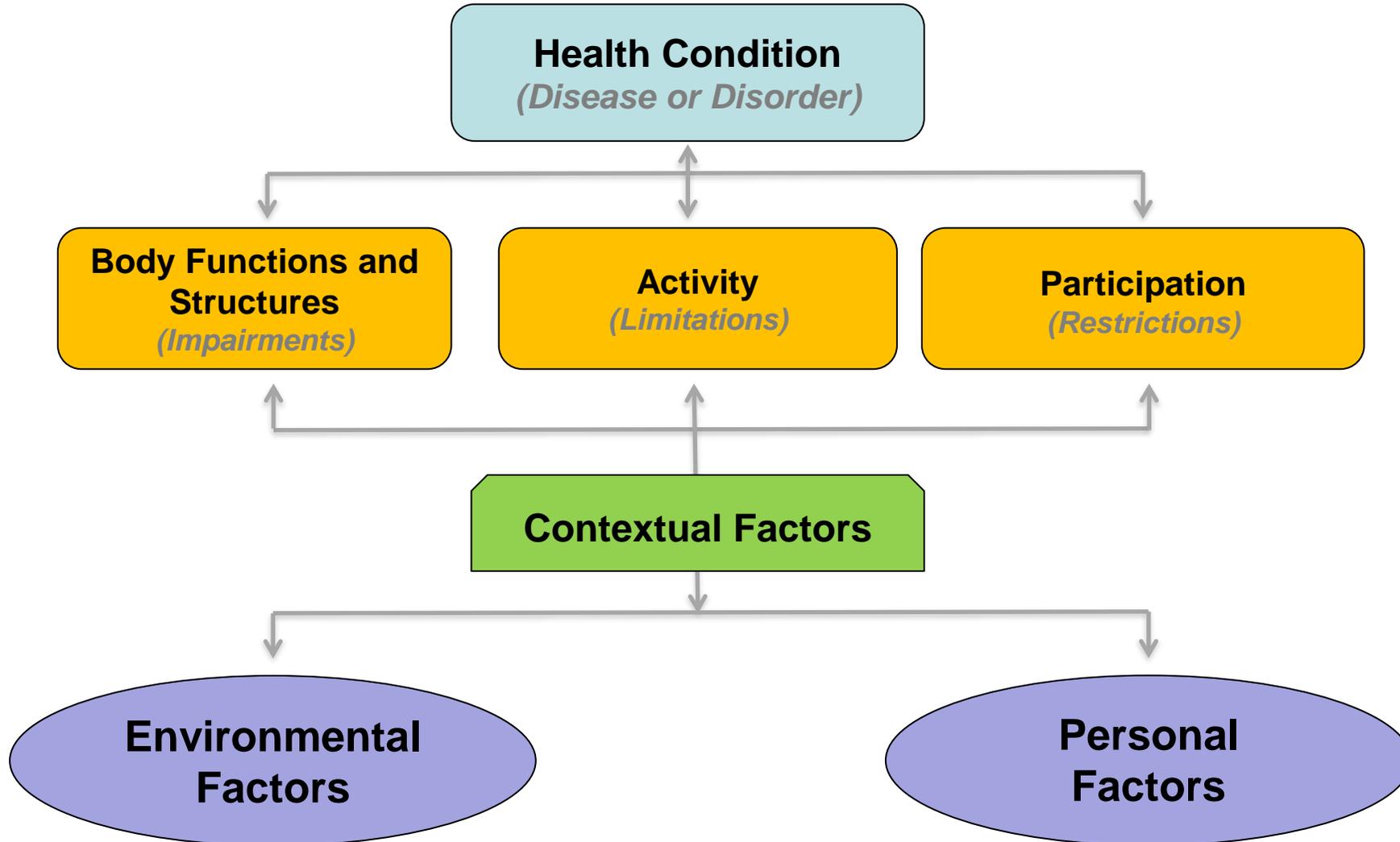
- It is very important to **review** and **understand** your role **within the stroke care team**
- **Consult** with your **team** if you
 - ❖ Are **unclear** about any aspect of the care plan
 - ❖ Have **questions** about how to implement the recommended care
 - ❖ Have **concerns** about the health of the person you are caring for
- Know your **direct contact** on the team and follow your workplace **guidelines** for **communicating with the team**
- **Do not delay** if a situation requires **immediate attention** – contact the appropriate team member as quickly as you can
- There may be times when the information in this resource **differs** from the **instructions** or **care plan** that have been developed by the organization you work for or by the stroke team. **In these cases, always follow the direction from your employer, your team, and the care plan**

Your Role: Communicate with your Team

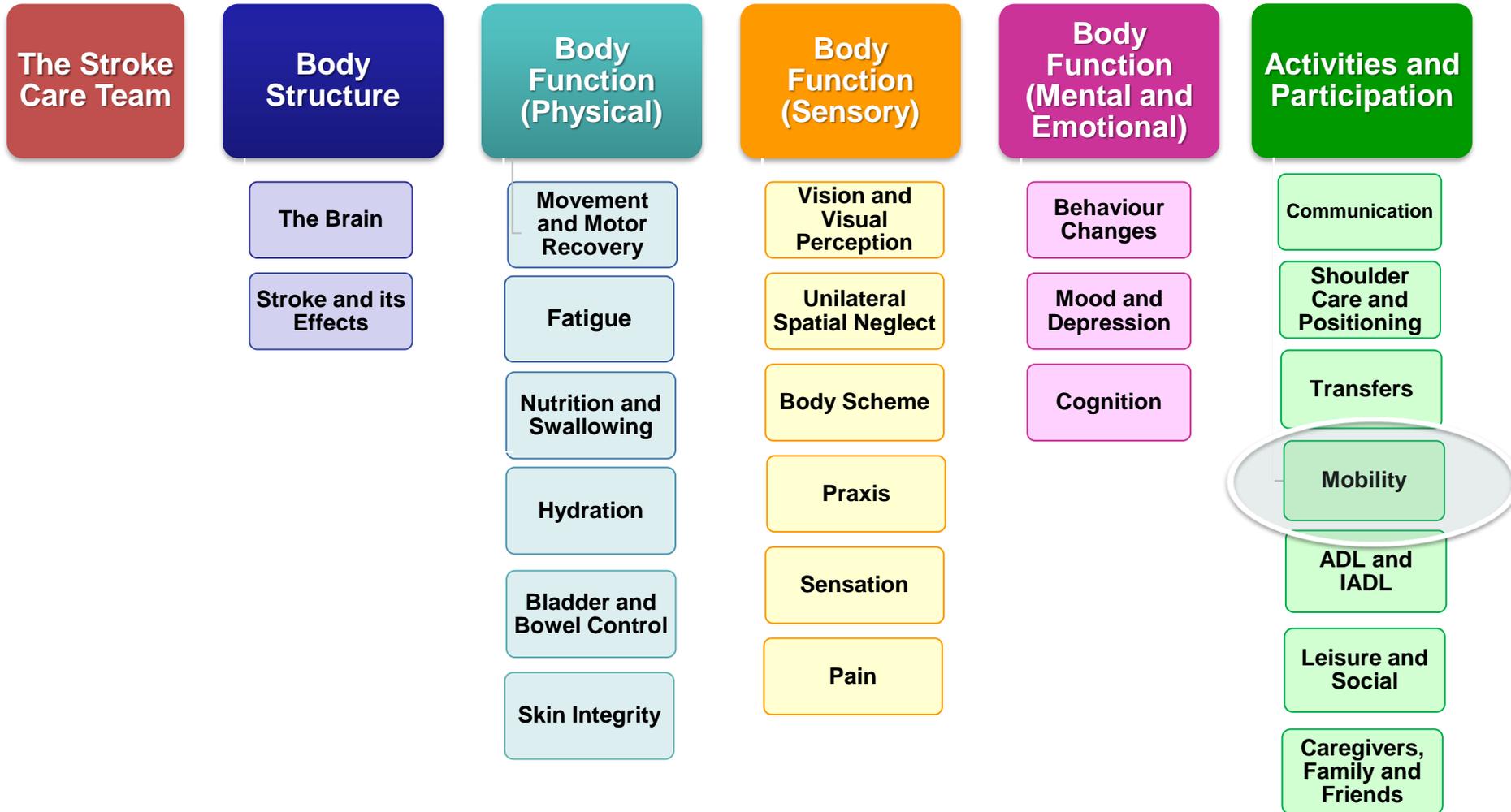
Stroke care is a **TEAM effort. The team is there to support you. Make sure to reach out to your team if you have any questions so that the safety and recovery of the individual you are working with and/or caring for is not compromised.**

TACLS Structure

TACLS is organized to follow the International Classification of Functioning (ICF) structure.



TACLS Content and Layout





Section 6.4 Mobility

➤ In this section

- ❖ Mobility (walking)
- ❖ Assistive devices and mobility (gait aids)
- ❖ Managing stairs
- ❖ Movement and exercises
- ❖ Wheelchair use



Key Messages: Mobility

- Always follow the current care plan
- Consult with the physiotherapist and occupational therapist to learn how you can support a person with their mobility. The therapists can provide education regarding gait aids, footwear, transfers, wheelchair use and mobility to promote safety for you and the person you're working with
- To avoid falls and injury after a stroke, stress the importance of safety – remind the person to slow down and be aware of their functional abilities and limitations
- Use any mobility devices and aids that have been recommended and are in the care plan such as a transfer belt, sling, ankle-foot orthosis (AFO), other ankle support and/or cane or walker



Key Messages: Mobility

- Follow the exercise **plan** for the person with stroke and **monitor** or **assist** with exercises as recommended
- Remind the person about the importance of **posture**. Have the person stand **upright** and tall, with eyes looking **forward**, resisting the temptation to look at their feet
- **Report** changes in mobility to the stroke care team
- **Be mindful of post-stroke fatigue** and consult with the stroke care team as needed for strategies to support the person in managing their levels of fatigue



Best Practice Recommendations

- Early prolonged mobilization of patients within the first few days after a stroke, especially a severe stroke, is not recommended
- Earlier mobilization may be reasonable for select patients with acute stroke (for instance people with more mild strokes or transient ischemic attack) but caution is advised, and clinical judgement should be used
- Patients should participate in training that is meaningful, engaging, progressively adaptive, intensive, task-specific and goal-oriented in an effort to improve transfer skills and mobility
- Strength training should be considered for persons with mild to moderate impairment in lower extremity function in both subacute and chronic phases of recovery. Strength training does not affect tone or pain
- Task and goal-oriented training that is repetitive and progressively adapted should be used to improve performance of selected lower-extremity tasks such as sit to stand, walking distance and walking speed

Best Practice Recommendations

- The need for gait aids, wheelchairs, and other assistive devices should be evaluated on an individual basis
 - ❖ Prescription and/or acquisition of an assistive device should be based on anticipation of a long-term need
 - ❖ Once provided, patients should be reassessed, as appropriate, to determine if changes are required or equipment can be discontinued
- Ankle-foot orthoses should be used on selected patients with foot drop following proper assessment and with follow-up to verify its effectiveness

The assessment and follow up reassessment of all equipment and devices should be completed by qualified therapist, such as a physiotherapist or occupational therapist

Best Practice Recommendations

- Following stroke, all patients should be screened for fall risk by an experienced clinician at admission, at all transition points, after a fall, and/or whenever there is a change in health status
- Screening should include identification of medical, functional, cognitive, and environmental factors associated with risk of falling and fall injuries (e.g., orthostatic hypotension, dehydration, muscle weakness, and osteoporosis)
- Those identified as being at risk for falls should undergo a comprehensive interdisciplinary assessment that includes medical and functional history and evaluation of mobility, vision, perception, cognition, cardiovascular status, and environment
- Based on risk assessment findings, an individualized falls prevention plan should be implemented for each patient
 - ❖ The patient, family, and caregiver should be made aware of the patient's increased risk for falls and given a list of precautions to reduce their risk of falling
 - ❖ The patient, family, and caregiver should receive skills training to enable them to safely transfer and mobilize the patient. This should include what to do if a fall occurs and how to get up from a fall.
 - ❖ The patient, family, and caregiver should receive education regarding suitable gait aids, footwear, transfers, and wheelchair use, considering the healthcare and community environment
 - ❖ Bed and chair alarms should be provided for patients at high risk for falls according to local fall prevention protocols

Your Role as a Healthcare Provider

- This resource provides general information on how to support a person's mobility, however every person and care plan is different. It is critical that you follow the care plan to promote safety and independence. If you have questions regarding how you can support the person's mobility, **consult with the physiotherapist or stroke care team**
- Consult the care plan for information such as: if the person can walk, how far they are able to walk and what **assistance** and assistive **devices** are needed to promote safety
- A stroke can affect a person's **ability** to maintain their **balance**, use their **affected** leg, and/or **walk**
- A person may require **supervision**, **verbal cueing** and/or **assistance** and **mobility aids** to walk even short distances
- The **challenges** will be even greater if the person has other impairments such as **cognitive impairments** (e.g., poor judgment and/or is impulsive) **visual perceptual** impairments (e.g., unilateral spatial neglect or visual field loss), **sensory loss** or **changes in balance**

Promoting Safety with Mobility

- Learning to walk **safely** is usually very **important** for people after stroke
- The stroke care physician and the physiotherapist (PT) will **assess the person** to determine **when they can begin mobilization**
- The PT and stroke care team **will provide recommendations** on how to support mobility
- **Consult the care plan** to understand when and how the person can mobilize after stroke. Work with the PT and stroke care team to make sure you **have all necessary skills and training** to support the person with their mobility



Promoting Safety with Mobility

- To avoid **falls** and **injury**, stress the importance of **safety**
 - ❖ A person may need to slow down to pay greater attention to their foot placement
- If the person has **visual or visual perceptual impairments**, remind them to **turn their head** to look towards the affected side to avoid bumping into walls or other obstacles
- If the person has motor planning/coordination difficulties and/or unsteady/staggering gait, the physiotherapist will assess and make recommendations specific to the person

Quality of Walking

- It is equally important to think about the **quality of walking**
- As the brain “re-programs,” the amount and type of **practice** becomes **critical** to the **quality of movement** and extent of functional recovery
- A physiotherapist can provide special **instructions** on how to help someone walk



Preparation

- Before you start, **consult the care plan** to ensure **mobility is supported by the physiotherapist**, the **activity is safe** and that you have **received any necessary training**
- Ensure the person is wearing appropriate **footwear** with good support and grip. Slippers provide minimal support and can lead to a **fall** and **injury**
- **Use any mobility devices and aids** that have been recommended and are in the care plan such as a transfer belt, sling, ankle-foot orthosis (AFO), other ankle support and/or cane or walker
- **If you are unsure** how to use any of the assistive devices, **consult with the stroke care team**, physiotherapist and/or occupational therapist



Support During Mobility

- To support the person, **stand on their affected side**. **Provide support by bracing the elbow and hand if needed, but do not pull on the affected arm.** Use a sling only if recommended in the care plan
 - ❖ Different people may require different support and approaches. Always consult the current care plan
 - ❖ The physiotherapist can provide guidance on strategies and techniques to reinforce, what to avoid and what type of assistance to provide
- If the person starts to **lose** their **balance** while walking, have them stop and **regain** it before continuing
- Always follow the physiotherapist's recommendations for assisting a person with their mobility

Posture

- **Remind** the person about the importance of **posture**. Have them stand **upright** and tall, with eyes looking **forward**, resisting the temptation to look at their feet
- If necessary, **provide a verbal cue** (ask the person to imagine a line pulling them upwards), **and/or a physical cue** by placing your hand on their upper back and asking the person to stand up tall towards your hand



Balance

- Have the person keep the **affected leg straight** and **feel steady weight** before taking a step
- **Remind** the person to share their weight equally between the right and left feet. Consult with the physiotherapist as they can provide exercises and strategies (if appropriate) to promote weight shifting
- Make sure the person is **balanced** before they start to move



Stepping Forward with the Affected Leg

- If the person has a mobility **aid**, have them place it at the appropriate distance before taking a step forward
- If they are having **difficulty** swinging the leg forward, as if it is stuck to the ground, make sure that they are **shifting** their **weight** to the standing leg and ask them to imagine bringing the affected knee up to their nose
- As they **take a step forward**, **remind** them to **feel contact with the ground** before transferring their weight to that side
- To help the **foot clear the ground** and **swing forward**, a verbal cue may be helpful such as: **“strike the foot on the ground and walk heel to toe”**

Stepping Forward with the Affected Leg

- As much as possible **discourage** the person from:
 - ❖ **Sliding** the affected foot along the ground
 - ❖ Landing with feet **close** together (this creates a narrow base of support)
 - ❖ **Hip hiking**
 - ❖ Swinging the leg **outward** to the side
 - ❖ **Looking** at their feet
 - ❖ **Leaning forward** while walking as it's better to stand up tall

Stepping Forward with the Unaffected Leg

- The next **challenge** is that the **affected** (weaker) leg has to take all of the body's **weight** while the **unaffected** (stronger) leg **swings** forward for the next step
- This may be difficult as a result of muscle weakness, decreased motor control, balance and trunk control
- Encourage the person to:
 - ❖ **Focus** on the **strength** in the affected leg - “Stand strong on that leg!”
 - ❖ Take it **slow**, don't rush
 - ❖ Work towards **equalizing** the stance **time** between the affected and unaffected leg (even the pace between steps)
 - ❖ Avoid **leaning** too much on the **mobility aid**

Compensating

- People who have had a stroke will often **rely on their strengths** to carry out an activity **rather than trying to use their weaker or affected side**
- This is called **compensating** for the weaker side or muscles
- Using only the stronger movements and muscle groups will **not** help **regain** the correct movements



Relearning How to Walk

- Relearning how to walk can be tiring, frustrating, and can take a **tremendous** amount of **mental and physical energy**
 - ❖ It is necessary to **re-establish** normal efficient movement
- It takes much longer to undo an incorrect movement pattern than to **learn** a good one
 - ❖ Your **role** as facilitator is **vital**
- Work closely with the **physiotherapist** to learn how to best help a person **stand**, **walk**, and **transfer** from one position to another

Assistive Devices

- Assistive devices may be **recommended** and **prescribed** by a physiotherapist to help a person be more independent and safe during mobility
- Talk to the physiotherapist or another member of the **team** if you have questions about how to use any recommended **assistive devices**



Ankle-Foot Orthosis

- An **AFO** (ankle-foot orthosis) fits in the shoe under the sole of the foot
 - ❖ It runs up the back of the calf and fastens with a strap below the knee
 - ❖ This device **holds** the ankle **straight** and reduces **foot drop**
 - ❖ An ankle-foot orthosis is often **custom** made to ensure the best **fit** for a person

- **Foot-up brace** is a device that helps a person with foot drop
 - ❖ It attaches on any lace-up shoe and helps the person raise the front of their foot to clear the ground when walking and to reduce the risk of tripping
- **An ankle brace** helps support a weak ankle and maintains the joint in a good position while weight bearing and walking

Assess and Monitor

- Check regularly for:
 - ❖ Signs of **redness**, skin **irritation**, or **breakdown** from the assistive device
 - ❖ Leg, foot, or ankle **swelling**
 - ❖ Reports of **discomfort** as a result of the device
- **Report** any of these **changes** to the physiotherapist or appropriate member of the **team** as soon as possible



Using AFOs and Braces

- The AFO or brace may need to be **modified** or **replaced** if:
 - ❖ There are **changes** in the person's muscle **size**
 - ❖ The person has lost or gained **weight**
 - ❖ There is **swelling**
- Putting on and removing these devices can present an additional **challenge**. The occupational therapist may recommend ways to make this task **easier**

Mobility Aids

- The physiotherapist will choose the type of mobility aid and make sure it is adjusted to the correct height
- Mobility aids might include:
 - ❖ Different types of canes: e.g., a straight or single point cane, quad cane
 - ❖ Two- or four-wheeled walkers
 - ❖ A rollator walker



Managing Stairs

- **Stairs** can be **difficult and precarious**. It is important that the **instructions in the care plan are always followed**
- **Never** take someone on stairs until they have been **assessed by a physiotherapist** (or sometimes by an occupational therapist)
- Make sure that using the stairs with the help of caregivers and/or healthcare providers is **supported by the physiotherapist before** you help someone use stairs. Ensure that you have **received appropriate training**
- If you are uncomfortable helping someone on stairs or are uncertain about someone's **ability** to manage the **stairs**, speak with the stroke care team
- Do not continue if you feel it is **unsafe** for you or the person you are helping

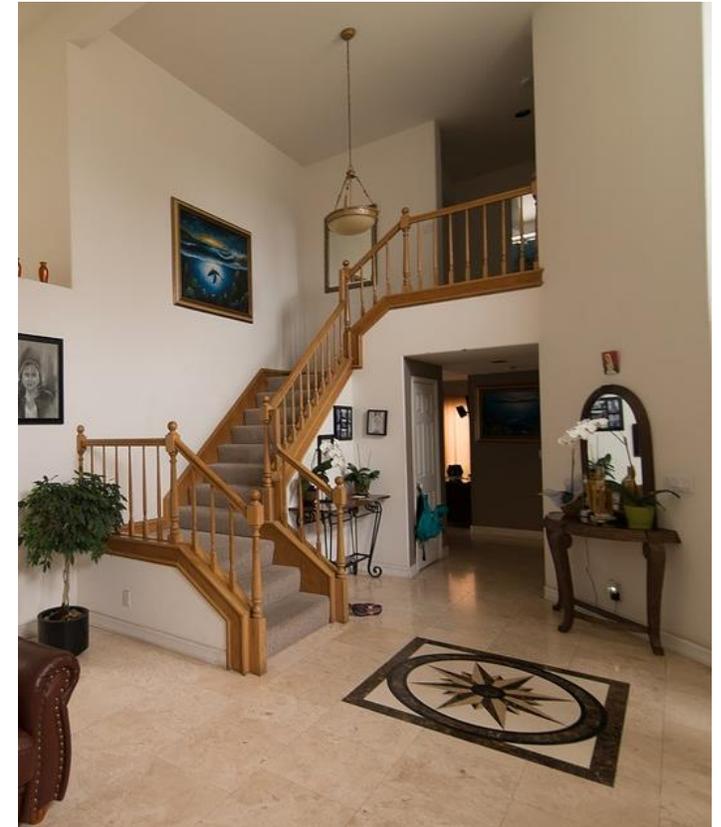
Preparing for Stairs

- It is common for people to **rush**, put only part of their foot on a step or continue even when they are off **balance**
- **Preparing** the person before you start will improve **safety** for both of you



Helping with Stairs

- As with all exercises **remind** the person that using stairs should be done **slowly** and **thoughtfully**
- Ask the person to put their **full foot** on the step and do not allow them to continue until this is done
- **Stop, stand,** and **rest** when needed, so the person can catch their breath and “reset” before proceeding to the next step



Technique for Stairs

- Typically, people who have had a stroke are instructed to:
 - ❖ Lead with the **unaffected** (strong) leg when going **up** the stairs
 - ❖ Lead with the **affected** (weaker) leg when going **down**
- Always check the current **care plan** to determine what has been assessed as the best way for a person to use the stairs

Ascending Stairs

- Assist from **behind**, using a transfer belt if recommended
- Instruct the person to use the **handrail** where possible
- A **mobility aid** may also be recommended

How You Can Help

- Ask the person to **lead** with the **unaffected** (strong) leg, by stepping up to the first step
- Then ask them to **step** up to the same stair with the **affected** (weaker) leg. This stepping pattern is often called “**marking time**”
- When it is **safe** for the person to do so, the physiotherapist may recommend that the person use a pattern of one foot per stair, also known as “**reciprocal stepping**”

Descending Stairs

- Assist from in **front**, using a transfer belt if recommended
- Have the person use the **handrail**, where possible
- Ask the person to **lead** with the **affected** leg while stepping down to the stair below
- Have them **follow** with the **unaffected** leg on the same stair (marking time) or to the next step (reciprocal stepping) as instructed by the physiotherapist

Movement and Exercises

- A physiotherapist or occupational therapist may recommend that a person do **specific activities** and **exercises** to promote:
 - ❖ Greater independence
 - ❖ Movement
 - ❖ Strength
 - ❖ Overall recovery



Activities and Exercises

- You may be asked to **assist** the person with their exercises
- If so, **follow the care plan** provided and ask for **training and clarification** whenever needed
- In addition, **report any problems** with the tasks to the appropriate person on the team



Maintaining Safety During Exercises

- Know the person's abilities, limitations and prescribed exercise program
 - ❖ Allow the person to pace themselves according to their activity tolerance and what has been recommended by the therapy team
 - ❖ Coach or guide the person as needed
- Use **good body mechanics**
- Always **ask for training and help** when needed



How You Can Help

Consider the following when **helping** someone complete their rehabilitation program:

- **Balance rest and activity** to avoid frustration and prevent injury
 - ❖ Do not overtire the person or ask them to do too much
 - ❖ Consult the care plan and speak with the rehabilitation therapists to determine the person's abilities and tolerance
- **Adjust your approach** to each person and respect that **progress** may look different between people

How You Can Help

- **Think things through**, using short, simple steps
 - ❖ As you help the person complete their program, ask yourself if the movements look the same as what you were shown in training
 - ❖ If they do not, or you have other concerns, talk to your team
- **Stay calm and do not rush**
 - ❖ Moving slowly and gently will help the person participate and give them time to think



How You Can Help - Communication

- **Explain what you are doing** and make sure the person understands the plan before you begin
 - ❖ Use simple concise instructions and demonstrate if necessary
- **Encourage the person to participate** as much as possible
 - ❖ Give them the time they need and only provide as much assistance as is necessary



Wheelchair use

Wheelchair Use

- Most people who have had a stroke have some problems with **movement**, and some will require a **wheelchair** for part or all of the day
- The occupational therapist will decide what **type** of wheelchair is needed, and whether a **specialized** back support, pressure-redistribution cushion, or additional **accessories** are necessary



Wheelchair Use

- A person will learn to use their **wheelchair** while in an acute care or a rehabilitation hospital
- You may need to **reinforce and remind** the person how to use their wheelchair as recommended in the care plan



Challenges with Wheelchair Use

- A person may experience some of the following challenges:
 - ❖ **Sliding** forward in their seat resulting in a poor sitting posture
 - ❖ **Unable to reach the ground** with the unaffected leg to foot propel the wheelchair, resulting in further **sliding** and poor posture
 - ❖ **Leaning** excessively to one side
 - ❖ Reports of **discomfort** while seated in the chair

Challenges with Wheelchair Use

- A person may experience some of the following challenges:
 - ❖ Leaving the **affected arm** hanging over the side of the wheelchair (e.g., they may not be aware of the arm's existence or may not be able to see or feel how the arm is positioned)
 - ❖ **Bumping** into obstacles on their right or left side (e.g., this may happen if they have a visual field impairment, unilateral spatial neglect and/or body neglect)
 - ❖ Not seeing, finding or forgetting to put on the **brakes** before getting up or sitting down
 - ❖ Having difficulty correctly positioning the wheelchair when **transferring** to another surface such as the bed or toilet (e.g., the wheelchair may be too far away or angled incorrectly)

Managing Challenges

- Any of these **challenges** should be discussed with the team
- The occupational therapist may need to **reassess** the wheelchair and/or seating **needs**
 - ❖ E.g., a **hemi-height wheelchair** may be recommended. It has a lower seat than a standard wheelchair and allows a person to reach the floor with their feet without sliding forward
 - ❖ E.g., the person may need a more supportive seating system and cushion
- The **occupational therapist or physiotherapist may need to reassess** and provide additional training to help with proper sitting postures and transfer skills





Managing fatigue

See TACLS section 3.2 on Fatigue for more information



Best Practice Recommendations

- Post-stroke fatigue is a common condition and can be experienced following a stroke at any point during the recovery process. Post-stroke fatigue is often under-recognized; thus, healthcare professionals should anticipate the possibility of post-stroke fatigue and prepare people who have experienced a stroke and families to mitigate fatigue through assessment, education, and interventions throughout the stroke-recovery continuum
- Prior to discharge from acute care or inpatient rehabilitation, people who have experienced a stroke, their families and informal caregivers, should be provided with basic information regarding the potential experience of post-stroke fatigue

Canadian Stroke Best Practice Recommendations, *Mood, Cognition and Fatigue Following Stroke*, 6th edition, section 3

See *TACLS* section 3.2 on *Fatigue* for more information

Best Practice Recommendations - Fatigue

- Counselling on graduated exercise schedules with increasing physical demands appropriate to tolerance level to improve deconditioning and physical tolerance is recommended
- Counselling on energy conservation strategies that consider optimizing daily function in high priority activities is recommended (e.g. daily routines and modified tasks that anticipate energy needs and provide a balance of activity/rest)
- Provide education to people who have experienced a stroke, their families and informal caregivers, on daily time management and planning a balance of activities with rest periods
- Encourage people who have experienced a stroke and are experiencing post-stroke fatigue to communicate energy status and rest needs to healthcare providers, family members, caregivers, employers and social groups

Post Stroke Fatigue*

- Fatigue is a **very common** effect of stroke and can be experienced at any point during recovery
- The signs of fatigue are not always obvious, and it is often **under-recognized**
- The person may experience **overwhelming tiredness** and **lack of energy** to perform daily activities; **abnormal need for naps, rest, or extended sleep**; **more easily tired** by daily activities than pre-stroke; **unpredictable feelings of fatigue without apparent reason**
- This type of fatigue does **not necessarily improve with rest or sleep**
- **Post-stroke fatigue can negatively impact a person's ability to actively participate in rehabilitation**, which has been associated with poorer long-term outcomes



*See *TACLS section 3.2 on Fatigue* for more information

Post Stroke Fatigue*

- Occupational therapists can suggest ways to **conserve energy**, cope with **fatigue** and **participate in recovery**. This may include:
 - ❖ **Organizing** activities
 - ❖ **Balancing** activity and rest
 - ❖ **Planning** and establishing good sleep routines
 - ❖ **Reducing stress** and incorporating activities that support mental health (e.g., mindfulness)
- **Physiotherapists** can **recommend appropriate exercise schedules and physical activities** that are safe, of interest to the individual and can **help restore energy and wellness**
- **Fatigue should be discussed and reported** to the stroke care team

Canadian Stroke Best Practice Recommendations, *Mood, Cognition and Fatigue Following Stroke*, 6th edition, section 3

*See *TACLS* section 3.2 on *Fatigue* for more information





Quiz

Test Your Knowledge

1. True or false: When using the stairs, the person will typically go up leading with their strong leg and come down with their weak leg first. If assisting, you should be behind them when they are going up and in front of them when they are coming down.

Test Your Knowledge

2. True or false: As a rule you should always stand on the person's affected side when helping them to walk.
3. True or false: If your patient uses a foot brace, check regularly for signs of redness, skin irritation, skin breakdown, or swelling.

Test Your Knowledge

4. Which approaches should be considered when helping someone complete their rehabilitation program?
 - a. Balance rest and activity
 - b. Individualize your approach
 - c. Stay calm and avoid rushing
 - d. Explain what you are going to do and make sure the person understands you
 - e. Ensure the safety of the person and yourself
 - f. Ask for help if you need it
 - g. All of the above

Conclusion

- More information regarding stroke and stroke care can be found at www.strokebestpractices.ca
- For additional resources visit: <https://www.strokebestpractices.ca/resources/professional-resources>
- Questions and comments can be sent to strokebestpractices@heartandstroke.ca

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Thank You

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