

The Brain....The Body...and You

Presented by St. Lawrence College with
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Professor Ruth Doran

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STROKE NETWORK
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Learning Series Topics

- Stroke Care from Prevention to Life After Stroke
- Contenance Care
- Mobility: Positioning and Transferring
- Swallowing, Feeding and Hydration
- Communications and Behaviours

Mobility: Positioning & Transferring

Presented by:

Mary Jo Demers, P.T.

Shannon Mulholland, P.T.

Ruth Doran, Professor

Overview of Workshop

- Workshop Objectives
- Workshop Philosophy
- Signs and Symptoms of Stroke
- Types of Strokes
- Factors affecting mobility
- Guiding principles for safe/effective mobility

Overview of Workshop

- Demonstrate and Practice of:
Bed Mobility
Arm Positioning
Human Movement Lab
Demonstration and Practice of:
Standing transfers
Sitting transfers
Mechanical Lift transfers

Overview of Workshop

- Walking
- Stair Climbing
- Questions
- Wrap Up

Workshop Objectives

- Understand the philosophy of assisting the stroke survivor with basic mobility
- Recognize the signs and symptoms of stroke
- Participate in identifying the factors affecting mobility
- Understand the guiding principles for safe/effective mobility

Workshop Objectives

- Observe and practice safe/effective techniques for:
- Bed mobility, transfer: 1 and 2 person
- Understand the importance of the arm position during these tasks
- Recognize good sitting posture
- Observe practical tips for safe/effective assisted walking and stair climbing

Workshop Philosophy

- YOU are an integral part of the stroke care team
- These techniques are designed for:
 - The safety of the stroke survivor
 - The safety of YOU, the stroke care giver
 - The effective interaction between YOU and the stroke survivor with the goal of maintaining or improving their level of function

Signs and Symptoms of Stroke

- Sudden weakness, numbness or tingling
- Sudden trouble speaking or understanding speech
- Sudden vision problems
- Sudden severe headache
- Sudden dizziness or loss of balance

Types of Strokes

- Blood Clot: the blocking of a cerebral artery (artery in the brain)
- Hemorrhage: diseased artery in the brain burst and floods the surrounding tissue with blood
- Incidence of Stroke: 20 % of people in LTC have a diagnosis of stroke as part of their medical history

Factors Affecting the Survivor's Mobility

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Factors Affecting the Survivor's Mobility

Motor Loss

- Which side has been affected by the stroke?
- Ability to move each limb?

Sensation

- Can they feel their arm/leg?
- Do they know where it is positioned?
- Pain?

Factors Affecting the Survivor's Mobility, cont....

Fatigue

- A survivor may require more assistance at various times throughout the day

Muscle Tone

- Is the limb stiff and difficult to move or is it limp and floppy?

Factors Affecting the Survivor's Mobility, cont....

Balance

- Can they sit on their own?
- Can they stand without assistance?
- Do they stand on both feet?

Posture

- Sit and stand upright
- Do they push themselves over?

Factors Affecting the Survivor's Mobility, cont....

Perception

- Neglect to one side
- Visual problems

Cognition

- How alert?
- Ability to learn?
- Attention span?
- Impulsivity?

Factors Affecting the Survivor's Mobility, cont....

Communication

- Ability to follow instructions
- Ability to speak

Personality

- Anxiety and fear of moving/falling
- Impulsiveness

Factors Affecting the Survivor's Mobility, cont....

Non – neurological Physical Limitations

- Previous fractures
- Painful joints
- Contractures
- Amputations
- Obesity

Guiding Principles for Assisting with Mobility and Motor Function

- The goal of assistance is survivor safety and comfort, quality of movement, and as high a level of independence as is possible
- If you are having difficulty assisting an individual, seek the advice of your immediate supervisor
- Each person is different and a unique individual
- Move slowly and gently

Guiding Principles, cont...

- Talk with the survivor
- Encourage the survivor to participate as much as possible
- Never LIFT the survivor
- Never pull on the survivor's affected arm or under the survivor's shoulders

Guiding Principles cont'd...

Use of Good Body Mechanics

- Centre of Gravity close to object/person you are moving
- Bend knees
- Straight back
- Weight transfer with movement

Bonus: These principles apply not only to the stroke survivor population, but also to people with any other medical conditions, i.e. M.S., Parkinson, Alzheimer, etc.

Assisting the Survivor Who has Shoulder Problems

- When the survivor is sitting, support the affected arm
- Always be careful when handling the limb
- Seek the advice of a professional
- Never pull on a limb
- When using a lifting device (Hoyer, ceiling lift) ensure affected arm is positioned inside the sling. Never let the arm hand outside the sling.

Movement In Bed

Bridging

Encourage the Survivor:

- To bend knees up
- Keep feet flat on bed
- Lift hips off bed
- To move from side to side in bed shift hips to the left or right
- To move up in bed push with both legs

Movement of the Upper Trunk

Encourage the survivor:

- Support affected arm
- Lift head and shoulders
- Shift head and shoulders to the left or right
- Move in small increments

Rolling onto the Side

Encourage the survivor:

- To bend knees up before rolling
- Not to forget the affected arm
- To look towards the direction of the roll

Moving From Lying to Sitting Position

Ask the survivor to:

- Bend both knees up
- Lift and turn head to look in the direction of the roll
- Roll completely onto the side, without forgetting the affected arm
- Draw knees toward the chest
- Slip both feet over the edge of the bed
- Push up with her arm (s), looking up as she pushes up
- Sit up tall

Transition: Sit to Stand

Moving From Sitting to Standing

This is not a LIFT

Ask the survivor to:

- Slide hips forward to the edge of the bed/chair
- Sit up tall
- Position feet correctly
- Bend forward at the hips
- Bring shoulders forward
- Keep weight equally distributed over both legs
- Stand up tall

Transfers

General Principles of Safe Transfer

- This is a problem solving approach based on individual factors
- Prepare the survivor and yourself for the transfer
- Make sure that wheelchair brakes are applied, arm rests removed and foot rests are up and swung out of the way
- Assist the survivor to bring their buttocks closer to the edge of the wheelchair by shifting one side forward at a time
- If the survivor overuses the unaffected side, have them stop and correct their position before proceeding

General Principles, cont....

- Position yourself as close to the survivor as possible, without blocking the direction of movement or the survivor's vision of the path of movement
- When assisting the person's body, place your hands around their upper back (shoulder blades) or pelvis
- Never hold onto clothing
- If the transfer requires two people to assist, communicate clearly with each other as well as the patient, this will ensure a coordinated effort

General Principles, cont....

- Bend your knees when assisting the survivor with the transfer. Keep your back in normal alignment.
- Shift weight from front foot to back foot as you assist with the transfer
- Avoid pulling the person's affected arm
- Do not lift the survivor by placing your hands under their arms

Transfer Set - Up

- Lower the bed so that the survivor's feet can rest on the floor. Lock the bed brakes, if the bed has casters.
- Adjust or remove the wheelchair's footrests and the armrest on the side closest to the bed.
- Place the wheelchair next to the bed at a slight angle and lock the brakes.

One Person Pivot (Stepping) Transfer

- Stand in front of the survivor, supporting the shoulder blades or pelvis
- Tell the survivor in which direction the movement will occur
- Shift the survivor gently forwards and guide them to standing
- Position your feet on each side of the survivor's affected foot once the survivor has risen to standing
- Assist the survivor to transfer weight to one leg and assist the unweighted leg to step/pivot. Continue stepping until the person is positioned directly in front of the chair

One Person Pivot (Stepping)

Transfer, cont....

- Assist the survivor to bend forward and to place buttocks down and back on the new surface
- Reposition the survivor so that he is comfortable
- Replace the foot rests and arm rests on the wheelchair

Car Transfer

- Follow the basic principles for the one – person standing stepping transfer
- There will be other variables to consider for this type of transfer including the type of vehicle, door opening, environment (rain and snow), ground surface, etc.
- Ideally the Physiotherapist/Occupational Therapist will be responsible for demonstrating the best method
- Contact your immediate supervisor if you are having difficulty

Two Person Pivot (Stepping) Transfer

- This transfer is for the survivor who bears weight through the legs but is heavy or unreliable. The technique requires two caregivers, with the taller of the two positioned behind the survivor
- Lower the bed so that the survivor's feet can rest on the floor
- Lock the bed brakes, if it has casters
- Adjust or remove the wheelchair's footrests and the armrest on the side closest to the bed
- Place the wheelchair next to the bed at a slight angle and lock the brakes

Two Person Pivot (Stepping) Transfer

- Place the wheelchair next to the bed at a slight angle and lock the brakes
- The staff member in front of the survivor is the leader and assists the survivor to sit on the edge of the bed with his feet flat on the floor
- The survivor places his arms around the waist of the leader, who, in turn, places his hands on the survivor's upper back or pelvis

Two Person Pivot (Stepping)

Transfer, cont....

- The rear caregiver is behind the survivor with one knee on the bed and supporting the survivor at hip level
- Assist the survivor to stand, then transfer weight to one leg and assist the un-weighted leg to step/pivot. Continue stepping until the person is positioned directly in front of the chair
- Assist the survivor to bend forward and to place buttocks down and back on the new surface

Two Person Pivot (Stepping) Transfer, cont....

- Re position the survivor so that he is comfortable
- Replace the foot rests and arm rests on the wheelchair

Two Person Sit Pivot Transfer

- This transfer is for the survivor who does not fully bear weight through the legs and/or is heavy or unreliable. The technique requires two caregivers, with the taller of the two positioned behind the survivor. The transfer occurs in several steps towards the new surface, not one large motion.

Two Person Sit Pivot Transfer cont....

- The staff member in front of the survivor is the leader and assists the survivor to sit on the edge of the bed with his feet flat on the floor. The survivor places his arms around the waist of the leader, who, in turn, places his hands on the survivor's upper back or pelvis.
- The rear caregiver is behind the survivor with one knee on the bed and supporting the survivor at hip level.

Two Person Sit Pivot Transfer, cont...

- Assist the survivor to bend forward to unweight the hips, but do not have them stand fully.
- Assist the survivor to pivot and shift their hips sideways and have them sit again. Repeat this procedure until the survivors hips are in the chair. Reposition the feet each time you have the person move.
- Reposition the survivor so that he is comfortable
- Replace the foot rests and arm rest on the wheelchair

Sitting in a Chair

- Tips to help you help your survivor sit comfortably and safely:
- Remember the 90 degree rule
- Remind and/or assist the caregiver to regularly assist the survivor to reposition hips back in the chair
- Use a lap tray to support the affected arm

Safe Wheelchair Use

- The wheelchair should be appropriately measured and prescribed
- Make sure that the survivor is comfortable and well – positioned in the chair
- Tips for correct wheelchair use:
 - Pay attention to whether the survivor slides forward in the chair when propelling it
 - Always observe a survivor's activity and ask "Does it look normal?"

Guidelines for Assisted Walking

- Consult with your supervisor or Physiotherapist regarding the specific ways to help the stroke survivor walk
- Follow guidelines for sit – to – stand
- Stand and support stroke survivor on their weak side
- To walk you may need to help them shift their weight from side to side. Move gently and do not push them
- Step with the same foot as they do

Guidelines for Stair Climbing

- Consult with your supervisor or Physiotherapist regarding the specific ways to help the stroke survivor climb the stairs
- Be mindful of other factors (medical conditions i.e. arthritis, railings) that may influence the method used
- Stand and support stroke survivor on their weak side
- Support may be required at the hip or knee
- The caregiver should straddle the steps to widen their base of support for better balance

Thank you