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# The Brain, The Body, and You: Behaviour

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# Objectives

- Review the impact stroke may have on
  - Behaviour
  - Personality
  - Emotions
  - Cognition
- Discuss strategies that may assist the stroke survivor with these changes to manage daily activities

# Stroke Impact on Behaviour

- Behaviour changes depend on
  - Where in the brain the stroke occurred
  - How severe the stroke was
  - When the stroke occurred
  - The patient's pre-stroke abilities and behaviours
- The loss of brain cells due to a stroke can change how a survivor acts or reacts in some situations

# Personality Changes

- Stroke damage can decrease a survivor's emotional control and change the way a survivor relates to others
  - Behaviours may not match the survivor's feelings
  - Survivors may lose interest in things they previously enjoyed
  - Survivors may not realize how their behaviour affects others
  - Survivors may experience mood swings
  - Survivors may appear stubborn, demanding or selfish

# Emotional Lability

- Emotional lability is a lack of emotional control
  - Responses may seem excessive
  - Emotional responses may not match the emotions the survivor is experiencing
- This can be upsetting for both the survivor and their families
- Ask if the emotion you are observing matches how the person is feeling
- Distraction can work to divert a survivor's attention to a new activity

# Social Isolation

- Many survivors have difficulty adjusting and coping with their self image after a stroke
  - They may have low self esteem
  - They may lose confidence
  - They may feel sad, helpless and out of control of their lives
- This can cause them to stop doing things that were important to them
- Encourage a survivor to return to activities they enjoy
- Encourage participation in self-care to promote independence

# Anger

- Often has a root cause
  - Inability to communicate or complete a task they used to do easily can cause frustration
  - Embarrassment after a toileting accident
  - Pain that causes helplessness and frustration
- Try to identify the cause of the anger and work with the survivor to find solutions
- Prevent outbursts through routines, explanations and support during potentially frustrating activities
- During an outburst remove the survivor from the situation or try to redirect their attention


# Lethargy

- Survivors, particularly with damage to the right side of the brain, may appear to lack interest in daily or leisure activities
- Learn what interests the survivor and try to find a way they can participate
- Reinforce and support their attempts to participate
- If a survivor is not successful or refuses to participate encourage them to try again later




# Social Judgment

- Social judgment is saying and doing the right thing in a given situation
- Personality changes can cause poor social judgment
- Problems with cognition can also contribute to poor social judgment
- Recognize and help the survivor to realize their limits
- Provide feedback to inappropriate behaviours in straightforward manner and offer alternatives
- Provide positive reinforcement to appropriate behaviours

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- Behaviours changes can be also be due to
    - Cognitive or perceptual problems
    - Depression
    - Communication challenges

# Cognition

- Cognition refers to how we know things and how we think. It involves
  - **Attention** – being able to concentrate for a period of time
  - **Orientation** – being aware of person, place and time
  - **Memory** – being able to retain and recall information
  - **Insight** – knowing and understanding our abilities and limits
  - **Judgment** – making good choices or decisions in line with our capabilities
  - **Sequencing** – being able to arrange or perform actions in the right order
  - **Problem solving** – recognizing a problem and finding a solution

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- Cognitive problems are invisible barriers but have a major impact on a survivor's functional level and independence post-stroke
  - Because there is no physical impairment we may not see the cognitive problem and over-estimate a survivor's abilities
    - People may assume a survivor is acting “this way on purpose” rather than an expectation that is too high



- Attention

- Reduce distractions
- Give short and simple instructions
- Slow down and give the survivor more time to think

- Orientation

- Post a calendar or use an agenda
- Use a board to post personal information and family pictures
- Limit changes to their schedule



- Memory

- Encourage use of memory aids (journal, agenda)
- Repeat important information
- Label drawers and keep things organized

- Insight

- Keep the environment safe
- Gently remind the survivor of the stroke and their subsequent limits
- Provide the necessary amount of supervision



- Judgment

- Do not place the survivor in challenging situations as they may be unable to decide what action is safe
- Maximize environmental safety

- Impulsivity

- Encourage the survivor to slow down
- Divide tasks into steps
- Provide clear and specific instructions

- Sequencing
  - Give step-by-step instructions
  - Help the survivor to think through and plan the task
  - Give the survivor the time necessary to complete the task, even if it takes a long time
  - Repeat the task in the same way each time
- Problem-solving
  - Break the tasks into small steps
  - Provide cues
  - Help the survivor identify different ways of solving the problem and how they could approach the solution



# Perception

- Perception refers to the way we understand our environment through processing and interpreting information from our senses
- Stroke can cause perceptual problems including
  - Time awareness
  - Spatial relation
  - Neglect
  - Apraxia
  - Perseveration
  - Vision problems

- Time awareness
  - Link events together
  - Review the daily schedule
  - Maintain a consistent schedule
  - Use a digital or talking clock
- Spatial relations
  - Keep safety in mind – decrease clutter, use assistive devices or reminders
  - Encourage practice and repetition

- Visual neglect
  - Provide stimulation of the affected side
  - Approach on the unaffected side and move to the affected side
  - Encourage scanning the environment
- Unilateral body neglect
  - Use the affected arm in daily activities as possible
  - Position the affected limb so the survivor can see it
  - Gently rub the affected arm to stimulate awareness
  - Encourage the survivor to position the limb themselves



- Apraxia

- Use short simple instructions
- Break the task down into small steps
- Encourage repetition and practice of activities
- Provide hand-over-hand guidance if necessary

- Perseveration

- Plan the task with the survivor and break it down into steps
- If the survivor gets stuck on a step help them move on to the next step

- Visual problems
  - Encourage scanning
  - Place items on the affected side to increase the survivor's awareness of the visual space
  - Encourage the survivor to turn their head toward the affected side



**Questions**