After the Diagnosis:

Rehabilitation & Support Options for Mild Dementia

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Say these aloud

- Dog
- Bread
- Tree
- Cheese
- Tomato
- Flower
- Cat
- Stevens
You will learn about:

• Neuropsychology
• The role of neuropsychology in diagnosing mild Alzheimer’s
• Mild Alzheimer’s vs. healthy aging
• Cognition – a snap shot
• Treatment options – cognitive rehabilitation
Immediate recall
Making the diagnosis

Is it normal aging or is it mild dementia
The role of neuropsychology in dementia care

• We understand the relationship between the brain, cognitive functions [memory, language, attention], emotions, behaviour, personality)

• When there is an alteration to the brain either through normal aging or atypical degeneration, we see changes in cognitive abilities.

• We formally assess the magnitude of the change with a series of standardized tests.

• We determine the level of functioning: normal for one’s age, mild, moderate, severely impaired?

• We rule out factors that can cause cognitive problems

• Recommend treatment options, where needed/ appropriate. Consult with your medical team regarding medication
Domains assessed in neuropsychology

- Memory
- Attention
- Language & Speech
- Executive functions
- Perception
- Sensor y & Motor
- Mood & Personality
- Activities of daily living
Parts of the Human Brain

- Cerebral cortex
- Parietal lobe: Spatial skills, Sensation, left/right awareness
- Occipital lobe: Visual processing
- Frontal lobe: Personality, Judgment, Reasoning, Organization, Language production
- Temporal lobe: Memory for language (L), Memory for visual (R), Auditory processing
- Spinal cord: Transmit signals between the brain and the body
- Cerebellum: Motor control, some cognition

http://www.educatorsathome.com/amazing-mind/
Cognitive testing will determine level of functioning

<table>
<thead>
<tr>
<th>Impaired * borderline * low average</th>
<th>Average</th>
<th>High average</th>
<th>Superior</th>
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- 0.1%  2.1%  13.6%    34.1%  34.1%    13.6%  2.1%  0.1%
What do cognitive changes look like?

Short term memory

- Forget names of people we just met, grocery items, misplace things, taking medication

Motor skills

- Slower reflexes

Language/Word finding

- Tip of the tongue phenomenon

Attention and Executive functions

- Difficulty concentrating, making decisions, planning, following instructions
# Reasons for cognitive changes

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<th>Reason</th>
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<td>Normal aging - we expect a degree of decline.</td>
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<td>Stress - cortisol</td>
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<td>Depression</td>
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<td>Poor sleep</td>
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<td>Poor general health</td>
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<td>Medication use</td>
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<td>Poor diet</td>
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<td>Substance misuse/ abuse</td>
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<td>Brain degeneration (e.g., Alzheimer’s disease)</td>
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Diagnostic criteria for mild neurocognitive disorder

Evidence of modest decline from previous level in one or more cognitive domains (complex attention, executive function, memory, language …)

- Concern to the individual or someone who knows them
- Modest impairment on neuropsychological tests

Deficits do not interfere with capacity for independence in daily activities (paying bills, managing medication)

- These abilities are preserved but require greater effort, compensatory strategies are needed

Deficits do not occur exclusively in the context of delirium

Cannot be explained by another disorder (e.g., depression, schizophrenia)
Memory

• The most noticeable change in healthy aging and atypical aging

• Most vulnerable to brain alterations

• Loss of or alterations to one’s memory can have a negative impact on one’s quality of life

• The core target for rehabilitation programs
Types of Memory

- Human memory
  - Sensory
  - Short term
  - Long term
    - Explicit (aware)
      - Declarative (what)
      - Episodic (personal)
    - Implicit (unaware)
      - Procedural (how)
      - Semantic (facts, concepts)

http://www.human-memory.net/types.html
Temporal lobes - Hippocampus and memory
After the diagnosis

Treatment options
Treatment options in the early/mild stage

• No cure

• Treatment options focus on:
  ✓ Enhancing quality of life
  ✓ Fostering independence
  ✓ Delaying progression
Treatment options: a holistic model

Cognitive rehabilitation

- Cognitively active
- Family support
- Medication
- Exercise
- Diet
Cognitive Rehabilitation:

Cognitive rehabilitation programs aim to help those with cognitive challenges to:

- Enhance metacognitive skills (get you thinking about thinking)
- Process training – to restore functions in some cases, or strengthen weakened skills
- Strategy training – develop compensatory strategies for lost functions. How to use memory aids
- Foster independence, where appropriate
- Empower you with knowledge
- Support family members
Cognitive Rehabilitation: Basic structure

• **Group and individual** programs are 6 – 8 weeks induration

• Learn about the brain and cognition

• Goal and outcome oriented – strategies for real life issues (taking medication, remembering appointments)

• 10 to 15 participants is ideal – Fun and interactive

• Programs are geared towards a given level of functioning: healthy aged, mild dementia

• Typically a family support component
Recall training: internal strategies

Mnemonics - Strategies to help boost memory

- Acronyms – NEWS – north, east, west, south; STAB – voices in a quartet
- Fun words – remembering Brian/Brain
- Associations – Rose – visual association with the flower
- Songs/jingles – the ABC song; 439-0000 pizza nova

Chunking – categorizing

- Great for remembering lists or numbers
- Grocery list – organize by section: meat, dairy – and also visualize
- Telephone numbers are perfectly chunked: 555-5500 – they are also like a jingle

Method of Loci

- Visualizing location
- Helps you memorize a list of items by visualizing and linking them to a place (e.g., a room in your house)
Recall training: internal strategies

Repetition – repeating the to-be-remembered information

• Names "Hello my name is, Rose" immediately say hello Rose and try to repeat the name a few times throughout the conversation

Spaced retrieval – stagger the time you recall

• Recall a PIN number immediately after, then 5 minutes later...10 minutes, 30 minutes.

Elaborate – Find meaning

• E.g., names – Belle means beautiful
Recall training: external strategies

- Memory aids
- Calendars
- Diaries
- Smart phone reminders
- Notes (visual cues)
- Organize – everything in it’s place
- Write it down
- Communication apps for tablets and phones

The right strategy for the right task
Research outcomes

• We rely heavily on client and family feedback.

• Formal research has shown efficacy.
  
  o Participants in the program are better able to achieve their activities of daily living goals.

  o Functional magnetic resonance imaging (fMRI) supported the positive behavioural findings of increased brain activity.
Family support: the roles of the family members

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<th>Early stage: care partner</th>
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<td>What to expect</td>
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<td>Your role</td>
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<td>Things to consider</td>
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Alzheimer’s Treatment – Future directions

• Transcranial Magnetic Stimulation (TMS)
  
  o Non-invasive, few side effects

  o Not indicated for people with seizure disorders

  o Have both been shown to improve cognitive function (recognition memory, novel memory formation, word-finding, and more) in healthy older adults and also in patients already suffering from Alzheimer’s

  o Used to treat depression
Thank you

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Delayed Recall
Delayed Recall

- Dog
- Bread
- Tree
- Cheese
- Flower
- Cat
- Steven
Availability

• Sign up for information on upcoming memory clinics.
References