



Healthy Ageing
and Geriatrics



Healthy Ageing 101:

Understanding How to Recognize Dementia from Normal Age-Related Memory Loss, And How to Prevent and Manage It

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Services



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Disclosures

- Nothing to disclose



Objectives

What is the difference between dementia, age-related memory loss and MCI

How to diagnose and manage MCI and dementia

What can be done to prevent and live with dementia

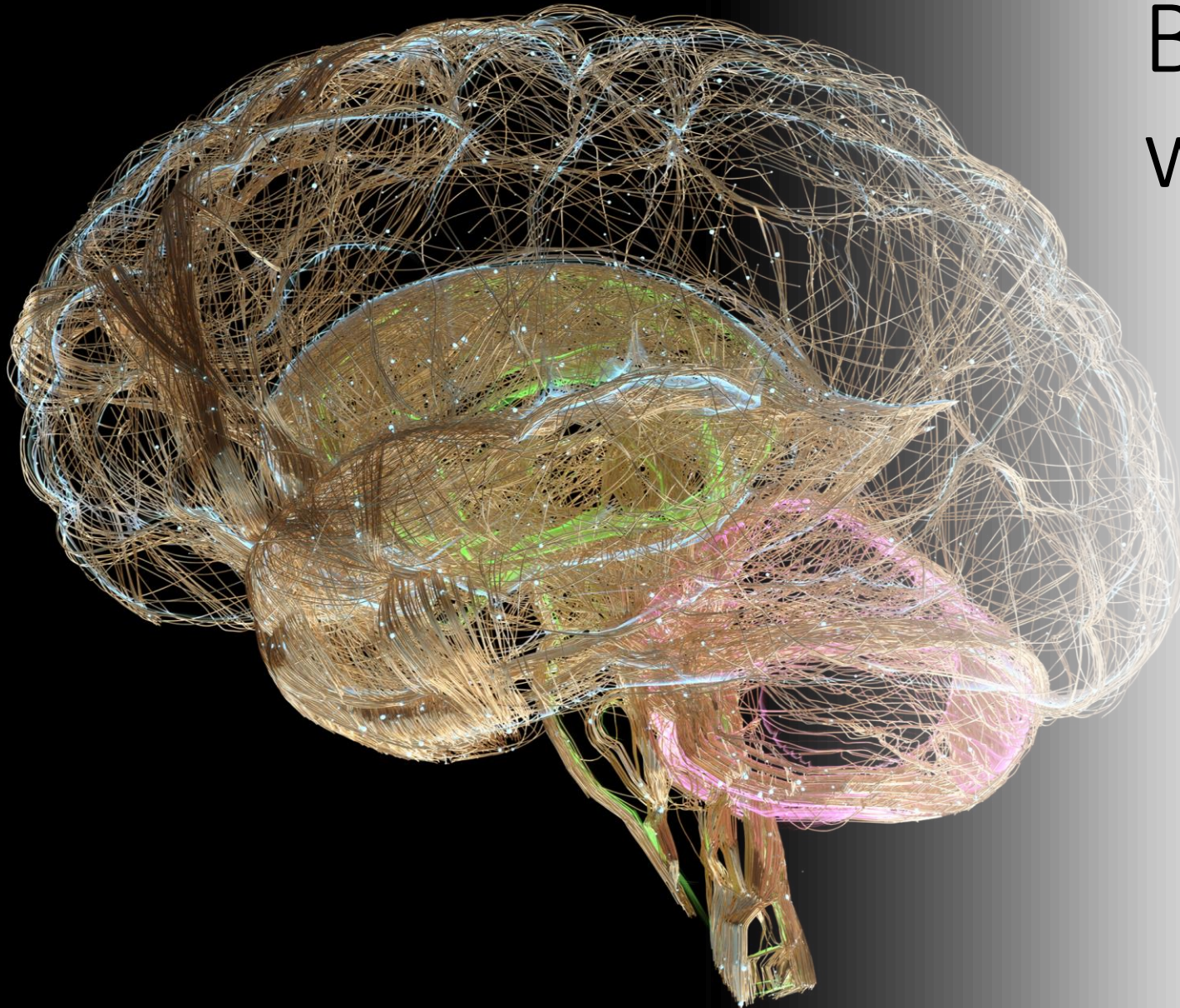
What are resources specifically available to support caregivers and people living with dementia

Neurocognitive Changes with Ageing

	Crystallized vs. Fluid	Declines with age?
Processing speed	Fluid	Yes
Attention	Fluid	Simple tasks- no Complex tasks- yes
Memory	Fluid	Mixed
Language	Crystallized > Fluid	In general- no Visual confrontation naming, verbal fluency- yes
Visuospatial	Mixed	Simple tasks- no Complex tasks- yes
Executive Function	Fluid	Mixed

Memory & Ageing

Declines with age	Remains stable with age
<p>Delayed free recall: spontaneous retrieval of information from memory without a cue^{24,25}</p> <p>Example: Recalling a list of items to purchase at the grocery store without a cue</p>	<p>Recognition memory: ability to retrieve information when given a cue</p> <p>Example: Correctly giving the details of a story when given yes/no questions</p>
<p>Source memory: knowing the source of the learned information</p> <p>Example: Remembering if you learned a fact because you saw it on television, read it in the newspaper, or heard it from a friend</p>	<p>Temporal order memory: memory for the correct time or sequence of past events</p> <p>Example: Remembering that last Saturday you went to the grocery store after you ate lunch with your friends</p>
<p>Prospective memory: remembering to perform intended actions in the future²⁶</p> <p>Example: Remembering to take medicine before going to bed</p>	<p>Procedural memory: memory of how to do things</p> <p>Example: Remembering how to ride a bike</p>



Brain changes with ageing

- Grey matter volume declines
- Neuronal size and synaptic density declines
- White matter changes

Signs of memory loss as a part of normal ageing

You're unable to remember details of a conversation or event that took place a year ago.

You're unable to remember the name of an acquaintance.

You forget things and events occasionally.

You occasionally have difficulty finding words.

You are worried about your memory, but your friends and relatives are not.

Mild Cognitive Impairment

AKA mild neurocognitive disorder

A noticeable decline in cognitive functioning that goes beyond normal age-related changes but is not functionally impairing.



Dementia

AKA Major Neurocognitive Disorder

Mild

Moderate

Severe

DSM-5

- There is evidence of substantial cognitive decline from a previous level of performance in one or more cognitive domains:
 - complex attention
 - executive ability
 - learning and memory
 - language
 - perceptual-motor-visual perception, praxis
- Deficits interfere with independence
- The cognitive deficits do not occur exclusively in the context of a delirium or other mental disorder

7 As

anosagnosia


agnosia

altered perception

apraxia

amnesia

apathy

A person wearing a white protective suit and a hood is holding a green umbrella in the rain. The background is a blurred, rainy street scene. The text and list are overlaid on a semi-transparent white circle that covers the umbrella and part of the person's suit.

An Umbrella term

-
- Alzheimer's Disease
 - Vascular Dementia
 - Lewy Body Disease
 - Frontotemporal Dementia
 - Mixed Dementia
 - Creutzfeldt-Jacob Disease
 - Huntington Disease
 - Multiple Sclerosis
 - Parkinson's disease, and Parkinson plus syndromes
 - Alcohol related
 - Cortico-basilar degeneration
 - Normal Pressure hydrocephalus



Dementia: The Stats

- 2014 - 24 million
- 2020 - 42 million
- 2040 - 81 million
- 90% cared for by family members
- In Canada
 - 8% of those 65 years and older
 - 35% of those 85 years and older
 - 50% cared for by family members

10 Warning Signs

1. Memory loss that affects day-to-day abilities
2. Difficulty performing familiar tasks
3. Problems with language
4. Disorientation in time and space
5. Impaired judgement
6. Problems with abstract thinking
7. Misplacing things
8. Changes in mood and behaviour
9. Changes in personality
10. Loss of initiative

Dementia – behavioural and psychological symptoms

- aggression
- agitation
restlessness
- screaming
- pacing and
repetitive
motor activity
- anxiety
- depression
- psychosis
- repetitive
vocalization,
cursing and
swearing
- sleep
disturbance
- shadowing
- sundowning
- wandering
- hoarding

Dementia – the stages

- **Stage 1: No cognitive decline:** Experiences no problems in daily living.
- **Stage 2: Very mild cognitive decline:** Forgets names and locations of objects. May have trouble finding words.
- **Stage 3: Mild cognitive decline:** Has difficulty travelling to new locations. Has difficulty handling problems at work.
- **Stage 4: Moderate cognitive decline:** Has difficulty with complex tasks (finances, shopping, planning dinner for guests).
- **Stage 5: Moderately severe cognitive decline:** Needs help to choose clothing. Needs prompting to bathe.
- **Stage 6: Severe cognitive decline:** Loss of awareness of recent events and experiences. Requires assistance bathing; may have a fear of bathing. Has decreased ability to use the toilet or is incontinent.
- **Stage 7: Very severe cognitive decline:** Vocabulary becomes limited, eventually declining to single words. Loses ability to walk and sit. Requires help with eating.

Caregivers

- Adult children/spouses
- Female
- Negative consequences
 - physical health
 - mental health
 - social network
 - finances



Risk Factors

Age

Female sex

< 5 % genetic (A β precursor protein, presenilin 1, and presenilin, 2APOE ϵ 4)

Vascular (hypertension, diabetes, smoking, heart disease)



Prevention

Exercise

Diet (mediterranean)

Stop smoking

Keep your mind active

Activities associated with high cognitive function in older adults

Intellectually Engaging Activities

- Puzzles, discussion groups, reading, using the computer, playing bridge, playing board games, playing musical instruments
- Careers that involve high complexity
- High educational attainment

Physical Activities

- Exercise, especially that which improves cardiovascular health
- Gardening
- Dancing

Social engagement

- Travel, cultural events
- Socializing with friends and family

Treatment - medications

Cholinesterase Inhibitors

- Donepezil
- Galantamine
- Rivastigmine

NMDA receptor Antagonist

- Memantine

Human Monoclonal Immunoglobulin

- Aducanumab?

BPSD treatments

- Antipsychotics
- Antidepressants
- Other psychotropics

What cognitively impairing drugs can be removed?

- Benzodiazepines
- Sleep aids
- Cholinergic medications
- Alcohol

Treatment –
non-
pharmacologic

Cognitive retraining

Hearing impairment

Behavioural plan

Address caregiver burnout

Having difficult conversations



Advance Care planning



Death dinner

Resources

The 36-hour Day by Nancy L
Mace and Peter V Rabins

Alzheimer's Society Website

Reitman Centre for Carers

www.advancecareplanning.ca

www.deathoverdinner.org

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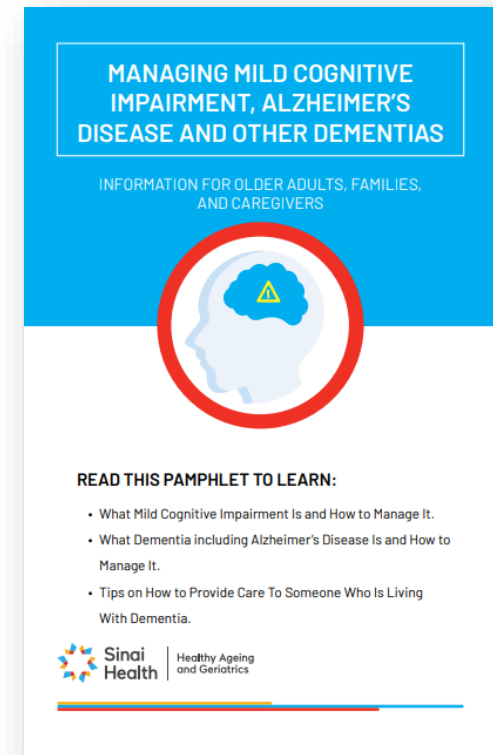
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Additional Resources

<https://sinaigeriatrics.ca/healtheducation/>

Find more information in “Managing Mild Cognitive Impairment, Alzheimer’s Disease and Other Dementias” available on our website

<https://sinaigeriatrics.ca/patient-resources/managing-mild-cognitive-impairment-alzheimers-disease-and-other-dementias/>



Questions? (Submit to Q&A)



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Upcoming Healthy Ageing 101 Sessions

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2022 WINTER SCHEDULE**