

REINFORCING  
MEMORY &  
COGNITIVE  
FUNCTION

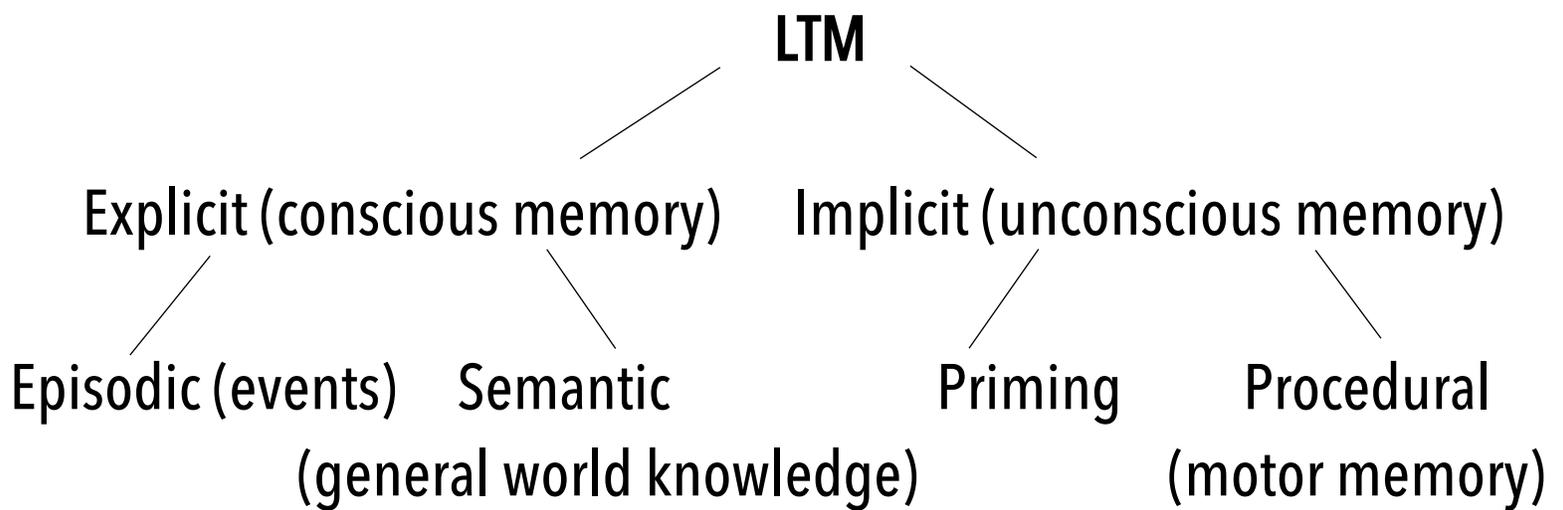
FOR OLDER ADULTS  
WITH DEMENTIA

# WHAT IS DEMENTIA?

- Dementia is a broad term for diseases and conditions that are characterized by a decline in memory, language, problem solving and other thinking skills that affect a person's ability to perform daily activities (Alzheimer's Association, 2020)<sup>1</sup>.  
\*Note: deterioration in cognitive function goes beyond what is expected of ageing
- Approximately 5-8% of the general population aged 60 and over have dementia (World Health Organization, 2020)<sup>2</sup>.

# WHAT IS MEMORY?

Memory is categorized into long-term memory (LTM) and short-term memory (STM)



**STM:** Enables the brain to remember a small amount of information for a short period of time (The University of Queensland, 2019)<sup>3</sup>.

# WHAT IS COGNITIVE FUNCTIONING?

- Cognitive functioning refers to mental abilities such as learning, thinking, remembering, reasoning, decision making, problem solving, and attention (Fisher et al., 2019)<sup>4</sup>. As dementia progresses, cognitive functioning gradually becomes impaired.
  - There are 5 domains of cognitive functioning including (Knopman & Petersen, 2015)<sup>5</sup>:
    1. Learning & Memory
    2. Language
    3. Visuo-Spatial
    4. Executive Functioning
    5. Psychomotor
- \*Note: more than 1 domain must be impaired in order for a diagnosis of dementia

# WHAT'S THE PROBLEM?

- Dementia is caused by damage to brain cells. This interferes with the ability of brain cells to communicate effectively. When brain cells cannot communicate properly, our cognitive functioning and memory are both negatively affected. Consequently, this interferes with our ability to execute everyday activities (Alzheimer's Association, 2020)<sup>1</sup>.
- Decreased cognitive functioning and memory may result in difficulties with activities such as: (Alzheimer's Association, 2020)<sup>1</sup>
  - Problems with short-term memory
  - Keeping track of a purse or a wallet
  - Paying bills
  - Planning and preparing meals
  - Remembering appointments
  - Traveling outside of the neighborhood

DEMENTIA STAGE	THINGS YOU CAN DO
1: No cognitive Decline	At this stage, individuals do not experience memory loss (i.e., no signs of dementia)
2: Very mild cognitive decline	Use the "Tile" (figure 1) to help locate keys, wallet, phone, etc. (Tile, 2020) <sup>6</sup> . Also use methods such as keeping objects in a designated location.
3: Mild cognitive decline	Use strategies such as mnemonics or associations to help remember names of acquaintances. Calendars/planners can also be useful to help remember upcoming appointments.
4: Moderate cognitive decline	Provide mental stimulation: promote ongoing interactions with familiar people (DiZazzo-Miller & Pociask, 2018) <sup>7</sup> . This will help address social withdrawal that begins to emerge during this stage.

<p>5: Moderately severe cognitive decline</p>	<p>Provide visual sequence cards (figure 2) for activities such as toileting, showering, brushing teeth, etc. Utilize a reality orientation board (figure 3) to remind individuals of their location, time, day, year, season, and weather.</p>
<p>6: Severe cognitive decline</p>	<p>Utilize memory books and familiar photographs to remind loved ones of family members and major events in the past (DiZazzo-Miller &amp; Pociask, 2018)<sup>7</sup>.</p>
<p>7: Very severe cognitive decline</p>	<p>Continue to provide mental stimulation, such as playing the individual's favorite tune.</p>

## Other Strategies:

- Diet: What's good for the body is also good for the mind. Try to incorporate fruits, vegetables, omega-3 fatty acids, whole grains, spices, and small portions of tree nuts into your diet. This will help improve cognitive function and memory
- Exercise: Engage in mental activities such as crossword puzzles or reading. Also engage in physical activity such as walking. (Consult with a physician prior to engaging in physical activity for safety considerations)
- Mindfulness: Focus on one task at a time, rather than trying to multitask.
- Cognitive Methods: Encourage learning new and challenging cognitive activities, such as a new language, new dance, new instrument, etc.
- Rehearsal: Silently repeat or write down important information.
- Be Patient: It can be extremely overwhelming and frustrating for individuals to experience memory difficulties. Patience is important, as frustration can make it more challenging to remember information.

(Barney & Perkinson, 2016)<sup>8</sup>

\*Note: the strategies listed above are not limited to a specific stage of dementia

# TILE



Tile.com

Attach the Tile to items such as your keys, wallet, purse, etc. Next, link the Tile with your phone. Finally, use the Tile app to ring your Tile.

**Figure 1**

# SEQUENCE CARDS

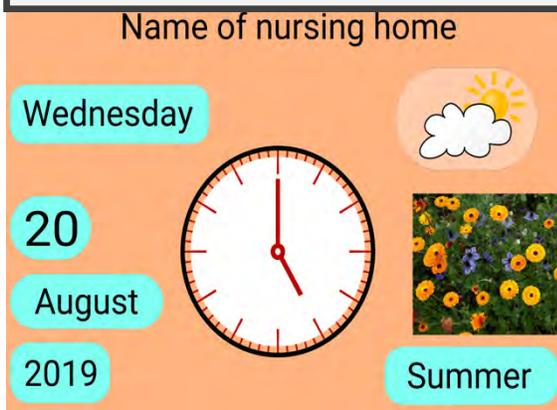


Autism Speaks

**Figure 2**

Use sequence cards to break down the steps of basic activities of daily living skills (toileting, brushing teeth, showering, etc.) into visual guides.

# REALITY ORIENTATION BOARD



Wikimedia Commons

**Figure 3**

Customize the reality orientation board with the location, time, day, year, season, and weather.

# RESOURCES

MindMate: MindMate is a free app that is designed for individuals with dementia as well as their caregivers. To get started, you select how active you are and how healthy you eat. Next, you complete a short matching quiz and rate the difficulty level. Based on that information, MindMate will generate daily cognitive and physical exercises, as well as a healthy "recipe of the day".

Tile Website: Below is the link to find all of the Tile products that are available, instructions on how to use them, and device costs.

[https://www.thetileapp.com/?ref=tiledotcom&utm\\_source=tiledotcom](https://www.thetileapp.com/?ref=tiledotcom&utm_source=tiledotcom)

Mnemonic Generator: Mnemonics are a great cognitive method to help remember things. However, it can be challenging to create one. Below is a link to a website that can generate mnemonics. All you have to do is simply input the list of words you wish to remember.

<https://www.mnemonicgenerator.com>

# HEALTH CARE TEAM

Other than an occupational therapist who will help maximize independence in daily activities, below is a list of other professionals who may be consulted (Alzheimer's Association, 2009)<sup>9</sup>:

- Neurologist: A neurologist will diagnose dementia and monitor an individual's cognitive status. Consulting with a neurologist will help OTs develop an appropriate intervention that meets a client's current level of cognitive functioning.
- Psychologist: Psychologists can help evaluate and treat mental health conditions associated with dementia, such as cognitive disturbances and behavioral functioning.
- Registered Dietician: A registered dietician can provide a nutritional assessment and make recommendations that will help improve individuals' health and well-being.
- Physical Therapist: Physical therapists can help develop an appropriate exercise program that are appropriate for individuals' current functional status. Consultation with a PT can help restore function and promote wellness. Once again, physical exercise is just as important as mental exercise in improving cognitive function and memory.

# OCCUPATIONAL ENGAGEMENT

Cognitive function and memory decline, due to dementia, impacts both the activity and participation domain in the International Classification of Functioning (ICF) model. Although cognitive training cannot prevent dementia, it can help improve aspects of memory and thinking. This, in turn, can help individuals manage their daily tasks better. For example, rehearsal/repetition while grocery shopping can help individuals remember which grocery items to pick up. Strategies that reinforce memory and cognitive function, such as the solutions listed above, can help improve limitations in the activity and participation domain of the ICF.

# REFERENCES

Barney, K. F., & Perkinson, M. A. (2016). Occupational therapy with aging adults: Promoting quality of life through collaborative practice. St. Louis, MO: Elsevier <sup>8</sup>

DiZazzo-Miller, R., & Pociask, F. D. (2018). Preparing for the occupational therapy national board exam: 45 days and counting (2<sup>nd</sup> ed.). Burlington, MA: Jones & Bartlett Publishers <sup>7</sup>

<https://www.alz.org/alzheimers-dementia/what-is-dementia> <sup>1</sup>

<https://www.who.int/news-room/fact-sheets/detail/dementia> <sup>2</sup>

<https://qbi.uq.edu.au/brain-basics/memory/types-memory> <sup>3</sup>

<https://www.sciencedirect.com/topics/psychology/cognitive-functioning> <sup>4</sup>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4185370/> <sup>5</sup>

<https://www.thetileapp.com/en-us/> <sup>6</sup>

[https://www.alz.org/national/documents/phase\\_4\\_home\\_care\\_recs.pdf](https://www.alz.org/national/documents/phase_4_home_care_recs.pdf) <sup>9</sup>