



# MANAGEMENT OF DIFFICULT BEHAVIOURS IN DEMENTIA AND ALZHEIMER DISEASE

**DOLLY DASTOOR Ph.D**

**Chair, Education Committee**

**MCGILL UNIVERSITY RESEARCH CENTRE FOR STUDIES IN AGING**

**ASST. PROF. PSYCHIATRY, MCGILL UNIVERSITY**

Quebec Provincial Association of Retired School Educators

October 14, 2021

[www.douglas.qc.ca](http://www.douglas.qc.ca)



## Management of Difficult Behaviours in Dementia and Alzheimer Disease

- 1 UNDERSTAND THE DISEASE
- 2 UNDESTAND WHAT IS CAUSING THE DIFFICULT BEHAVIOUR
- 3 APPRECIATE YOUR OWN STRENGTHS AND LIMITATIONS
- 4 ACCEPT THEM
- 5 LEARN TO TAKE CARE OF YOURSELF TO BETTER CARE FOR YOUR LOVED ONE
- 7 DEVELOP STRATEGIES TO HELP YOURSELF AND YOUR LOVED ONE



**What is Memory? (Mnemosyne = the Greek Goddess of Memory)**

Memory is a dance of chemical and electrical activity in the Brain

**MEMORY SYSTEMS**

1 **EXPLICIT** (declarative memory) consciously remember an action

- Episodic (for events)  
Declines with age
- Semantic (for facts, words, images over learnt materials)  
Does not decline with age, is not dependent of cues for retrieval, it may become temporarily inaccessible

2 **IMPLICIT** (non-declarative memory),

- Procedural memory – does not decline with age.  
motor skill for learning, automatic action

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Brain is network of billions of nerve cells and connections (synapses), with aging these connections break down and these expressway of lanes closed for construction, the movement in the brain is also slowed.

Our lives are largely made up of memories (our past) and hopes (our future) wit now a grammatical construct. Any memory lapse however transient scares us as we are bombarded with the spectre of AD. We treasure our memories and our capacity to remember.

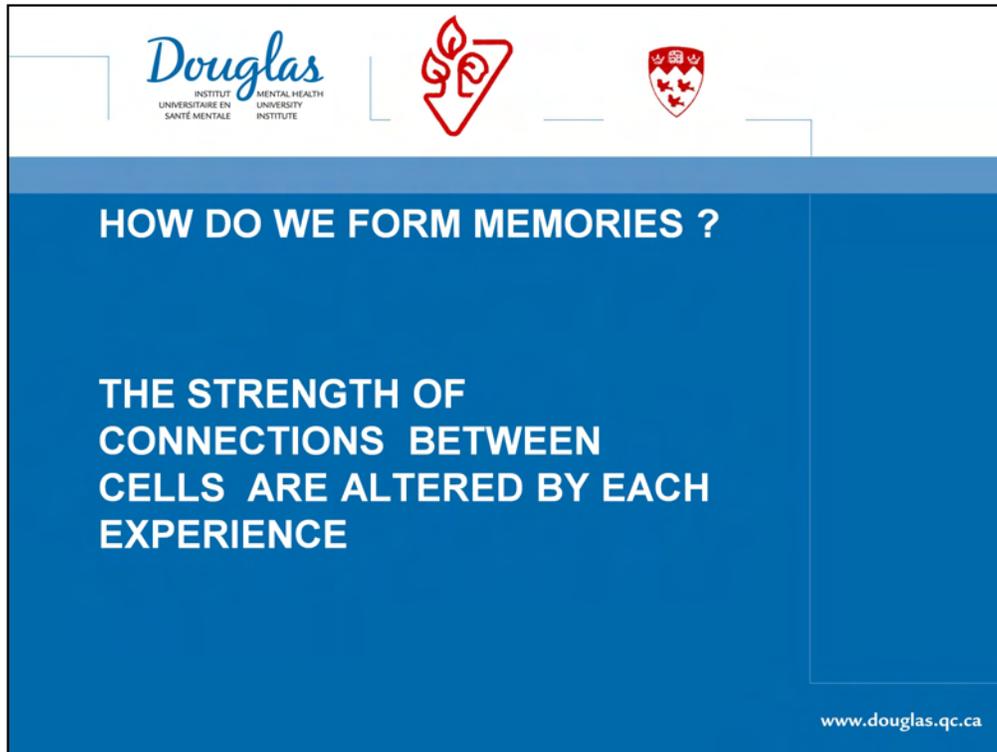
Healthy people may complain of forgetting names, take longer to recall a name, to find a word. This forgetfulness is Benign forgetfulness and comes after age 40. We cannot absorb new information as easily as when we were 20

Episodic = requires temporal and spatial context for retrieving. And declines with age as we do not encode well (filing system)

Semantic=not dependent on temporal or spatial cues. Eg vocabulary, historical or geographical information.

Episodic and semantic memories work together

When our brain retains a memory of an earlier event that memory is non-declarative, implicit or procedural.



The brain is the most powerful organ in the body weighs only 3 lbs. and the texture is like firm jello

The brain is old by age 24. It starts to shrink by age 30 and by age 80 we will have 10-20% less of the grey matter than as a teenage. It has no moving parts, no joints or valves, It serves as motherboard for all our body's other system, but is also the seat of the mind, your thoughts , your sense that you exist at all. **The BRAIN IS LIKE AN INTERNET SERVER AND NOT A COMPUTER.**

4 weeks after conception ½ million nerve cells are made every minute and gradually they are sent to different areas to form specific functions.

1<sup>st</sup> Area—sensory cortex –Basic functions movement in front and back of the brain

2<sup>nd</sup> area– Parietal lobes—spatial orientation and language

3<sup>rd</sup> area-prefrontal cortex—executive functions, social judgment, plan for the future

10 million nerve cells or neurons with branches connecting at more than 100 trillion points forming a network. Signals traveling through the neurons, forms the basis of memories, thoughts and feelings.

Synapses ---connector points of nerve cells-tiny bursts of chemicals called neurotransmitters (dozens of neurotransmitters) Signals travel within the nerve cells as electrical charges. AD destroys the neurons and disrupts both the electrical charges that travel within the cells and the activity of neurotransmitters at the synapse

**Douglas**  
INSTITUT MENTAL HEALTH  
UNIVERSITAIRE EN UNIVERSITY  
SANTÉ MENTALE INSTITUTE

**MEMORY STORE**  
Sensory Memory, Primary Memory, Secondary Memory

**SENSORY MEMORY (Modality Specific)**  
No loss with age

**PRIMARY MEMORY (Short Term Memory)**  
Minimal loss with age  
Working Memory, needs to be repeated and rehearsed

**SECONDARY MEMORY (Long-Term Memory)**  
Does not decline with age

The relationship between primary and secondary memory is interactive . Recognition is better than recall, and both need cuing

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Primary memory –needs repetition, space in primary memory is limited

Encoding strength affects retrieval and vice-versa

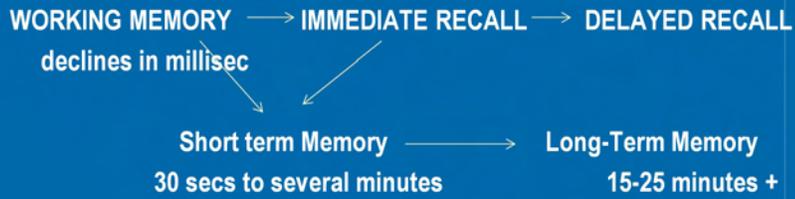
Recall consolidates LTM and like the principal server on the computer network, it integrates visual information coming from the visual cortex with input coming from other servers, and stores memories in full recognition of the event.

SECONDARY memory-Age related changes. Loss depends upon the type of materials to be learnt and the method we use to remember i.e. free recall or recognition. Materials with greater meaning will be remembered better. (nonsense syllables). Recall improves when cue are given in both encoding and retrieval stages.

Procedural memory: Motor activity based on repetition,



## MEMORY MODEL





**Why Does Memory Decline With Age?**  
*AGING IS INEVITABLE, MEMORY LOSS IS NOT*

**AREAS IN THE BRAIN VITAL TO MEMORY**  
**HIPPOCAMPUS** essential for working memory (stm)  
**FRONTAL LOBES**  
**AMYGDELA** (emotions associated with memory)  
**THALAMUS** (controls attention)

Activity in Hippocampus and frontal lobes slows down with age, due to loss of connections (synapses) between nerve cells.

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Hippocampus is involved in receiving information processing, and storing it retrieval on demand

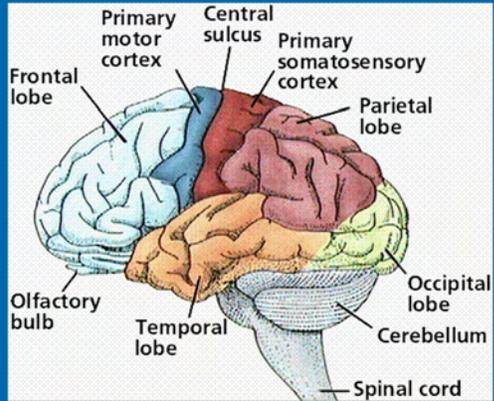
Prefrontal –Long term memories are stored.

Frontal lobes—to retrieve information You depend on the frontal lobes to retrieve information

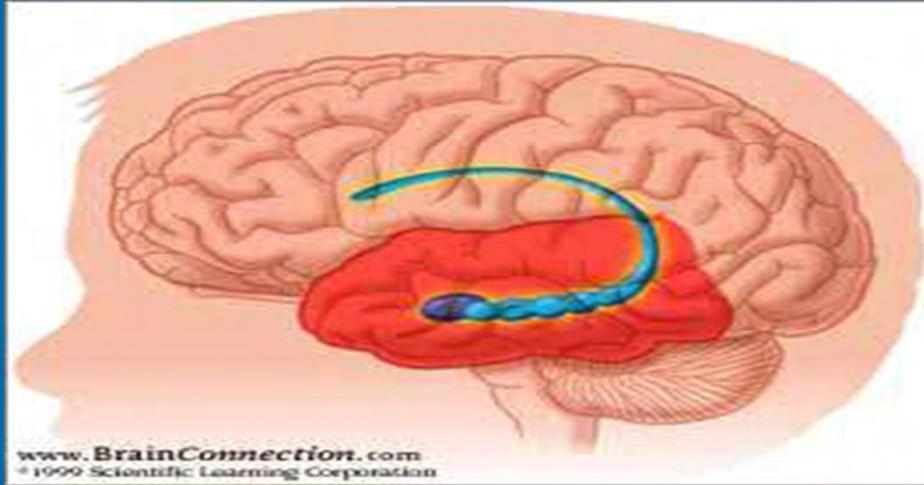
To lock something in LTS, review the information 3-5 times a day for 3-5 days. If you need to memorize something visualize it.

With age activity in the hippocampus and frontal lobes slow down

Loss of function particularly in the connections between nerve cells break down



## LOBES OF THE BRAIN



### Lobes of the Brain

FRONTAL personality, executive functions, abstract reasoning, motivational acts

TEMPORAL Verbal memory (left hemisphere)

Non-verbal memory (right hemisphere)

PARIETAL Integration of Sensory information

OCCIPITAL Visual functions and perception

Frontal Lobe SOAP **S**equence, **O**rganization, **A**bstract Reasoning, **P**lanning



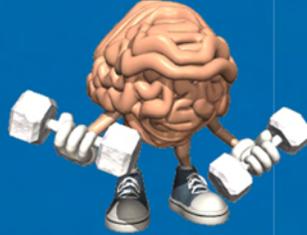
## HOW DO WE PRESERVE MEMORY

LIFE STYLE

COGNITIVE ACTIVITIES

POSITIVE ATTITUDE

USE OF EFFICIENT STRATEGIES



**Douglas**  
INSTITUT MENTAL HEALTH  
UNIVERSITAIRE EN UNIVERSITE  
SANTÉ MENTALE INSTITUTE

**HOW DO WE PRESERVE MEMORY**  
**LIFE STYLE**

**EXERCISE...molecular fertilizers**  
both mental and physical  
exercise 30 min/day 3 times a week

**DIET** Pro-memory diet, low in saturated fat  
high in fruit and vegetables  
Vit B12, folate, (spinach, citrus fruits,  
asparagus, beans) folic acid, Vit E (nuts,  
oils, protects brain from aging)

**SLEEP** necessary for memory functioning

**STRESS** cortisol, a stress hormone shrinks  
hippocampus, chronic stress alters brain  
function

**SOCIAL AND LEISURE ACTIVITIES**

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Brain feeds on stimulation. It grows and changes all the time . It is never too late to feed it. The brain is far more resilient than we think. It needs a good mental workout  
Brian GYM,

In spite of all the wear and tear our brain the most important organ which defines us as humans, maintains its potency and is far more resilient than previously thought  
The brain grows and changes all the time .It feeds on stimulation and it is never too late to feed it

On a biological level, the older brain is a different brain. It reroutes messages across underutilized area, including the hippocampus which is generally reserved for more complex memory tasks.

Strategies Link data, challenges, create something, exercise, write it down, compartmentalize

Cross-words—refine verbal abilities, Jig-saw---helps spatial skills; card game --- helps sharpen your memory reserves

Keep a diary—the art of writing, cements an important events in the memory. Make associative links, new data.

Estrogen make improve verbal and visual memory. Reduces osteoporosis , and AD but increases the risk of cancer.

Multi-tasking—difficult as we grow older, detrimental to working memory-short –term memory. When distracted the information can slop out before you have had a chance to act on it . (standing in the kitchen wondering why you came there)



## HOW DO WE PRESERVE MEMORY

### LIFE STYLE

Healthy body weight,  
Monitoring diabetes and good glycemc control,  
Controlling hypertension,  
Take your medications,  
Control osteoporosis,

**HOW DO WE PRESERVE MEMORY**

**COGNITIVE ACTIVITIES**

- Solve brain teasers -- Learn one new activity a year**
- Active not passive activities**

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Brain feeds on stimulation. It grows and changes all the time . It is never too late to feed it. The brain is far more resilient than we think. It needs a good mental workout  
Brian GYM,

In spite of all the wear and tear our brain the most important organ which defines us as humans, maintains its potency and is far more resilient than previously thought  
The brain grows and changes all the time .It feeds on stimulsion and it is never too late to feed it

On a biological level, the older brain is a different brain. It reroutes messages across underutilized area, including the hippocampus which is generally reserved for more complex memory tasks.

Strategies Link data, challenges, create something, exercise, write it down, compartmentalize

Cross-words—refine verbal abilities, Jig-saw---helps spatial skills; card game --- helps sharpen your memory reserves

Keep a diary—the art of writing, cements an important events in the memory. Make associative links, new data.

Estrogen make improve verbal and visual memory. Reduces osteoporosis , and AD but increases the risk of cancer.

Multi-tasking—difficult as we grow older, detrimental to working memory-short –term memory. When distracted the information can slop out before you have had a chance to act on it . (standing in the kitchen wondering why you cane there)

**HOW DO WE PRESERVE MEMORY**

**USE OF EFFICIENT STRATEGIES**

**INTERNAL MEMORY AIDS**

Mnemonics—organized mental systems or strategies (verbal or visual)

Add something to the information to make it more meaningful

Organize the information you want to remember

Break information into more meaningful parts

**EXTERNAL MEMORY AIDS**

Agenda, cues, filing system, writing things down

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Brain feeds on stimulation. It grows and changes all the time . It is never too late to feed it. The brain is far more resilient than we think. It needs a good mental workout Brian GYM,

In spite of all the wear and tear our brain the most important organ which defines us as humans, maintains its potency and is far more resilient than previously thought The brain grows and changes all the time .It feeds on stimulation and it is never too late to feed it

On a biological level, the older brain is a different brain. It reroutes messages across underutilized area, including the hippocampus which is generally reserved for more complex memory tasks.

Strategies Link data, challenges, create something, exercise, write it down, compartmentalize

Cross-words—refine verbal abilities, Jig-saw---helps spatial skills; card game --- helps sharpen your memory reserves

Keep a diary—the art of writing, cements an important events in the memory. Make associative links, new data.

Estrogen make improve verbal and visual memory. Reduces osteoporosis , and AD but increases the risk of cancer.

Multi-tasking—difficult as we grow older, detrimental to working memory-short –term memory. When distracted the information can slop out before you have had a chance to act on it . (standing in the kitchen wondering why you cane there)

## TOP 10 WARNING SIGNS OF DECREASED MEMORY

**Memory loss that affects day-to-day function**  
**Difficulty performing familiar tasks**  
**Problems with language**  
**Disorientation of time and place**  
**Poor or decreased judgment**  
**Problems with abstract thinking**  
**Misplacing things**  
**Changes in mood or behaviour**  
**Changes in personality**  
**Loss of initiative**

[www.douglas.qc.ca](http://www.douglas.qc.ca)

1. Memory loss that affects day-to-day function: normal to occasionally forget appointments etc., a person with AD may forget more often and not remember them later
2. Difficulty performing familiar tasks: may be unable to prepare any part of a meal or forget they ate a meal
3. Problems with language: may forget simple words or substitute inappropriate words
4. Disorientation of time and place: can become lost on their own street, not knowing how they got there or how to get home
5. Poor or decreased judgment: may not recognize an infection as a problem or may dress inappropriately (e.g. wear heavy clothing on a hot day)
6. Problems with abstract thinking: may forget completely what is in a chequebook and what needs to be done with them, may not understand what a birthday is
7. Misplacing things: may put things in inappropriate places - iron in the freezer, wristwatch in the sugar bowl
8. Changes in mood or behaviour: can exhibit rapid mood swings - from calm to tears to anger - for no apparent reason
9. Changes in personality: become extremely confused, suspicious or withdrawn, may also include apathy, fearfulness or acting inappropriately
10. Loss of initiative: may become very passive, and require cues and prompting to become involved



**DEMENTIA**

Dementia is a syndrome or a group of symptoms resulting from a structural loss or death of nerve cells in the brain.

- Insidious onset
- Progressive decline
- Destroys cognitive, functional and behavioural abilities

Less than 10% of people who experience lapses of memory develop dementia

Even before symptoms are detected plaques and tangles are formed in areas involved in

1. Learning and memory
2. Thinking and planning

[www.douglas.qc.ca](http://www.douglas.qc.ca)

60+ different varieties of dementia of which AD is 60%.

8% of Canadians over 65. 35% over 85; 65% go undiagnosed till symptoms are very apparent, this delays intervention and planning for the future.

Imagine a Brain as a home filled with lights which are switched off one by one. AD turns off the lights so that the flow of ideas , emotions, memories from one room to the other slows and eventually stops and as yet there is no way for the lights to come back on.

Memory impairment, other cognitive impairments, functional loss resulting form cognitive impairments. No depression.

**Symptoms in Dementia**

- Memory Impairment**
- Other cognitive impairments**
  - language, executive functions, apraxia, agnosia
  - Functional loss in ADL
- Clear consciousness**
- No depression**

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Dementia is a syndrome or a group of symptoms resulting from a structural loss or death of nerve cells in the brain. In the earliest stages, before symptoms are detected with the current tests, plaques and tangles begin to form in the brain area involved in

1 learning and memory and 2 thinking and planning

Insidious onset with a progressive decline, slowly destroying all cognitive and functional abilities. Also behavioral symptoms eg. Depression, wandering, disinhibition. People with MCI are characterized by persistent recurrent short-term memory loss, forgetting important social and business matters and some moments of confusion. They do poorly on learning and retention of new information. This interferes with daily living but they can still care for themselves. Between 10 to 20% of people with mild cognitive impairment develop AD characterized progressive deterioration of memory, language, reasoning and other vital cognitive functions 1 in 10 develop AD 1-2 years after age 85



## PREVALENCE OF DEMENTIA

### GLOBALLY

Year 2000 20 million

Year 2005 25 million

Year 2015 46.8 million

Year 2030 74.7 million



## DIFFERENT TYPES OF DEMENTIA

THERE ARE OVER 60 different types of DEMENTIA  
Most common types

Alzheimer's Disease 64 %  
Vascular Dementia  
Fronto-temporal Dementia  
Alcoholic Dementia  
Lewy Body Dementia

Most common feature of all these dementias is Memory Loss,



## PREVALENCE OF ALZHEIMER'S DISEASE

**Alzheimer's Disease is the most common form of dementia; 64% of all dementias.**

The World Alzheimer Report 2021 stated  
46.8 million globally (9.9 million new cases every year)

32% know someone with Alzheimer's Disease

21% have someone with Alzheimer's disease in their family

**Women account for over 2/3 rds of those over 65 with the disease**

**Most caregivers are also women.**

**Douglas**  
INSTITUT UNIVERSITAIRE EN  
SANTÉ MENTALE

MENTAL HEALTH  
UNIVERSITY  
INSTITUTE

**Prevalence and Impact of DEMENTIA**

**ANNUAL SOCIETAL AND ECONOMIC  
COST ESTIMATES GLOBALLY  
GROWING MORE RAPIDLY THAN THE NUMBER  
AFFECTED**

**In 2010 USD 604 billion**  
**In 2018 USD 818 billion**  
**In 2021 USD 1 trillion**

**The rising global cost of dementia will pose  
serious challenges to health care and social care  
systems around the world**

[www.douglas.qc.ca](http://www.douglas.qc.ca)

As the incidence of AD increases, government and society as a whole face a major challenge in dealing with the economic and societal implications.

In Canada:

AD affects 5% of people aged > 65 years and 25% of those > 85 years of age

Represents 316,500 cases of AD, of which 50% require institutionalized care

Two-thirds of AD patients are women

The annual treatment costs of AD in Canada currently approach \$4 billion a year;

Direct costs (actual monetary expenditures) of AD include supportive home care, institutionalization, pharmacological treatments and physician visits

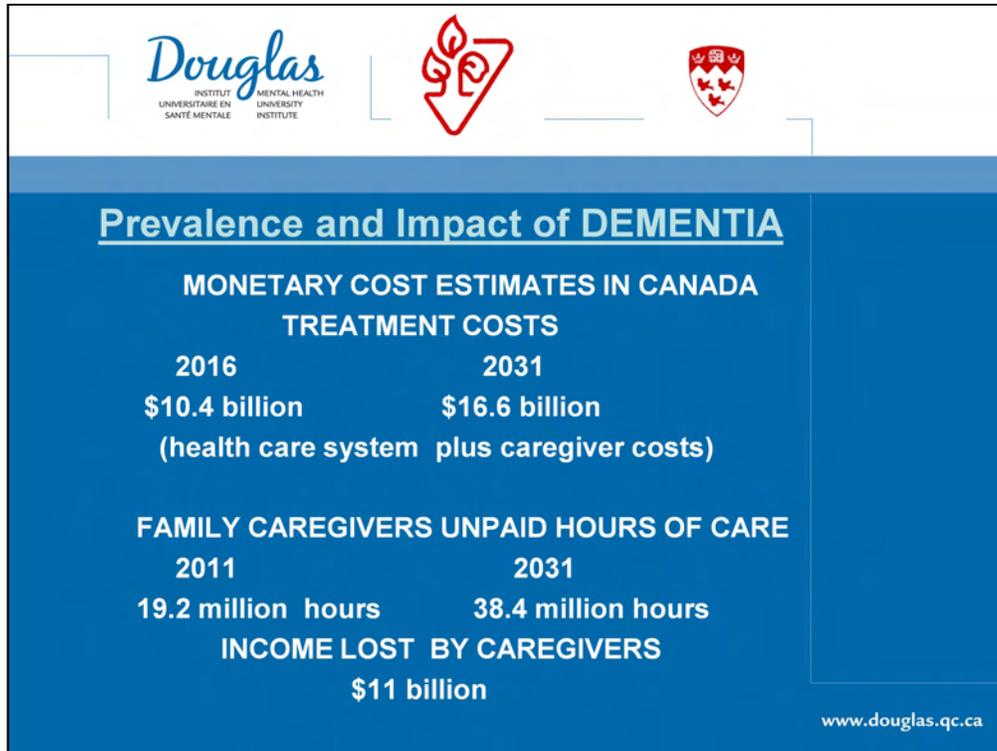
Indirect costs (lost resources) include the loss of productivity of the patient and primarily the unpaid caregiver services provided by family, friends and volunteers

A recent Canadian study found that 84% of the cost of care for a patient with severe AD arises from institutionalization<sup>1</sup>

It has been estimated that the burden of unpaid caregiver time may account for up to 62% of the cost of caring for an AD patient at home<sup>2</sup>

#### References

1. Hux M et al. CMAJ 1998; 159 (5): 457–65.
2. Meek PD, McKeithan EK, Schumock GT. Pharmacotherapy 1998; 18 (2 Pt 2): 68-73.
3. Foster RH, Posker GGL. Pharmacoeconomics 1999; 16 (1): 99–114
4. Knapp M, Wilkinson D, Wiggles R. Int J Geriatr Psychiatry 1998; 13(8): 531–43.



As the incidence of AD increases, government and society as a whole face a major challenge in dealing with the economic and societal implications.

In Canada:

AD affects 5% of people aged > 65 years and 25% of those > 85 years of age

Represents 316,500 cases of AD, of which 50% require institutionalized care

Two-thirds of AD patients are women

The annual treatment costs of AD in Canada currently approach \$4 billion a year;

Direct costs (actual monetary expenditures) of AD include supportive home care, institutionalization, pharmacological treatments and physician visits

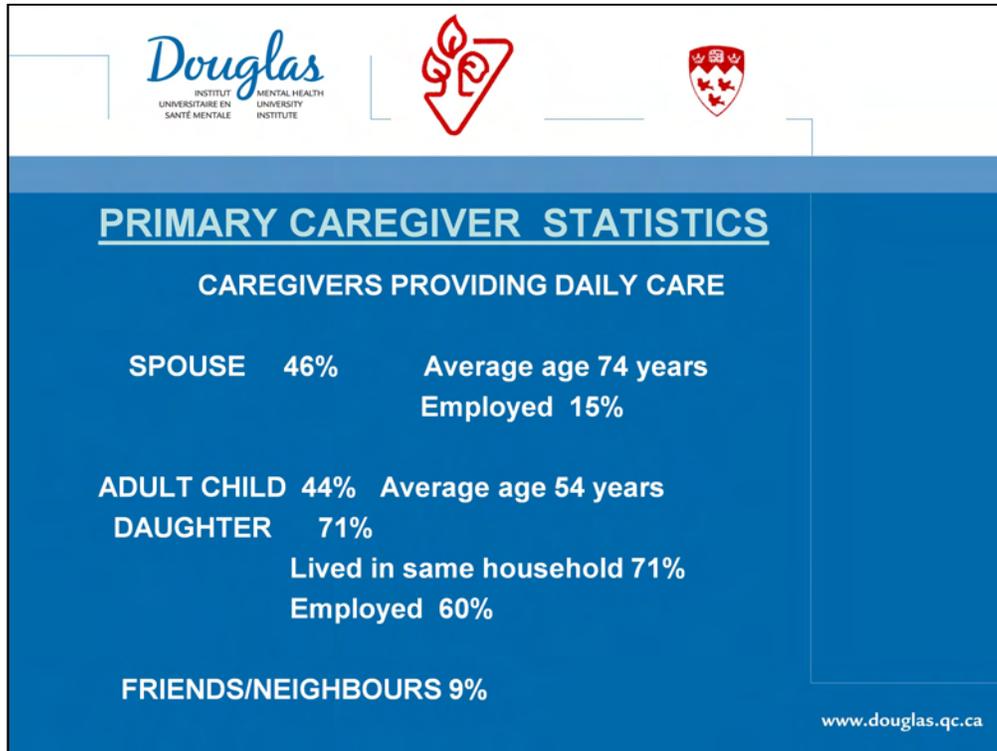
Indirect costs (lost resources) include the loss of productivity of the patient and primarily the unpaid caregiver services provided by family, friends and volunteers

A recent Canadian study found that 84% of the cost of care for a patient with severe AD arises from institutionalization<sup>1</sup>

It has been estimated that the burden of unpaid caregiver time may account for up to 62% of the cost of caring for an AD patient at home<sup>2</sup>

#### References

1. Hux M et al. CMAJ 1998; 159 (5): 457–65.
2. Meek PD, McKeithan EK, Schumock GT. Pharmacotherapy 1998; 18 (2 Pt 2): 68-73.
3. Foster RH, Posker GGL. Pharmacoeconomics 1999; 16 (1): 99–114
4. Knapp M, Wilkinson D, Wiggles R. Int J Geriatr Psychiatry 1998; 13(8): 531–43.



As the incidence of AD increases, government and society as a whole face a major challenge in dealing with the economic and societal implications.

In Canada:

AD affects 5% of people aged > 65 years and 25% of those > 85 years of age

Represents 316,500 cases of AD, of which 50% require institutionalized care

Two-thirds of AD patients are women

The annual treatment costs of AD in Canada currently approach \$4 billion a year;

Direct costs (actual monetary expenditures) of AD include supportive home care, institutionalization, pharmacological treatments and physician visits

Indirect costs (lost resources) include the loss of productivity of the patient and primarily the unpaid caregiver services provided by family, friends and volunteers

A recent Canadian study found that 84% of the cost of care for a patient with severe AD arises from institutionalization<sup>1</sup>

It has been estimated that the burden of unpaid caregiver time may account for up to 62% of the cost of caring for an AD patient at home<sup>2</sup>

References

1. Hux M et al. CMAJ 1998; 159 (5): 457–65.
2. Meek PD, McKeithan EK, Schumock GT. Pharmacotherapy 1998; 18 (2 Pt 2): 68-73.
3. Foster RH, Posker GGL. Pharmacoeconomics 1999; 16 (1): 99–114
4. Knapp M, Wilkinson D, Wiggles R. Int J Geriatr Psychiatry 1998; 13(8): 531–43.





## STAGES OF ALZHEIMER DISEASE

**MILD** (mild to moderate stage may last 2-10 years)

- Forgetful about recent events
- Difficulty with complex tasks
- Suspicious
- Normal Physical examination

**MODERATE**

- Difficulty cooking, handling money
- Unable to maintain home
- Difficulty managing medications.
- Little recall for recent events.
- Agitation and aggression

[www.douglas.qc.ca](http://www.douglas.qc.ca)

**MILD** preparing a meal but forgetting to serve; getting lost in familiar area or street; inappropriate choices putting a bathrobe to go out; May last from 2-10 years

**Moderate:** putting objects in inappropriate places, e.g. iron in freezer, rapid mood or personality changes, lack of interest, lack of initiative.

More plaques and tangles are formed affecting (spreading) to other areas involved in 1 speaking and understanding 2 your sense of where your body relates to objects around you. Changes in personality and trouble recognizing friends and family members



## STAGES OF ALZHEIMER DISEASE

### **SEVERE** (may last 1-2 years)

**Difficulty dressing, grooming**

**Difficulty swallowing**

**Fecal incontinence**

**Gait disturbance**

**Hallucinations and delusions**

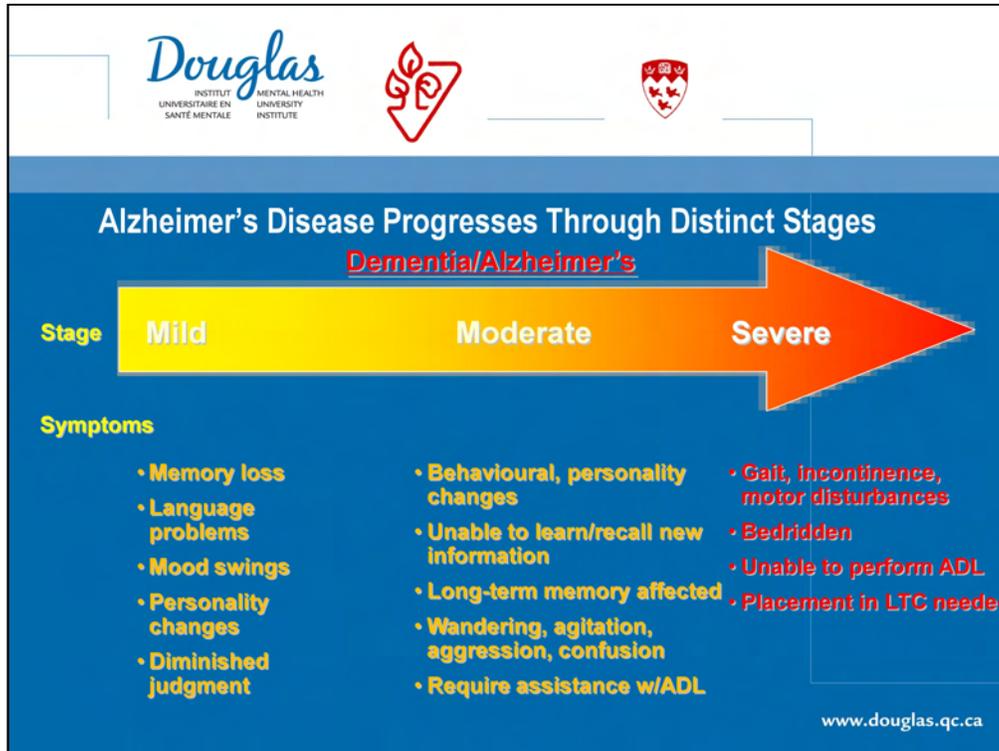
**Poor recognition of family**

**Little recall of past life**

**Restricted vocabulary**

**Neurologic abnormalities**

The cortex shrivels up, damaging areas involved in thinking, planning and remembering, shrinkage specially severe in hippocampus, an area that plays a key role in formation of memories. The ventricles (fluid –field spaces within the brain) grow larger. More cortex is seriously damaged. Wide spread cell death. Lose their ability to communicate, recognize family and even themselves in a photo



In the early stages of AD, tasks requiring sustained attention, memory and problem solving abilities begin to deteriorate. In some patients progression can be rapid.

As AD progresses, patients develop moderate to severe memory deficits, and increased language impairment.

In the severe stages of AD, patients exhibit aphasia (loss of language), apraxia (loss of purposeful movement) and agnosia (loss of recognition).

Approximately two thirds of AD patients will begin to exhibit behavioural problems encompassing a range of symptoms including

- Anxiety
- Depression
- Aggression
- Wandering

These symptoms tend to emerge in the more advanced stages of AD.



## RISK FACTORS OF ALZHEIMER DISEASE

AGE

GENETIC FACTORS

ENVIRONMENT



## RISK FACTORS OF ALZHEIMER'S DISEASE

### AGE

After age	30	4-8%	of brain cells lost every 10 years
After age	60	15%	brain cells lost
After age	80	60%	brain cells lost
After age	100	50%	brain cells lost
After age	150	100%	brain cells lost

**60% to 80%** of brain cells are lost by the time AD is diagnosed

By the time AD is noticed 60 to 80% of our brain cells are dead/lost.

## RISK FACTORS OF ALZHEIMER DISEASE

### GENETIC FACTORS

Chromosome 1 (less than 1% chance of developing AD)

Chromosome 14 (less than 4% chance familial AD 400 families world wide)  
Age of onset between 28-50 years

Chromosome 19 (APOE4 common form of AD between 50% to 60%)

Chromosome 21 (less than 1% chance, 3 copies of gene instead of 2)  
Down Syndrome Age of onset 45-65 years

Amyloid plaques (senile plaques): Neurons store memory, neurons die, these dead cells cannot be pushed out of the brain and they collect together and remain clumped together.

Neurofibrillary tangles are long ribbons INSIDE the cell, they choke the cell.  
Plaques are outside the cells



**RISK FACTORS OF ALZHEIMER DISEASE**

**ENVIRONMENT (RISK FACTOR)**

**EDUCATION** Lower levels of education (low socio-economic status, poor diet)

**HORMONES**

**HEAD TRAUMA** (only those with APOE4 gene; boxers with loss of consciousness)

**HYPERTENSION**

**DOWN SYNDROME** 100% after age 60

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Down syndrome: Chromosome 21 is defective, it contains 3 copies of the gene instead of 2

Aluminum: NO RISK The dye injected has aluminium.

Interplay of environmental factors : Infection or head trauma-combined with genes that make you more susceptible to the disease.





**PROTECTIVE FACTORS FOR ALZHEIMER DISEASE**

- Higher Education- better coping strategies
- Estrogen stimulates the release of natural compounds for brain cell growth
- Exercise
- Anti-inflammatory or hypertensive drugs
- Anti-oxidants (VIT E, B, C Ginko Biloba)
- Red Wine (not white) The mould on the skin acts as an antioxydant
- Cholesterol lowering drugs
- Good Diet
- Social support and network
- Spirituality

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Most people with AD die not because their brain has aged but because of deterioration somewhere else in the body. If we maintain a healthy functioning brain with continued self renewal, we can have a well-functioning brain for a longer period of time. Research has shifted from structure to form—the brain is not a shell, but a

In active, dynamic, supremely plastic structure that changes from moment to moment.

Exercise stimulates the release of natural compounds that stimulate brain cell growth. It relieves stress levels, lowers BP, improves the lipid profile enhances glucose tolerance

Anti-inflammatory: Twins study. 1 twin had AD and the second had No AD . He had arthritis and took Advil

Vit E 400-1200 IU. Vitamin C –1-5 grms; Vit A 10,00 to 20,00 units

Ginko—need to be taken in the refined form. It contains super vit E. NIH has an \$18 million study to test the claim of ginko

Red wine : 1 litre a day, the mold on the skin acts as an anti-oxydent

Alcohol is a toxin for hippocampus. It is water soluble and with age body fat percentage increases and body water decreases. Hence the alcohol stays in the body longer, One drink while you are an adult is like 2 drinks when you are young.

Cholesterol lowering drugs : incidence reduced by 75% in people in their 40s and 50s

Cigarettes; Nicotene and other substances target brain cells responsible for memory by boosting it to work better

Diet : Pro-memory diet-low in saturated fat, high in fruit and vegs, rich in antioxidant Vit B, C and E

Spirituality triggers relaxation process, lowers BP and heart rate, it is a powerful stress reducer.

**Douglas**  
INSTITUT MENTAL HEALTH  
UNIVERSITAIRE EN UNIVERSITY  
SANTÉ MENTALE INSTITUTE

**Cholinergic Treatment of AD**

**Aricept® (donepezil hydrochloride)**  
Approved August 1997

**Exelon® (rivastigmine)**  
Approved April 2000

**Reminyl ER® (galantamine)**  
Approved July 2001

[www.douglas.qc.ca](http://www.douglas.qc.ca)

Currently, the only agents approved in Canada for use in the treatment of AD inhibit the breakdown of ACh by AChE. These include:

Donepezil (Aricept; Pfizer)

Rivastigmine (Exelon; Novartis)

Galantamine (Reminyl; Janssen-Ortho), approved in July 2001, has a novel dual mechanism of action on the cholinergic system.

Galantamine is a reversible AChE inhibitor and also allosterically modulates nicotinic ACh receptors. The nicotinic receptors play a key role in memory and learning. The allosteric modulation of these receptors increases their sensitivity to stimulation by ACh thus enhancing cholinergic function.



## Dementia

**Cognitive Loss**

**Non-Cognitive  
Psychiatric & Behavioral  
Disturbances (90%)**

Agitation, wandering, vocalization,  
aggressiveness (43% to 93%)



## THE MANAGEMENT OF BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS IN DEMENTIA CARE

▪ **Physically non-aggressive behavior:**

Pacing, inappropriate dressing and undressing, trying to get in a different place, handling things inappropriately, general restlessness, repetitious mannerisms

▪ **Physically aggressive behavior:**

Hitting, kicking, pushing, scratching, tearing things, grabbing people (biting, spitting)

▪ **Verbally non-aggressive behavior:**

Complaining, constant requests for attention, negativism, screaming, repetitious sentences or questions, relevant and irrelevant interruptions

▪ **Verbally aggressive behaviors:**

Screaming, cursing, temper outbursts and making strange noises



## Management of Difficult Behavioural Problems

### HELPFUL STRATEGIES FOR COMMON BEHAVIOURS

<b>RESTLESSNESS</b>	Distract; calm with music or touch consider pacing as a form of exercise
<b>REPEATED ACTIONS</b>	If behaviour does not bother, do nothing distract with simple activities , Change the subject; Stay calm
<b>SUSPICION</b>	Provide comfort; do not argue or try to reason do not take accusations personally



## Management of Difficult Behavioural Problems

### Best Practices in Treatment Modalities

Focused Person Centered Care

Supportive Environment

Pharmacology



## Management of Difficult Behavioural Problems

**Behavioural Disturbance can be**

**Primary Behavioural Disturbance**

(e.g. sleep problem, sundowning, hoarding,  
restlessness, physical aggression )

**Secondary Behavioural Disturbances**

Medical conditions, pain, environmental factors  
fecal impaction, abscess tooth, fracture, congestive heart  
failure, hypoglycemia



## Management of Difficult Behavioural Problems

### INTERVENTION TECHNIQUES

#### NON-DRUG THERAPIES

Music therapy

Art Therapy

Reality orientation

Reminiscence therapy

Movement therapy

Exercise

Touch therapy

Cognitive activities



## Management of Difficult Behavioural Problems HELPFUL STRATEGIES FOR COMMON BEHAVIOURS

- WANDERING** Reassure the person and distract  
Put reminders (hats, shoes umbrellas ) out of sight and reach  
Inform neighbours
- AGGRESSION** Be calm and reassuring  
Give space to cool down  
Distract  
Look for immediate cause



**COMMUNICATION** allows us to express ourselves and relate to each other.

It can be

- verbal: words we use
- non-verbal: body language
- Para verbal: tone, pacing, and volume of our voice

In Dementia communication is affected and this can cause misunderstanding and mutual frustration. As disease progresses communication becomes increasingly challenging. The caregiver needs to find ways to communicate more effectively.



## Management of Difficult Behavioural Problems

### LOSS OF VERBAL COMMUNICATION

The quality of life for people with dementia is largely dependent on their connection with others.

Maintaining relationship can be complex and challenging when verbal communication is lost

**COMMON PROBLEM:** difficulty finding a word; creating new words; repeating word or phrase.  
difficulty organizing words into logical sentence  
Cursing or using offensive language  
reverting to your first language



## Management of Behavioural Problems

### COMMUNICATION CHALLENGE AT EACH STAGE OF THE DISEASE

**EARLY STAGE:** difficulty understanding humour , jokes etc  
needs more time to respond; lose train of thought

**MIDDLE STAGE:** Trouble understanding everyday conversation  
Asks the speaker to repeat simple sentences  
Difficulty reading and understanding  
Not able to interpret facial expression  
(like a wink or nod)  
Difficulty finishing a sentence, speak in vague and  
rambling sentences



## Management of Difficult Behavioural Problems

### LATE STAGE

- Lose capacity for recognizable speech, although words or phrases may occasionally be uttered

### Non-verbal Communication Becomes Increasingly Important

- Unable to understand the meaning of most words
- Lose capacity for recognizable speech, though words or phrases may occasionally be uttered. Language does not make sense to other
- Become totally mute in some cases



## Management of Difficult Behavioural Problems

### STRATEGIES FOR CAREGIVERS

#### Late stage

#### People in this late stage experience the world through their senses

- Touch:** Hold hands, massage gently to hands, legs, feet
- Smell:** Smell of a favourite perfume, flower, of food which may bring back happy memories
- Vision:** Videos of scenes of nature and soft calming sounds can be relaxing
- Hearing:** Can be comforting even if the words are not understood. Tone and rhythm of voice may be soothing, giving a feeling of comfort and safety .



## Management of Difficult Behavioural Problems

### STRATEGIES FOR CAREGIVERS

- With progression of disease a person's perception of reality can become confused. However it is their reality . Try to accept their reality and meet them where they are .
- Avoid contradicting them or convincing them that what they say is untrue. Trying to bring them to your reality will cause frustration and make things worse.

### CONNECT NOT CORRECT



## Management of Difficult Behavioural Problems

### STRATEGIES FOR CAREGIVERS

- As disease progresses paranoia is common, food being poisoned, belongings being stolen; spying on them or trying to hurt them .
- These are the result of the disease not willful or intentional and although hurtful they are not to be taken personally. Do not argue or try to convince them that their perception is not real. **It is their reality**
- As a caregiver it is normal to feel a variety of emotions throughout all stages of the disease. It is important to acknowledge your feelings, care for yourself and seek practical help and emotional support***



## Management of Difficult Behavioural Problems

- WHO ARE THE CAREGIVERS?
  - INFORMAL -- FAMILY MEMBERS AND FRIENDS
  - FORMAL -- PAID
- WHO DO THEY CARE FOR AND WHY DO THEY PROVIDE CARE
- THE SCOPE OF THE PROBLEM
- WHAT DO THEY NEED TO KNOW TO PROTECT THEMSELVES FROM BURN OUT
- STRESS MANAGEMENT



## Management of Difficult Behavioural Problems

- Some caregivers provide care 24 hours 7 days a week, getting up at night and assisting with all activities of daily living.
- Such round the clock care is needed when the person cannot be left alone
- 32% provided care for 5 years +; 39% provided care 1-4 years
- Caregivers range in age : 14% under age 35; 26% between 35-49  
46% between 50-64; 13% aged 65 and over  
Average age 51 (the sandwich generation)

More people in their 70s are looking after people in their 90s



## Management of Difficult Behavioural Problems

### CAREGIVING TASKS

- Shopping ; preparing meals and providing transportation
  - Helping with medications and follow treatment recommendations
  - Managing finances and legal affairs
- Supervision to avoid unsafe activities as wandering and getting lost
- Bathing , dressing, feeding, and helping the person use the toilet or managing incontinence
  - Making arrangements for medical care and paid in-home assistance
  - Managing behavioral symptoms



## Management of Difficult Behavioural Problems

### Given the pressures of Caregiving

- Caregivers experience rates of depression, suicide, physical illness and premature death higher than the general population
- Most problems related to stress. 40% of caregivers suffer from mental distress (Canadian Institute of Health Information)
- High levels of stress hormones; reduced immune functions; increased risk of hypertension; heart disease; strain in marriage (4 in 10)
- Relationships are elastic only up to a point then they become taut, then they are no longer a net but become a sieve. First thing to go is peace of mind.



## Management of Difficult Behavioural Problems

**WHAT IS STRESS?** Biological reaction to physical or environmental danger (cortisol and adrenaline)

**ACUTE STRESS** good and some necessary

**CHRONIC STRESS** not good-accelerates aging

### **STRESS IS EXPRESSED AS**

**PHYSICAL** headache, fatigue, loss of appetite, sleep disturbance

**MENTAL** impaired memory, lack of concentration; inability to make decisions

**EMOTIONAL** tense, nervous, frustrated, depressed, anxious

**BEHAVIOUR** smoking, drinking, overeating, nail biting, swearing



## Management of Difficult Behavioural Problems

### 10 SIGNS OF CAREGIVER STRESS

- |                        |                         |
|------------------------|-------------------------|
| 1 Denial               | 6 Exhaustion            |
| 2 Anger                | 7 Sleeplessness         |
| 3 Withdrawing socially | 8 Emotional lability    |
| 4 Anxiety              | 9 Lack of concentration |
| 5 Depression           | 10 Health Problems      |



## Management of Difficult Behavioural Problems

### 10 WAYS TO REDUCE YOUR STRESS

As a caregiver you need to look after yourself, to be able to look after the person you love

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1 Learn about the disease         | 6 Be Positive           |
| 2 Be realistic about the disease  | 7 Look for humour       |
| 3 Be realistic about yourself.    | 8 Take care of yourself |
| 4 Accept your feelings            | 9 Get Help              |
| 5 Share your feelings with others | 10 Plan for the Future  |



## Management of Difficult Behavioural Problems

### COPING STRATEGIES FOR STRESS

- Change the way you look at things
- Take nutritional health seriously
- Exercise one of the best and most efficient ways to reduce stress
- Practice relaxation and meditation; get more sleep
- Buy yourself some relief; hire help, book a massage; pace yourself,
- Avoid overextending, build a support system

**FIRST STEP IN REDUCING STRESS  
TAKE BACK CONTROL OF YOUR LIFE**



*GETTING OLD IS  
NATURAL*

*FEELING  
OLD IS OPTIONAL*

THANK YOU