

Dementia and Fall

Geriatric Interprofessional Training

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Prevalence of Dementia

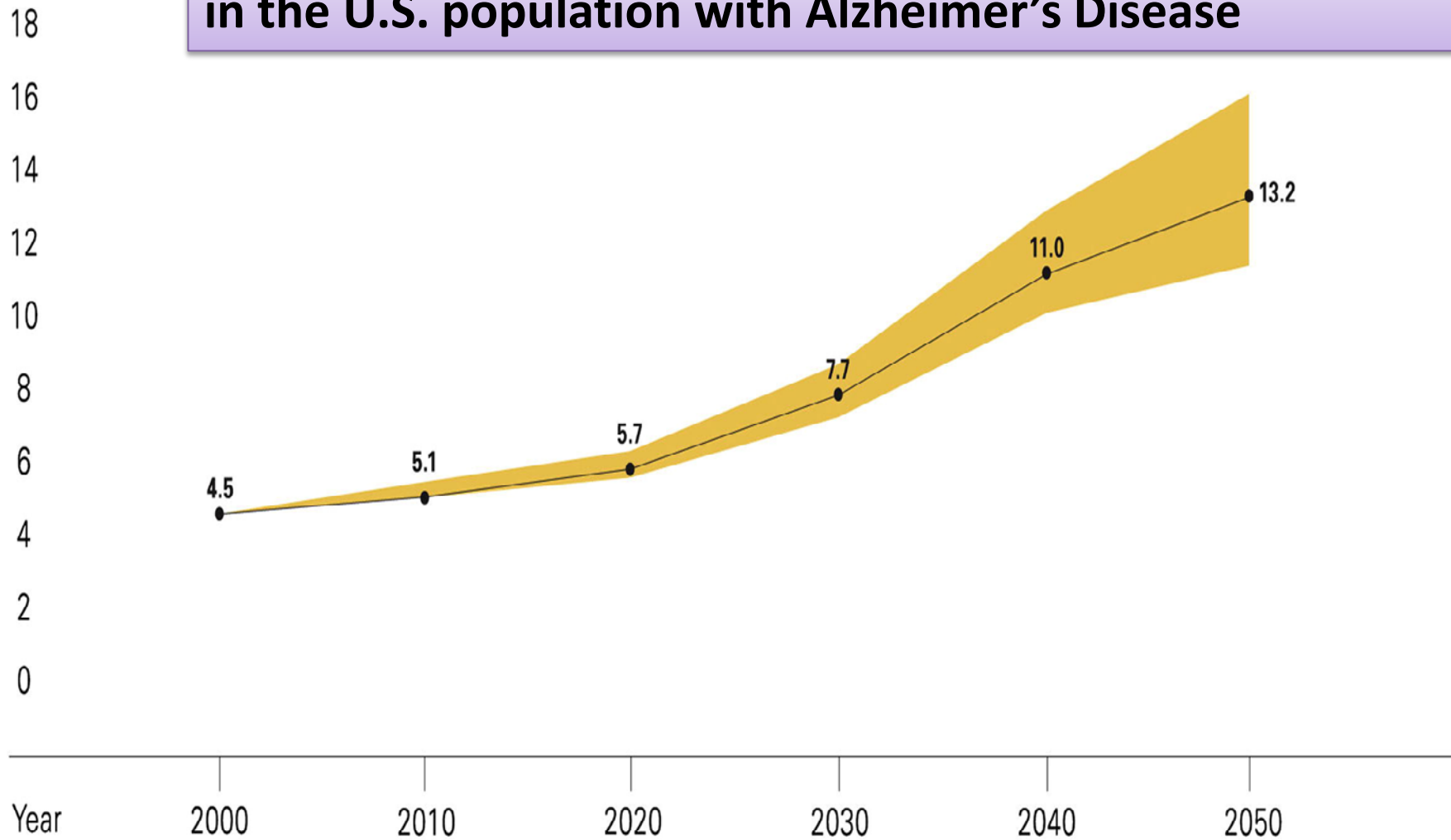
<u>Age range</u>	<u>% affected</u>
65-74	5%
75-84	15-25%
85 and older	36-50%



- 5.4 Million American have AD
- Dementia is an epidemic, particularly among the oldest old
- Someone in the United States develops AD every 66 seconds

Number
(in millions)

Projected numbers of people aged ≥ 65 years in the U.S. population with Alzheimer's Disease



Alzheimer's: More Than Just Memory Loss

- Progressive and disabling
- Cognitive deficits must be severe enough to interfere with independence in everyday activities
- At ↑ risk for accidents, delirium, medical nonadherence, disability and abuse
- Changes in personality and behavior
- Increases in resource utilization
- Eventual nursing home placement



Progression of Alzheimer's Disease

Mild

Short-term memory loss
Word-Finding Trouble
Mood Swings
Personality changes
Diminished judgment

Moderate

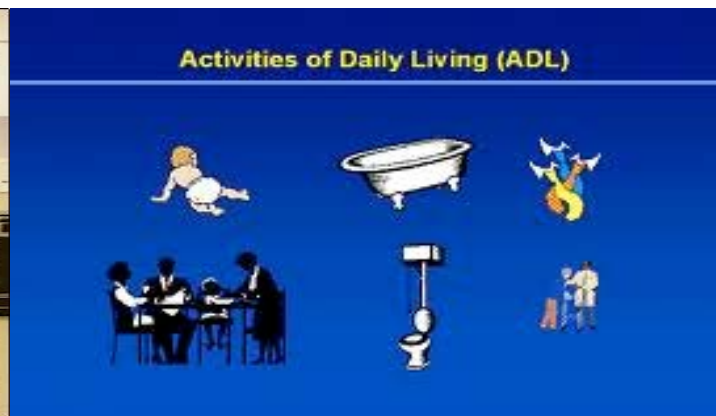
Behavioral, personality changes
Long-term memory affected, unable to recall new info
Wandering, agitation, aggression, confusion
Require assistance with ADL's

Severe

Increase in behavioral disturbances
Unable to perform ADL's
Incontinence, gait dz
Bedridden
Placement in long-term care facilities

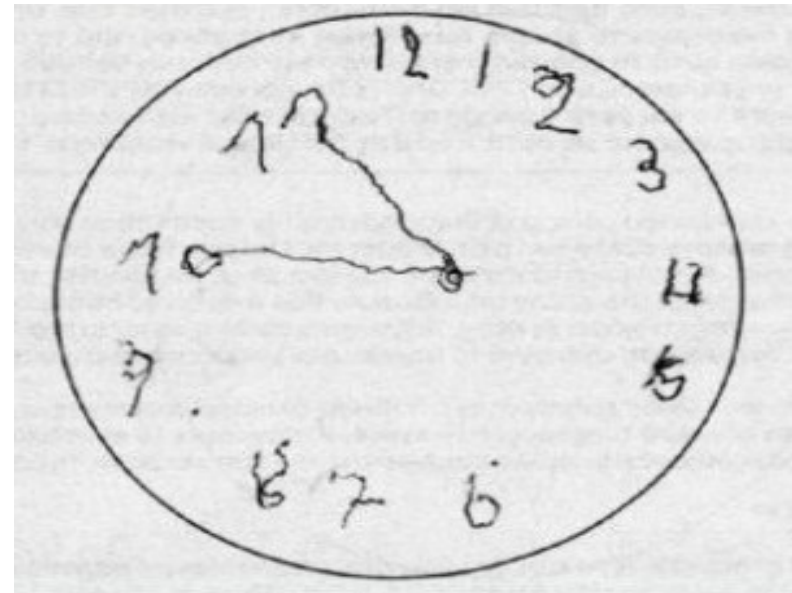
Functional Status

- **Activities of daily living (ADLs):**
 - Bathing, dressing, transferring, toileting, grooming, feeding
- **Instrumental activities of daily living (IADLs):**
 - Using telephone, preparing meals, managing finances, taking medications, doing laundry, doing housework, shopping, managing transportation



Mini-Cog

- Components
 - 3 item recall: give 3 items, ask to repeat, divert and recall
 - Clock Drawing Test (CDT)
 - Normal: all numbers present in correct sequence and position and hands readably displayed the represented time
- Abnormal Mini-Cog scoring
 - Recall =0, or
 - Recall ≤ 2 AND CDT abnormal



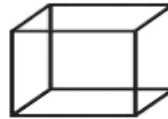
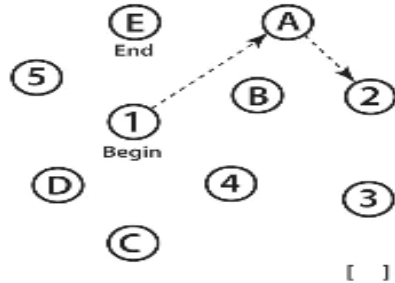
MOCA

MONTREAL COGNITIVE ASSESSMENT (MOCA) Version 7.1 Original Version

NAME: _____
Education: _____
Sex: _____

Date of birth: _____
DATE: _____

VISUOSPATIAL / EXECUTIVE



Copy cube

Draw CLOCK (Ten past eleven)
(3 points)

POINTS

[] [] []
Contour Numbers Hands

___/5

NAMING



[]



[]



[]

___/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No points

ATTENTION

Read list of digits (1 digit/ sec.).

Subject has to repeat them in the forward order
Subject has to repeat them in the backward order

[] 2 1 8 5 4
[] 7 4 2

___/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[] FBACMNAAJKLBAFAKDEAAAJAMOF AAB

___/1

Serial 7 subtraction starting at 100

[] 93 [] 86 [] 79 [] 72 [] 65
4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt

___/3

LANGUAGE

Repeat: I only know that John is the one to help today. []
The cat always hid under the couch when dogs were in the room. []

___/2

Fluency / Name maximum number of words in one minute that begin with the letter F [] _____ (N ≥ 11 words)

___/1

ABSTRACTION

Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler

___/2

DELAYED RECALL

Has to recall words WITH NO CUE

FACE [] VELVET [] CHURCH [] DAISY [] RED []

Points for UNCUED recall only

___/5

Optional

Category cue
Multiple choice cue

ORIENTATION

[] Date [] Month [] Year [] Day [] Place [] City

___/6

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www.mocatest.org

Normal ≥ 26 / 30

TOTAL

___/30

Administered by: _____

Add 1 point if ≤ 12 yr edu

Behavioral & Psychiatric Symptoms of Dementia

- As many as 80%–90% of patients with dementia develop at least one distressing symptom over the course of their illness
- Behavioral disturbances or psychotic symptoms in dementia often precipitate early nursing-home placement
- Neuropsychiatric symptoms such as apathy, poor self-care, or paranoia may be the first indication of dementia
- May involve verbal outbursts, agitation, physical aggression, resistance to bathing or other care needs, and restless motor activity such as pacing or rocking

Management

- **Pharmacologic:**
 - Donepezil, rivastigmine, galantamine and Memantine
- **Nonpharmacologic:**
 - Cognitive rehabilitation with behavioral therapy
 - Physical and mental exercises
 - Family and caregiver education and support
 - Attention to safety and environmental modification



Complexity of Quality Care for Dementia

- Evaluation for treatable conditions contributing to cognitive impairment, including prescription and OTC drug
- Evaluation for remediable causes of excess functional disability, including assessment of home environment
- Discussion of the diagnosis, prognosis, and treatment options with the patient and family
- Referral to patient and caregiver educational programs and/or community support agencies
- Encourage and facilitate patient's continued physical, social and mental activity
- Consideration for treatment with cholinesterase inhibitors and/or memantine
- Discussion of financial planning, advanced care planning and end-of-life care
- Monitoring and support of the caregiver's health
- Discussion of home safety including driving safety
- Support of the patient and the family across the journey of dementia progression

Falls



- One of the most common geriatric syndromes
- Often goes without clinical attention
- Falls are the leading cause of injury among older adults
- Rarely due to a single cause
- Falls predict functional decline



Epidemiology

- 1 in 3 people over the age of 65 yrs falls each year (1/2 of those > 80 years)
- One-half of nursing-home residents
- Demented patients 60% annual incidence of falls
- The death rate attributable to falls increases with age
- 10%–15% of falls by older adults result in fracture or other serious injury
- Mortality highest in white men aged ≥ 85 :
>180 deaths/100,000 population

Risk factors for falls

Most falls are caused by multiple risk factors

- Older Age
- History of a fall
- Lower body weakness
- Balance and gait problems
- Postural Hypotension
- Vision/ Hearing impairment
- Foot disorder
- Pain
- Chronic disease: Parkinson's, stroke, dementia
- Medication
- Environmental hazards
- Foot wear



Fall Risk Increasing Drugs

Drug Class	Examples
Psychotropic drugs	
Sedative/hypnotics	Ambien, Ativan
Antidepressants	Lexapro, Effexor, TCA's
Antipsychotics	Risperdal, Zyprexa
Opioids	Codeine, morphine
First-generation antihistamines	Benadryl
Skeletal muscle relaxants	Robaxin, Flexeril
Long-acting hypoglycemics	Chlorpropamide, Glyburide
Alcohol (> 1 drink/d)	Beer, wine, whiskey, mixed drinks
Cardiovascular	Diuretics, Digoxin

Falls Assessment

- Ask all older adults about falls in past year:
 - *Have you fallen 2 or more times in the past year?*
 - *Have you fallen and hurt yourself in the past year?*
 - *Are you afraid that you might fall because of balance or walking problems?*



STEADI

Stopping Elderly Accidents, Deaths & Injuries

Please circle "Yes" or "No" for each statement below.			Why it matters
Yes (2)	No (0)	I have fallen in the past year.	People who have fallen once are likely to fall again.
Yes (2)	No (0)	I use or have been advised to use a cane or walker to get around safely.	People who have been advised to use a cane or walker may already be more likely to fall.
Yes (1)	No (0)	Sometimes I feel unsteady when I am walking.	Unsteadiness or needing support while walking are signs of poor balance.
Yes (1)	No (0)	I steady myself by holding onto furniture when walking at home.	This is also a sign of poor balance.
Yes (1)	No (0)	I am worried about falling.	People who are worried about falling are more likely to fall.
Yes (1)	No (0)	I need to push with my hands to stand up from a chair.	This is a sign of weak leg muscles, a major reason for falling.
Yes (1)	No (0)	I have some trouble stepping up onto a curb.	This is also a sign of weak leg muscles.
Yes (1)	No (0)	I often have to rush to the toilet.	Rushing to the bathroom, especially at night, increases your chance of falling.
Yes (1)	No (0)	I have lost some feeling in my feet.	Numbness in your feet can cause stumbles and lead to falls.
Yes (1)	No (0)	I take medicine that sometimes makes me feel light-headed or more tired than usual.	Side effects from medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I take medicine to help me sleep or improve my mood.	These medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I often feel sad or depressed.	Symptoms of depression, such as not feeling well or feeling slowed down, are linked to falls.
Total _____		Add up the number of points for each "yes" answer. If you scored 4 points or more, you may be at risk for falling. Discuss this brochure with your doctor.	

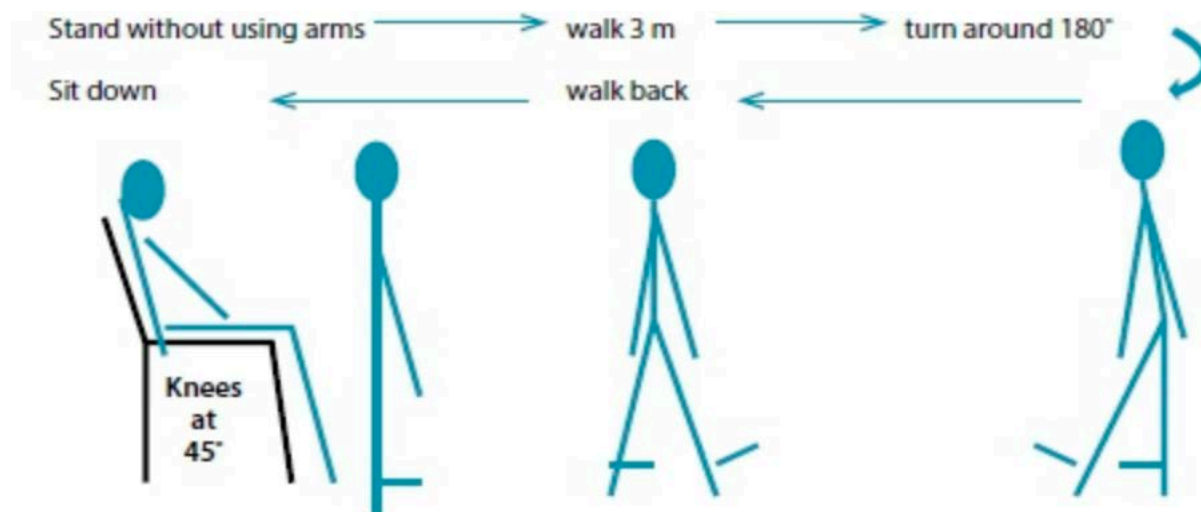
Falls Assessment

- **Single fall:** check for balance or gait disturbance
- **Recurrent falls or gait or balance disturbance:**
 - Obtain relevant medical history, physical exam, cognitive and functional assessment..... *Pursue a multifactorial falls risk assessment*

**RISK
ASSESSMENT**

“Timed Up and Go” test

- Qualitative; timed; assesses gait, balance, and transfers
- Rise from a chair, walk 3 meters, turn, return to sit in the chair
- One study suggests a TUG score of ≥ 14 seconds as an indicator of fall risk



AGS Falls Prevention Guidelines

- Minimize medications
- Initiate individually tailored exercise program
- Treat vision impairment
- Manage postural hypotension, and heart rate and rhythm abnormalities
- Supplement vitamin D
- Manage foot and footwear problems
- Modify the home environment

The Interdisciplinary Approach



Mr. Lewis Part 5

- Mr. Lewis agrees to
 - Take beta blocker once daily for his heart
 - Try inhaler
 - Home PT (VNS)
 - Revisit in 3 months
- Mr. Lewis declines:
 - Anticoagulation for stroke prevention