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Holland Professional Club

DEMENTIA AND ALZHEIMER'S

... WHAT SHOULD WE REMEMBER?

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DEMENTIA AND ALZHEIMER'S

... WHAT SHOULD WE REMEMBER?

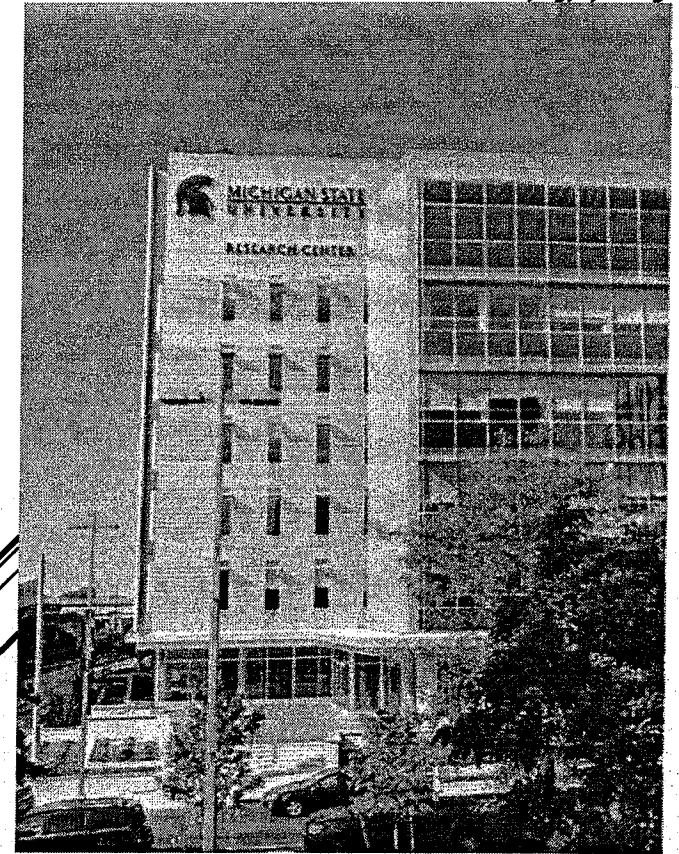
- Introduction: Do we have a problem?
- Key definitions, facts and statistics
- Early signs and diagnosis
- Treatment, Care ... AND the Caregivers
- Research ... A look into the future!

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Michigan State University Alzheimer's Alliance

- Engaging all available stakeholders:
 - Alzheimer's Association
 - Spectrum Health
 - Mercy Health
 - Pine Rest
 - Multiple other care facilities



Dementia and Alzheimer's ... *What should we remember?*

04/04/2019

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Michigan State University Alzheimer's Alliance



- Mobilizing resources in Grand Rapids
- Develop community based memory programs ... *The MoCa.*
- Initiate new focused clinical trials relating to "Mild Cognitive Impairment"
- Integrate major health systems in clinical pharmaceutical company trials

Dementia and Alzheimer's ... *What should we remember?*

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Michigan State University Alzheimer's Alliance

*... to increase dementia and Alzheimer's diagnoses
and research, access to clinical trials, improved
resources and services for caregivers*

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KEY FACTS AND DEFINITIONS,
AND STATISTICS

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Fact Sheet ... *All About Genes:*

Cause:

1. Scientists don't yet fully understand what causes Dementia ... *but it's irreversible*
2. **Genes** play a prominent role ... *and genetic mutations that are inherited as a "genetic risk factor"*
3. **Amyloid plaques and neurofiber "tangles"** which break up nerve cell connections to the brain which then die
4. **Early - Onset Alzheimer's** ... *ages 30 to 60, rare (less than 5%), inherited ...
Familial Alzheimer's*

Dementia and Alzheimer's ... *What should we remember?*

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Fact Sheet ... *All About Genes:*

Cause:

5. **Late - Onset Alzheimer's** ... *after age 61, influenced by environmental and lifestyle factors ... exercise, diet, chemicals or smoking*
6. *Alzheimer's begins years before symptoms emerge*
7. **"Dementia"** is an umbrella term for disorders where the mental functions break down - where there is confusion, disorientation, and memory loss.
 - Alzheimer's is the most common cause of dementia

Dementia and Alzheimer's ... *What should we remember?*

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Fact Sheet ... All About Genes:

Cause:

8. **Mild Cognitive Impairment** ... *Symptoms, beyond normal aging, that may or may not lead to a disease (in 5 years)*
- Subject to medications and "coping techniques" ... *but no FDA approved treatments*
 - Family history is a key indicator
 - Other treatments include high blood pressure and physical, social, and mental activity

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Alzheimer's Disease Statistics:

- 1 in 10: Seniors with Alzheimer's disease
- 1 in 5: Risk for Alzheimer's at age 45
- 1 in 3: Seniors dies with dementia over 85

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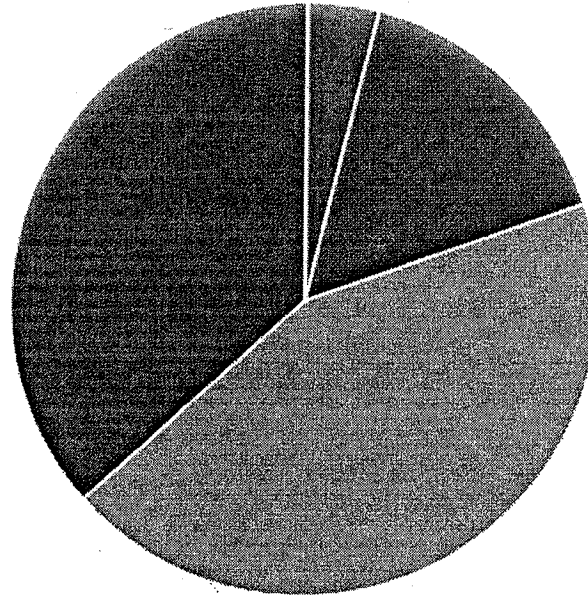
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Who does Alzheimer's Disease Affect?

Ages of People with Alzheimer's Disease in the US, 2018



■ <65 ■ 65-74 ■ 75-84 ■ >85

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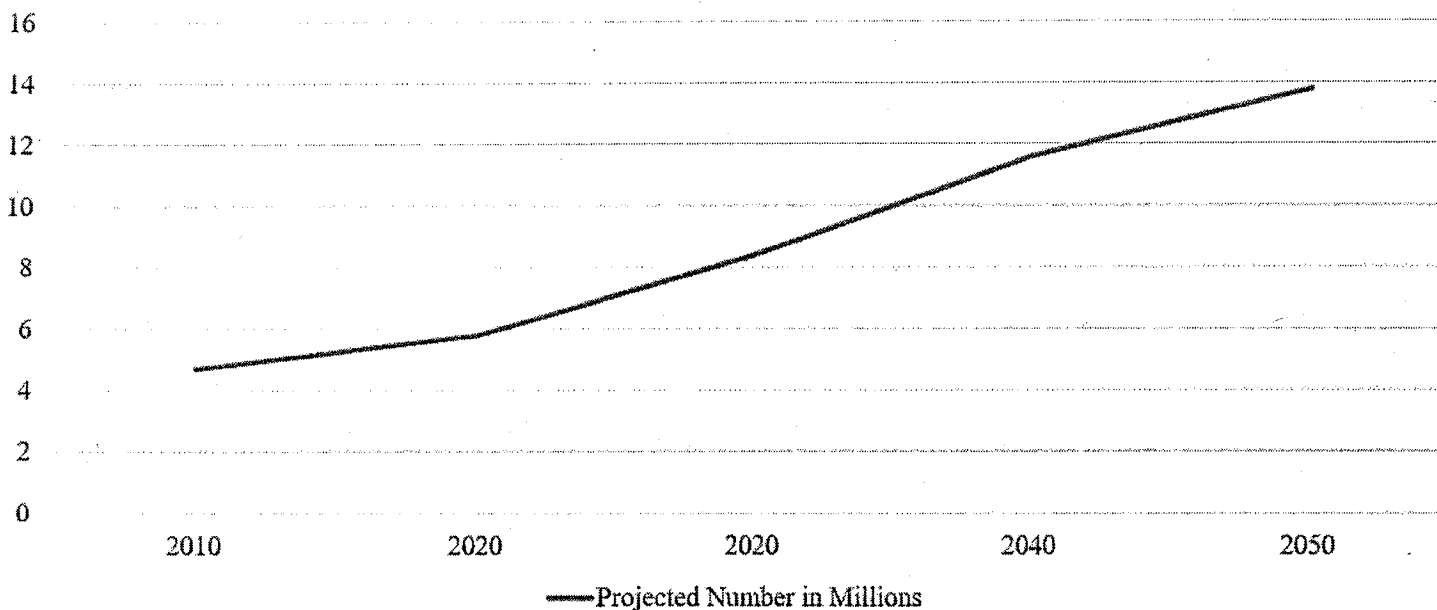
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Projection into the Future

Projected Number of People (over age 65) in US with
Alzheimer's Disease



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© 2014 Alzheimer's Association

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Impact on Persons with Alzheimer's Disease

Losses Memory of some past events/people Family relationships

Learning new things

Cognitive abilities

Certain skills

Some functions

Independence

Memory of some past events/people

Possible Gains/Maintains

Enjoyment of the moment

Everyday decision making

Certain skills

Some functions

Activities with others

Family relationships

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DEMENTIA AND ALZHEIMER'S

... WHAT SHOULD WE REMEMBER?

Early Signs & Diagnosis

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Know the 10 signs (1-5):

1. Memory loss that disrupts daily life
2. Challenges in planning or solving problems
3. Difficulty completing familiar tasks
4. Confusion with time or place
5. Trouble understanding visual images and spatial relationships

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Know the 10 signs (6-10):

6. New problems with words in speaking or writing
7. Misplacing things and losing the ability to retrace steps
8. Decreased or poor judgement
9. Withdrawal from work or social activities
10. Changes in mood or personality

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What are other causes of memory problems?

- Bad reaction to certain medicines
- Emotional problems such as depression
- Not eating enough healthy foods
- Too few vitamins and minerals in your body
- Drinking too much alcohol
- Blood clots or tumors in the brains
- Head injury, such as a concussion from a fall or accident
- Kidney, liver or thyroid problems

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Signs of Alzheimer's Dementia

- "Is this **normal** aging?"
 - Memory
 - Decision making/problem solving
 - Daily tasks
 - Language
 - Motor/spatial skills
 - Personality/behavioral

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Evaluation for Alzheimer's Dementia

- History – with family/friend
- Neurological examination
- Laboratory tests for other causes
- Imaging of the brain for other causes
- Cognitive or neuropsychological testing

Dementia and Alzheimer's ... *What should we remember?*

04/14/99

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Montreal Cognitive Assessment Test for Dementia ("MCA")*

- Orientation
- Short term memory ... *the WORDS!!*
- Visual spatial ability
- Language and Recall

*Developed by Montreal's McGill University

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MONTREAL COGNITIVE ASSESSMENT (MOCA)

NAME : _____
 Education : _____ Date of birth : _____
 Sex : _____ GATE : _____

<p>VISUOSPATIAL / EXECUTIVE</p> <p style="text-align: center;">[] []</p>	<p>Copy cube</p> <p style="text-align: center;">[] []</p>	<p>Draw CLOCK (Ten past eleven) (10 points)</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p style="text-align: center;">[] [] [] []</p> <p style="text-align: center;">Contour Numbers Hands</p>	<p>Points</p> <p>___/5</p>																		
<p>NAMING</p>																					
<p style="text-align: center;">[] [] []</p>				<p>Points</p> <p>___/3</p>																	
<p>MEMORY</p> <p>Read list of words, subject must repeat them. Do 2 trials. Do a recall after 3 minutes.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;"></td> <td style="width:15%;">FACE</td> <td style="width:15%;">VELVET</td> <td style="width:15%;">CHURCH</td> <td style="width:15%;">DAISY</td> <td style="width:15%;">RED</td> </tr> <tr> <td>1st trial</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> <tr> <td>2nd trial</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> </table>		FACE	VELVET	CHURCH	DAISY	RED	1st trial	[]	[]	[]	[]	[]	2nd trial	[]	[]	[]	[]	[]	<p>No points</p>	
	FACE	VELVET	CHURCH	DAISY	RED																
1st trial	[]	[]	[]	[]	[]																
2nd trial	[]	[]	[]	[]	[]																
<p>ATTENTION</p> <p>Read list of digits (1 digit/ sec). Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2</p>				<p>Points</p> <p>___/2</p>																	
<p>Read list of letters. The subject must tap with his hand at each letter A. No points if 2 or more [] F B A C M N A A J K L B A F A K D E A A A A I A M O F A A B</p>				<p>Points</p> <p>___/1</p>																	
<p>Serial 7 subtraction starting at 100 [] 92 [] 86 [] 78 [] 72 [] 65</p> <p style="font-size: small;">4 or 5 correct subtractions: 3 pts, 3 or 2 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt</p>				<p>Points</p> <p>___/3</p>																	
<p>LANGUAGE</p> <p>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. []</p>				<p>Points</p> <p>___/2</p>																	
<p>Fluency / Name many number of words in one minute that begin with the letter F [] _____ (N ≥ 7 words)</p>				<p>Points</p> <p>___/1</p>																	
<p>ABSTRACTION</p> <p>Similarity between e.g. banana - orange - fruit [] train - bicycle [] watch - ruler</p>				<p>Points</p> <p>___/2</p>																	
<p>DELAYED RECALL</p> <p>Has to recall words WITH NO CUE [] [] [] [] []</p> <p style="font-size: small;">Category cue</p>				<p>Points for UNCLUED words only</p> <p>___/5</p>																	
<p>Optional</p> <p>Multiple choice cue</p>																					
<p>ORIENTATION</p> <p>[] Date [] Month [] Year [] Day [] Place [] City</p>				<p>Points</p> <p>___/6</p>																	
<p>© Z. Nasreddine MD, Version November 7, 2004 Normal ≥ 28 / 30</p>				<p>TOTAL</p> <p>___/30</p> <p style="font-size: small;">Add 1 point if ≥ 12 yr edu</p>																	

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... and the words are...

Elephant	→	(Animal)
Daisy	→	(Flower)
Infant	→	(People)
Skyscraper	→	(Building)
Orange	→	(Fruit)

Dementia and Alzheimer's ... *What should we remember?*

04/11/15

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TREATMENT, CARE...
AND THE CARE GIVERS

04/04/2018

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Into the Future:

- Earlier, better diagnoses
- More long-distance caregiving
- More comprehensive care planning
- "Dementia friendly" communities
- More people with dementia living alone in the community
- More technological interventions
- Better long term care options

Dementia and Alzheimer's ... *What should we remember?*

04/04/2011

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Coping with mild cognitive impairment

Staying mentally sharp:

- Stay physically active
- Eat a healthy diet
- Get a good night's rest
- Limit your alcohol intake
- Manage stress
- Create routines and rituals
- Stay involved in life such as spending time with family and friends, doing volunteer work, taking classes and going to movies

Dementia and Alzheimer's ... *What should we remember?*

04/18/2015

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Treatment for Alzheimer's Dementia

Physical activities

Cognitive activities

Diet

Yes: olive oil, vegetables, fish, legumes, nuts

No: red meat, dairy

Control blood pressure

Control blood sugar

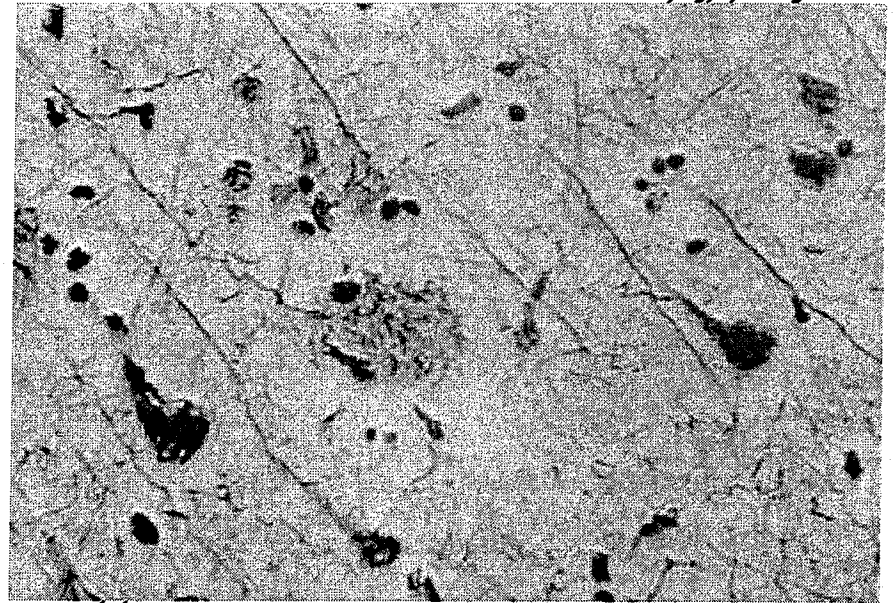
Limit medications that worsen brain function

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Alzheimer Pathology

- Autopsy of Auguste D revealed two key features when stained with silver
- Neuritic plaques outside cells
- Neurofibrillary tangles inside cells



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Treatment for Alzheimer's Dementia

- Cholinesterase inhibitors:
 - donepezil (Aricept)
 - rivastigmine (Exelon)
 - galantamine (Razadyne)

NMDA receptor antagonist: memantine (Namenda)

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Importance of Clinical Trials

- Today the only opportunity to receive a drug to slow Alzheimer's is in a clinical trial. The first person cured of Alzheimer's will be in a clinical trial!
- Final stage (phase 3) clinical trials for Alzheimer's take 2 years from first participant to last participant enrolled
- Delays drug availability and reduces drug company period of exclusivity
- The average dementia diagnosis occurs at a stage too late for clinical trial participation (median MMSE=18.8; range 0-30 with 27-30 normal)
- Plan to conduct clinical trials with multiple health system partner

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CLINICAL TRIALS

Numerous clinical trials regarding new drug treatment

>Estrogen

>Anti-inflammatory drugs

>Cardiovascular statins

> Antioxidants

>Secretase

Early Treatment ... *See your doctor*

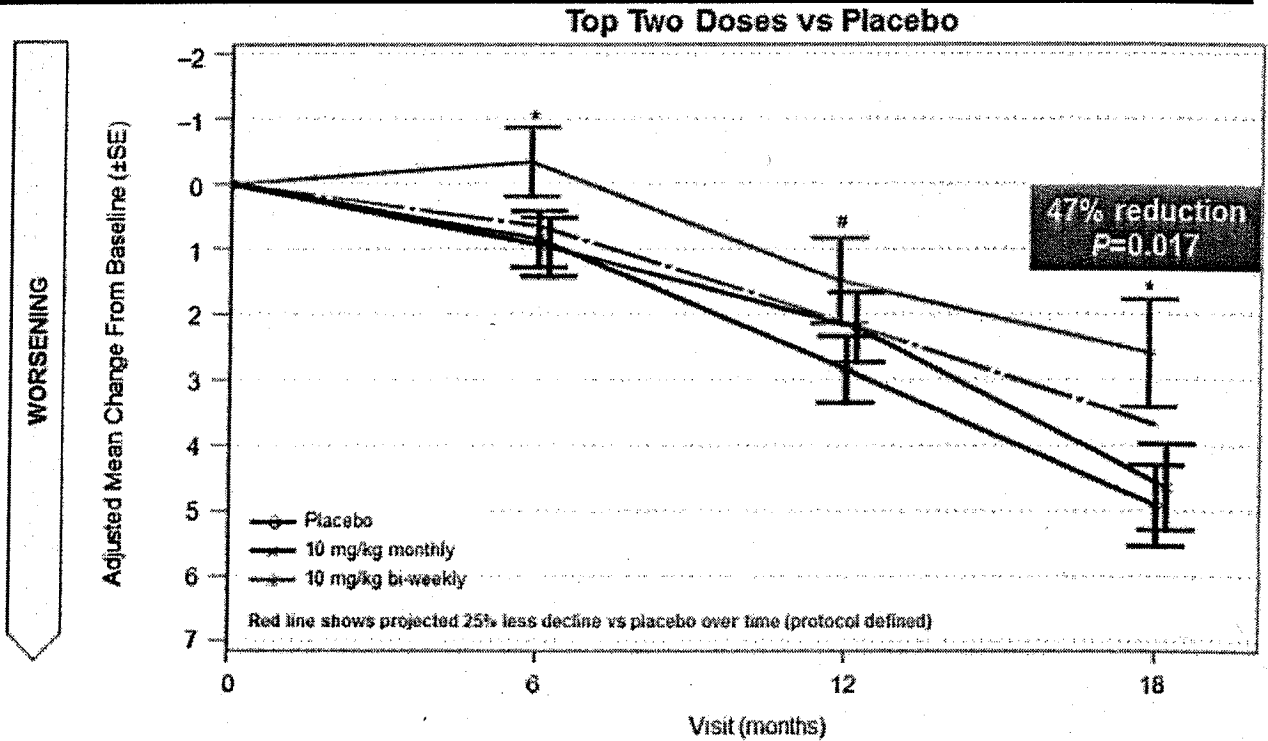
Diet, exercise, reduced alcohol, lower cholesterol

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BAN 2401 Slowed Cognitive Decline on ADAS-cog Over 18 Months

- Dose dependent reduction in decline on ADAS-cog over time; starting at 6 months
- Slower decline on ADAS-cog 10mg/kg bi-weekly dose (green) vs placebo (black) across all time points



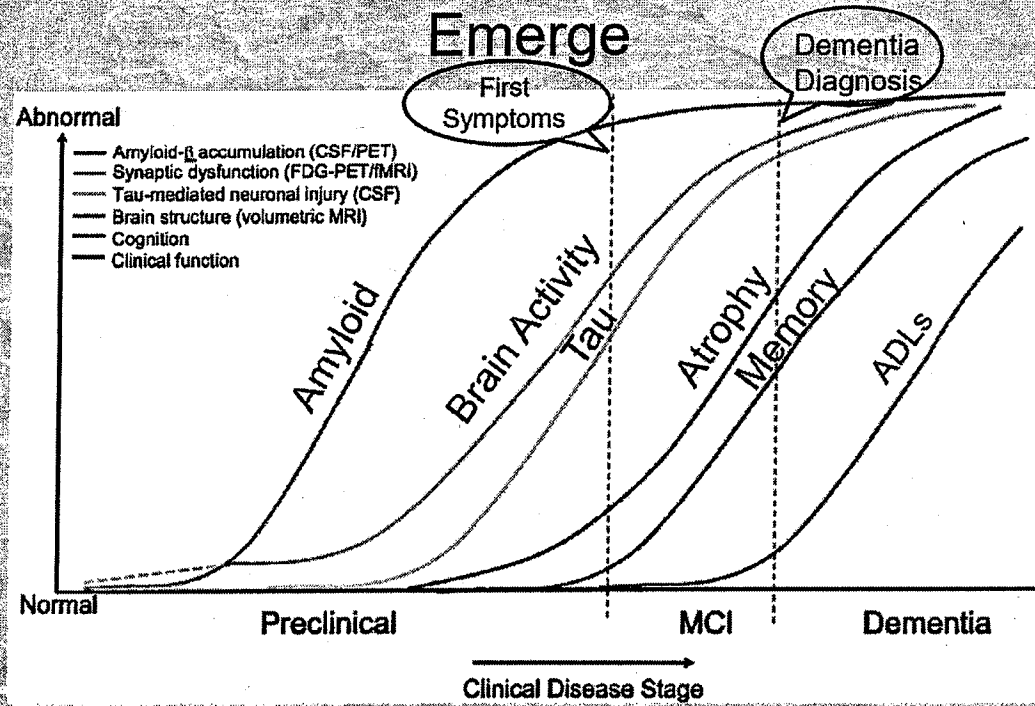
Dementia and Alzheimer's ... What should we remember?

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Alzheimer's Begins Years Before Symptoms Emerge



Jack CR. Lancet Neurol 2010;9:119

Dementia and Alzheimer's ... What should we remember?

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Caregivers:

- Over half of caregivers (66%) live with the person with dementia
- 25% “sandwich” caregivers
- 2/3 of caregivers are women
- 1/3 of caregivers are daughter



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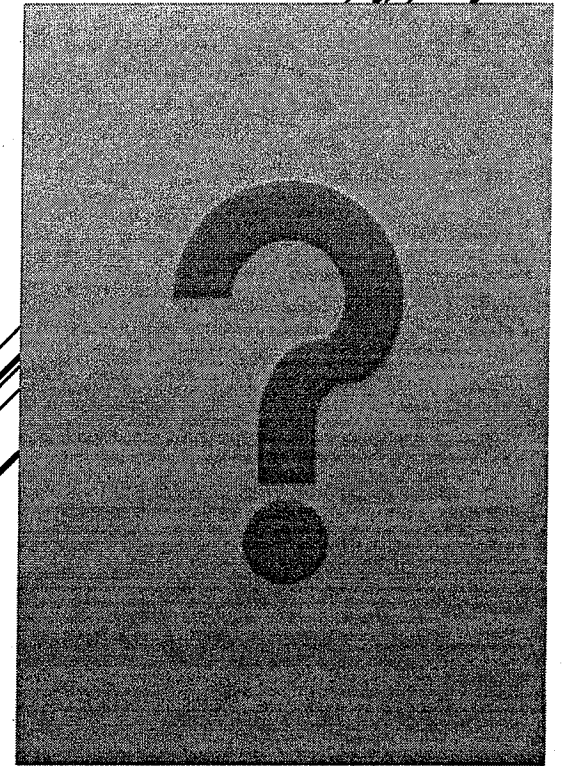
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Decision Making:

- Independence/Dependence?
- Driving?
- Living arrangements?
- Medication safety?
- Home safety?
- Health?
- Values?



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Caregiving:

- Assistance with mobility
- Dressing
- Showering
- Feeding
- Toileting

Plus ... companionship, finances, health care, emotional support, and tender loving care

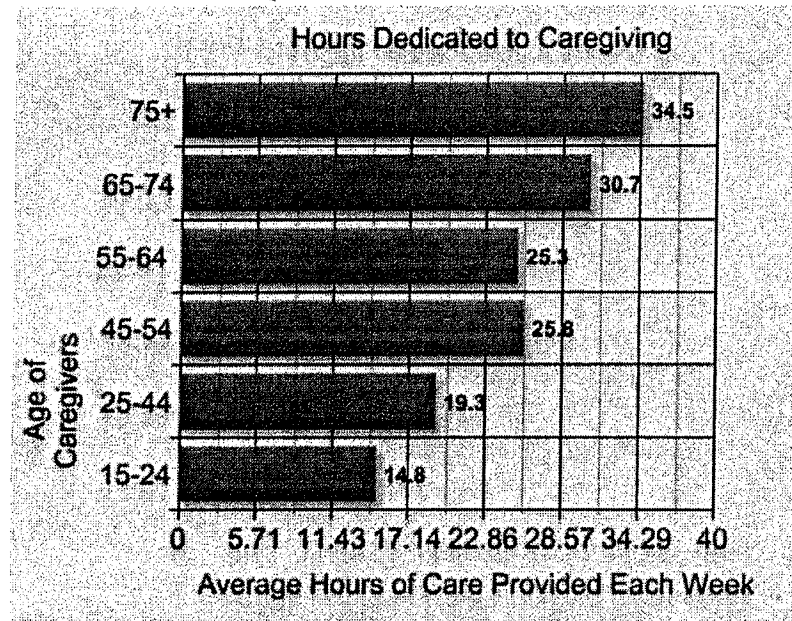
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Hours Spent Caregiving

Number of Hours Dedicated to Caregiving by Age of Family Caregiver



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Effects on Caregivers:

- Stress
- Anxiety
- Less personal time
- Health effects

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10/10/00

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Impact on Families:

- 18.4 billion hours of care provided by unpaid/family caregivers
 - \$232 billion in care
- Average age of caregiver is almost 70 years
- Most persons with dementia live in the community

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Help for Caregivers:

- Acceptance of disease
- Reduce stigma (tell people)
- Seeking support and help
 - Alzheimer's Association
 - Support groups
 - Family/Friends
- Making a plan (i.e. SHARE intervention)



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Questions?

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Alzheimer's Alliance
MICHIGAN STATE UNIVERSITY

Sign up to receive information about:

- Free memory screenings
- Alzheimer's prevention and treatment research opportunities
- Services and resources for dementia in West Michigan
- News and updates

Contact: Christin Carpenter
(616) 234-2844
christin.carpenter@hc.msu.edu

Sign up for our email newsletter:

Name: _____

Email Address: _____

- Please contact me directly to schedule a memory screening for myself or someone I know.
(Optional) Phone Number: _____