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 **MARYLAND Living Well**
CENTER OF EXCELLENCE

"ASK THE EXPERT" Educational Lunch and Learn Series

THIRD THURSDAY OF EACH MONTH FROM 12:15 - 1 PM
STARTING JANUARY 16

A webinar tailored for professionals and caregivers working with people living with dementia.

MDLIVINGWELL.ORG

Join us for the "Ask the Dementia Expert" educational Lunch and Learn series. This webinar is intended for Aging Services professionals, caregivers of persons living with ADRD, and anyone with an interest in matters concerning older adults. The series will engage a dementia expert on topics related to cognitive health, dementia care, caregiving, local services and support.

Sponsored by: Johns Hopkins Geriatric Workforce Enhancement Program (JHGWEP) and MAC INC. Living Well Center of Excellence (LWCE)

Ask the Expert

Understanding the Term Dementia! How does Alzheimer's Disease fit in Dementia?

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Johns Hopkins University School of Medicine

January 16, 2025



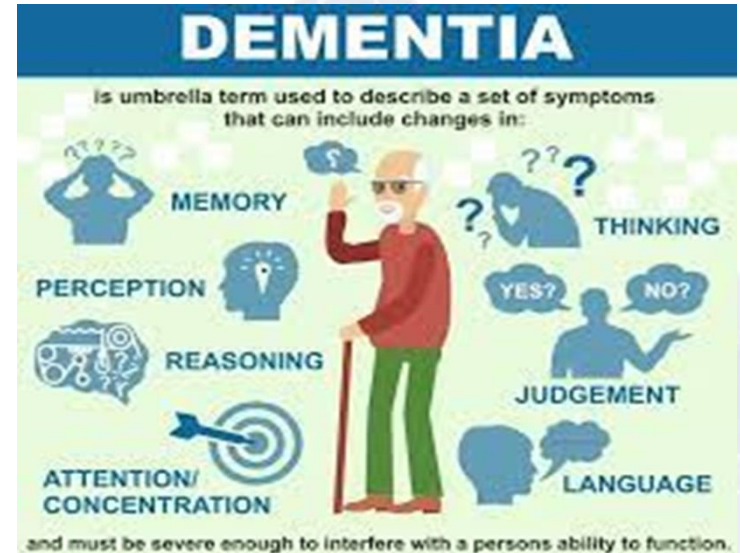
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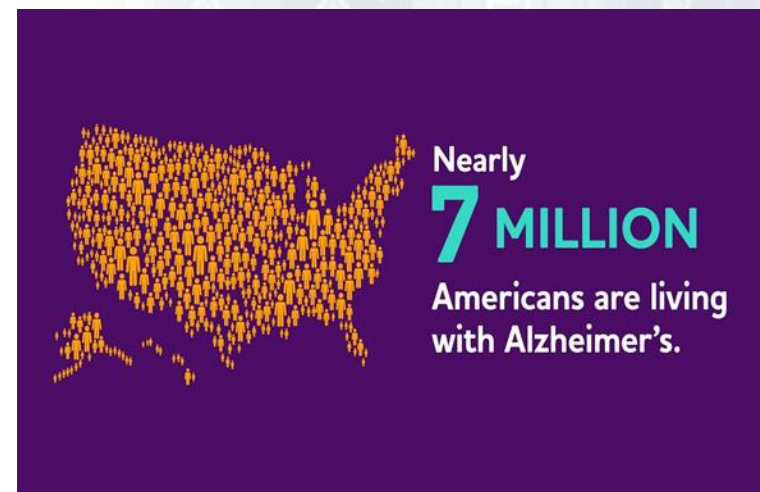
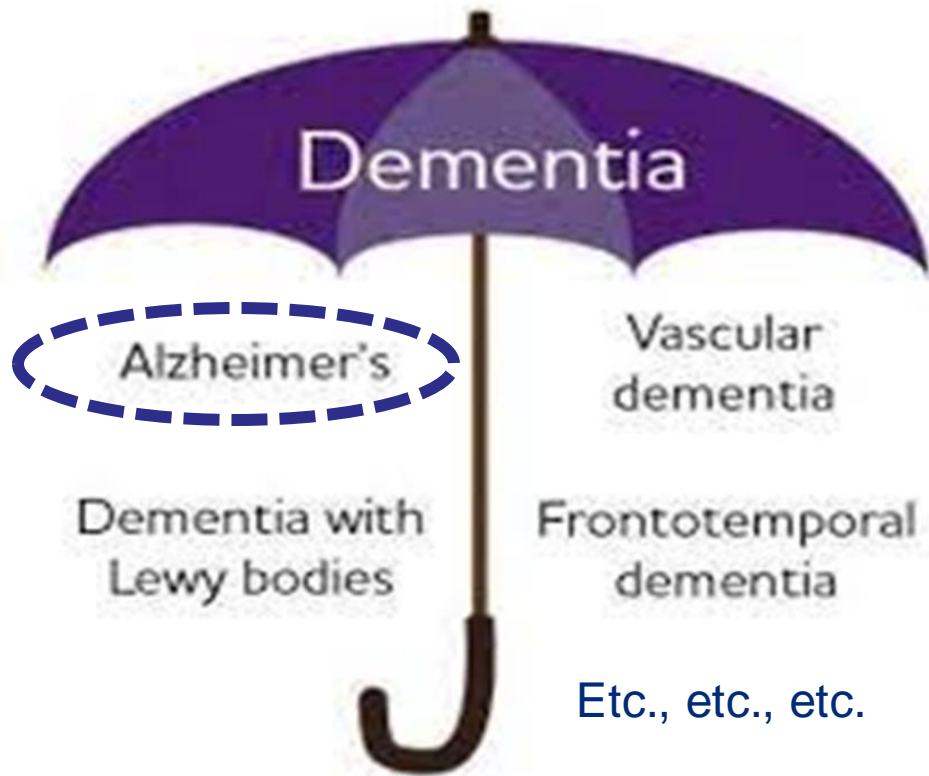
What does it mean when you hear the term “Dementia”

How does Alzheimer’s Disease
fit in?

Dementia is a syndrome

- **COGNITIVE** impairment
 - Learning & memory
 - Executive function
 - Language
 - Complex attention
 - Perceptual-motor
 - Social cognition
- **FUNCTIONAL** impairment
 - Instrumental Activities of Daily Living (IADLs)
 - Financial management, shopping, meal preparation, etc.
 - Activities of Daily Living (Basic ADLs)
 - Dressing, bathing, toileting, etc.





Alzheimer's disease – “brain failure”

- Rapid forgetting is an early hallmark
- Ultimately, all cog domains are affected
- Insidious onset and gradual decline
- Through predictable stages
- Progressive loss of independence
- Marked by personality & behavior changes
- Life-limiting illness with no cure

What happens in the brain to cause AD?

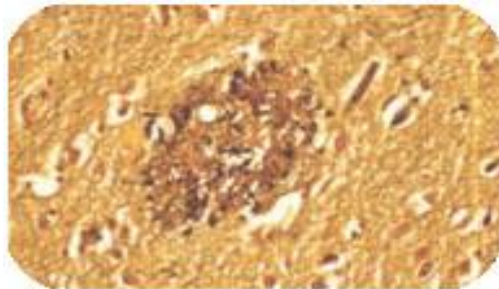
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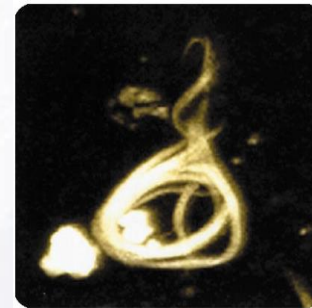
Hallmarks of AD: plaques & tangles



Plaque (amyloid)



Tangle (tau)



= treatment targets (stay tuned!)

Neuronal death & brain shrinkage

Brain of a Normal 100y.o.:



Brain of a Patient with AD:



What are the risk factors for getting AD?

And is it hereditary???

Risk factors – non-modifiable

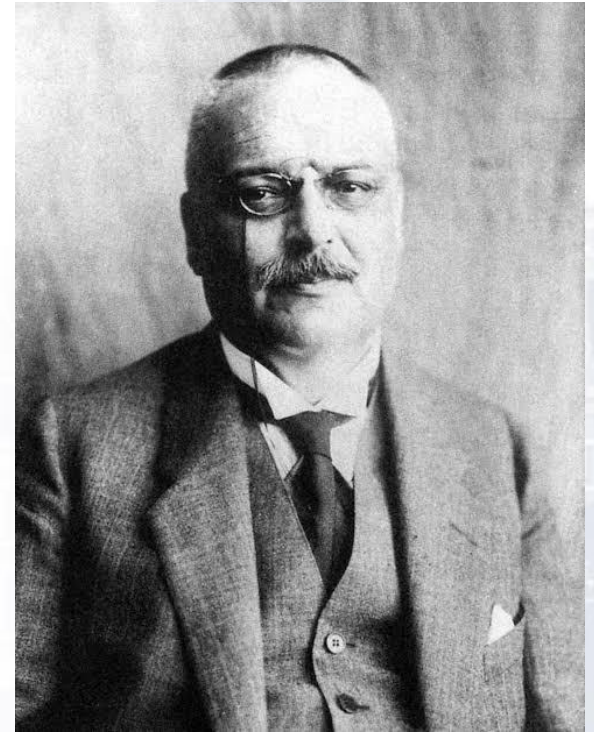
- Age is the greatest risk factor (> 65y.o.)
- Family history of AD in 1st degree relative
- Other genetic considerations
 - APOE-e4 is one of many “risk genes”
 - < 1% of cases are from inherited mutation

Risk factors for AD - modifiable

- Lancet Commission 2024

- Less education - “cognitive reserve”
- Head injury
- Diabetes, hypertension, high cholesterol (*in mid-life*)
- Physical inactivity, obesity
- Alcohol, smoking, air pollution
- Hearing loss, vision loss
- Social isolation, depression
- Sleep disorders (evidence is mounting)

How is AD diagnosed?



Dr. Alois Alzheimer

Clinical diagnosis of AD

Clinical evaluation (starts with PCP)

- Thorough history – cog & fxn
- Physical Examination
- Cognitive testing
 - MMSE or MoCA
 - Neuropsychological testing



The picture of early stage AD

COGNITIVELY

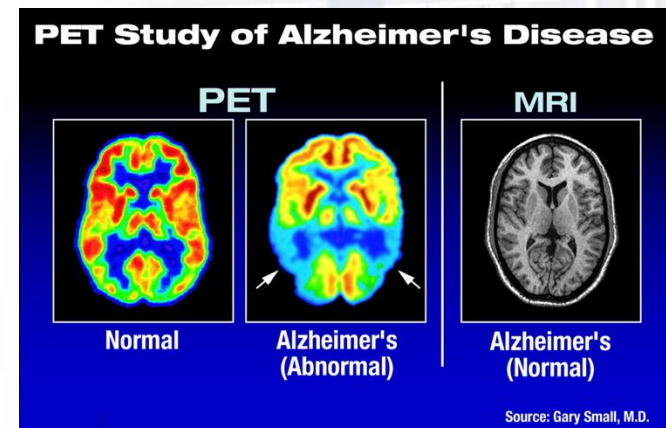
- short-term memory loss
- word-finding difficulties
- trouble with reasoning
- disoriented to time/place

FUNCTIONALLY

- forgetting conversations
- missing appointments
- losing items frequently
- trouble with the finances
- getting lost while driving

Biological diagnosis of AD

- Rule-out other causes of memory loss
 - blood work (Vitamin B12, thyroid)
 - brain imaging (CT or MRI)
- Can rule-in Alzheimer's disease
 - PET scan for amyloid
 - biomarkers in CSF
 - biomarkers in blood



What can be expected in the course of AD?

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Mild AD - early stage

- Short-term memory is poor
- Expressive language & naming affected
- Executive function is impaired - judgment
- Trouble with IADLs (higher level)
- Need gentle reminders and supervision
- Some activities are taken over by others
- Close family and friends can notice

what is going on here???

Moderate AD - middle stage

- Long-term memory becomes affected
- Speech comprehension is difficult
- Decision-making is harder -- 2 choices
- ADLs are affected & incontinence develops
- Need cuing, set-up and assistance
- Balance is worse & higher risk of falls
- Becomes more obvious to others

“falling off a cliff” stage

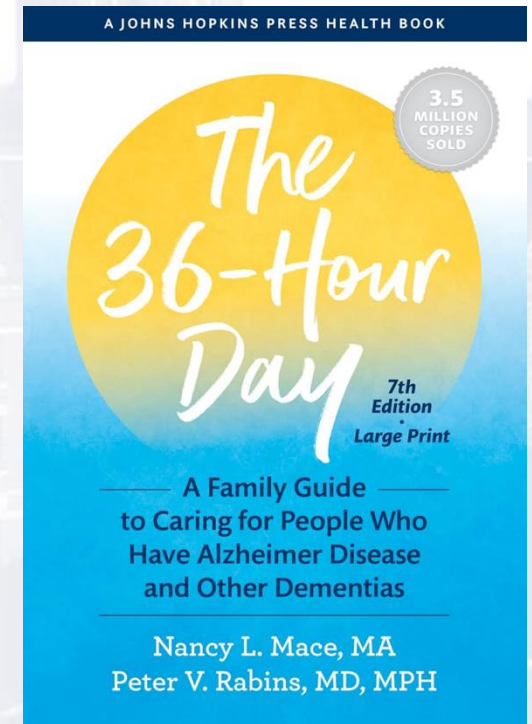
Severe AD – late stage

- All cognitive domains are impaired
- Recognizing people, places, things is affected
- Very basic information is lost
- Can become unable to walk, talk, feed self
- Fully dependent on others for care
- Neurological changes and abnormalities
- Swallowing becomes affected

hospitalizations & Hospice

Selected resources for AD

- Alzheimer's Association (alz.org)
- Alzheimers.gov
- nia.nih.gov
- cdc.gov/alzheimers-dementia
- Am Med Assn (AMA) webinars



Save the date:

February 20th 12:15

Promoting Brain Health!

Dr. Jessica Colburn MD, Associate Professor of
Medicine, JH School of medicine, Division of Geriatric
Medicine and Gerontology

Thank you.

Is there time for questions?