WHERE DID I PUT MY KEYS?
Differentiating Normal Aging from Dementia

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The Centers for Aging and Memory
Responses to Lost Keys

- Age 2-25 “Mom, where are my keys?”
- Age 26-55 “Who took my keys?” or “Let my use my key finding app”
- Age 55+ “I can’t find my keys. Do I have Alzheimer’s disease?”
What happens to the Aging Brain?

- The brain decreases in size
  - **Brain weight**: decline is small until 45 years, then significant reduction
  - **Brain volume**: decreases by 6% at age 70 (greatest at the frontal cortex)

- The brain becomes less efficient

- There is a loss of cells in the brain
  - Minimal loss in areas associated with memory
What is Memory?

- Memory involves the ability to take in and store information and to retrieve that information for later use.
- There are three parts of memory
  - Working memory
    - Short-term- repeating something just said in conversation
  - Declarative Memory
    - Remembering facts
  - Procedural Memory
    - Things we’ve learned by repetition (driving, walking, playing an instrument)
- Memory can also be considered recent (what you did yesterday and remote (things you did in childhood).
HOW DO I FORM A NEW MEMORY?

Three Stages of Memory:

- Sensory
  - Vision, sound, touch, smell or taste
  - Attention

- Short Term
  - Maintained through Rehearsal
  - Looking up and dialing phone number

- Long-Term Memory
  - Information from STM is either forgotten or successfully encoded into LTM
  - Unlimited storage capacity
How Age Affects Memory

- Divided Attention
  - Remembering to ask your doctor questions during visits.

- Ability to Learn New Information
  - Takes longer

- Information Retrieval
  - Aging may affect memory by changing the way your brain stores information and by making it harder to recall stored information.
SOURCES OF MEMORY PROBLEMS

- Problem with attention
- Problem with encoding and storage
- Problem with retrieval
- Problem with all of the above
CAUSES OF MEMORY PROBLEMS

- Memory complaints are common in later life
- Some sources of memory problems are reversible, some are irreversible
- Dementia
  - Alzheimer’s Disease
  - Vascular Dementia
  - Parkinson’s Disease
- Delirium
- Depression
- Anxiety
What is Dementia?

– Marked by progressive, irreversible declines in multiple areas:
  • memory.
  • visual-spatial relationships
  • performance of routine tasks
  • language and communication skills
  • abstract thinking
  • ability to learn and carry out mathematical calculations.
  • Executive functioning
    – Problem solving, reasoning, planning, organization
RISK FACTORS FOR DEMENTIA

- Age
  - 24% of people aged 85 and older
- Family History
  - 1st degree relatives 3-4 x’s more likely to develop
- Cardio-vascular risk
  - HTN, Diabetes, CAD
- Low level of education
- Untreated depression
- Alcoholism
RISK OF DEMENTIA INCREASES WITH AGE

Percentage of Persons with Moderate to Severe Memory Impairment

Percent Impaired

Age (years)

65 to 69 70 to 74 75 to 79 80 to 84 85 to 99 100 or older
• Alzheimer's Disease

- Most common type of dementia
- Estimated that 4,000,000 people in U.S. have Alzheimer's disease.
- Estimated that 25-35% of people over age 85 have some type of dementia.
- After age 65 the percentage of affected people, doubles with every decade of life.
- Caring for patient with Alzheimer's disease can cost $47,000 per year (NIH).
NORMAL AGING VERSUS DEMENTIA²

- Independence in daily activities preserved
- Complains of memory loss but able to provide considerable detail regarding incidents of forgetfulness
- Patient is more concerned about alleged forgetfulness than are close family members
- Recent memory for important events, affairs; conversations not impaired
- Occasional word-finding difficulties
- Person becomes critically dependent on others for key independent-living activities
- May complain of memory problems only if specifically asked; unable to recall instances where memory loss was noticed
- Close family members much more concerned about incidents of memory loss than patient
- Frequent word-finding pauses and substitutions
NORMAL AGING VERSUS DEMENTIA

- Does not get lost in familiar territory; may have to pause momentarily to remember way
- Able to operate common appliances even if unwilling to learn how to operate new devices
- Maintains prior level of interpersonal social skills
- Normal performance on mental status examinations, taking education and culture into account

- Gets lost in familiar territory while walking or driving; may take hours to eventually return home
- Becomes unable to operate common appliances; unable to learn to operate even simple new appliances
- Exhibits loss of interest in social activities; exhibits socially inappropriate behaviors
- Abnormal performance on mental status examination not accounted for by education or cultural factors
<table>
<thead>
<tr>
<th>Depression</th>
<th>Dementia</th>
<th>Normal Aging</th>
</tr>
</thead>
<tbody>
<tr>
<td>More likely to complain about memory</td>
<td>Variable general complaints or may have no awareness</td>
<td>Lower levels of complaints about memory</td>
</tr>
<tr>
<td>May interfere with daily functioning</td>
<td>Interferes with daily functioning</td>
<td>Does not interfere with daily functioning</td>
</tr>
<tr>
<td>Sudden onset</td>
<td>Gradual onset</td>
<td>Onset Unclear</td>
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<tr>
<td>Mild Cog impairment on testing, may remit as depression clears</td>
<td>Cognition impaired on testing, worsens over time</td>
<td>Normal on testing</td>
</tr>
<tr>
<td>Mood may be depressed or anxious</td>
<td>Mood may be blunted or labile</td>
<td>No mood changes</td>
</tr>
</tbody>
</table>
I DON’T HAVE A MEMORY PROBLEM BECAUSE I REMEMBER THINGS FROM 40 YEARS AGO

- Remote memory tends to be preserved at least into the second stage of dementia
- Memory problems associated with attention, short-term memory and executive functioning tend to be more problematic in the beginning stages of dementia
HOW DO I FIND OUT IF I HAVE A MEMORY PROBLEM

- See your physician
  - Have vision and hearing checked
  - Referral to neurologist or neuropsychologist for a dementia work-up
- This might include a CT Scan or MRI
- Screening or more comprehensive work-ups
- Blood work
Neuropsychological Evaluation

- Memory
- Executive Functioning
- Attention
- Language
- Visual Spatial
- Emotional Functioning
You may have a memory problem if....

- You have trouble learning new things
- You forget how to do things you have done many times before
- You get lost driving to familiar places
- You repeat the same story in the same conversation
- You have trouble making choices or handling money.
After a diagnosis

- Medication
- Progression
- Independent living
- Moving from home
- Communication
He Only Drives To The Market
Driving and Dementia

- Some recommend that individuals should stop driving after a diagnosis
- Aids to decision making
  - Accidents
  - Getting lost (taking longer to arrive at destination)
  - Road rage
- They only drive to church and the grocery store
- Older driving evaluation
  - Complex attention
  - Balance
  - Reflexes
  - Left hand turn
- Have a milestone in mind as a stop date
Dementia Prevention

- Take care of your heart and you will take care of your brain
  - Diet
    - Mediterranean Diet
  - Exercise
    - 20 to 30 minutes a day
  - Medication compliance
    - Keep blood pressure and cholesterol under control
- Stop smoking
- Drink only in moderation
- Stay socially connected
- Get sufficient vitamin D
- Marry a smart woman