Understanding Dementia:
What’s Happening & How to Help

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PET and Aging

PET Scan of 20-Year-Old Brain

PET Scan of 80-Year-Old Brain

ADEAR, 2003
As We Age,
WE DO NOT lose function in our Brains, UNLESS…

Something Goes Wrong with Our Brains
Couldn’t It Just Be Forgetfulness or Getting Old?... NOT Really!

• There is a difference
• At first it may be hard to tell
• Then you start to notice patterns
• One or more of these things start to show significant changes…
  – Memory  - Problem solving
  – Word finding  - Behavior
What is it NOT...

NORMAL Aging
• Slower to think
• Slower to do
• Hesitates more
• More likely to ‘look before you leap’
• Know the person but not the name
• Pause to find words
• Reminded of the past
• Life is HARDER

NOT Normal Aging
• Can’t think the same
• Can’t do like before
• Can’t get started
• Can’t seem to move on
• Doesn’t think it out at all
• Can’t place the person
• Words won’t come – even later
• Confused about past versus now
• Things are DIFFERENT
Ten Early Warning Signs

- memory loss for recent or new information – repeats self frequently
- difficulty doing familiar, but difficult tasks – managing money, medications, driving
- problems with word finding, mis-naming, or mis-understanding
- getting confused about time or place - getting lost while driving, missing several appointments

- worsening judgment – not thinking thing through like before
- difficulty problem solving or reasoning
- misplacing things – putting them in ‘odd places’
- changes in mood or behavior
- changes in typical personality
- loss of initiation – withdraws from normal patterns of activities and interests
What Could It Be?

- Another medical condition
- Medication side-effect
- Hearing loss or vision loss
- Depression
- Acute illness
- Severe but unrecognized pain
- Other things…
What Should the Doctor Do?

- A thorough physical & medical history
- Blood work
- A neurological exam
- A good history from the person and the family of the ‘problem’
- A complete medication review
- A CAT scan or MRI or PET scan
- Neuropsychological testing – screening for cognitive changes
- FOLLOW-UP and counseling or at least a referral
What Should We Do If We Suspect Something Might Be Happening?

- Work Out Legal Support – Financial PoA
- Work Out Health Care Support – HC-PoA
- Check with Your Doctor – Raise Your Concern
- Consider a Neuropsychological Assessment
- Consider Seeing a Specialist – geriatrician, neurologist, gero-psychiatrist
SO... What is Dementia?

• It is NOT part of normal aging! It is a disease!

• It is more than just forgetfulness - which is part of normal aging

• It makes independent life impossible
Cognitive Changes with Aging

• Normal changes = more forgetful & slower to learn

• MCI – Mild Cognitive Impairment = typically 1 area
  – Immediate recall, word finding, or complex problem solving problems (½ of these folks will develop dementia in 5 yrs)

• Dementia = Chronic thinking problems in > 2 areas

• Delirium = Rapid changes in thinking & alertness
  (seek medical help immediately)

• Depression = chronic unless treated, poor quality, I “don’t know”, “I just can’t” responses, no pleasure can look like agitation & confusion
Alzheimer’s Disease
• Early - Young Onset
• Normal Onset

Vascular Dementias (Multi-infarct)

Lewy Body Dementia

Fronto-Temporal Lobe Dementias

Other Dementias
• Genetic syndromes
• Metabolic pxs
• ETOH related
• Drugs/toxin exposure
• White matter diseases
• Mass effects
• Depression(?) or Other Mental conditions
• Infections – BBB cross
• Parkinson’s
**Positron Emission Tomography (PET)**

**Alzheimer’s Disease Progression vs. Normal Brains**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Early Alzheimer’s</th>
<th>Late Alzheimer’s</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Image of Normal Brain" /></td>
<td><img src="image2" alt="Image of Early Alzheimer’s Brain" /></td>
<td><img src="image3" alt="Image of Late Alzheimer’s Brain" /></td>
<td><img src="image4" alt="Image of Child Brain" /></td>
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</tbody>
</table>

G. Small, UCLA School of Medicine.
Brain Failure

The person’s brain is dying
Alzheimer’s Disease
• Early - Young Onset
• Normal Onset

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(Multi-infarct)

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What is Dementia?...

It is BOTH

• a chemical change in the brain

AND

• a structural change in the brain

• So...

  Sometimes they can & sometimes they can’t
Learning & Memory Center
Hippocampus
BIG CHANGE
Understanding Language – BIG CHANGE
Hearing Sound – Not Changed
Sensory Strip
Motor Strip
White Matter
Connections
BIG CHANGES

Formal Speech &
Language Center
HUGE CHANGES

Automatic Speech
Rhythm – Music
Expletives
PRESERVED
Executive Control Center
Emotions
Behavior
Judgment
Reasoning
Vision Center – BIG CHANGES
Brain atrophy

- the brain actually shrinks
- cells wither then die
- abilities are lost
- with Alzheimer’s area of loss are fairly predictable
- … as is the progression
- BUT the experience is individual…
Memory Loss

• Losses
  – Immediate recall
  – Attention to selected info
  – Recent events
  – Relationships

• Preserved abilities
  – Long ago memories
  – Confabulation!
  – Emotional memories
  – Motor memories
Understanding

- **Losses**
  - Can’t interpret words
  - Misses some words
  - Gets off target

- **Preserved abilities**
  - Can get facial expression
  - Hears tone of voice
  - Can get some non-verbals
  - Learns how to cover
Sensory Changes

• Losses
  – Awareness of body and position
  – Ability to locate and express pain
  – Awareness of feeling in most of body

• Preserved Abilities
  – 4 areas can be sensitive
  – Any of these areas can be hypersensitive
  – Need for sensation can become extreme
Self-Care Changes

• **Losses**
  – initiation & termination
  – tool manipulation
  – sequencing

• **Preserved Abilities**
  – motions and actions
  – the doing part
  – cued activity
Language

• Losses
  – Can’t find the right words
  – Word Salad
  – Vague language
  – Single phrases
  – Sounds & vocalizing
  – Can’t make needs known

• Preserved abilities
  – singing
  – automatic speech
  – Swearing/sex
  – words/forbidden words
Impulse & Emotional Control

• **Losses**
  – becomes labile & extreme
  – think it - say it
  – want it - do it
  – see it - use it

• **Preserved**
  – desire to be respected
  – desire to be in control
  – regret after action
Use empathy & Go with the flow

Reality Orientation

Telling Lies
How you talk…

- How you say it…
- What you say…
- How you respond…
How can we help... better?

It all starts with your approach!
How you help...

• Sight or Visual cues

• Verbal or Auditory cues

• Touch or Tactile cues
Believe -

People with dementia
Are doing The BEST they can!
So... What is Dementia?

- It changes everything over time
- It is NOT something the person can control
- It is NOT always the same for every person
- It is NOT a mental illness
- It is real
- It is hard at times
Dementia can be treated

• With knowledge
• With skill building
• With commitment
• With flexibility
• With practice
• With support
• With compassion