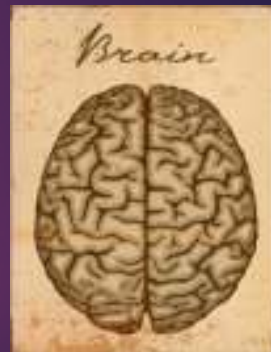


# Our Aging Brains and Caregiving

Why did you come to this presentation today?

- I'm a caregiver
- I expect to be a caregiver in the future
- I worry about burdening my family
- I'm have concerns about my future
- I worry about my aging brain's future
- Many of the above



The Aging Brain



*Observations | Opinions*

## A Tsunami of Dementia Could Be on the Way

The COVID-19 pandemic can damage the aging brain both directly and indirectly



Year	Total	Age 65-74	Age 75-84	Age 85+
2005	9.4	~2.5	~3.5	~3.4
2010	11.0	~2.8	~4.0	~4.2
2015	13.0	~3.0	~4.5	~5.5
2020	15.0	~3.2	~5.0	~6.8
2025	17.0	~3.4	~5.5	~8.1
2030	19.0	~3.6	~6.0	~9.4
2035	21.0	~3.8	~6.5	~10.7
2040	23.0	~4.0	~7.0	~12.0
2045	28.0	~4.2	~7.5	~16.3



2022 Alzheimer's Disease Facts and Figures

Healthy Brain



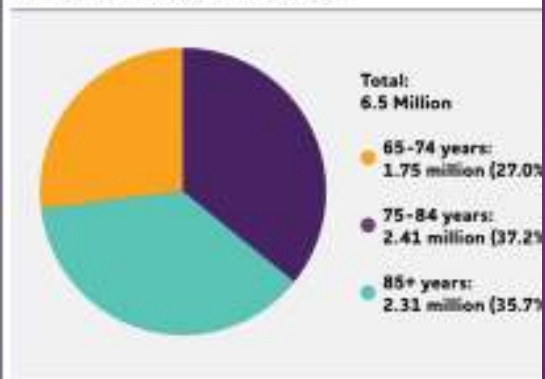
Severe Alzheimer's





## Risk

Number and Ages of People 65 or Older with Alzheimer's Dementia, 2022\*



Estimated Lifetime Risk for Alzheimer's Dementia, by Sex, at Ages 45 and 65



## Signs of Dementia

### Cognitive changes

- Memory loss, which is usually noticed by someone else
- Difficulty communicating (or finding words)
- Difficulty with visual and spatial abilities, such as getting lost while driving
- Difficulty reasoning or problem-solving
- Difficulty handling complex tasks
- Difficulty with planning and organizing
- Difficulty with coordination and motor functions
- Confusion and disorientation

### Psychological changes

- Personality changes
- Depression
- Anxiety
- Inappropriate behavior
- Paranoia
- Agitation
- Hallucinations

## Dementia vs the Normal Challenges of Aging

Signs of Alzheimer's Dementia	Typical Age-Related Changes
<b>Memory loss that disrupts daily life:</b> One of the most common signs of Alzheimer's dementia, especially in the early stage, is forgetting recently learned information. Others include asking the same questions over and over, and increasingly needing to rely on memory aids (for example, reminder notes or electronic devices) or family members for things that used to be handled on one's own.	Sometimes forgetting names or appointments, but remembering them later.
<b>Challenges in planning or solving problems:</b> Some people experience changes in their ability to develop and follow a plan or work with numbers. They may have trouble following a familiar recipe or keeping track of monthly bills. They may have difficulty concentrating and take much longer to do things than they did before.	Making occasional errors when managing finances or household bills.
<b>Difficulty completing familiar tasks:</b> People with Alzheimer's often find it hard to complete daily tasks. Sometimes, people have trouble driving to a familiar location, organizing a grocery list or remembering the rules of a favorite game.	Occasionally needing help to use microwave ovens or record a television show.
<b>Confusion with time or place:</b> People living with Alzheimer's can lose track of dates, seasons and the passage of time. They may have trouble understanding something if it is not happening immediately. Sometimes they forget where they are or how they got there.	Getting confused about the day of the week, but figuring it out later.
<b>Trouble understanding visual images and spatial relationships:</b> For some people, having vision problems is a sign of Alzheimer's. They may also have problems judging distance and determining color and contrast, causing issues with driving.	Vision changes related to cataracts.

Memory

Planning

Tasks

Confusion

Vision

<b>New problems with words in speaking or writing:</b> People living with Alzheimer's may have trouble following or joining a conversation. They may stop in the middle of a conversation and have no idea how to continue or they may repeat themselves. They may struggle with vocabulary, have trouble naming a familiar object or use the wrong name (e.g., calling a watch a "hand clock").	Sometimes having trouble finding the right word.
<b>Misplacing things and losing the ability to retrace steps:</b> People living with Alzheimer's may put things in unusual places. They may lose things and be unable to go back over their steps to find them. They may accuse others of stealing, especially as the disease progresses.	Misplacing things from time to time and retracing steps to find them.
<b>Decreased or poor judgment:</b> Individuals may experience changes in judgment or decision-making. For example, they may use poor judgment when dealing with money or pay less attention to grooming or keeping themselves clean.	Making a bad decision or mistake once in a while, such as neglecting to schedule an oil change for a car.
<b>Withdrawal from work or social activities:</b> People living with Alzheimer's disease may experience changes in the ability to hold or follow a conversation. As a result, they may withdraw from hobbies, social activities or other engagements. They may have trouble keeping up with a favorite sports team or activity.	Sometimes feeling uncomfortable or stressed in family and social obligations.
<b>Changes in mood, personality and behavior:</b> The mood and personalities of people living with Alzheimer's can change. They can become confused, suspicious, depressed, fearful or anxious. They may be easily upset at home, at work, with friends or when out of their comfort zones.	Developing very specific ways of doing things and becoming irritable when a routine is disrupted.

Language

Loss

Judgement

Withdrawal

Moods

Where **did** I leave my glasses?



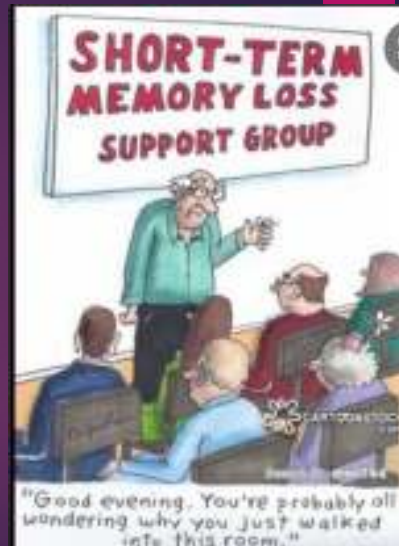
Thankyou...

Find My Phone



Benign Forgetfulness of Aging

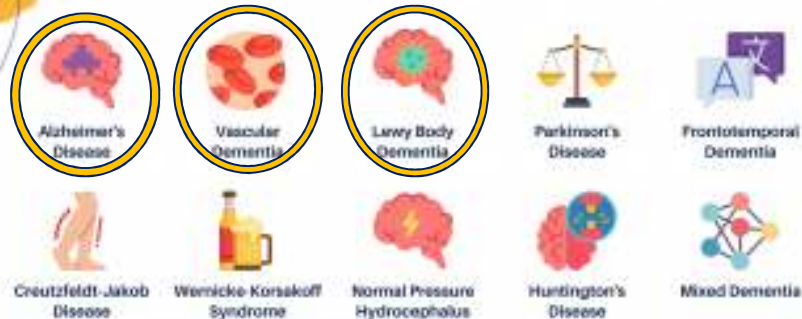
Mild Cognitive Impairment (MCI)



## A brief diversion: An impending Dilemma



## 10 Forms of Dementia



Homage

## Evaluation of Cognitive Impairment

- History/Interview with patient and family
- Physical Examination - Neurologic, Mental Status
- Review Medications
- Testing for medical conditions – Blood work
- Brain Imaging - MRI, PET
- Neurocognitive/Neuropsychological Testing



- TIME

## Lewy Body Disease

### Lewy body disease



Lewy bodies are abnormal aggregations (or clumps) of the protein alpha-synuclein in neurons. When they develop in a part of the brain called the cortex, dementia can result. This is called dementia with Lewy bodies or DLB.

About 5% of older individuals with dementia show evidence of DLB alone, but most people with DLB also have Alzheimer's disease pathology.

#### Symptoms

People with DLB have some of the symptoms common in Alzheimer's, but are more likely to have initial or early symptoms of sleep disturbances, well-formed visual hallucinations and visuospatial impairment. These symptoms may differ dramatically hourly or from day to day. Problems with motor function (similar to Parkinson's disease) are also common. They may occur in the absence of significant memory impairment, but memory loss often occurs at some point in the disease, especially when the brain changes of other causes of dementia are present.

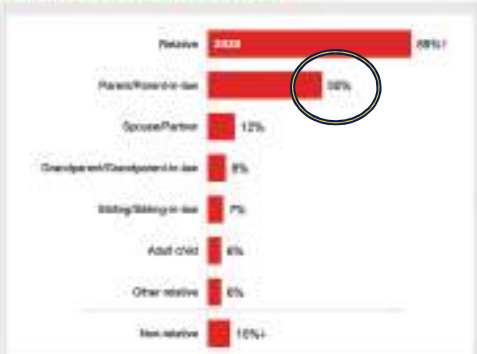
- Fluctuating alertness and thinking function
- Repeated visual hallucinations
- Parkinsonian symptoms
- REM sleep behavior disorder, in which people act out their dreams during sleep





	2020 Prevalence	Estimated Number of U.S. Adults Who Are Caregivers	2015 Prevalence	Estimated Number of U.S. Adults Who Are Caregivers
Caregivers of recipients ages 50+	16.8%†	41.8 million	14.3%	34.2 million

Figure 13. Care Recipient Relation to Caregiver



Q1: Who are you caring for? Please select one relationship.  
 2020 Base: Caregivers of Recipient Age 18+ (n = 1,381)  
 Note: Results are rounded and don't include/refuse responses and not shown results may not add to 100 percent.

Figure 8. Age and Relationship of Care Recipient by Caregiver Age

	Caregiver Age			
	18-49 (n = 448) A	50-64 (n = 488) B	65-74 (n = 199) C	75+ (n = 223) D
<b>Average Care Recipient Age</b>	67.4	75.2 <sup>a</sup>	78.1 <sup>a</sup>	82.1 <sup>a</sup>
Recipient age 50-74	68% <sup>ab</sup>	26%	42% <sup>bc</sup>	22%
Recipient age 75-84	21%	37% <sup>bc</sup>	16%	43% <sup>cd</sup>
Recipient age 85-89	6%	20% <sup>cd</sup>	14%	18% <sup>d</sup>
Recipient age 90+	4%	16% <sup>d</sup>	28% <sup>d</sup>	17% <sup>d</sup>
<b>Relationships</b>				
Parent/parent-in-law	62% <sup>cd</sup>	67% <sup>cd</sup>	37% <sup>d</sup>	8%
Spouse/partner	3%	11% <sup>d</sup>	22% <sup>d</sup>	43% <sup>d</sup>
Grandparent/grandparent-in-law	21% <sup>cd</sup>	25% <sup>cd</sup>	-	-
Sibling/sibling-in-law	1%	5% <sup>d</sup>	10% <sup>d</sup>	10% <sup>d</sup>
Other relatives	5%	5%	13% <sup>d</sup>	18% <sup>d</sup>
Non-relatives	8%	10%	15% <sup>d</sup>	24% <sup>d</sup>

Figure 24. Types of Care Recipient Conditions by Caregiver Tenure

	Less Than 1 year (n = 574) A	1-4 years (n = 393) B	5+ years (n = 419) C
<b>Average number of condition categories</b>	1.5	1.7 <sup>a</sup>	1.9 <sup>a</sup>
Long-term physical condition	43%	77% <sup>a</sup>	79% <sup>a</sup>
Short-term physical condition	48% <sup>bc</sup>	19% <sup>c</sup>	12% <sup>c</sup>
Emotional or mental health problem	22%	28% <sup>a</sup>	33% <sup>a</sup>
Behavioral issue	6%	7%	13% <sup>bc</sup>
Memory problems	23%	38% <sup>a</sup>	38% <sup>a</sup>
Developmental or intellectual disorder or delay	5%	5%	16% <sup>a</sup>
<b>Presence of any Alzheimer's or dementia</b>	18%	35% <sup>bc</sup>	28% <sup>a</sup>
Caregiver age (mean, in years)	46.8	50.1 <sup>a</sup>	51.8 <sup>a</sup>
Recipient age (mean, in years)	66.0	73.1 <sup>bc</sup>	69.2 <sup>a</sup>

Figure 26. Selected Main Problem or Illness by Care Recipient Age

	Recipient Age 18-49 (n = 188)	Recipient Age 50-64 (n = 256)	Recipient Age 65+ (n = 944)
	A	B	C
Alzheimer's, dementia	2%	2%	15% <sup>***</sup>
Back problems	0% <sup>c</sup>	10% <sup>c</sup>	3%
Cancer	6%	7%	6%
Developmental or intellectual disorder or disability	13% <sup>***</sup>	1%	0%
Diabetes	2%	8% <sup>bc</sup>	3%
Heart disease or attack	1%	4% <sup>a</sup>	4% <sup>a</sup>
Mental/Emotional illness	15% <sup>bc</sup>	7% <sup>c</sup>	2%
Mobility issues	7%	10%	13% <sup>a</sup>
"Old age," frailty	-	4% <sup>a</sup>	23% <sup>***</sup>
Stroke	1%	6% <sup>a</sup>	5% <sup>a</sup>
Substance abuse	5% <sup>c</sup>	3% <sup>c</sup>	0%
Surgery, wounds	4%	12% <sup>bc</sup>	5%

**Dementia Caregiving Tasks**

- Helping with instrumental activities of daily living (IADLs), such as household chores, shopping, preparing meals, providing transportation, arranging for doctor's appointments, managing financial and legal affairs, and answering the telephone.
- Helping the person take medications correctly, either via reminders or direct administration of medication.
- Helping the person adhere to treatment recommendations for dementia or other medical conditions.
- Assisting with personal activities of daily living (ADLs), such as bathing, dressing, grooming and feeding and helping the person walk, transfer from bed to chair, use the toilet and manage incontinence.
- Managing behaviors or symptoms of the disease such as aggression, delirium, wandering, depressive mood, agitation, anxiety, repetitive asking and negative outbursts.
- Finding and using support services such as support group and adult day service programs.
- Making arrangements for paid in-home, nursing home or assisted living care.
- Hiring and supervising other help provide care.
- Assuming additional responsibilities that are not necessarily specific tasks, such as:
  - Providing care or management of getting through the day
  - Addressing family issues (reluctance to help with Alzheimer's disease, including communication with other family members about care plans, decision-making and arrangements for respite for the main caregiver)
  - Managing other health conditions (e.g., "comorbidities"), such as arthritis, diabetes or cancer.
  - Seeking emotional support and a sense of security.

### Caregivers

- Instrumental ADL's
- Medications
- Adhere to Treatment
- Personal ADL's
- Behavior Management
- Support Services
- In-home Assistance
- Supervision
- Getting through the day
- Dealing with Family
- Managing Co-morbidities
- Emotional support and security

### Caregiving Burdens

- ▶ Informal or unpaid caregiving has been associated with:
  - ▶ Elevated levels of depression and anxiety
  - ▶ Higher use of psychoactive medications
  - ▶ Worse self-reported physical health
  - ▶ Compromised immune function
  - ▶ Increased risk of early death

### Benefits

- ▶ For many people, providing care for a family member with a chronic illness or a disabling condition can provide:
  - ▶ A sense of fulfillment
  - ▶ Establishment of extended social networks or friendship groups associated with caregiving
  - ▶ Feeling needed and useful
  - ▶ Learning something about one's self, others, and the meaning of life.

## Caregiver Interventions

Type and Focus of Caregiver Interventions

Type	Focus
Case management	Provides assessment, information, planning, referral, care coordination and/or advocacy for family caregivers
Psychoeducational approaches	Include structured programs that provide information about the disease, resources and services, and about how to respond skills to effectively respond to symptoms of the disease (for example, cognitive impairment, behavioral symptoms and care-related needs). Include lectures, discussions and written materials and are led by professionals with specialized training.
Counseling	Aims to resolve preexisting personal problems that complicate caregiving to reduce conflicts between caregivers and care recipients and/or improve family functioning.
Psychotherapeutic approaches	Involve the establishment of a therapeutic relationship between the caregiver and a professional therapist. (For example, cognitive behavioral therapy for caregivers to focus on identifying and modifying beliefs related to emotional distress, developing new behaviors to deal with caregiving demands, and fostering activities that can promote caregiver well-being.)
Respite	Provides planned, temporary relief for the caregiver through the provision of substitute care; examples include adult day services and in-home or institutional respite care for a certain number of weekly hours.
Support groups	Are less structured than psychoeducational or psychotherapeutic interventions. Support groups provide caregivers the opportunity to share personal feelings and concerns to overcome feelings of isolation.
Multicomponent approaches	Are characterized by intensive support strategies that combine multiple forms of interventions, such as education, support and respite, into a single, long-term service package provided for 12 months or more.

Adapted from data from Piquart et al.,<sup>24</sup> Gaugler et al,<sup>25</sup> and Weber and Piquart.<sup>26</sup>

Case Management

Psychoeducational

Counseling

Psychotherapeutic

Respite

Support Groups

Multicomponent

## Self Care

- Let go of guilt
- Join a caregiver support group
- Stretch and breathe
- Get some laughs
- Talk to someone once a day
- Get rest
- Prioritize nutrition
- Ask for help
- [Start a CaringBridge site](#)
- Don't be afraid to say "no"
- Ask for flexibility at work
- Spend quality time with friends and family
- Take time for spiritual practices/meditation
- Keep a gratitude journal
- Find time for exercise
- Reduce caffeine intake
- Listen to music
- Treat yourself
- Make time for your hobbies
- Play with a furry friend
- Read books
- Create self-love mantras
- Consider professional help
- Don't make self-care another "to-do"
- Be kind to yourself

## What to do

### NOW WHAT?

### Modifiable Risk Factors

- Hypertension
- Smoking
- Diabetes
- Obesity
- Physical Inactivity
- Diet
- Excessive Alcohol
- Low Cognitive Engagement
- Depression
- Traumatic Brain Injury
- Hearing Loss (Isolation)
- Social Isolation
- Air Pollution

Non-Modifiable...Age, Sex, Genetics

and what about...?



Feel free to email me for a pdf  
of the PowerPoint:

**[pwillisneuro@gmail.com](mailto:pwillisneuro@gmail.com)**