

# Memory Loss: Is it Normal Aging or Alzheimer's Disease?

**Memory Impairment and  
Alzheimer's Expo**

**September 22, 2018**

**Karin R. Ahlstrand, Ph.D.**

# Why Focus on Older Adults?

## A few relevant facts from the APA:

1. Since 1900 the percentage of Americans 65 years and older has more than tripled. By the year 2030, more than 20 percent of U.S. residents are projected to be aged 65 and older, compared with 13% in 2010 and nearly 10% in 1970.
2. The older population itself is getting older. In 1994, the 65-74 age group was 8 times larger than in 1900. The 75-84 age group was 14 times larger. The 85 and older age group was 28 times larger. The "oldest old" group (those over 85 years) is increasing faster than any other age group.
3. The current average life expectancy for men is 73 years; for women, it is 80 years. After age 80, women outnumber men by almost 3 to 1.
4. The ethnic racial minority population over 65 years old is growing faster than the older adults group as a whole, at a 2:3 ratio. Minority persons are projected to represent up to 39% percent of older adults by the year 2050, up from nearly 21% in 2012. Among the 85 and over population, nearly 30% are projected to be minority in 2050, up from 16.3% in 2012.

What does it mean to **age**,  
or become **Old**?



www.eFunnyCartoons.com

Order #110

**Researchers distinguish between four groups:**

- the "younger old" (ages 65-75)
- the "older-old" (ages 75-85)
- the "oldest old" (ages 85+)
- the centenarians (ages 100+)

# MYTH: Aging is a disease.

**Actually, IT IS JUST A *RISK FACTOR*!** (remember your stats!...correlation does not necessarily equal causation.)

That is, we can distinguish normal age-related changes from those that are pathological...with age considered a risk factor for the development of the latter.

Aging and Alzheimer's disease are distinct, with AD appearing to represent a separate disease process superimposed on a normal aging process. Aging has a different pattern of cognitive weaknesses than AD. :)

# Cognitive Changes in Normal Aging

- Some cognitive abilities decline with age, some may improve, and some show little change.
  - individual differences are prominent and findings can depend on the domain. For example, creativity can continue into the ninth decade of life.
  - the decline that does take place is not severe enough to cause significant impairment in daily occupational or social functioning (as occurs with a dementing disorder):
- Normal, age-related changes include:
  - forgetfulness
  - word-finding difficulties and reduced verbal fluency
  - reduced processing speed, particularly for more complex tasks
    - Divided attention between two simultaneous tasks shows age-related decline, as does ability to switch attention rapidly between multiple auditory inputs, although ability to switch attention between visual inputs does not change much with age.
  - Short-term memory shows relatively less age-related decline. Long-term shows more substantial age-related changes, although the decline is greater for recall than for recognition and performance generally benefits from cueing.
  - Visuospatial decline, including of three-dimensional construction and drawing.
  - Weaker abstraction and mental flexibility

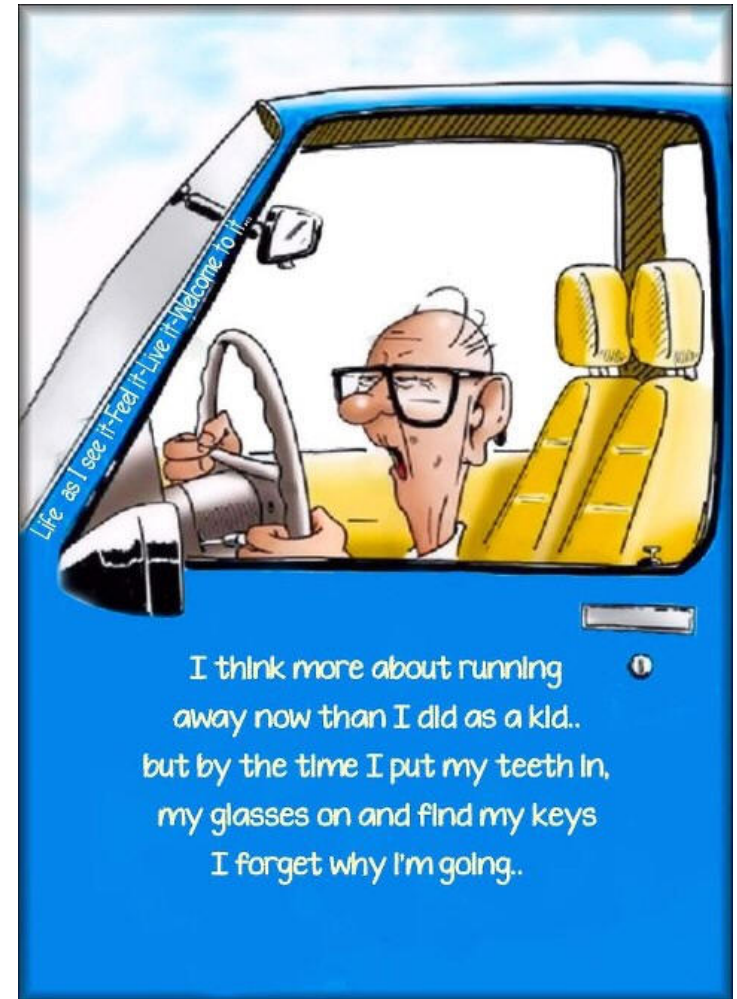
**BUT...you see continued accumulation of practical expertise, or wisdom, that may continue through to the very end of life!**

# Potential Protective Factors in Normal Aging?

- antioxidants
- anti-inflammatory medications
- exercise
- mental stimulation
- education
- health (especially a lack of vascular risk factors)

# MYTH: Everyone who gets old will develop dementia.

- In a study of 100 Swedish centenarians that were enrolled at age 100 and followed until their death (the oldest lived to 111), 73% were dementia free at the end of their lives. :) (Hagberg, B. & Samuelsson, G., 2008)
- Only 6%-8% of people over age 65 have dementia
- Roughly 1/3 of those over age 85 have *some* dementia symptoms



When to be  
concerned  
about  
“memory  
loss” ...

# KNOW<sup>the</sup> 10 SIGNS

EARLY DETECTION MATTERS

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



# What is Dementia?

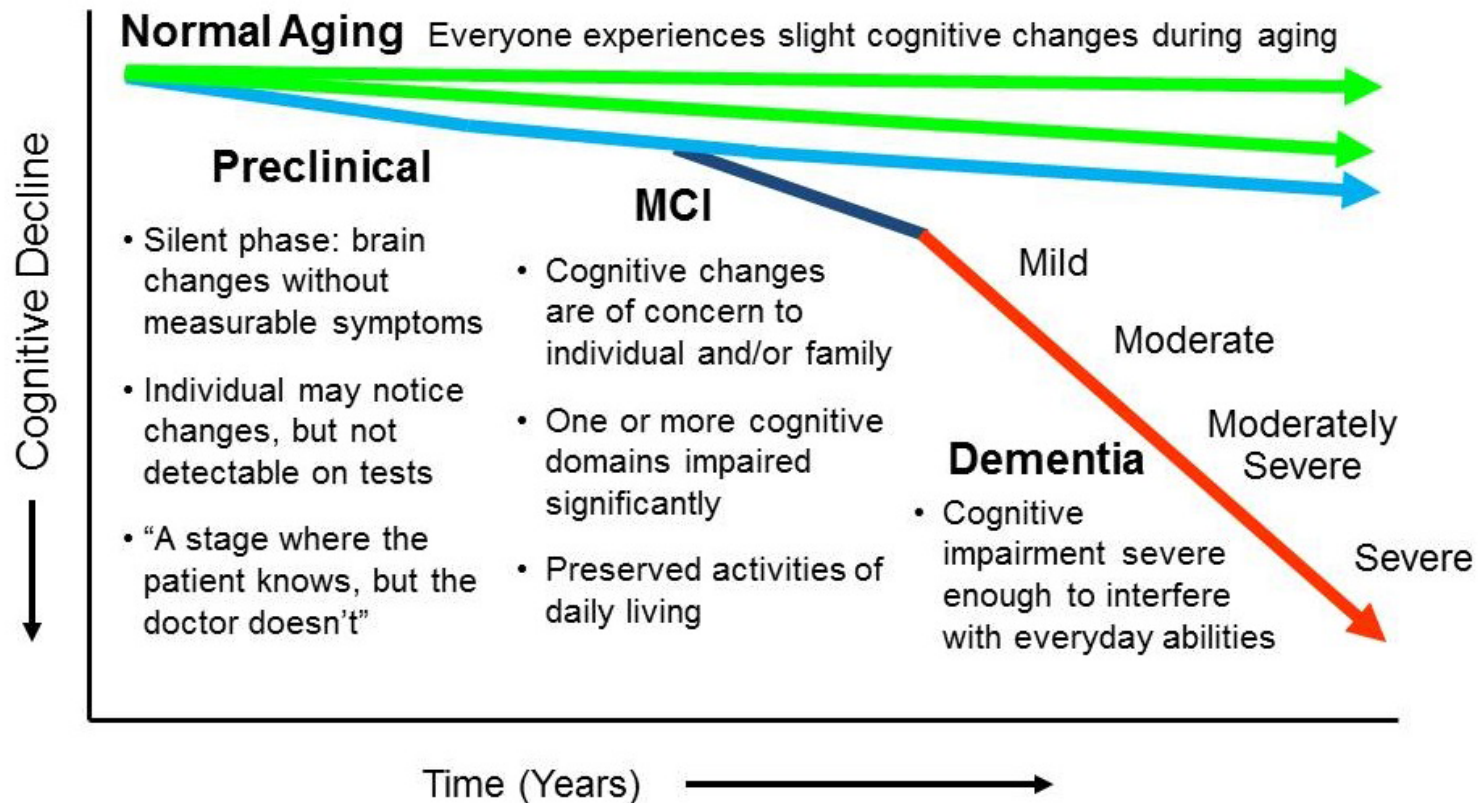
1) A progressive and significant cognitive decline from a previous level of performance or ability in one or more areas of thinking:

- memory\*\*
- language
- visuospatial skills
- calculation
- apraxia & agnosia
- abstract reasoning & judgment

2) A progressive deterioration in mental function that interferes with activities of daily living appropriate for one's age and background

The persistence of the deficit(s) differentiates dementia from delirium.

## ...vs. Mild Cognitive Impairment?



# Differential Diagnosis of Dementia

## DEGENERATIVE DISEASES

Alzheimer's disease  
 Pick's disease (and other FTDs)  
 Parkinson's disease  
 Diffuse Lewy Body disease  
 Corticobasal degeneration  
 Huntington's disease  
 Wilson's disease  
 Progressive supranuclear palsy  
 Spinocerebellar degenerations  
 Hallervorden-Spatz disease  
 Dementia-MND

## WHITE MATTER DISEASES

Multiple sclerosis  
 Metachromatic leukodystrophy  
 Adrenoleukodystrophy

## VASCULAR DISEASES

Multi-infarct dementia  
 Lacunes  
 Binswanger's disease  
 Lupus & other collagen vascular diseases with cerebral vasculitis

## INFECTIOUS DISEASES

Creutzfeldt-Jakob disease  
 AIDS dementia complex  
 Viral encephalitis  
 Neurosyphilis  
 Chronic bacterial meningitis (incl. TB)  
 Cryptococcal meningitis  
 Other fungal meningitides

## INTRACRANIAL MASS LESIONS

Subdural hematoma  
 Brain abscesses  
 Tumors

## TRAUMA

Head trauma  
 Dementia pugilistica

## TOXIC-METABOLIC

Anoxia  
 Uremic encephalopathy/dementia  
 Hepatic encephalopathy  
 Thyroid disorders (↑ and ↓)  
 Adrenal disorders (↑ and ↓)  
 Parathyroid disorders (↑ and ↓)  
 Porphyrria

## PSYCHIATRIC DISORDERS

Depression  
 Mania  
 Hysteria  
 Ganser's syndrome  
 Schizophrenia

## HYDROCEPHALIC DEMENTIAS

Normal pressure hydrocephalus

## DRUGS AND TOXINS

Alcohol and drug abuse  
 Major and minor tranquilizers  
 Anti-depressants  
 Lithium  
 Anti-hypertensive agents  
 Anti-convulsants  
 Anti-cholinergic agents  
 Heavy metals (As, Pb, Mn, Hg, Ti)  
 Organic solvents (insecticides)  
 Carbon Monoxide

## NUTRITIONAL DISORDERS

B12 deficiency  
 Folate deficiency  
 B1 deficiency (Wernicke-Korsakoff)  
 Niacin deficiency (Pellagra)

## PARANEOPLASTIC

Limbic encephalitis

# What is Neuropsychology?

## 1) What is a neuropsychologist?

A clinical neuropsychologist is a psychologist who specializes in understanding the structure and function of the brain and how it relates to behavior.

Neuropsychologists apply knowledge about brain function to evaluate and treat individuals with suspected or demonstrated neurological problems.

## 2) What is a neuropsychological evaluation?

Neuropsychological testing assists referring doctors, patients, and their loved ones in understanding how the brain is working. It is an examination that uses standardized psychometric tests to assess function in different cognitive and emotional areas based on a statistical comparison to age peers.

## 3) When should I have a neuropsychological assessment?

Whenever there are concerns about the degree of memory or cognitive change, or if there is an abrupt change in cognitive abilities.

# What Can the Results Tell Me?

Testing can help outline the cognitive, physical, and behavioral factors that may be contributing to one's presentation

Testing may help distinguish between normal aging, dementia, depression, or some combination of factors by comparing individual performance against age norms

Testing provides a baseline against which to monitor progress and assess cognitive development over time

The results can provide functional recommendations to address cognitive and mood problems in the home and community setting

The results can provide guidance for other therapists and specialists to better treat a progressive cognitive decline (e.g., medications, research options, community resources, etc.)

# HOW CAN NEUROPSYCHOLOGY HELP DISTINGUISH NORMAL AGING FROM DEMENTIA?

## Questions you *can field* on the basis of neuropsychological assessment:

Does this individual *appear* to have deficits in one or more domains of cognitive functioning? (e.g., memory, language, etc.)

Is the pattern of deficits observed more consistent with *Diagnosis A* than *Diagnosis B* (psychological labels can be considered here as well)?

What are this individual's cognitive *strengths* and *weaknesses*?

What does the pattern of testing suggest with respect to daily living habits or future plans?...

## Questions you *cannot answer solely* on the basis of neuropsychological assessment:

Does this person have *x*? (e.g., Alzheimer's disease)

Should this person be allowed to drive?

Will this individual show improvement in cognitive functioning in the future?

Etc.



# QUESTIONS?

## Contact Information:

Karin R. Ahlstrand, Ph.D.

Office Phone: (520) 954-9930

Fax: (520) 306-4755

[www.drahlstrand.com](http://www.drahlstrand.com)