

Aging and Memory Loss: The Importance and Impact of a Healthy Lifestyle

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Learning objectives

- Understand normal age-related changes in cognition
- Know the symptoms and impact of dementia
- Learn the importance of staying mentally, socially, and physically engaged throughout the lifespan

Key questions

- What are normal age-related cognitive changes?
- What is dementia?
- What is the impact of dementia?
- What are key differences between normal aging and dementia?
- What can you do to buffer against cognitive changes?



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What are normal age-related cognitive changes?

- Different types of cognitive processes:

- Basic cognitive processes:

Perception

Attention

Short-term memory

Working memory

Long-term memory

Speed of processing

- Higher-order cognitive processes:

Decision-making

Reasoning

Judgment

Abstract thought

Problem-solving

Reading and Language⁵

What are normal age-related cognitive changes?

- Cognitive changes across the lifespan reflect a pattern of gains, losses, and stability
- Great deal of variability across tasks and individual
 - Ex. individuals who are physically active (versus non-active) in their 90s perform similarly to individuals in their 40s on cognitive tasks
- Concept of statistically meaningful versus clinically meaningful results and implications
 - Ex. speeded tasks within lab setting versus driving and reaction time

What are normal age-related cognitive changes?

- Speed of processing shows the largest declines (or loss) across the lifespan, with very small changes beginning at age 25
- As we age, it is normal to experience some minor changes in how quickly we retrieve and process information
 - Ex. Retrieving a specific word
 - Ex. Mentally manipulating information
 - Ex. Reversing directions

What are normal age-related cognitive changes?

- Processes that reflect loss across the lifespan:
 - Sensation
 - Attention: alternating/divided processes
 - Executive functioning*
 - Working memory: processing and manipulation based tasks/activities
 - Episodic long-term memory
 - Semantic long-term memory: word finding
 - Speed of processing**

What are normal age-related cognitive changes?

- Processes that reflect stability or minor changes across the lifespan
 - Perception
 - Attention: sustained/selective processes
 - Language production and comprehension
 - Short-term memory/working memory: storage and maintenance based tasks/activities
 - Executive functioning*
 - Procedural long-term memory: skills/habits/motor memory/priming/classical conditioning

What are normal age-related cognitive changes?

- Processes that reflect gains across the lifespan:
 - Executive Functioning*
 - Tasks/activities that require 'real-world' problem solving, decision making, judgment, reasoning
 - Semantic long-term memory
 - Vocabulary/Verbal skills
 - General world knowledge

What is dementia?

- Cognitive symptoms include difficulties with:
 - Attention
 - Short-term memory
 - Episodic memory
 - Executive functioning
 - Visuo-spatial processes
 - Language

What is dementia?

- Functional symptoms:
 - Instrumental activities of daily living (IADLs)
 - Personal activities of daily living (PADLs)
- Behavioral symptoms:
 - depression, anxiety, agitation, apathy, delusions, hallucinations, sleep-wake cycle changes, appetite changes, emotional outbursts, personality changes

What is dementia?

- Dementia is due to a variety of illnesses and can be reversible or irreversible
- Examples of reversible dementias include:
 - thyroid disorders, urinary tract infections, electrolyte imbalance, depression
- Examples of irreversible dementias include:
 - Alzheimer's disease, Lewy Body dementia, Frontal Lobe dementia
- Staging of irreversible dementia illnesses:
 - mild, moderate, and severe

What is dementia?

- Alzheimer's disease is the most commonly diagnosed type of dementia
- 5.3 million individuals are currently diagnosed with Alzheimer's disease
- 1 in 8 individuals over the age of 65 will be diagnosed with Alzheimer's disease
- More women than men are diagnosed with Alzheimer's disease, which is most likely due to their longer lifespan

What is the impact of dementia?

- Society level impact:
 - Increased financial costs
 - \$172 billion dollars spent in annual costs
 - Balancing work and caregiving responsibilities
 - Sandwich generation
 - Individuals who are providing care for their children and their parents
 - Shortage of trained professional and para-professional workers
 - Limited resources and support

What is the impact of dementia?

- Caregiver level impact:
 - family/friend caregivers provide \$10.9 million dollars in unpaid caregiving
 - changing roles and responsibilities
 - increased risk for symptoms of depression and anxiety
 - increased stress and burden
 - increased risk for chronic health conditions and higher mortality
 - financial and legal aspects

What is the impact of dementia?

- Individual level impact:
 - cognitive symptoms
 - functional symptoms
 - behavioral symptoms
 - social and emotional impact
 - coping and managing their illness
 - development of anxiety and/or depression symptoms
 - quality of life
 - social support
 - financial and legal aspects

'Those with dementia are still people and they still have stories and they still have character and they're all individuals and they're all unique. And they just need to be interacted with on a human level.'

-Cary Mulligan

Tips for living WITH dementia...

- Unless it is distressing, a safety or health issue....let it be
- Enter their world...take their perspective
- Be ready for new and different baselines and routines
- Work with and consult dementia specialists
- Advocate for your loved one AND for yourself as a caregiver

Tips for living WITH dementia...

- Take advantage of what is working today
- Understand how dementia impacts other physical and mental health conditions
- Look for the non-dementia explanation... what is the unmet need that is being expressed
- Ask for help

Look for the positive in the caregiving journey...

- Prioritize what is important...
- Live in the moment...
- Find the humor in situations...laughter is the best medicine...
- Find ways to connect and stay connected with your love one...
- Look for the bliss...

What are key differences between normal aging and dementia?

SIGNS OF DEMENTIA*	TYPICAL AGE-RELATED CHANGES
Poor judgment & decision making	Making a bad decision once in a while
Inability to manage budget	Missing a monthly payment
Losing track of the date or the season	Forgetting which day it is & remembering later
Difficulty having a conversation	Sometimes forgetting which word to use
Misplacing things and being unable to retrace steps to find them	Losing things from time to time

*NOTE: compared to usual behavior

Alzheimer's Association, 2012

What are key differences between normal aging and dementia?

- Dementia is NOT part of the normal aging process
- Contact your primary care physician if you notice a change in yourself or a loved one
 - Ex. Daily activities seem difficult or take much longer than usual
 - Ex. Repeatedly asking the same question or telling the same story
 - Ex. Confusion regarding time, place, or person
- Further comprehensive testing may be needed to rule out other explanations and for proper diagnosis

What can you do to buffer against cognitive changes?

- Across the lifespan, staying engaged cognitively, socially, and physically serves as a buffer against normal and pathological aspects of aging
 - Cognitive engagement or mental stimulation are tasks/activities that are novel and challenging
 - Brain = Muscle
 - Social engagement
 - Staying connected
 - Purpose and meaning
 - Physical activity
 - Aerobic exercises

Questions???



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