Cognitive Aging:

Progress in Understanding and Opportunities for Action

IOM Committee on the Public Health Dimensions of Cognitive Aging



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2

What is Cognitive Aging?

- Cognition refers to the mental functions involved in attention, thinking, understanding, learning, remembering, solving problems, and making decisions.
- Cognitive aging is a process of gradual, ongoing, yet highly variable changes in cognitive functions that occur as people get older.
- Cognitive aging is a lifelong process. It is not a disease or a quantifiable level of function.
- In the context of aging, cognitive health is exemplified by an individual who maintains his or her optimal cognitive function with age.

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Cognitive aging is not the same as Alzheimer's disease.

ALZHEIMER'S DISEASE	COGNITIVE AGING
Chronic neurodegenerative disease	Part of aging
Extensive neuron loss	Neuron number remains relatively stable, but neuronal function may decline
Affects approximately 10 percent of older Americans	Occurs in everyone, but the extent and nature of changes varies widely
Declines are often severe and progressive	Changes are variable and gradual

Know the facts about cognitive aging **MISCONCEPTION** FACT Maintaining cognitive health means Cognitive health is far more than having preserving your memory. a good memory. It also involves decision making, attention, and problem solving. Cognitive function always declines with age.

Aging can have both positive and negative effects on cognition. Wisdom and expertise can increase with age. Older adults experience fewer negative emotions, such as anger and worry, than people in young adulthood and middle age, and they report feeling greater satisfaction with life in general.

There are actions individuals and families There's nothing you can do to improve your cognitive health. can take to help support their cognitive health and adapt to age-related cognitive changes. See the next page for more information.

Brain neurons die as you age, so there is In the absence of disease, neuron death no way to prevent cognitive decline. is minimal. There are a number of actions you can take to support your cognitive health.

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Key Messages

- Age affects all organs, including the brain. Wide variability in the impact of cognitive aging among individuals and throughout the life span.
- Cognitive aging is more than decline in memory or speed of processing; can also have positive effects on cognition.
- Scientific understanding of the non-disease changes in cognition with age is rapidly advancing; much remains to be learned.
- Cognitive changes can affect daily activities.
- Opportunities for action at many levels: individuals, families, senior centers, communities, nonprofits, federal and state agencies, private sector (finance, transportation, technology, health care)

www.iom.edu/cognitiveaging

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Key messages for patients about cognitive aging

- The brain ages, just like other parts of the body. The brain is responsible for "cognition," a term that describes mental functions including memory, decision making, processing speed, and learning. As the brain ages, these functions may change a process called "cognitive aging."
- Cognitive aging is not a disease. It is not the same as Alzheimer's disease or other types of dementia. Cognitive aging is a natural, lifelong process that occurs in every individual.
- Cognitive aging is different for every individual. Some people may experience very few effects, while others may undergo changes that can affect cognitive abilities needed to carry out daily tasks, such as paying bills, driving, and following recipes.
- Some cognitive functions improve with age. Wisdom and knowledge often increase with age, and older adults report greater levels of happiness and satisfaction than their younger counterparts.
- There are steps patients can take to protect their cognitive health. Although aging is inevitable, it is possible to promote and support cognitive health and adapt to age-related changes in cognitive function.

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The top 3 actions you can take to help protect your cognitive health as you age

- Be physically active. Staying physically active can promote cognitive health in middle-aged and older adults.
- Reduce your cardiovascular risk factors (including hypertension, diabetes, and smoking). Maintaining cardiovascular health supports cognitive health.
- Manage your medications. A number of medications can have a negative effect on cognitive function when used alone or in combination with other medications. The effects can be temporary or long-term. It's important to review all of your medications with a health care professional and learn about their effects on cognitive

Other actions that may promote cognitive health

- · Be socially and intellectually active, and continually seek opportunities to learn.
- Get adequate sleep and seek professional treatment for sleep disorders, if needed.
- Talk to your health care provider to learn more about preventing delirium (a decline in cognitive function that can be associated with some medications and hospitalization).

MONITORING MEDICATIONS WITH PATIENTS

Older adults take an average of 14 prescription drugs per year, putting them at heightened risk for adverse drug reactions, drug-drug interactions, and drug-disease interactions. Health care professionals, particularly primary care providers, play a critical role in monitoring medications and avoiding inappropriate use by older adults.

Key messages for patients about medication management

A complete medication review (including over-the-counter and herbal remedies) should be performed frequently, and especially during care transitions, such as post-surgery or hospital discharge.

Over-the-counter medications (such as antihistamines, sedatives, and other medications that have strong anticholinergic activity), may have significant cognitive side effects, so their use should be carefully assessed.

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RESOURCES RELATED TO COGNITIVE AGING AND FINANCIAL DECISION MAKING

Age-related declines in cognitive function may make older adults vulnerable to financial fraud or abuse at a time when significant financial decisions need to be made, such as planning for retirement. In 2010 alone, victims of elder financial abuse lost an estimated \$2.9 billion, which includes loss of money and goods to legitimate businesses, scams, family, and friends and indirectly through medical insurance fraud. According to the National Council on Aging, the top 10 financial scams targeting older adults include telemarketing, Internet scams, and sales of anti-aging products.

Fortunately, there are many resources available to raise awareness and help older adults, their families, and financial advisers avoid abuse and make sound financial decisions, including AARP's "Scam Jams" and "Fraud Watch Network," the Consumer Financial Protection Bureau's Office of Financial Protection for Older Americans, and the Federal Trade Commission's "Pass It On" financial fraud campaign.

Visit www.iom.edu/cognitiveaging to access a list of resources related to cognitive aging and financial decision making.

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11