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ELDER CARE

A Resource for Interprofessional Providers

Discussing Cognitive Aging with Patients and Families

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What is Cognitive Aging?

The term cognition refers to a wide array of mental capabilities. They include, but are not limited to, memory, decision-making, processing speed, wisdom, and learning. Cognitive aging is the process of cognition changing over time. It occurs in all individuals over their life span and is not explained by neurologic or psychiatric disorders.

Cognitive aging generally refers to age-associated decline in an individual's "fluid intelligence," which is the ability to reason, think logically, and find solutions to novel problems. It differs from "crystallized intelligence," which has to do with the ability to use learned skills.

Cognitive aging has both positive and negative effects. Older adults might experience lapses in memory or difficulty learning new material. But, they tend to experience few of the negative emotions often associated with youth, such as anger and worry, and commonly report higher general life satisfaction.

When discussing the topic of cognitive aging, it is important to convey that it is a complex process that affects all individuals, but does so in unique ways. The process of cognitive aging is highly variable from person to person, and can change from year to year.

It is also important to recognize that cognitive aging is often asymptomatic, and thus it is not always obvious that it is occurring. Over time, however, these cognitive changes can influence the ability of a person to perform regular

activities, such as driving, taking care of personal finances, and following medical prescriptions. For individuals and families dealing with cognitive aging, it is important to overcome misconceptions, seek knowledge, and take action to promote cognitive health.

How is Cognitive Aging Measured?

Measures of cognition that can detect subtle changes over time are difficult to standardize because of many factors, such as culture, education, literacy, that can influence test performance. In addition, the cognitive measures used might not represent real-life situations that demonstrate whether cognitive aging has an effect on daily function.

Despite these limitations, cognitive tests can provide insight into the underlying mechanisms behind age-associated changes in cognition. (Table 1) These tests are particularly useful when assessments are made on several occasions over time.

When selecting a cohort to study for an assessment of the effects of cognitive aging, remember the importance of the cohort's composition. The goal should be to have a diverse representation of older adults from various ethnicities, education levels, socioeconomic levels, etc. Most importantly, a study on cognitive aging should not include individuals with conditions that impair cognition, such as Alzheimer's disease. The changes in cognition that occur with these diseases are distinct from changes seen in cognitive aging.

Table 1. Examples of Cognitive Assessment Instruments

Assessment Instrument	What It Tests
Pattern Comparison Processing Speed Test	Speed of processing
Connors Continuous Performance Test	Sustained attention
Stroop Test	Selective attention

TIPS FOR PROMOTING COGNITIVE HEALTH

- Avoid prescribing medications to older adults that can interfere with cognitive function. Many medications, notably those listed on Table 2, can have negative short-term and/or long-term effects on cognition.
- Physical exercise and cardiovascular health are critical to maintaining cognitive health as adults get older. Encourage some form of physical activity every day.
- Encourage patients to get adequate sleep and address any disorders that might be interfering with sleep.
- Encourage older adults to participate socially in their community and to seek out opportunities to learn and keep mentally active.

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Why Cognitive Aging Is Important

Older Americans are an increasingly large and active segment of our population. Thus, cognitive aging has become important to the overall health of many communities. Research on cognitive aging has the goals of finding ways to improve cognitive health, inform populations about the importance of maintaining cognitive health, and eliminate stigmas surrounding the process of cognitive aging.

Steps to Protect Cognitive Health

It is necessary to disseminate research findings and engage the communities in discussion about cognitive health, and to do so in ways that are culturally acceptable and understandable. Research shows that individuals can take specific actions to improve their cognitive health and limit decline.

One key action is to remain physically active. Exercise has been shown to promote healthy cognition in older adults. Secondly, a reduction of cardiovascular risk factors, like hypertension and diabetes, can support cognitive health. In addition, the careful management of medication, particularly those that have been shown to have an effect on cognition (Table 2) is key to **protecting** cognitive aging.

It is particularly important for patients to learn what effect their medications (such as over-the-counter medications for sleep, allergies, and colds) can have on their cognition. Finally, it is critical that older adults are active in their community and engage both socially and intellectually. It has been shown that this type of activity benefits cognitive health.

Future Directions for Cognitive Aging Research

Research in factors that affect cognitive aging can be used in to create “age-friendly” communities that are welcoming for people of all ages and ability levels. Significant focus should be put on ease of mobility and access, as well as general community education on how to promote healthy cognition as a person ages.

Increased mobility and access to amenities (such as parks, fresh grocers, libraries, and gyms) provides seniors increased opportunity to participate in physical activity, eat healthily, and engage socially in their communities. This is important, as it makes the environment more conducive to cognitively healthy lifestyles, and is inclusive of community members of all ages. Indeed, these factors are very important in creating a community where cognitive health is encouraged.

Table 2. Common Medications That Can Impair Cognitive Function

Anticholinergics	Digoxin
Antihistamines (first generation)	Non-Benzodiazepine Sedative Hypnotics
Antipsychotics	Opioids
Benzodiazepines	Tricyclic Antidepressants

References and Resources

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