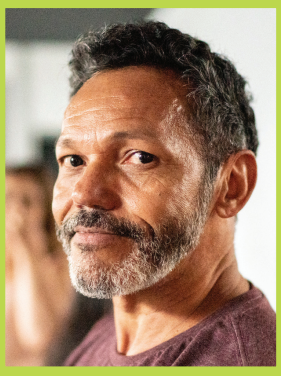
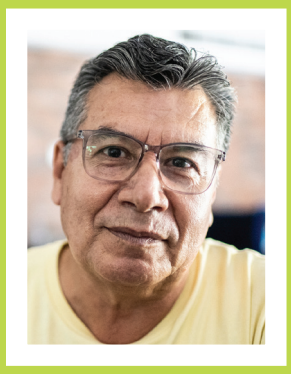
Getting Older with ADHD:





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What Does "Normal Aging" with ADHD Look Like?

Brandy L. Callahan, PhD, RPsych

The first groups of children to receive a diagnosis of ADHD when it was first defined in 1968—then under the name *hyperkinetic reaction of childhood*—are soon entering their fifties and sixties. Yet, how they will experience aging is not clear, because most of our knowledge about ADHD comes from research in children or young adults.

Currently, roughly one in four people living with ADHD is aged fifty and older. That number will likely continue to rise as we see improved understanding of neurodiversity across the lifespan and improved general access to ADHD-related services. So, what *do* we know about ADHD in later life?

Both ADHD and aging can be associated with cognitive challenges

One of the core features of ADHD is difficulty with cognitive control—in other words, challenges regulating thoughts and behaviors. The frontal lobes of the brain are heavily involved in these abilities. Brain scans of adults with ADHD show tissue thinning and irregular activity in frontal brain areas, which may explain these cognitive challenges. Normal aging is also associated with frontal-lobe thinning that can lead to difficulties with cognitive control; for example, this is why some older people need to work harder than younger adults to efficiently multitask or learn new complex activities.

Unfortunately, this means that adults who are getting older *with* ADHD are doubly disadvantaged in terms of their frontal-lobe functioning, and may experience especially frustrating cognitive problems. They may benefit from "reducing the load" carried by the frontal lobes, for example, by doing one thing at a time (avoiding multitasking), allowing themselves more time to complete tasks, and relying on external supports such as calendars or lists, smartphone reminders, and automated scheduled bill payments.

Cognitive aging may be more challenging for women with ADHD

Women with ADHD may be at even greater disadvantage than men as they get older, because menopause impacts cognition as well. In the general population, an estimated two-thirds of women experience "brain fog"—difficulties learning and remembering information, concentrating, and multitasking—related to hormonal changes surrounding menopause.

Anecdotally, professionals supporting women with ADHD know that their patients' cognitive symptoms often worsen during the peri- and post-menopausal stages, but virtually no scientific studies have addressed this issue. As such, very little is known about how hormonal fluctuations impact cognitive aging in ADHD, so this is an area that is ripe for future research.

Does ADHD increase risk for dementia?

Emerging research tentatively suggests that adults with ADHD may have higher risk for some forms of late-life cognitive impairment and dementia. This research is still new and comes almost exclusively from studies using electronic health records, which have some limitations.

Nonetheless, this body of work seems to indicate that having ADHD may somehow interfere with the body's ability to grapple with aging. For example, relative to their peers, older adults with ADHD and those at high genetic risk for ADHD are more jeopardized by age-related damage to the brain's white matter and by the accumulation of abnormal brain proteins.

We're not sure why, but these associations suggest it may be particularly important for adults with ADHD to proactively protect their brain health as they get older, for example through diet and exercise, controlling metabolic conditions such as diabetes and hypertension, and remaining socially and intellectually active.

Parsing ADHD from age-related changes

Despite a tentative link between ADHD and dementia, the vast majority of people with ADHD will not develop dementia as they get older, and it is important to distinguish signs of dementia from normal aging.

A concern that is common to both ADHD and age-related cognitive disorders is memory: older adults with ADHD and those in the early states of dementia both complain of forgetfulness and absent-mindedness. However, many different experiences may be described as "memory" problems, and the specific *types* of difficulties can either point to dementia or to normal aging with ADHD.

Forgetting an acquaintance's name, misplacing an important item, and word-finding difficulties are common examples of "memory" failures among older adults, but each of these processes is actually controlled by different brain regions which are not all impacted in the same way by aging and brain disease.

The frontal lobes are responsible for paying attention to information and organizing it logically so it can be efficiently retrieved later on, and because these brain areas function less efficiently in ADHD the result is an ineffective ability to learn and remember new information that was not properly registered in the first place. When attentional and organizational abilities are supported (for example, by helping participants pay attention to and cluster information in an easy-to-remember format), researchers have observed that the "memory" difficulties experienced by adults with ADHD improve substantially.

In contrast, people in the early stages of dementia do not benefit from these strategies. Dementia-related memory changes usually arise from the deterioration of brain structures that store information in long-term memory (the medial temporal lobes), so even if information is attended to and properly registered, it cannot be retrieved later on. This means that even details that were previously well-remembered (for example, an acquaintance's name or a familiar neighborhood route) are susceptible to being forgotten.

The medial temporal lobes are also responsible for storing vocabulary knowledge, so frequent word-finding difficulties or no-

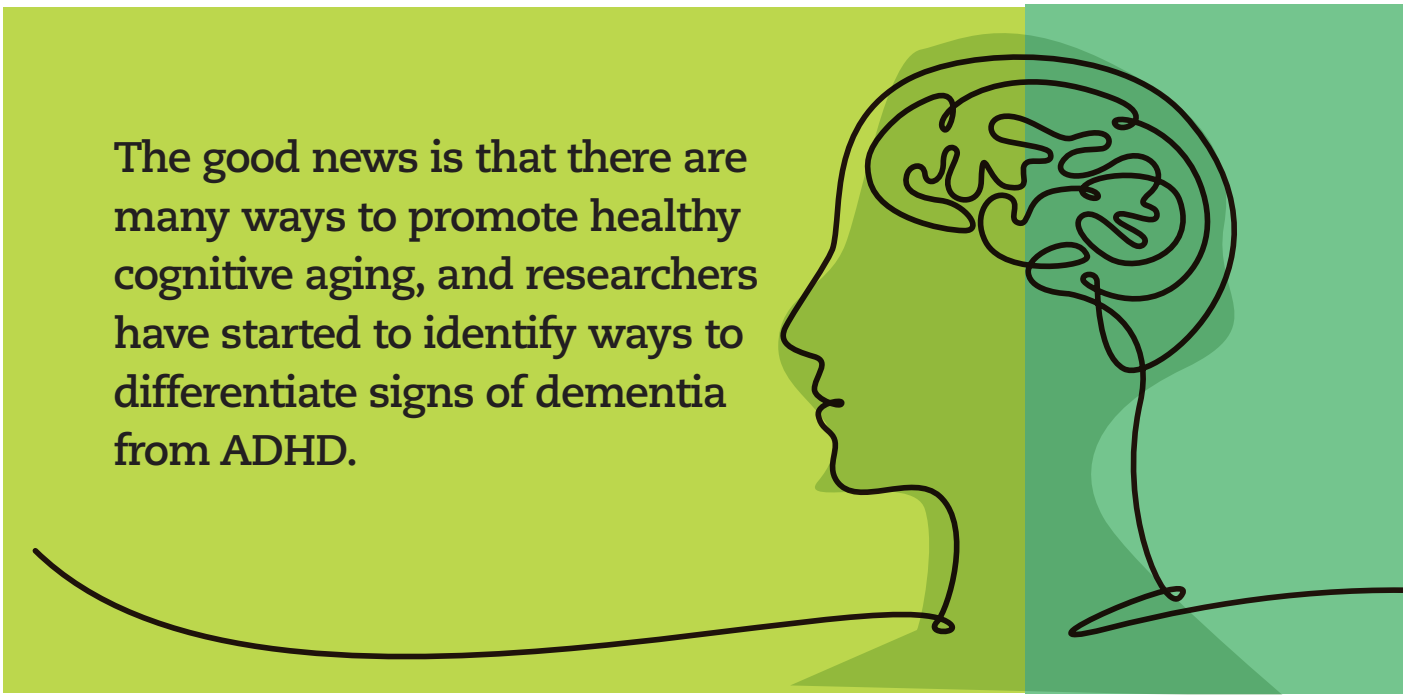

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table changes in language or conversation may be indicative of a dementia-related cognitive issue. All available evidence indicates that language abilities are preserved during aging in ADHD.

How to age well with ADHD

It is never too early or too late to support healthy brain aging, and this may be especially relevant in the context of ADHD in light of potentially increased risk for dementia. Several key protective factors have been identified across the lifespan as effective targets to support healthy brain aging. Most of these involve maintaining a healthy heart, because the heart supplies oxygenated blood and vital nutrients to the brain. Therefore, as a general rule of thumb, what's good for the heart is good for the brain.

Limiting alcohol consumption to fewer than twenty-one drinks per week; avoiding tobacco; eating plenty of fruits, vegetables, and whole grains; exercising regularly; and maintaining a healthy weight have all been shown to reduce dementia risk. Concussion is another established risk factor for dementia, so physically protecting the head from injury—by wearing a helmet while cycling, for example—is also an easy way to stack the deck in favor of healthy brain aging.

In addition, there is substantial evidence that hearing loss is a major risk factor for dementia. This can be effectively mitigated by using hearing aids and avoiding exposure to excessive loud noise. Lastly, social and psychological well-being has also been determined to influence dementia risk: remaining socially active and treating symptoms of depression are recommended strategies for mitigating this risk.

Toward greater understanding

There is still much to learn about brain aging in the context of ADHD. The good news is that there are many ways to promote healthy cognitive aging, and researchers have started to identify ways to differentiate signs of dementia from ADHD.

There has been strong recent interest in understanding how women with ADHD are impacted by hormonal fluctuations, which will further clarify the types of cognitive issues that may be experienced in and around later-life menopausal stages.

In the last fifteen years, there has been a steady rise in the number of middle-aged and older adults seeking assessment and treatment for ADHD. Increased recognition of ADHD in these groups is a positive factor that will stimulate much-needed new research to understand their experience of aging.

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