

# Neurologist discusses mild cognitive impairment

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We've all walked into a room, only to have forgotten exactly why we are there. Or maybe our ability to recall names of long-lost friends or classmates isn't quite what it used to be.

These are normal signs of aging. But, if such events begin to happen more frequently or escalate, then it could be something called [mild cognitive impairment](#), often called MCI. Mild cognitive impairment is an early stage of memory—or cognitive ability—loss in people who can still independently perform most daily activities.

If mild cognitive impairment is not a familiar term to you, you aren't alone. A recent survey from the Alzheimer's Association found that 82% of Americans are unaware of the condition or know little about it. And yet it affects about 10 million people in the United States.

For people diagnosed with mild cognitive impairment, within just one year 10 to 15% of them will go on to develop dementia, a general term for loss of memory and other [mental abilities](#) that is severe enough to interfere with daily life. And one-third of those with MCI will develop Alzheimer's (the most common form of dementia) within five years.

Seeking [medical attention](#) for signs of MCI is important because it may be caused by something that can easily be reversed, such as a medication or a [medical condition](#), says Carolyn Fredericks, MD, a Yale Medicine neurologist who specializes in cognitive and behavioral conditions, including dementia.

"For example, someone's thyroid could not be functioning properly. That's something we can treat, and then they get better," Dr. Fredericks says. "Or someone might have severe sleep apnea, which is shocking in terms of how much cognitive impairment it can cause."

Yet, according to the Alzheimer's Association survey, just 40% of respondents said they would see a doctor if they experienced MCI symptoms. This is unfortunate, Dr. Fredericks says, because whether it's a condition that can be fixed or not, there are clinical trials patients can enroll in that might offer [treatment options](#) they wouldn't otherwise

have.

"More and more, we are able to use tests to identify biomarkers, like spinal fluid testing or new imaging methods to see the earliest stages of Alzheimer's pathology," she says. "That can be helpful, though it is ethically complicated. Would someone want that information if they can't do anything about it? But for patients who come to us interested in drug trials, the early stages of a process like this might be the right place to intervene with some of the newer drugs that are being developed."

We talked more with Dr. Fredericks about the distinctions between "normal" aging, MCI, and dementia, and what, if any, steps can be taken to prevent cognitive decline.

## **Mild cognitive impairment vs. normal aging**

Normal aging and mild cognitive impairment are definitely distinct from one another, Dr. Fredericks says.

"Basically, mild cognitive impairment is when someone has clear symptoms showing changes in their memory or their thinking, but the changes don't affect their ability to do their day-to-day activities," she says. "That is what distinguishes it from dementia."

With MCI, the changes are often noticed by friends and family members, too. It's also something that can be seen on a neuropsychological evaluation, which measures how well your brain is working by testing reading, language usage, learning, processing speed, reasoning, and problem-solving, as well as mood and personality.

Much of what differentiates MCI from normal aging has to do with how often someone struggles with memory or cognition.

"It's common for any of us to end up in our kitchen with no idea why we are there or to run into someone in the grocery store and forget their name. But when it starts to happen repetitively and on a day-to-day basis, that's when you start to worry about it," Dr. Fredericks says.

For example, it might entail struggling to remember the details of a conversation you had recently. "This isn't something where we talked about an appointment three weeks ago and now you don't remember. It's when you just told me a story and you don't seem to remember telling me," Dr. Fredericks explains. "Or it might be having difficulty finding your way driving to a friend's house you visit often, or experiencing greater difficulty keeping track of objects like keys and wallets on a daily basis."

What, then, is normal aging? Do memory and cognition naturally decline in everyone as we age? Like many of the great questions of the brain, there isn't a clear answer, Dr. Fredericks says.

"There's a bit of debate about what is normal in the field, mostly because of the way studies are designed," she says. "But the larger studies generally show that people can be expected to do their best on certain tests of memory and thinking in their 20s or so, and that it's pretty normal for all of us to not be as good at memorizing a list of words [as we age], even starting in our 30s."

"But some things—like vocabulary—can actually improve as people get older if they keep reading and stay active," Dr. Fredericks says. "But for certain neuropsychological testing, it is adjusted for age because it's normal to not do quite as well when you're 70 as you would have when you were 30 or 40."

Still, that doesn't mean everyone loses sharpness as they age. "There's a category of individuals called super-agers in which people who are in

late life—80s, 90s—are scoring as well or better than the average person would be much earlier in life," Dr. Fredericks says. "There's some interesting research in these individuals to try to understand what makes them so resilient to what we consider 'normal cognitive aging.'"

## **Diagnosing mild cognitive impairment**

If you have concerns about your memory or cognition, talking to your primary care physician is a good place to start.

"Most primary care doctors are really comfortable with an initial cognitive assessment, listening to your concerns, and doing a brief 10-minute screening in the office," Dr. Fredericks says. "You'll likely undergo blood tests to check your thyroid and vitamin B12 levels, as unbalanced levels of both can affect cognition and be treated with medications." Additionally, Dr. Fredericks says screening for depression is also something your clinician may do, as depression can affect cognition and can be treated.

Your medical provider will also likely ask to talk to family members to hear their concerns and get a better perspective of what changes may be going on. If you decide to see a specialist, you might be referred to a behavioral neurologist or a neuropsychiatrist, both of whom specialize in treating memory and cognitive concerns.

"These specialists will take a detailed history, do a neurological exam, and likely some cognitive screening in the office for the initial visit. They then consider whether to refer you for a formal neuropsychological evaluation, which is more detailed and takes a half day," Dr. Fredericks says. "In that evaluation, we would be looking for a test score that's lower than we would expect for someone of your age, sex, and education. We're looking for a score that's clearly abnormal—that's part of what distinguishes it from normal aging, too."

If a diagnosis of MCI is suspected, your specialist will likely recommend brain imaging, such as an MRI (magnetic resonance imaging), to rule out lesions or strokes. If these issues aren't seen but the MRI shows patterns more consistent with Alzheimer's, it is good for patients to know; they may have a chance to participate in clinical trials, Dr. Fredericks points out.

The Alzheimer's Disease Research Unit at Yale offers treatment, neuroimaging, and genetic studies of Alzheimer's disease. There are a number of trials and therapies open to people with early symptoms or those who have strong family histories of the condition.

"Not everyone has access to trials and some might be told, "This looks pretty mild for now. Let's see you in a year," Dr. Fredericks says. "That's not ideal for someone who is interested in trials because getting involved when the symptoms are mild is likely the best time."

Another good reason to know if you have MCI or some form of dementia is that it may give you a push to get other aspects of your life in better order, Dr. Fredericks says.

"It lets you know what you might be on the lookout for. You might be more cautious about making sure that your driving is OK," she adds. "You also may want to make sure your finances and your medical wishes are all exactly as you want them in case this gets to the point where you wouldn't necessarily be able to speak articulately for yourself."

## **Preventing more cognitive decline**

If you are diagnosed with MCI, is there anything you can do to prevent further cognitive decline? While there is no specific treatment for MCI, there is evidence that following a [healthy diet](#), for anyone, can help, Dr. Fredericks says.



Specifically, Dr. Fredericks points to research about the so-called Mediterranean diet, which emphasizes whole grains, seafood, and nuts, and the DASH (Dietary Approaches to Stop Hypertension) diet, which is designed to help lower or control high blood pressure.

"Either of these or a combination of the two can be effective in slowing cognitive decline," Dr. Fredericks says. "Also, as we get older, there's good evidence that moderate-intensity cardiovascular exercise for 30 minutes, five times a week helps. We all should be doing this, especially those of us with a family history of dementia."

Furthermore, staying cognitively active—especially after retirement—is key, she adds. "People come to me and ask, 'Should I do Sudoku or crossword puzzles?' I tell them to do anything that they find enjoyable and cognitively challenging. It has to be enjoyable or you likely won't do it," she says. "But it also has to really 'stretch' you."

Plus, combining any mental activity with a social component is a good idea, she explains. "Instead of just reading a book, join a book club and discuss it with people, which forces you to really engage with the material," Dr. Fredericks says. "I have patients who sing in a choir, which is a wonderful social and cognitive activity because there's so much going on in your brain when you're coordinating with others and with the music. You're surrounded by a group of people that you're close with, too."

Provided by Yale University

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