



**Medical
Blueprints**

MILD COGNITIVE IMPAIRMENT: KNOW THE SIGNS REPORT #2986

BACKGROUND: Mild cognitive impairment (MCI) causes cognitive changes that are serious enough to be noticed by the person affected but do not affect the individual's ability to carry out everyday activities. Family members and friends are able to notice these changes as well. MCI is considered an early stage of memory loss or other cognitive ability loss such as language or visual/spatial perception. It can develop for many reasons, and individuals living with MCI may go on to develop dementia. In some individuals, MCI reverts to normal cognition or remains stable. In other cases, such as when a medication causes cognitive impairment, MCI is mistakenly diagnosed. Individuals living with MCI who have an abnormal brain positron emission tomography (PET) scan or spinal fluid test for amyloid beta protein, which is the protein in amyloid plaques (one of the two hallmarks of Alzheimer's), are considered to have a diagnosis of MCI due to Alzheimer's disease.

(Source: [https://www.alz.org/alzheimers-dementia/what-is-dementia/related_conditions/mild-cognitive-impairment#:~:text=Cognitive%20Impairment%20\(MCI\)-,Mild%20Cognitive%20Impairment%20\(MCI\),most%20activities%20of%20daily%20living.](https://www.alz.org/alzheimers-dementia/what-is-dementia/related_conditions/mild-cognitive-impairment#:~:text=Cognitive%20Impairment%20(MCI)-,Mild%20Cognitive%20Impairment%20(MCI),most%20activities%20of%20daily%20living.))

MCI PREVENTION: Symptoms of MCI only appear after years and perhaps decades of damaging changes have accumulated in the brain. "The footprint of these diseases may begin in early adulthood or even late adolescence," says Robert S. Wilson, PhD, a professor of neurological sciences and behavioral sciences at Rush University Medical Center and a neuropsychologist at the Rush Alzheimer's Disease Center. "Almost everyone now believes that the fewer cognitive symptoms you have, and the less the pathologies have progressed, the greater chance of intervention being effective." For that reason, many researchers are now focusing on prevention rather than treatment. A report from the National Institute on Aging and the National Academies of Sciences, Engineering, and Medicine found support for three interventions that may prevent or slow the development of cognitive decline and dementia: increased physical activity; controlling high blood pressure; and cognitive training interventions that aim to enhance problem-solving, memory, and speed of processing.

(Source: <https://www.apa.org/monitor/2019/10/ce-corner-impairment>)

DIGITAL THERAPEUTICS FOR MCI: Digital health tools to manage MCI is a promising new therapeutic direction for a very complex condition. Due to the pandemic, research and development of digital health tools used in patient's homes to treat acute illness and/or manage chronic conditions has drastically accelerated. Two categories that have experienced rapid growth are digital therapeutics, which are prescribed alone or in tandem with pharmaceutical therapy, and virtual care solutions such as remote patient monitoring tools. Because MCI is a challenging chronic condition to manage for providers and caregivers, digital health companies are developing new technology solutions that can be used at home to stimulate brain activity with the goal of slowing progression of the disease. By promoting engagement and delivering an exciting experience, the patient will continue to use digital tools as prescribed and experience improved health outcomes, whether it's through virtual care and remote patient monitoring or prescription digital therapy.

(Source: <https://medcitynews.com/2021/12/digital-healths-wow-factor-should-focus-on-the-patient/>)

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