Road Map to Dementia Diagnosis
Patients & Families Edition

Are You or a Loved One Experiencing Changes in Memory or Thinking?

Recent studies have indicated that subtle changes in cognitive abilities can occur as early as 10-15 years before noticeable symptoms of brain disease. Following are examples of thinking and memory concerns:
- Driving and not remembering where you wanted to go and how to get there
- Leaving mail unopened and bills unpaid
- Forgetting appointments and important dates with loved ones

What Are Normal, Age-Related, Changes in Memory?

As we age, it is normal to experience some changes in memory. Most older adults experience some type of cognitive change. The following changes are commonly reported:
- Forgetting names more frequently
- Having trouble switching from one subject to another
- Requiring effort and time to learn new information

Normal age-related memory loss may result from your brain’s decreased ability to retrieve information. It can take more time to remember or learn new things. Although it may be irritating, these memory changes should not be significant enough to affect your daily living.
When Should I be Worried?

Brain disease develops gradually; dementia begins when your thinking and memory issues interfere with your ability to complete daily tasks and activities. Dementia is an umbrella term used to describe symptoms and changes in cognitive ability, mood, behavior and daily functioning. Alzheimer's disease (AD) is the most common cause of dementia and can occur on its own or in combination with other dementias. Following are some other diseases that can cause dementia or dementia-like symptoms:

- Vascular dementia
- Huntington's disease
- Lewy body dementia
- Normal pressure hydrocephalus
- Parkinson's disease
- Physical injury to the head
- Frontotemporal Dementia or Pick's disease
- Chronic Traumatic Encephalopathy (CTE)

If you experience problems with your memory, but your symptoms are not severe enough to be classified as dementia, your doctor may diagnose you with Mild Cognitive Impairment (MCI). Recent research has shown that people with MCI are more likely to later be diagnosed with dementia, but having MCI does not always mean that you will go on to develop dementia. MCI symptoms may not always interfere with your daily activities and it is less threatening than AD. Symptoms of MCI can include:

- Short-term memory complications
- Word finding difficulties
- Mood changes (i.e. depression, anxiety, apathy and irritability)
- Impaired high-level daily functioning (i.e. managing finances)

What Steps Should I take?

Feeling that you may have a problem with your memory or thinking can be worrisome, but there are many ways to seek help. If you have concerns, talk to your primary care physician first. Your primary care physician may be able to give you a diagnosis if there is a problem. However, they may also refer you to another doctor that specializes in memory and cognition. There are several different types of specialists that can address your symptoms, develop a treatment plan and refer you to a research program.

Getting a diagnosis can sometimes require you to see multiple specialists and have several diagnostic tests and medical evaluations. This process can take time; do not be discouraged. If you or a loved one need additional support, there are many resources available to help you through the process. (See p. 8 for resources)
Who Can Make a Diagnosis?

Several different healthcare providers can diagnose and treat dementia. Your primary care physician may make a diagnosis or may refer you to one of the following specialists:

- **Geriatrician**: A primary care physician (MD) who specializes in conditions unique to older adults.
- **Geriatric Psychiatrist**: A doctor (MD) who specializes in psychology among older adults. They help detect mood and behavior symptoms associated with dementia, such as depression or anxiety.
- **Neurologist**: A specialist (MD) in diseases of the brain and nervous system. A behavioral or cognitive neurologist further specializes in the diagnosis and treatment of conditions like Alzheimer's disease.
- **Neuropsychologist**: A psychologist (PhD or PsyD) with specialized training in how to assess the structure and function of the brain with standardized tests. Typically, a referral from your doctor is needed to meet with this type of expert.

How do I Prepare For my Appointments?

- Prepare in advance - write down a list of your concerns and symptoms before your visit and know what information you want to get out of the visit
- Consider bringing someone you trust to your appointment to take notes and listen
- Bring a list of all of your medications to share with your doctor
- Discuss any new diagnosis and what you can expect
- If you are prescribed a new medication, make sure you know the name and why you should take it
- Ensure that you know why a test or procedure is recommended, what happens during the procedure and what the results could mean
- Ask your doctor about prevention and actions you could take in your daily life (i.e. diet, physical activity, sleep adjustments)
- Discuss how you can contact your provider if you have any questions

Talk to your doctor about scheduling periodic check-ups. Your doctor may also want to discuss opportunities to participate in research studies which focus on people with early symptoms of Alzheimer's disease (AD).
A medical workup is necessary to evaluate how well your brain is functioning. This process may begin with a visit to your primary care doctor and often includes a referral to a memory specialist. Memory evaluations used to determine a diagnosis may include the following:

- A review of personal and family medical history
- A general physical exam
- A neurological exam, including tests of reflexes, coordination, eye movement, speech, sensation, muscle strength and tone, walking and balance
- A brain scan (CT, MRI or PET)
  - CT - Computed tomography and MRI - Magnetic resonance imaging: These scans provide images of the structure of the brain tissue and show its shape and volume
  - PET - Positron emission tomography - This scan uses a contrast to either provide a functional image of the cell activity in the brain or an image of the pathological changes seen in Alzheimer’s disease, such as amyloid plaques (a protein that is deposited in the brains of patients with Alzheimer's disease).
- A Neuropsychological exam: These tests evaluate cognitive ability. They consist of interviews, paper and pencil testing and sometimes computerized tests. These tests can be frustrating, but they help specialists better understand how your brain is functioning.
- Questionnaires: Questions about your mood, behavior and daily functioning are typically asked of both the patient and someone who knows them very well, such as a family member.

Getting a diagnosis may require several appointments with different types of healthcare providers. All medical organizations, academic centers and primary care practices function in different ways. Alzheimer’s disease and other related dementias do not always present the same way in everyone. They are often difficult to diagnose and may require additional evaluations. Be sure to talk to your doctor about the steps involved in your diagnosis and ask them to write it down for you.
Research participation is critical to finding a cure. Whether or not you have been diagnosed with Alzheimer’s disease or a related dementia, you may be able to participate in research. People participate in research studies for a variety of reasons. Healthy volunteers and people living with the disease say they participate in clinical trials to help others, contribute to moving the science forward or to receive access to a possible new treatment.

The Massachusetts Alzheimer’s Disease Research Center (MADRC) at Massachusetts General Hospital and the Center for Alzheimer’s Research and Treatment (CART) at Brigham and Women’s Hospital offer a variety of study types, ranging from observational studies to clinical trials.

If you are interested in participating in research, at either of these centers, please call (617) 278-0383.

What Happens if I am Diagnosed With Alzheimer’s Disease or a Related Dementia?

The most common form of dementia is Alzheimer’s disease (AD). It is characterized by a decline in brain function over time. This decline is usually a slow and progressive process. Memory loss in AD is caused by one’s diminished ability to consistently store new information.

Sudden changes in a person with dementia should always be evaluated by a healthcare provider. These changes may be caused by other health issues such as:

- Side Effects of medication
- Dehydration
- Thyroid imbalance
- Poor nutrition
- Infection
- Fatigue
- Poor nutrition
- Infection
- Fatigue

The progression of AD occurs differently in everyone diagnosed with it. Be sure to communicate with your healthcare provider if you experience anything out of the ordinary. In the early stages of AD, some common mood and behavior symptoms are:

- Depression
- Anxiety
- Irritability

Behavioral symptoms that may occur during later stage Alzheimer’s disease are:

- Aggression and anger
- Emotional Distress
- Anxiety and agitation
- Sleep issues

Is Research Participation Right For me?

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Care at Brigham and Women's Hospital

At Brigham and Women's Hospital, the Clinical Care Program of the Alzheimer's Disease Center (ADC) is part of the Center for Brain Mind/Medicine and the Division of Cognitive and Behavioral Neurology. It provides comprehensive evaluation and treatment for this complex disease. The care provided spans all aspects of a patient's life. The multidisciplinary team of specialists in behavioral neurology, neuropsychiatry, geriatric psychiatry, neuropsychology and social work address the cognitive, emotional and behavioral components of Alzheimer's disease during each stage of the illness.

The Division of Cognitive and Behavioral Neurology provides comprehensive diagnostic and evaluative service for patients with the following neurologic conditions:

- Alzheimer's disease
- Autism and Asperger Syndromes
- Non-Alzheimer dementia
- Learning disabilities
- Mild Cognitive Impairment
- ADHD
- Frontotemporal Degeneration

The Division of Cognitive and Behavioral Neurology also treats patients experiencing cognitive and neuropsychiatric difficulties that are secondary to the following conditions:

- Parkinson's Disease
- Traumatic Brain Injury
- Brain tumors and other central nervous system cancers
- Cerebrovascular Disease
- Seizures and Epilepsy
The Frontotemporal Disorders Unit specializes in comprehensive diagnosis and treatment for Frontotemporal focal dementia syndromes and disorders. They aim to develop better knowledge about diagnosis of, and treatment for, all forms of Frontotemporal focal dementia and related focal dementia syndromes.

Email: MGHTFDUNIT@partners.org  Telephone: (617) 726-8689

The Lewy Body Dementia Unit coordinates clinical care and research for patients with Lewy body Dementia. It is a Lewy Body Dementia Association Research Center of Excellence.

Email: mquan4@mgh.harvard.edu  Telephone: (617) 726-1728

The Psychology Assessment Center provides neuropsychological and psychological assessment for individuals, including Spanish speakers.

Telephone: (617) 726-3647

The Multicultural Assessment and Research Center is dedicated to best practices in multicultural neuropsychology. The bilingual staff focuses on providing culturally and linguistically proficient neuropsychological services to diverse adult patients with a variety of disorders that impact cognitive functioning.

Email: MARC@mgh.harvard.edu  Telephone: (617) 643-5883

Memory Disorders Division
Massachusetts General Hospital
(617) 726-1728
Patient and Caregiver Support Resources

- **Alzheimer’s Association**: Information on advocacy, research, support programs and education
  24/7 Helpline 1-800-272-3900,  [www.alz.org/MANH](http://www.alz.org/MANH)
- **Alzheimer’s Foundation of America**: Educational resources and direct services for patients and caregivers.
  National Helpline 1-800-232-8484  [www.alzfdn.org](http://www.alzfdn.org)
- **Association for Frontotemporal Degeneration** (ATFD):  [www.theaftd.org](http://www.theaftd.org), 1-866-507-7222
- **Lewy Body Dementia Association** (LBDA) [www.lbda.org](http://www.lbda.org), Caregiver link: 1-800-539-9767
- **MADRC Aging & Memory Loss Road Map Education Series**  [www.madrc.org/community](http://www.madrc.org/community)
- **National Institute on Aging: Alzheimer's Disease Education & Referral Center** (ADECAR): Dementia related information and resources on diagnosis, treatment, care and research.
  Helpline 1-800-438-4380,  [www.nia.nih.gov/health/alzheimers](http://www.nia.nih.gov/health/alzheimers)

### National Clinical Trial Information

Participation in research, by you or a loved one, will help significantly in the search to find a cure for Alzheimer’s disease (AD) and related dementias. The first person to be cured of AD will be a clinical trial participant!

- NIH Clinical Trial Finder:  [www.nia.nih.gov/alzheimers/clinical-trials](http://www.nia.nih.gov/alzheimers/clinical-trials)
- Alzheimer's Association TrialMatch:  [www.trialmatch.alz.org](http://www.trialmatch.alz.org)

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**Brigham & Women's Hospital**

**Center for Alzheimer Research & Treatment**

(617) 732-8085

CART@partners.org

**Massachusetts General Hospital**

**Massachusetts Alzheimer's Disease Research Center**

(617) 278-0600

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