Maria has been a teacher for 35 years. Teaching fills her life and gives her a sense of accomplishment, but recently she has begun to forget details and has become more and more disorganized. At first, she laughed it off, but her memory problems have worsened. Her family and friends have been sympathetic but are not sure what to do. Parents and school administrators are worried about Maria’s performance in the classroom. The principal has suggested she see a doctor. Maria is angry with herself and frustrated, and she wonders whether these problems are signs of Alzheimer’s disease or just forgetfulness that comes with getting older.

Many people worry about becoming forgetful. They think forgetfulness is the first sign of Alzheimer’s disease. Over the past few years, scientists have learned a lot about memory and why
some kinds of memory problems are serious but others are not.

**Age-Related Changes In Memory**

Forgetfulness can be a normal part of aging. As people get older, changes occur in all parts of the body, including the brain. As a result, some people may notice that it takes longer to learn new things, they don’t remember information as well as they did, or they lose things like their glasses. These usually are signs of mild forgetfulness, not serious memory problems.

Some older adults also find that they don’t do as well as younger people on complex memory or learning tests. Scientists have found, though, that given enough time, healthy older people can do as well as younger people do on these tests. In fact, as they age, healthy adults usually improve in areas of mental ability such as vocabulary.

**Other Causes Of Memory Loss**

Some memory problems are related to health issues that may be treatable. For example, medication side effects, vitamin $\text{B}_{12}$ deficiency, chronic alcoholism, tumors or infections in the brain, or blood clots in the brain can cause
memory loss or possibly dementia (see more on dementia, below). Some thyroid, kidney, or liver disorders also can lead to memory loss. A doctor should treat serious medical conditions like these as soon as possible.

Emotional problems, such as stress, anxiety, or depression, can make a person more forgetful and can be mistaken for dementia. For instance, someone who has recently retired or who is coping with the death of a spouse, relative, or friend may feel sad, lonely, worried, or bored. Trying to deal with these life changes leaves some people confused or forgetful.

The confusion and forgetfulness caused by emotions usually are temporary and go away when the feelings fade. The emotional problems can be eased by supportive friends and family, but if these feelings last for a long time, it is important to get help from a doctor or counselor. Treatment may include counseling, medication, or both.

More Serious Memory Problems

For some older people, memory problems are a sign of a serious problem, such as mild cognitive impairment or dementia. People who are worried about memory problems should see a doctor. The doctor might conduct or order a
thorough physical and mental health evaluation to reach a diagnosis. Often, these evaluations are conducted by a neurologist, a physician who specializes in problems related to the brain and central nervous system.

A complete medical exam for memory loss should review the person’s medical history, including the use of prescription and over-the-counter medicines, diet, past medical problems, and general health. A correct diagnosis depends on accurate details, so in addition to talking with the patient, the doctor might ask a family member, caregiver, or close friend for information.

Blood and urine tests can help the doctor find the cause of the memory problems or dementia. The doctor also might do tests for memory loss and test the person’s problem-solving and language abilities. A computed tomography (CT) or magnetic resonance imaging (MRI) brain scan may help rule out some causes of the memory problems.

**Amnestic Mild Cognitive Impairment (MCI).** Some people with memory problems have a condition called amnestic mild cognitive impairment, or amnestic MCI. People with this condition have more memory problems than normal for people their age, but their symptoms are not as severe as those of Alzheimer’s
disease, and they are able to carry out their normal daily activities.

Signs of MCI include misplacing things often, forgetting to go to important events and appointments, and having trouble coming up with desired words. Family and friends may notice memory lapses, and the person with MCI may worry about losing his or her memory. These worries may prompt the person to see a doctor for diagnosis.

Researchers have found that more people with MCI than those without it go on to develop Alzheimer’s within a certain timeframe. However, not everyone who has MCI develops AD. Studies are underway to learn why some people with MCI progress to AD and others do not.

There currently is no standard treatment for MCI. Typically, the doctor will regularly monitor and test a person diagnosed with MCI to detect any changes in memory and thinking skills over time. There are no medications approved for use for MCI.

**Dementia.** Dementia is the loss of thinking, memory, and reasoning skills to such an extent that it seriously affects a person’s ability to carry out daily activities. Dementia is not a disease itself but a group of symptoms caused by certain diseases or conditions such as Alzheimer’s.
Keeping Your Memory Sharp

People with some forgetfulness can use a variety of techniques that may help them stay healthy and maintain their memory and mental skills. Here are some tips that can help:

- Plan tasks, make “to do” lists, and use memory aids like notes and calendars. Some people find they remember things better if they mentally connect them to other meaningful things, such as a familiar name, song, book, or TV show.
- Develop interests or hobbies and stay involved in activities that can help both the mind and body.
- Engage in physical activity and exercise. Several studies have associated exercise (such as walking) with better brain function, although more research is needed to say for sure whether exercise can help to maintain brain function or prevent or delay symptoms of Alzheimer’s.
- Limit alcohol use. Although some studies suggest that moderate alcohol use has health benefits, heavy or binge drinking over time can cause memory loss and permanent brain damage.
- Find activities, such as exercise or a hobby, to relieve feelings of stress, anxiety, or depression. If these feelings last for a long time, talk with your doctor.
People with dementia lose their mental abilities at different rates.

Symptoms may include:

- Being unable to remember things
- Asking the same question or repeating the same story over and over
- Becoming lost in familiar places
- Being unable to follow directions
- Getting disoriented about time, people, and places
- Neglecting personal safety, hygiene, and nutrition

Two of the most common forms of dementia in older people are Alzheimer’s disease and vascular dementia. These types of dementia cannot be cured at present.

In Alzheimer’s disease, changes to nerve cells in certain parts of the brain result in the death of a large number of cells. Symptoms of Alzheimer’s begin slowly and worsen steadily as damage to nerve cells spreads throughout the brain. As time goes by, forgetfulness gives way to serious problems with thinking, judgment, recognizing family and friends, and the ability to perform daily activities like driving a car or handling money. Eventually, the person needs total care.

In vascular dementia, a series of strokes or changes in the brain’s blood supply leads to the death of brain tissue. Symptoms of vascular dementia can vary
but usually begin suddenly, depending on where in the brain the strokes occurred and how severe they were. The person’s memory, language, reasoning, and coordination may be affected. Mood and personality changes are common as well.

It’s not possible to reverse damage already caused by a stroke, so it’s very important to get medical care right away if someone has signs of a stroke. It’s also important to take steps to prevent further strokes, which worsen vascular dementia symptoms. Some people have both Alzheimer’s and vascular dementia.

**Treatment For Dementia**

A person with dementia should be under a doctor’s care. The doctor might be a neurologist, family doctor, internist, geriatrician, or psychiatrist. He or she can treat the patient’s physical and behavioral problems (such as aggression, agitation, or wandering) and answer the many questions that the person or family may have.

People with dementia caused by Alzheimer’s disease may be treated with medications. Four medications are approved by the U.S. Food and Drug Administration to treat Alzheimer’s. Donepezil (Aricept®), rivastigmine (Exelon®), and galantamine (Razadyne®)
are used to treat mild to moderate Alzheimer’s (donepezil has been approved to treat severe Alzheimer’s as well). Memantine (Namenda®) is used to treat moderate to severe Alzheimer’s. These drugs may help maintain thinking, memory, and speaking skills, and may lessen certain behavioral problems for a few months to a few years in some people. However, they don’t stop Alzheimer’s disease from progressing. Studies are underway to investigate medications to slow cognitive decline and to prevent the development of Alzheimer’s.

People with vascular dementia should take steps to prevent further strokes. These steps include controlling high blood pressure, monitoring and treating high blood cholesterol and diabetes, and not smoking. Studies are underway to develop medicines to reduce the severity of memory and thinking problems that come with vascular dementia. Other studies are looking at the effects of drugs to relieve certain symptoms of this type of dementia.

Family members and friends can help people in the early stages of dementia to continue their daily routines, physical activities, and social contacts. People with dementia should be kept up to date about the details of their lives, such as the time of day, where they live, and what
is happening at home or in the world. Memory aids may help. Some families find that a big calendar, a list of daily plans, notes about simple safety measures, and written directions describing how to use common household items are useful aids.

**What You Can Do**

If you’re concerned that you or someone you know has a serious memory problem, talk with your doctor. He or she may be able to diagnose the problem or refer you to a specialist in neurology or geriatric psychiatry. Healthcare professionals who specialize in Alzheimer’s can recommend ways to manage the problem or suggest treatment or services that might help. More information is available from the organizations listed below.

People with Alzheimer’s disease, MCI, or a family history of Alzheimer’s and healthy people with no memory problems and no family history of Alzheimer’s may be able to take part in clinical trials. Participating in clinical trials is an effective way to help in the fight against Alzheimer’s. To find out more about clinical trials, call the Alzheimer’s Disease Education and Referral (ADEAR) Center toll-free at 1-800-438-4380 or visit the ADEAR Center website at
More information is available at www.ClinicalTrials.gov.

For More Information

Here are some helpful resources:

**Alzheimer’s Disease Education and Referral (ADEAR) Center**
P.O. Box 8250
Silver Spring, MD 20907-8250
1-800-438-4380 (toll-free)
www.nia.nih.gov/Alzheimers

The National Institute on Aging’s ADEAR Center offers information and publications in English and Spanish for families, caregivers, and professionals on diagnosis, treatment, patient care, caregiver needs, long-term care, education and training, and research related to Alzheimer’s.

**Alzheimer’s Association**
225 North Michigan Avenue, Floor 17
Chicago, IL 60601-7633
1-800-272-3900 (toll-free)
1-866-403-3073 (TDD/toll-free)
www.alz.org

**Eldercare Locator**
1-800-677-1116 (toll-free)
www.eldercare.gov

**National Library of Medicine MedlinePlus**
www.medlineplus.gov
For more information on health and aging, contact:

National Institute on Aging
Information Center
P.O. Box 8057
Gaithersburg, MD 20898-8057
1-800-222-2225 (toll-free)
1-800-222-4225 (TTY/toll-free)
www.nia.nih.gov
www.nia.nih.gov/Espanol

To sign up for regular email alerts about new publications and other information from the NIA, go to www.nia.nih.gov/HealthInformation.

Visit NIHSeniorHealth (www.nihseniorhealth.gov), a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has health information for older adults. Special features make it simple to use. For example, you can click on a button to have the text read out loud or to make the type larger.