

THE LATEST ABOUT MEMORY LOSS



No One Wants To Have Memory Loss

Of all the illnesses that we face as we grow older, memory loss is one of the most dreaded. We hear people say, “She died of a heart attack, but her mind was good right up to the end. “ We all would want that ... we all want to interact with our loved ones and our friends throughout life even to the last.

Who Develops Memory Loss?

Memory loss may well affect as many as half of us if we live long enough. Statistics show that memory loss becomes more common the older we get. It usually begins as we enter our 60s in a few of us (although a very few people can experience it earlier) and by the time we are 85, roughly 45% of us can have some degree of memory loss.

Are There Different Kinds Of Memory Loss?

Yes, memory loss (which is also called dementia) can be caused by different things and depending on the cause, we give them different names. For example, memory loss caused by one or more strokes is called vascular dementia. Memory loss caused by head trauma due to an automobile accident, falls with concussions, or football or soccer is called traumatic brain injury. The most common form of memory loss is called Alzheimer’s disease which affects 70% to 80% of all people with memory loss.



Is Alzheimer’s Disease Inherited?

There is a rare form of Alzheimer’s disease that is directly inherited from mother or father (each child born to this couple has a 50% chance of inheriting this disease). It is a very severe, rapidly advancing, and lethal form of Alzheimer’s Disease that usually begins as these people reach their 40s. This form is called early onset or familial Alzheimer’s disease.

What Causes Alzheimer’s Disease?

In a word, no one knows for sure. Most scientists in the field believe that the problem begins when proteins called amyloid beta (normally present in the brain) clump together to form plaques, which can well before the first symptoms of memory loss. Plaques of amyloid beta protein are toxic to brain cells and cause them to not work correctly, slowly degenerate, and eventually die. This degeneration and death of brain cells are sometimes called “tangles” and results in progressive memory loss as more and more brain cells are affected. This decline in memory continues over the course of 5 to 10 years to a point where the patient experiences near complete loss of memory.

When Does Amyloid-Beta Protein Begin to Deposit in the Brain?

Research is teaching us that deposits of amyloid beta begin early in life, perhaps 20 to 30 years before the first symptom of memory loss occurs. This means that the disease is already in the brain and may even be causing some damage to the brain cells well before memory loss is detected. This also means we should begin to look for ways to treat the problem early, right when the first symptom of memory loss occurs (and not after it has advanced to be a real problem).

How Can I Tell If I Have Amyloid Plaque In My Brain?

A brain scan called positron emission tomography, or PET scan for short, can detect amyloid beta plaque in the brain. Because there is currently no treatment available to reduce this plaque and slow or stop memory loss, the test is available ONLY to those people who participate in research studies. More recently, a PET scan of the brain to detect tangles has been developed. This may help us determine when the disease has progressed to the point that brain cells are degenerating and are producing memory loss. This is the time when treatment should begin.

Are There Any Medications That Can Slow Or Stop Memory Loss?

There are several prescription medications that are on the market today for people with memory loss. These medications help brain cells communicate better and this may improve memory a little. However, these medications do not stop the underlying build-up of amyloid beta plaques in the brain and do not stop or slow the progressive degeneration of brain cells. This means that people with Alzheimer's disease will continue to lose their memory in spite of taking one or more of these prescription medications.

The hope for slowing or stopping the progressive loss of memory is with medications currently being tested in research studies. One group of these medications attaches to amyloid beta and helps remove it from the brain. Research studies show that these medications don't offer much help in people with advanced memory loss but may help slow or halt the progress of the disease in people with early signs of memory loss. For this reason, most Alzheimer's research studies are currently being conducted in people with mild memory loss symptoms.

An example of a medication currently under investigation that binds to amyloid beta is called aducanumab (ad-u'-can-u-mab). In a study in which aducanumab was given to people with mild Alzheimer's disease, those receiving the medication had nearly complete removal of the amyloid beta plaque in their brain and significantly less memory loss after just one year of treatment. If you wish to read more about this study, you may google the word "aducanumab" on your computer (*look for the journal Nature, 2016*).

What Is Involved In A Research Study?

A research study begins with an informed consent, a document which fully describes the study for the patient who is interested. The patient must sign this document before the study can be started. The next step is a thorough medical evaluation including a medical history and physical, blood tests, and testing by memory specialists. If there is no clear evidence of a memory problem, the process stops there but if the patient has evidence of memory loss, the next step is to obtain a MRI scan. This will tell the doctors whether there are other causes of memory loss, such as a past stroke or trauma. If no other cause of memory loss is found, then a PET scan for amyloid-beta plaque, and possibly for tangles, is obtained. If the results are positive, the person begins the treatment phase of the study.

The first phase of treatment provides the real medication for removal of amyloid-beta plaque or a placebo. This phase of the study typically lasts for 18 to 24 months. After this, everyone is given the real amyloid-beta removing medication for another 18 or 24 months or until the medication has been approved by the FDA and is available on the market. This means that all patients who participate in the study will receive the investigational medication at some point in the study, and possibly for the entire duration.

What Is The Role Of National Clinical Research?

We are very pleased to be able to offer a wide array of research studies to our community which involves the very latest investigational therapies for the treatment and prevention of Alzheimer's Disease. We are unique in this regard as we have more such study opportunities available than anywhere else in the state of Virginia, including all of our medical universities. We believe that the cure to Alzheimer's disease will come through us. We hope you will seek to learn more about these studies and consider participating in one if you are experiencing memory loss. With your help, we hope that one day we can all cheer together when a breakthrough for this disease is at last found.



What Is My Next Step?

If you or a relative would like to be a part of a research study for memory loss, there is still room and still time but don't delay as once the study has the number of patients it needs, it will close to new patients. By the way, the initial evaluation (valued at close to \$10,000), as well as all of the subsequent medical care and testing for memory loss, and the study medication will be offered to those who participate in this research study at no cost. To learn more about our studies to prevent memory loss and to make your appointment, call 804-755-2300 or visit our website www.alzresearch.net.



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