

***Alzheimer's Disease:
Awareness for CNAs***

**This course has been approved for two (2.0) contact hours.
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Purpose & Objectives

The purpose of this course is to provide awareness about Alzheimer's disease (AD), its causes, treatments, and outcomes.

After successful completion of this continuing education self-study CNA course, you should be able to:

- 1. Define Alzheimer's disease.**
- 2. Discuss risk factors for Alzheimer's disease.**
- 3. Explain how Alzheimer's disease is diagnosed.**
- 4. Identify the stages and specific behaviors of Alzheimer's disease.**
- 5. Identify current medications and other treatments that are used with Alzheimer's patients.**

Acknowledgements

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Introduction

There are associated disease process links between Dementia and Alzheimer's disease (AD). Sixty to 70 % of people with dementia can be attributed to Alzheimer's disease. Dementia is a brain disorder that seriously affects a person's ability to carry out daily activities. Alzheimer's disease is the most common form of dementia among older people. It involves the parts of the brain that control thought, memory, and language. Through continuous research efforts, scientists learn more about AD; however, presently the causes of AD are still unknown, and there is no known cure.

Scientists think that up to 5 million Americans suffer from AD. The disease usually begins after age 60, and risk increases with age. While younger people also may get Alzheimer's disease, it is much less common. About 3 percent of men and women ages 65 to 74 have AD. Almost half of the people age 85 and older may have the disease. It is important to note that AD is not a normal part of aging.

Alzheimer's disease is named after Dr. Alois Alzheimer, a German physician. In 1906, Dr. Alzheimer noticed changes in the brain tissue of a woman who had died of an unusual mental illness. He found abnormal clumps

and tangled bundles of fibers. The clumps are now called amyloid plaques and the tangles are called neurofibrillary tangles. Today, these plaques and tangles in the brain are considered hallmarks of AD.

Scientists also have found other brain changes in people with AD. There is a loss of nerve cells in areas of the brain that are vital to memory and other mental abilities. There also are lower levels of chemicals in the brain that carry messages back and forth between nerve cells.

TY: True or False: Alzheimer's is a normal part of aging. ANS: False

Rationale: *Although Alzheimer's occurs more commonly in the elderly, it is NOT a normal part of the aging process.*

A Few Alzheimer's Disease Facts and Figures

Alzheimer's affects an entire family. Overall, the nation's healthcare system attempts to deal with AD as it continues to burden cities and states throughout the country.

- AD ranks #6 in the list of leading causes of death in 2007
- AD is greater in women than men (on average, women tend to live longer than men)
- In 2010, an estimated 5.5 million Americans were 85 years and older
- In 2010, 2.4 million Americans 85 years and older had AD
- Eleven million Americans provide unpaid care for someone with AD or other dementia
- People with AD are high users of healthcare, long-term care, and hospice

- Older African-American and Hispanics are considerably more likely than older whites to have AD and other dementias (related to other health issues, like hypertension and diabetes)

Causes and Risk Factors

Scientists do not yet fully understand what causes Alzheimer's disease. Presently, it is unknown whether one particular factor causes Alzheimer's, but several factors affect each person differently.

- Age is the most important known risk factor
- Family history is another risk factor
- Disease that occurs between the ages of 30 and 60 can be inherited
- In the more common form of AD, which occurs later in life, no obvious family pattern is seen
- One risk factor for this type of AD is a specific protein called apolipoprotein E, or apoE (apo-lid-po-pro-tein)
- There are 3 forms of apoE. One form seems to protect a person from AD, and another form seems to make a person more likely to develop the disease

Scientists continue to learn more about causes and risk factors. In addition to genetics and apoE, they are studying education, diet, environment, and viruses to learn what role they might play in the development of this disease.

Symptoms

Alzheimer's disease has a slow onset. At first, the only symptom may be mild forgetfulness. People with AD may have trouble remembering recent events, activities, or the names of familiar people or things. Such difficulties may be a bother.

As the disease goes on, symptoms are more easily noticed. They become serious enough to cause people with AD or their family members to seek medical help. For example, people in the later stages of AD may forget how to

do simple tasks, like brushing their teeth or combing their hair. They can no longer think clearly (See the Ten Signs of AD Comparison Chart for distinguished examples between a typical age-related change and AD-related warning sign changes).

Ten Signs of Alzheimer's: Comparison Chart

Typical Age-Related Change	Alzheimer's-Related Warning Sign
1. Forgets but remembers later (ex. forgets where the car was parked, but remembers in seconds)	Experiences memory loss that interferes with daily routine (ex. forgets how to make coffee or do laundry)
2. Experiences occasional gaps in memory (ex. forgets some formula aspect of a math problem, but remembers it later)	Has challenges solving problems performed for years (ex. mathematical statistician now takes much longer to solve problems)
3. Occasionally needs help (ex. needs help writing the grocery list)	Has difficulty accomplishing usual activities (ex. has no memory of the location of the market visited for years)
4. Occasionally forgets (ex. forgets daughter's birthday, but remembers it later)	Has confusion about specific or usual place (ex. doesn't know home address or make of car having lived in the home for years with the same car)

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|--|---|
| 5. Experiences visual changes related to aging (ex. cataracts that affect vision) | Has trouble understanding visual images (ex. has difficulty determining whether seeing a car or a truck) |
| 6. Occasionally has gaps in conversation (ex. stops conversation to search for a particular word) | Experiences increased problems speaking or writing (ex. has difficulty following a conversation and frequently repeats the same information) |
| 7. Forgets placement of object, but remembers later (ex. forgets putting keys in purse, but remembers placing them there later) | Puts things in usual place, but never able to remember the thing or place; never remembers the loss (ex. loses entire purse and never knew had one) |
| 8. Makes an occasional wrong or bad decision (ex. decides to walk half a mile after recent knee surgery, realizing afterwards probably shouldn't have) | Applies poor judgment with no thought (ex. overpays the newspaper delivery person, but not remembering doing to or ever seeing the person) |
| 9. Adapts work or social activities for a good reason (ex. decreases work schedule from 5 days a week to 3 days a week after 25 years) | Becomes disinterested in usual social activities (ex. has difficulty playing bridge with social group after enjoying it for 25 years) |
| 10. Gets upset with changes in established routine of doing things (ex. watches noon soap opera daily, daughter makes physician appointment for | Has unpleasant mood or personality change that may be frightening because of memory loss(ex. visits relatives in their home and gets anxious |

noon, gets irritated by change in routine) because of the strange environment)

Adapted from alz.org Ten Signs of Alzheimer's

TY: True or False Alzheimer's is slow in development. ANS: True

Rationale: *AD progresses slowly and may not be recognized until later in the course of the disease process.*

Remember:

It is difficult to place a person with Alzheimer's in a specific stage as stages may overlap

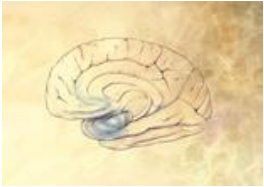
www.alz.gov

(2010)

Stages of Alzheimer's

(As presented, some of the stages overlap – making it difficult to place someone in a particular stage)

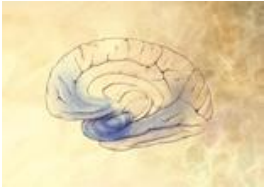
Mild Alzheimer's



Courtesy of nia.nih.gov

- Loses recent memory without a change in appearance or casual conversation
- Loses judgment about money
- Has difficulty with new learning and making new memories
- Has shorter attention span and less motivation to stay with an activity
- Easily loses way going to familiar places
- Resists change or new things
- Has trouble organizing and thinking logically
- Asks repetitive questions
- Takes longer to do routine chores and becomes upset if rushed or if something unexpected happens
- Forgets to pay, pays too much, or forgets how to pay – may hand the checkout person a wallet instead of the correct amount of money
- Forgets to eat, eats only one kind of food, or eats constantly
- Loses or misplaces things by hiding them in odd places or forgets where things go, such as putting clothes in the dishwasher

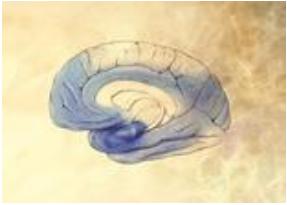
Moderate Alzheimer's



Courtesy of nia.nih.gov

- Changes in behavior, concern for appearance, hygiene, and sleep become more noticeable
- Mixes up identity of people, such as thinking a son is a brother or that a wife is a stranger
- Poor judgment creates safety issues when left alone - may wander and risk exposure, poisoning, falls, self-neglect or exploitation
- Cannot organize thoughts or follow logical explanations
- Has trouble following written notes or completing tasks
- May be able to read but cannot formulate the correct response to a written request
- May accuse, threaten, curse, fidget or behave inappropriately, such as kicking, hitting, biting, screaming or grabbing
- May become sloppy or forget manners
- Naps frequently or awakens at night believing it is time to go to work
- Needs help finding the toilet, using the shower, remembering to drink, and dressing for the weather or occasion

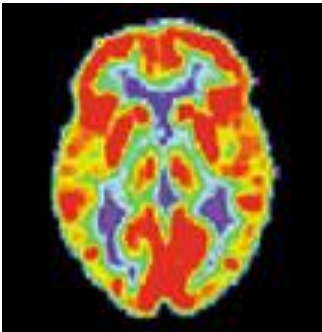
Severe Alzheimer's



Courtesy of nia.nih.gov

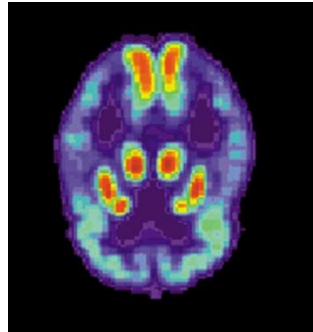
- Doesn't recognize self or close family
- Speaks in gibberish, is mute, or is difficult to understand
- May refuse to eat, chokes, or forgets to swallow
- May repetitively cry out, pat or touch everything
- Loses control of bowel and bladder
- Loses weight and skin becomes thin and tears easily

Diagnosing Alzheimer's and Research



PET Scan of
Normal Brain

<http://www.nia.nih.gov/Alzheimers/Resources/HighRes.htm>



PET Scan of
Alzheimer's Disease Brain

An early, accurate diagnosis of Alzheimer's disease helps patients and their families plan for the future. It gives them time to discuss care options with the patient. Early diagnosis also offers the best chance to treat the symptoms of the disease.

Today, the only definite way to diagnose AD is to find out whether there are plaques and tangles in brain tissue. To look at brain tissue, physicians must wait until they do an autopsy, which is an examination of the body done after a person dies. Therefore, physicians must make a diagnosis of "possible" or "probable" AD. At specialized centers, physicians can diagnose Alzheimer's disease correctly up to 90 percent of the time. Physicians use several tools to diagnose "probable" Alzheimer's disease:

- A complete medical history. This includes information about the person's general health, past medical problems, and any difficulties the person has carrying out daily activities.
- Medical tests - such as tests of blood, urine, or spinal fluid - help the physician find other possible diseases causing the symptoms.
- Neuropsychological tests measure memory, problem solving, attention, counting, and language.
- Brain scans allow the physician to look at a picture of the brain to see if anything does not look normal.

Information from the medical history and test results help the physician rule out other possible causes of the person's symptoms. Some of these other conditions can be treated successfully:

- Thyroid problems
- Drug reaction
- Depression
- Vitamin deficiencies
- Brain tumors
- Blood vessel disease in the brain

More recently, scientists have focused on a type of memory change called mild cognitive impairment, or MCI. MCI is different from both Alzheimer's disease and normal age-related memory change. People with MCI have ongoing memory problems, but no other losses like confusion, attention problems, and difficulty with language. Funded by the National Institute on Aging and other organizations, research continues towards understanding cognitive-type diseases such as MCI and Alzheimer's.

There is ongoing research with other medicines to learn if AD can be prevented or delayed in patients who are diagnosed with the disease:

- Anti-inflammatory drugs
- Vitamin E
- Medicines already used to help reduce the risk of heart disease
- Folic acid and vitamins B6 and B12
- Estrogen
- Ginkgo biloba

People with Alzheimer's disease and those with mild cognitive impairment who want to help scientists test new treatments may be able to take part in research studies, otherwise known as clinical trials. These research studies are done on people to find out whether a new drug or treatment is both safe and effective.

New therapies are tested on people only after laboratory and animal studies show promising results. The Food and Drug Administration (FDA) sets strict rules to make sure that people who agree to be in the studies are treated as safely as possible.

For more information, the U.S. National Institutes of Health, through its National Library of Medicine and other Institutes, maintains a database of clinical trials at <http://clinicaltrials.gov>.

Additionally, some medicines may help control behavioral symptoms of AD. Drugs that treat sleeplessness, agitation, wandering, anxiety, psychosis, and depression can be helpful. Treating these symptoms often makes patients more comfortable and makes their care easier for caregivers.

Scientists also have made great progress in defining the changes that take place in the AD brain, which allows them to pinpoint possible targets for treatment.

These advances are the foundation of the National Institutes of Health's Alzheimer's Disease Prevention Initiative, which is designed to:

- Understand why AD occurs and who is at greatest risk of developing it
- Improve the accuracy of diagnosis and the ability to identify those at risk
- Discover, develop, and test new treatments
- Discover treatments for behavioral problems in patients with AD

Treatment Management

TY: True or False Treating the symptoms of AD can make the patient more comfortable and ease the burden on the caregiver.

ANS: True

Rationale: *Since there is no cure for AD, treating symptoms like sleeplessness, agitation, or anxiousness, assist in calming the patient as well as the caregiver in having to provide constant care for the individual.*

In order to appropriately treat and manage AD, it is important to note the following:

- Alzheimer's Disease is a slowly developing disease
- AD starts with mild memory problems and ends with severe brain damage
- Disease progression varies from person to person

- On average, AD patients live from 8 to 10 years after diagnosed
- AD can last for as many as 20 years
- No cure for AD at present

Treating the symptoms of AD can provide patients with comfort, dignity, and independence for a longer period of time. It can encourage and assist their caregivers as well. It is important to understand that none of these medications stops the disease itself. These medications are used in lessening memory loss and confusion associated with AD.

Treatment for Mild to Moderate AD

Drugs for mild to moderate AD help delay or prevent symptoms from becoming worse for a limited time, and may help control some behavioral symptoms. The medications are:

- Razadyne® (galantamine)
- Exelon® (rivastigmine)
- Aricept® (donepezil) (The only approved medication to treat AD at all stages)
- Cognex® (tacrine)

Scientists do not yet fully understand how they work. Current research shows that as the disease progresses these drugs become less effective.

Treatment for Moderate to Severe AD

The fifth approved medication is Namenda® (memantine)

- The main effect of Namenda® is to delay progression of some of the symptoms of moderate to severe AD
- May allow patients to maintain certain daily functions a little longer (for example, Namenda® may help a patient in the later stages of AD maintain the ability to go to the bathroom independently for several more months, a benefit for both patients and caregivers)

TY: True or False Aricept® (donepezil) is the only approved drug that treats all stages of Alzheimer's.

ANS: True

Rationale: *Aricept® (donepezil) is the only cholinesterase inhibitor approved to treat all stages of Alzheimer's disease, including moderate to severe.*

CNA Tips in Caring for Alzheimer's Patients

CNAs are very likely to spend a great amount of time caring for Alzheimer's patients. It might be a situation where a CNA is caring for a family member, friend, or patient at work. No matter the circumstance, the patient will require compassion and patience. The specific care depends on the Alzheimer's stage.

- Introduce yourself to the patient, looking at them face-front and speaking in a caring tone.
- Assure the patient that you are there to help.
- Obtain assessment information about the patient such as cognitive level, care ability, and safety precautions.
- Acquire an understanding of the patient's level of independence (e.g., if the patient needs help walking or using the toilet).
- Assess activity level (e.g. watching TV, doing puzzles, walking).
- Determine ability to consume own meals (observe the person eating).
- Ask the nurse or caregiver if the patient is a wanderer as they might require constant monitoring.
- Observe if the patient is in pain and report appropriately.
- Maintain the patient's routine of daily activities for consistency to reduce anxiety.
- Provide positive feedback and rewards for accomplishments; especially in early stages of the disease process for encouragement.
- Consistently explain all care and activities.

- Provide care in clusters to prevent frustration (e.g. combine assessment and bathing together – this prevents having to interrupt the patient numerous times to perform different skills or care).
- Allow patient independence as much as tolerable and safe based on AD stage.
- Empathize with the patient to gain an appreciation of what they might be experiencing.

Inside the Brain: An Interactive Tour

<http://www.alz.org/brain/01.asp>

The Brain Tour explains how the brain works and how Alzheimer's affects it.

Taking the tour: There are 16 interactive slides. As you view each slide, **roll your mouse over any colored text** to highlight special features of each image. Then, click on the arrow to move to the next slide.

Conclusion

Alzheimer's disease is a chronic condition that provides a challenge for the patient, family, and healthcare providers. Knowledge about this disease and associated behaviors will assist you in managing the necessary care of your patients. Research continues to strive for improved treatments and eventually a cure.

Resources

- A Listing of Clinical Trials, sponsored by the NIH, other federal agencies, and private industry: www.ClinicalTrials.gov
- Alzheimer's Association: www.alz.org
- Alzheimer's Foundation of America: www.alzfdn.org

- Fisher Center for Alzheimer's Research Foundation: www.alzinfo.org
- MedlinePlus, a Service of the NIH and National Library of Medicine: <http://medlineplus.gov>
- National Institute on Aging's (NIA) Alzheimer's Disease Education and Referral (ADEAR) Center for answers to your questions, free publications, Spanish-language resources, clinical trials, and more: www.nia.nih.gov/Alzheimers

toll-free 1-800-438-4380 (8:30 am–5:00 pm EST/EDT, Mon–Fri) or email to adear@nia.nih.gov or surface mail to ADEAR Center, P.O. Box 8250, Silver Spring, Md. 20907-8250

- National Institute of Mental Health: www.nimh.nih.gov
- National Institute of Neurological Disorders and Stroke: www.ninds.nih.gov/disorders/alzheimersdisease/alzheimersdisease.htm
- U.S. Administration on Aging's Eldercare Locator: www.eldercare.gov

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