

Alzheimer's 101

Erin Yelland, Ph.D.

K-State Research and Extension

The prevalence of Alzheimer's disease across the United States is staggering — 1 in every 10 people age 65 and older has Alzheimer's disease. As the size of the older adult population continues to grow, the number of Americans with Alzheimer's disease and other dementias will continue to increase. Currently, 5.5 million Americans of all ages have Alzheimer's disease, and this number is expected to reach 7.1 million by 2025 and 13.8 million by 2050, barring a major medical breakthrough. Currently, Alzheimer's disease is the only leading cause of death that cannot be prevented, slowed, or cured. This, combined with the sheer prevalence of the disease, has led researchers to name Alzheimer's "the biggest health crisis facing the world today."

Despite the severity of the Alzheimer's crisis, there are steps you can take to better the lives of those who are currently facing, or will face in their future, an Alzheimer's diagnosis. Education and awareness of the disease is key. Thus, the focus of this publication will be: understanding Alzheimer's, its warning signs, the benefits of early detection and diagnosis, and steps to bettering your overall brain health.

Understanding Alzheimer's

Alzheimer's disease is not a normal part of aging. It is an irreversible, progressive brain disease that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest daily tasks. Alzheimer's disease works to destroy your brain when abnormal lesions — called beta-amyloid plaques and neurofibrillary tangles — clog the brain and interrupt the flow of communication between the neurons. The hippocampus, where short-term memory is stored, is one of the first areas of the brain affected by the disease. This is why individuals with Alzheimer's disease may be able to recall stories from their youth, yet cannot remember what they

had to eat for lunch a few hours ago. As the disease progresses, the entire brain will experience the effects of the disease, resulting in massive cell loss and shrinking of brain tissue. Sadly, this deterioration can lead to death, and Alzheimer's disease is one of the leading causes of death among older Americans.

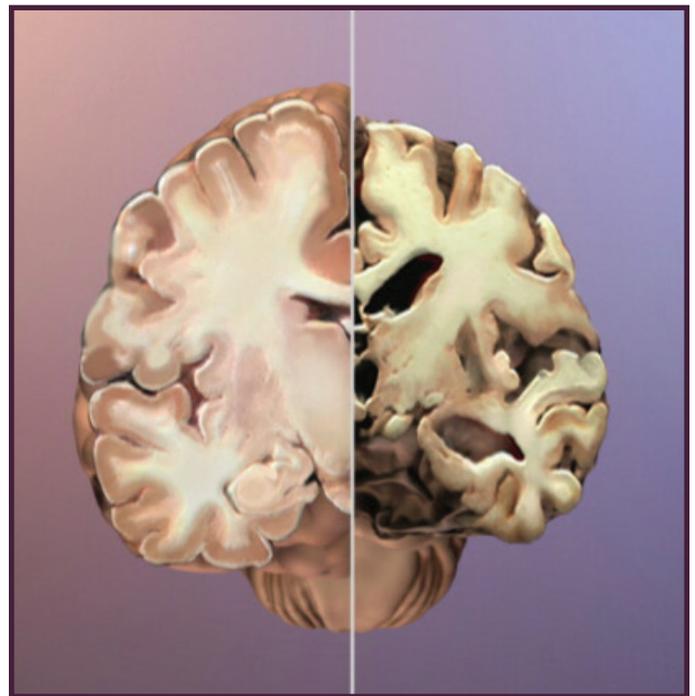


Photo credit: © 2012 Alzheimer's Association. All rights reserved. Illustration by Stacy Jannis.

When understanding Alzheimer's, it is important to note the difference between dementia and Alzheimer's disease. Dementia is a general term used to describe symptoms of loss of intellectual functioning severe enough to interfere with daily life, such as a decline in thinking, memory, or judgment skills. Dementia is not a specific disease and dementia-like symptoms have numerous causes, both reversible and non-reversible, including stroke, thyroid problems, vitamin deficiencies, and Alzheimer's disease. Alzheimer's disease is

the leading cause of dementia-like symptoms, accounting for 60 to 80 percent of all dementia cases. Alzheimer's disease is the cause, and dementia is a symptom of the disease.

The 10 Warning Signs of Alzheimer's Disease

Researchers strongly believe that early detection of Alzheimer's disease will be a key to understanding how to prevent, slow, and ultimately stop the disease in the future. The first step to early detection is understanding the 10 warning signs of the disease, as defined by the Alzheimer's Association:

1. Memory loss that disrupts daily life.

A common sign of Alzheimer's disease is memory loss, especially the inability to remember recently-learned information. Individuals with Alzheimer's disease may begin to forget important dates or events, ask more questions, repeat information, and rely more frequently on sticky notes to help them remember things.

What's a typical age-related change? Forgetting someone's name, but remembering it later.

2. Challenges in planning or solving problems.

Some individuals with Alzheimer's disease will struggle to concentrate, follow a plan or recipe, or work with numbers. Because of these challenges, some tasks may take much longer to complete than usual.

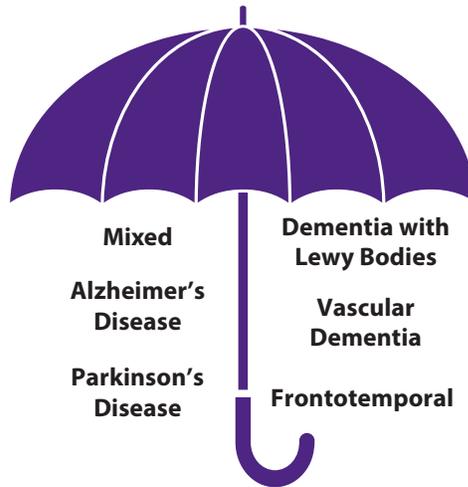
What's a typical age-related change? Making occasional errors when balancing a checkbook or preparing a recipe.

3. Difficulty completing familiar tasks at home, at work, or at leisure.

Some individuals with Alzheimer's disease will have difficulty driving to a familiar location, completing tasks at work, or remembering how to play a favorite game.

What's a typical age-related change? Occasionally needing help remembering how to do something, such as logging into an online account or changing the settings on a cell phone.

DEMENTIA



4. Confusion with time or place.

Individuals with Alzheimer's disease can easily lose track of dates, the passage of time, and the seasons. Especially as the disease progresses, an Alzheimer's sufferer may forget where they are, why they are there, and how they got there.

What's a typical age-related change? Occasionally forgetting the day of the week, but remembering it later.

5. Trouble understanding visual images and spatial relationships.

Some individuals with Alzheimer's disease will struggle to read, judge the distance between themselves and another object or person, and determine differences in color or contrast.

What's a typical age-related change? Vision changes related to an eye disease, such as cataracts or glaucoma.

6. New problems with words in speaking or writing.

People with Alzheimer's disease may have trouble following and participating in a conversation. They might seem disinterested, repeat themselves when speaking, or call items or people by the wrong name.

What's a typical age-related change? Sometimes struggling to find the correct name for someone or something.

7. Misplacing things and losing the ability to retrace steps.

People with Alzheimer's disease can often put items in odd and unusual places — such as placing shoes in the freezer or pantry. They also might lose or misplace things, and will not be able to go back over their steps to find them again.

What's a typical age-related change? Losing something from time to time, but remembering where it is later.

8. Decreased or poor judgment.

A person with Alzheimer's disease can exhibit poor decision-making. They may give large amounts of money to telemarketers or charities, or they might stop taking care of their own personal hygiene.

What's a typical age-related change? Making a bad choice once in a while.

9. Withdrawal from work or social activities.

Some individuals with Alzheimer's disease will begin to back away from family events, sports, other hobbies, or work projects. They might begin to forget the names of individuals, the rules of a game, or how to perform their work tasks. Losing your memory can be scary, and sufferers may avoid being social because of these changes.

What's a typical age-related change? Occasionally feeling weary of social activities.

10. Changes in mood and personality.

Individuals with Alzheimer's disease may experience mood and personality changes; they can become easily upset and feel confused, suspicious, depressed, fearful, or anxious. It can be difficult and uncomfortable for them to visit people or places, especially those that are outside of their comfort zone.

What's a typical age-related change? Feeling irritable when something does not go as planned.

Every individual who suffers from Alzheimer's disease may experience one or more of these warning signs to varying degrees. If you notice any of these warning signs in yourself or a loved one, please see a doctor as soon as possible. It may not be Alzheimer's disease, but if it is, there are numerous benefits to early detection and diagnosis.

The Benefits of Early Detection and Diagnosis

Educating yourself and your loved ones is currently the most powerful tool you can have for living a life with Alzheimer's disease. Although we are awaiting a medical breakthrough that will prevent, treat, or cure the disease, there are many benefits to early detection and diagnosis. You can:

- learn and understand the disease process;
- receive better, more informed medical care;

- receive the maximum benefit from available symptomatic treatments,
- participate in clinical trials;
- build your own care team;
- plan your own future healthcare, including completing your advance health-care directives;
- explore resources in your community and online;
- remain independent for a longer period of time and address safety issues in your home;
- plan for your financial future; and
- reduce burden and stress on your family members and loved ones.

By taking an active role in your own health care through invaluable early detection and diagnosis, you can help improve your future well-being and prepare yourself and your loved ones for what is to come.

Steps to Better Brain Health

Although Alzheimer's disease cannot be prevented, slowed, or cured, there are numerous steps you can take to live an overall brain-healthy lifestyle. Doing so can improve your overall health and well-being, but may also reduce your risk of cognitive decline as you age. It is best to adopt these practices early, and to practice them throughout your entire life — but, it is never too late to adopt a healthy lifestyle.

According to the Alzheimer's Association, there are 10 ways to love your brain:

1. **Break a sweat.** Engage in regular exercise for at least 150 minutes per week.
2. **Hit the books.** Take a class online or at your local community center. Formal education at any age can help reduce your risk of cognitive decline.
3. **Butt out.** Smoking cigarettes increases your risk for numerous health concerns, including cognitive decline. Quit smoking now.
4. **Follow your heart.** Risk factors for cardiovascular disease — such as high blood pressure and obesity — also increase your risk for cognitive decline. Living a heart-healthy lifestyle is also best for your brain.



5. **Heads up!** Wear a helmet, use your seatbelt, and prevent fall-related injuries. Protecting your head, and your brain, can help reduce your risk of cognitive decline.
6. **Fuel up right.** Eat a healthy and balanced diet. Be sure to consume plenty of fruits, vegetables, and whole grains.
7. **Catch some Zzz's.** A lack of sleep can contribute to memory loss and trouble thinking. Strive to get 9 hours of sleep per night.
8. **Take care of your mental health.** Some studies have linked a history of depression with an increased risk of cognitive decline. If you have symptoms of depression, or are unsure, seek advice from a doctor.
9. **Buddy up.** Staying social throughout your lifespan may support better brain health. Get together with friends, engage in your favorite hobbies, volunteer, and be a part of your local community.
10. **Stump yourself.** Challenge your brain! Playing cards, doing puzzles, and trying new things — such as building a piece of furniture or learning a new skill — can have numerous brain-boosting benefits.

Conclusion

Alzheimer's disease is a worldwide crisis until a medical breakthrough occurs. Because of current limitations in pharmacological treatments, the best advice that can be given to anyone experiencing cognitive changes is to see your doctor as soon as possible. It might not be Alzheimer's disease, but if it is, there are steps that you can take to prepare yourself and your loved ones for a life with Alzheimer's disease. Be proactive in your own health care.

Resources

The Alzheimer's Association (www.alz.org; 1-800-272-3900) provides education, support, and resources for individuals living with Alzheimer's disease, their family members, and care partners. Numerous other organizations throughout the state of Kansas can provide similar support. For more information, or to connect with these resources, contact your local K-State Research and Extension office.

References

- Alzheimer's Association (2015). Policy brief: Early detection and diagnosis of Alzheimer's disease. Retrieved from: <http://www.alz.org/publichealth/downloads/policy-brief.pdf>*
- Alzheimer's Association (2016). 10 early signs and symptoms of Alzheimer's. Retrieved from: <http://alz.org/10-signs-symptoms-alzheimers-dementia.asp>*
- Alzheimer's Association (2016). 10 ways to love your brain. Retrieved from: http://www.alz.org/brain-health/10_ways-to-love-your-brain.asp*
- Alzheimer's Association (2017). 2016 Alzheimer's disease facts and figures. Retrieved from: http://www.alz.org/documents_custom/2017-facts-and-figures.pdf*
- Alzheimer's Foundation of America (2016). About Alzheimer's disease. Retrieved from: <http://www.alzfdn.org/AboutAlzheimers/definition.html>*
- National Center for Health Statistics (2015). Health, United States, 2015: With special feature on racial and ethnic health disparities. Hyattsville, MD. Retrieved from: [https://www.cdc.gov/nchs/data/15.pdf#020](https://www.cdc.gov/nchs/data/hus/15.pdf#020)*

Acknowledgements

The author would like to acknowledge Kaylee Seyferth and Helene Waldeck, undergraduate students in the School of Family Studies and Human Services at Kansas State University, for their contributions to and review of this publication. Also, special thanks to Amy Collins and Nancy Nelson for their thorough review.

Publications from Kansas State University are available at:
www.bookstore.ksre.ksu.edu

Date shown is that of publication or last revision. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Erin Yelland, *Alzheimer's 101, Fact Sheet*, Kansas State University, July 2017.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, John D. Floros, Director.