The impact of Alzheimer’s disease

Ron Petersen, MD, PhD, is Director of the Mayo Alzheimer’s Disease Research Center.

Typical changes

- Typical age-related changes involve:
  - Making a bad decision once in a while
  - Missing an occasional monthly payment
  - Forgetting which day it is and remembering later
  - Sometimes forgetting which word to use
  - Losing things from time to time
Problematic changes

1. Memory changes that disrupt daily life
2. Challenges in planning or solving problems
3. Difficulty completing familiar tasks
4. Confusion with time or place
5. Trouble with visual images and spatial relationships
6. New problems with words in speaking or writing
7. Misplacing things and losing the ability to retrace steps
8. Decreased or poor judgment
9. Withdrawal from work or social activities
10. Changes in mood and personality

What is dementia?
Understanding dementia

Dementia

- Reversible dementias
- Frontotemporal dementia
- Vascular dementia
- Lewy body disease
- Alzheimer's disease

What is dementia?

- Loss of cognitive functioning serious enough to interfere with daily functioning
- Causes changes in:
  - Memory
  - Language
  - Thought
  - Navigation
  - Behavior
  - Personality/Mood
  - Planning and Organizing

Irreversible types of dementia

- Alzheimer's disease: the most common type
- Over 70% of people with dementia have Alzheimer's disease
Mild Cognitive Impairment
- Severe enough to show up on tests
- Not severe enough to affect daily life
- Increases risk of developing Alzheimer’s disease

What is Alzheimer’s disease?
Alzheimer’s disease:
- is a brain disorder
- is a progressive disease
- is the most common form of dementia
- has no cure
- is eventually fatal
- affects over 5 million Americans

Problematic changes
Steve has a diagnosis of Alzheimer’s disease, the most common form of dementia.
How the brain works

- There are 100 billion nerve cells, or neurons, creating a branching network.
- Signals traveling through the neuron forest form memories, thoughts and feelings
- Alzheimer’s disease destroys neurons

Which functions are affected?

- Language, Sense of temperature, touch, pain
- Vision
- Judgment, reasoning
- Memory, language, hearing
- Movement, balance

Healthy vs. Alzheimer’s brain

- Ventricles enlarge
- Cortex shrivels, especially near hippocampus
Brain functioning affects memory

Kitty's husband, Bill, has a diagnosis of Alzheimer's disease.

Major risk factors

- The primary risk factor is age
- The incidence is higher in women due to women living longer
- Down syndrome is correlated with Alzheimer's
- Family history can increase risk
- There are two categories of genes

Selecting a Doctor

- Doctors can diagnosis Alzheimer's disease with accuracy
- Start with:
  - A physician who is experienced with diagnosing Alzheimer's
- Then consult the following as needed:
  - Geriatrician
  - Neurologist
  - Psychiatrist
  - Neuropsychologist
Preparing for the doctor’s visit

- Keep a log
  - Write a list of symptoms, be specific
  - Include when, how often and where
  - Develop the list with input from other family members
- List current and previous health problems
- Bring all medication (prescriptions, vitamins, herbal supplements and over the counter medication)

Steps in the assessment

1. Medical history
2. Mental status evaluation
3. Series of evaluations that test memory, reasoning, visual-motor coordination and language skills
4. Physical examination, which includes:
   - Evaluating blood pressure, nutrition and pulse
   - Testing nervous system functions like sensation and balance
   - A brain scan to rule out a stroke
   - Lab tests to rule out other disorders
5. Psychiatric evaluation, to rule out emotional causes of symptoms
6. Interviews with family to get more information about changes

When the diagnosis is Alzheimer’s disease...
Emotions run high

- shock
- fear
- confusion
- guilt
- grief
- worry
- anger
- acceptance
- relief

Stages of Alzheimer’s disease

- Early Stage
  - Recent memory loss
  - Difficulty managing money, driving, or handling social situations
- Middle Stage
  - Difficulty with language
  - Problems keeping track of personal items
  - May need help with grooming
- Late Stage
  - Long- and short-term memory affected
  - Needs care around the clock

Plan early

Monica Parker, MD, is a Geriatric Medicine specialist at Emory University.
Plan early

- Be an active partner in long-term care plan
- Develop a relationship with your healthcare team
- Get legal and financial issues in order
- Grow a support system
- Educate yourself about the disease

Medications to treat symptoms

- Cholinesterase inhibitors for mild to moderate symptoms
  - Donepezil (Aricept®)
  - Rivastigmine (Exelon®)
  - Galantamine (Razadyne®)
- NMDA receptor antagonist (glutamate regulator) for moderate to severe symptoms
  - Memantine (Namenda®)

Ron Petersen, MD, is Director of the Mayo Alzheimer’s Disease Research Center.
Clinical research studies

- Clinical trials fuel progress toward treatments
- Participants receive a high standard of care

Programs and services

- Educational programs for families and professionals
- 24-hour helpline
- Information and referrals
- Care consultations
- Support groups
- Online Community
- Safety services

Make a difference!
Betsy's partner, John, has a diagnosis of Alzheimer's disease.

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Contact us:

- When Alzheimer’s disease touches your life turn to us
- Nationwide 24-hour Helpline
  - Whether you need information or just want to talk, call us at 1.800.272.3900
- [www.alz.org](http://www.alz.org)
  - Our award-winning Web site is a rich resource of evidence-based content

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