



JOHNS HOPKINS
M E D I C I N E

Guide to Understanding Dementia

by the Editors of Johns Hopkins Health Alerts

**Special
Report**

www.JohnsHopkinsHealthAlerts.com



Guide to Understanding Dementia

Table of Contents

What Is Dementia? An Introduction.....1

Diagnosing Dementia.....1

**Distinguishing Normal “Senior Moments” From More
Worrisome Memory Lapses2**

If It’s Not Alzheimer’s, What Is It?3

Vascular Dementia.....3

Dementia With Lewy Bodies.....3

Frontotemporal Dementias3

Huntington’s Disease4

Creutzfeldt-Jakob Disease4

Simple Tests for Measuring Cognitive Impairment5

Further Resources.....7

Disclaimer8



What Is Dementia? An Introduction

Dementia refers to a cluster of symptoms caused by changes in brain function. Memory loss is the hallmark of dementia, but personality and behavior changes are also common. Nearly everyone experiences memory lapses as they age, but dementia interferes with a person's ability to carry out daily activities.

Dementia is caused by many disorders; only a few of them are reversible. In these instances, patients may have a physical or psychological condition, such as a high fever, depression, or a minor head injury, that can improve or be cured with treatment. Most forms of dementia are not reversible. They include Alzheimer's disease (AD), the most common cause of dementia.

Diagnosing Dementia

According to guidelines published by the Agency for Health Care Policy and Research, a person who has difficulties with one or more of the following activities should be evaluated for dementia:

- **Learning and retaining new information.** The person regularly misplaces objects, has trouble remembering appointments or recent conversations, or is repetitive in conversation.
- **Handling complex tasks.** The individual has trouble with previously familiar activities, like balancing a checkbook, cooking a meal, or other tasks that involve a complex train of thought.
- **Ability to reason.** The person finds it difficult to respond appropriately to everyday problems, such as a flat tire. Or, a previously responsible, well-adjusted person may display poor judgment about social or financial matters.
- **Spatial ability and orientation.** Driving and finding one's way in familiar surroundings become difficult or impossible, and the person may have problems recognizing known objects and landmarks.
- **Language.** The ability to speak or comprehend seems impaired, and the person may have problems following or participating in conversations.
- **Behavior.** Personality changes emerge. For example, the person appears more passive and less responsive than usual, or more suspicious and irritable. Visual or auditory stimuli may be misinterpreted.

Distinguishing Normal “Senior Moments” From More Worrisome Memory Lapses

Occasional memory lapses, such as forgetting why you walked into a room or having difficulty recalling a person’s name, become more common as we approach our 50s and 60s. It’s comforting to know that this minor forgetfulness is a normal sign of aging, not a sign of dementia.

But other types of memory loss, such as forgetting appointments or becoming momentarily disoriented in a familiar place, may indicate mild

cognitive impairment. In the most serious form of memory impairment—dementia—people often find themselves disoriented in time and place and unable to name common objects or recognize once-familiar people.

The chart below gives examples of the types of memory problems common in normal age-related forgetfulness, mild cognitive impairment, and dementia.

Normal Age-Related Forgetfulness	Mild Cognitive Impairment	Dementia
Sometimes misplaces keys, eyeglasses, or other items.	Frequently misplaces items.	Forgets what an item is used for or puts it in an inappropriate place.
Momentarily forgets an acquaintance’s name.	Frequently forgets people’s names and is slow to recall them.	May not remember knowing a person.
Occasionally has to “search” for a word.	Has more difficulty using the right words.	Begins to lose language skills. May withdraw from social interaction.
Occasionally forgets to run an errand.	Begins to forget important events and appointments.	Loses sense of time. Doesn’t know what day it is.
May forget an event from the distant past.	May forget more recent events or newly learned information.	Has serious impairment of short-term memory. Has difficulty learning and remembering new information.
When driving, may momentarily forget where to turn; quickly orients self.	May temporarily become lost more often. May have trouble understanding and following a map.	Becomes easily disoriented or lost in familiar places, sometimes for hours.
Jokes about memory loss.	Worries about memory loss. Family and friends notice the lapses.	May have little or no awareness of cognitive problems.



If It's Not Alzheimer's, What Is It?

Differentiating between age-associated memory impairment and dementia due to a medical condition involves a process of systematic elimination. Doctors often start by looking for conditions that are correctable. If these possibilities can be eliminated, then more serious, irreversible dementias – such as Alzheimer's disease – are considered. In addition, the presence of reversible disorders can complicate the irreversible forms of dementia. In these cases, diagnosing and treating concurrent depression, for example, makes it possible to gain a clearer view of any conditions that may persist.

After eliminating treatable causes of memory loss, physicians will consider irreversible dementias as a possible diagnosis. These include well-known conditions, such as AD, stroke, and other vascular abnormalities, dementia with Lewy bodies, and Parkinson disease, as well as less common disorders, such as frontotemporal dementia (for example, Pick disease) and Huntington's disease. Other causes include infectious diseases such as Creutzfeldt-Jakob disease and AIDS.

Vascular Dementia

After AD, the most common cause of memory loss is vascular dementia – a disorder often resulting from a series of tiny strokes (known as infarcts) that destroy brain cells. Each infarct may be so small that it is inconsequential alone; however, the cumulative effect of many infarcts can destroy enough brain tissue to impair a per-

son's memory, language, and other intellectual abilities.

Symptoms can also involve other brain functions: loss of bladder or bowel control (incontinence); a mask-like facial expression; and weakness or paralysis on one side of the body are thought to be noncognitive hallmarks of vascular dementia. Patients who survive a cardiac arrest can also suffer from memory deficits. Rare causes of vascular dementia include lupus erythematosus and other collagen-vascular diseases (these may be at least partially reversible), as well as a major stroke. Vascular causes account for 10 percent to 20 percent of dementia cases.

Dementia with Lewy Bodies

Dementia with Lewy bodies, which sometimes occurs simultaneously with AD or Parkinson disease, may account for 10 percent of cases of dementia. An individual with this form of dementia experiences episodes of confusion, falls, and repetitive hallucinations (such as always seeing the same person sitting on a particular chair), and also has signs of parkinsonism (such as shuffling gait, rigid, stooped posture, poor balance, and slowness) early in the disease.

Frontotemporal Dementias

Diseases causing frontotemporal dementia are much less frequent than AD, and account for 5 percent of cases of dementia. Pick disease is responsible for approximately one third of cases of frontotemporal dementia. Symptoms

associated with Pick disease include impaired initiation of plans and goal setting, personality changes, unawareness of any loss of mental function, and language difficulties (aphasia). Palilalia – compulsive repetition of a word or phrase with increasing rapidity – sometimes occurs later in the illness. The course of the disease can vary from 2 to 10 years, but its final result is death.

Huntington's Disease

Huntington's disease is a rare hereditary disorder of the central nervous system characterized by uncontrollable movement and dementia. The illness begins gradually, usually between the ages of 30 and 40, and can last for up to 20 years. Early signs of Huntington's disease include changes in behavior and unusual, fidgety move-

ments. Symptoms may be mild enough for the disease to go unnoticed for many years. Eventually, however, twisting and jerking movements spread to the entire body and are followed by memory loss, confusion, and hallucinations.

Creutzfeldt-Jakob Disease

Creutzfeldt-Jakob disease (CJD) is a rare, fatal brain disorder that causes a rapidly progressing dementia. The disease, which affects approximately one in a million people worldwide, has received much attention due to the discovery in England of a handful of people who developed a disorder similar to CJD, most likely by eating beef from cattle infected with bovine spongiform encephalopathy (mad cow disease).



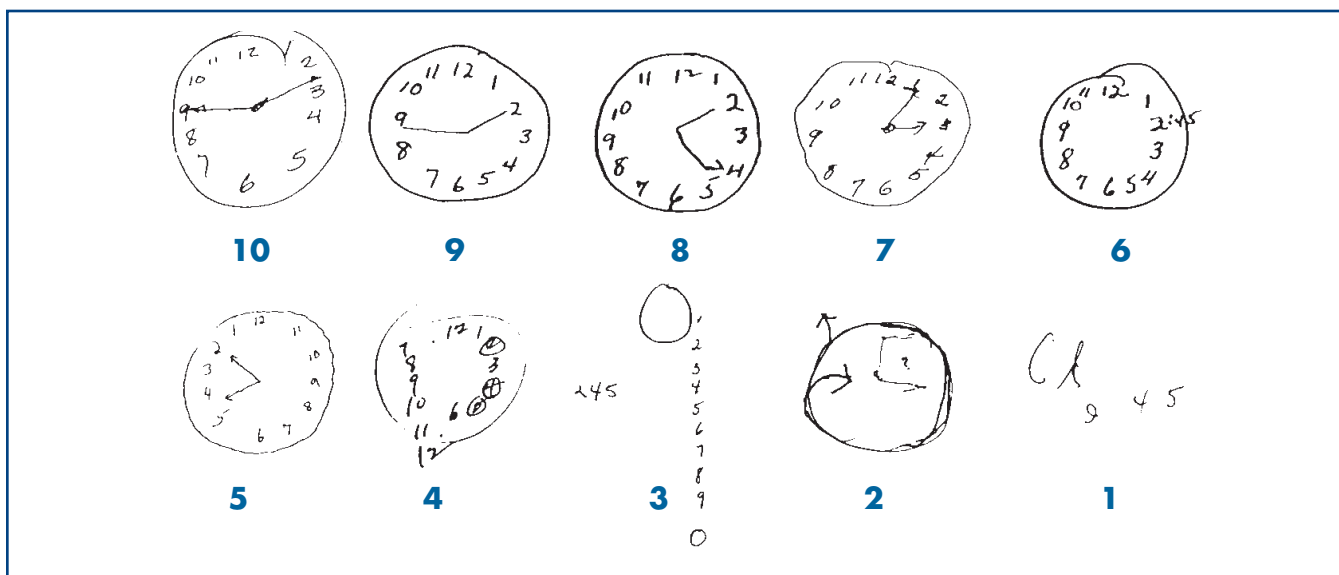
Simple Tests for Measuring Cognitive Impairment

New developments in brain imaging technology are significant advances in Alzheimer’s research and diagnosis. But some decidedly low-tech screening tests may offer quick and inexpensive snapshots of a person’s cognitive health. Whether any of these tests is accurate enough to be used widely for screening remains to be seen, but one or several may be useful on an individual basis.

Clock Drawing Test. The Clock Drawing Test is the most well known of the screening tests for dementia. Patients are asked to draw a clock with the hands pointing to a specified time—for example, 2:45. The most complete,

well-organized, accurate, and spatially correct drawing is rated a “10,” and the least representative is rated a “1.” The more distorted and inaccurate the drawings are, the more likely the person has dementia.

Time and Change Test. This test measures the ability to tell time and perform a simple math task. In the time test, the patient is given 60 seconds to read the time on a clock and gets two attempts to get it right. In the change test, the person is given three quarters, seven dimes, and seven nickels and asked to make change for a dollar. The change test has a three-minute limit, and two attempts are allowed.





Sniff Test. Researchers have known for some time that loss of the sense of smell is an early warning sign of Alzheimer's. The beta-amyloid plaques that ultimately destroy memory and other cognitive abilities accumulate first in areas of the brain that are responsible for perception of odors. In a paper presented at a recent meeting of the American College of Neuropsychopharmacology, people with mild cognitive impairment were given a 10-item sniff test. The odors were lemon, strawberry, pineapple, lilac, clove, menthol, smoke, natural gas, soap, and leather. Study participants who misidentified more than two of the odors were five times more likely to progress to Alzheimer's disease than were those who performed better on the test.

More Quick Tests. If dementia is suspected, doctors may give a person several tests that examine specific cognitive abilities. To test language ability, the patient will be asked to name as many items as possible in a given category, such as fruits or animals. Naming fewer than 10 items in one minute suggests slowed men-

tal functioning. Counting backwards by sevens, spelling a word backwards and forwards, and listing the months of the year backwards are tests of working memory and attention. To test the ability to reason and plan, the doctor may ask the patient to describe similarities and differences between two items, such as an apple and an orange.

Listening to a list of words and reciting them back is a common memory test. A person without memory problems should be able to remember at least three words. Often, the person will be given a distracting task to complete before recalling the words. Someone who cannot remember at least two words out of three may have cognitive impairment.

Bottom line: It's important to realize that these are screening tests, not diagnostic tests. They are designed to be administered and interpreted by a healthcare professional. Poor results are an indication of probable cognitive impairment, but more sophisticated testing is necessary to make a diagnosis of Alzheimer's disease.

Rely on Expert Health Advice From Johns Hopkins

Ranked America's #1 Hospital for the 19th year in a row by U.S. News & World Report

Memory White Paper

A dramatic increase in the number of people affected by Alzheimer's disease has heightened the urgency of the research into Alzheimer's and other dementias. The Memory White Paper brings you state-of-the-art information on how to tell the difference between Alzheimer's, another form of dementia, or ordinary age-related memory loss, and the best ways to keep your memory sharp as you get older. You will also learn about important new research in identifying, treating, and preventing memory disorders, as well as new drugs for Alzheimer's and other dementias that can help slow memory decline.

The Johns Hopkins Memory Bulletin

Edited by Dr. Peter V. Rabins, Professor of Psychiatry at the Johns Hopkins University School of Medicine and co-author of the best-selling guide for caregivers, *The 36-Hour Day*, *The Johns Hopkins Memory Bulletin*

brings timely, in-depth information for anyone facing Alzheimer's disease, dementia, or another memory problem. In each quarterly issue, you'll read about the latest scientific breakthroughs, research findings from the world's foremost medical journals and conferences, medications, caregiver support and relief, plus breakthrough medical discoveries for safeguarding your brain against aging and memory loss. Subscribe today at the special web-only discount and get 4 FREE special reports to download instantly.

The Johns Hopkins Prostate Bulletin

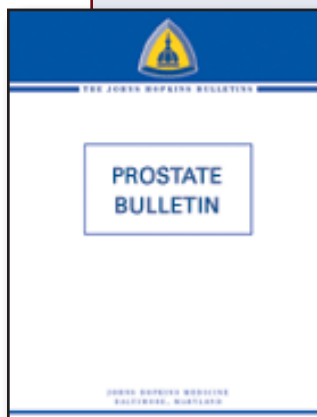
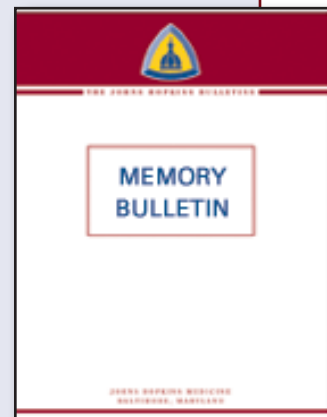
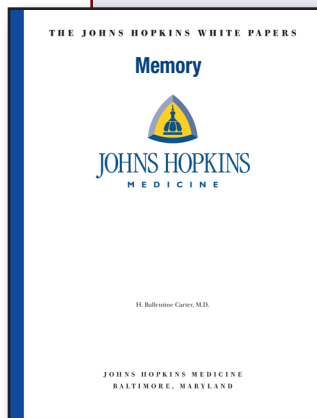
The Johns Hopkins Prostate Bulletin is an indispensable quarterly journal for men with prostate cancer, and the other prostate health concerns: Benign Prostatic Hyperplasia (BPH), prostatodynia, and the various forms of prostatitis. It also deals with side effects and related conditions, such as Lower Urinary Tract Symptoms (LUTS), overactive bladder (OA), and erectile dysfunction (ED). Written by Dr. Jacek L. Mostwin and his esteemed colleagues at the world-renowned James Buchanan Brady Urological Institute, *The Johns Hopkins Prostate Bulletin* goes beyond the basics to report on the latest therapeutic treatments, advanced news of clinical trials, in-depth reports, new medications, plus detailed answers to subscribers' concerns about all aspects of your prostate health.

The Johns Hopkins Medical Letter: Health After 50

Since 1988 this acclaimed monthly newsletter has delivered cutting-edge information on treating the major medical conditions affecting those over 50. Each eight-page issue delivers important news and research on women's health, men's health, nutrition, weight control, arthritis, COPD, colon cancer, dementia and much more. Friendly, easy-to-read, and written in plain English (without any advertising), *Health After 50* speaks directly to your personal health concerns.

For more information, or to order, go to:

www.JohnsHopkinsHealthAlerts.com/bookstore/index.html



JOHNS HOPKINS MEDICAL DISCLAIMER:

This Special Report is not intended to provide advice on personal medical matters or to substitute for consultation with a physician.

Copyright © 2009 MediZine LLC.
All rights reserved.

MediZine LLC.
500 Fifth Ave
Suite 1900
New York, NY 10110