

Lifestyle Modification And Prevention Of Dementia

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Abstract

Dementia is an acquired syndrome of decline in memory and at least one other cognitive domain such as language, visuo-spatial, or executive function sufficient to interfere with social or occupational functioning in an alert person. Multiple diseases can cause the syndrome of dementia. Routine history and physical examinations do not readily diagnose dementia during clinic or physician visits. Multiple studies in the United States and abroad indicate low identification of dementia by primary care physicians. More than 50% of patients with dementia have never been diagnosed by a physician. This raises the possibility that effective screening tests might be able to identify people with dementia at an early stage, thus allowing the possibility of earlier intervention. The various strategies for the prevention of Dementia are lifestyle changes helps with Alzheimer disease (AD) manage the disease and plan for the time when they are no longer able to do daily tasks, don't smoke stay at a healthy weight, get plenty of exercise, eat healthy food, manage health problems including diabetes, high blood pressure, and high cholesterol, stay mentally alert by learning new hobbies, reading, or solving crossword puzzles, stay involved socially and be the part of social gatherings.

Keywords: Dementia, Lifestyle modification, Prevention of dementia

INTRODUCTION

Dementia is an acquired syndrome of decline in memory and at least one other cognitive domain such as language, visuo-spatial, or executive function sufficient to interfere with social or occupational functioning in an alert person. Multiple diseases can cause the syndrome of dementia. The large majority of people with dementia have neurodegenerative disease or cerebrovascular ischemia as the underlying cause. Between 60% and 70% of people with the dementia syndrome have Alzheimer's disease; about 20% to 30% have vascular or mixed vascular and Alzheimer's disease causes. A smaller number have other causes such as Lewy body dementia, frontal dementia, Parkinson's disease, hypothyroidism, and vitamin B₁₂ deficiency.

Various researches suggested that no effective approach for primary prevention of dementia. Chemoprevention has been advocated, but data on effectiveness are lacking. Although control of hypertension reduces the risk of cerebrovascular accidents, its role in reducing small vessel vascular dementia is less clear. The wealth of literature has been on screening for dementia with the hope of reducing its burden of suffering by earlier intervention.

Routine history and physical examinations do not readily diagnose dementia during clinic or physician visits. Multiple studies in the United States and abroad indicate low identification of dementia by primary care physicians. More than 50% of patients with dementia have never been diagnosed by a physician. This raises the possibility that effective screening tests might be able to identify people with dementia at an early stage, thus allowing the possibility of earlier intervention.

No national organization recommends routine screening for dementia syndrome. The 1996 Guide to Clinical Preventive Services from the US Preventive Services Task Force (USPSTF) found insufficient evidence to make a recommendation either for or against screening. Since that USPSTF review, however, several studies have been published concerning both pharmacologic and caregiver interventions. Given the new evidence and the large and growing importance of this condition, the RTI International-University of North Carolina Evidence-based Practice Center (RTI-UNC EPC) undertook this review for the use of the USPSTF in reconsidering its previous conclusions.

Symptoms

Dementia symptoms vary depending on the cause, but common signs and symptoms include:

Cognitive changes

- Memory loss, which is usually noticed by someone else
- Difficulty communicating or finding words
- Difficulty with visual and spatial abilities, such as getting lost while driving
- Difficulty reasoning or problem-solving
- Difficulty handling complex tasks
- Difficulty with planning and organizing
- Difficulty with coordination and motor functions
- Confusion and disorientation

Psychological changes

- Personality changes
- Depression
- Anxiety
- Inappropriate behavior
- Paranoia
- Agitation
- Hallucinations

Etiology of Dementia

Dementia is caused by damage to or loss of nerve cells and their connections in the brain. Depending on the area of the brain that's damaged, dementia can affect people differently and cause different symptoms.

Dementias are often grouped by what they have in common, such as the protein or proteins deposited in the brain or the part of the brain that's affected. Some diseases look like dementias, such as those caused by a reaction to medications or vitamin deficiencies, and they might improve with treatment.

Progressive dementias

Types of dementias that progress and aren't reversible include:

- **Alzheimer's disease.** This is the most common cause of dementia.

Although not all causes of Alzheimer's disease are known, experts do know that a small percentage are related to mutations of three genes, which can be passed down from parent to child. While several genes are probably involved in Alzheimer's disease, one important gene that increases risk is apolipoprotein E4 (APOE).

Alzheimer's disease patients have plaques and tangles in their brains. Plaques are clumps of a protein called beta-amyloid, and tangles are fibrous tangles made up of tau protein. It's thought that these clumps damage healthy neurons and the fibers connecting them.

- **Vascular dementia.** This type of dementia is caused by damage to the vessels that supply blood to your brain. Blood vessel problems can cause strokes or affect the brain in other ways, such as by damaging the fibers in the white matter of the brain.

The most common signs of vascular dementia include difficulties with problem-solving, slowed thinking, and loss of focus and organization. These tend to be more noticeable than memory loss.

- **Lewy body dementia.** Lewy bodies are abnormal balloonlike clumps of protein that have been found in the brains of people with Lewy body dementia, Alzheimer's disease and Parkinson's disease. This is one of the more common types of progressive dementia.

Common signs and symptoms include acting out one's dreams in sleep, seeing things that aren't there (visual hallucinations), and problems with focus and attention. Other signs include uncoordinated or slow movement, tremors, and rigidity (parkinsonism).

- **Frontotemporal dementia.** This is a group of diseases characterized by the breakdown of nerve cells and their connections in the frontal and temporal lobes of the brain. These are the areas generally associated with personality, behavior and language. Common symptoms affect behavior, personality, thinking, judgment, and language and movement.
- **Mixed dementia.** Autopsy studies of the brains of people 80 and older who had dementia indicate that many had a combination of several causes, such as Alzheimer's disease, vascular dementia and Lewy body dementia. Studies are ongoing to determine how having mixed dementia affects symptoms and treatments.

Other disorders linked to dementia

- **Huntington's disease.** Caused by a genetic mutation, this disease causes certain nerve cells in your brain and spinal cord to waste away. Signs and symptoms, including a severe decline in thinking (cognitive) skills, usually appear around age 30 or 40.
- **Traumatic brain injury (TBI).** This condition is most often caused by repetitive head trauma. Boxers, football players or soldiers might develop TBI.

Depending on the part of the brain that's injured, this condition can cause dementia signs and symptoms such as depression, explosiveness, memory loss and impaired speech. TBI may also cause parkinsonism. Symptoms might not appear until years after the trauma.

- **Creutzfeldt-Jakob disease.** This rare brain disorder usually occurs in people without known risk factors. This condition might be due to deposits of infectious proteins called prions. Signs and symptoms of this fatal condition usually appear after age 60.

Creutzfeldt-Jakob disease usually has no known cause but can be inherited. It may also be caused by exposure to diseased brain or nervous system tissue, such as from a cornea transplant.

- **Parkinson's disease.** Many people with Parkinson's disease eventually develop dementia symptoms (Parkinson's disease dementia).

Diagnosis

Diagnosing dementia and its type can be challenging. To diagnose the cause of the dementia, must recognize the pattern of the loss of skills and function and determine what a person is still able to do. More recently, biomarkers have become available to make a more accurate diagnosis of Alzheimer's disease.

No single test can diagnose dementia, so doctors are likely to run a number of tests that can help pinpoint the problem.

Cognitive and neuropsychological tests

Evaluate the thinking ability. A number of tests measure thinking skills, such as memory, orientation, reasoning and judgment, language skills, and attention.

Neurological evaluation

Evaluate memory, language, visual perception, attention, problem-solving, movement, senses, balance, reflexes and other areas.

Brain scans

- **CT or MRI.** These scans can check for evidence of stroke or bleeding or tumor or hydrocephalus.
- **PET scans.** These can show patterns of brain activity and whether the amyloid or tau protein, hallmarks of Alzheimer's disease, have been deposited in the brain.

Laboratory tests

Simple blood tests can detect physical problems that can affect brain function, such as vitamin B-12 deficiency or an underactive thyroid gland. Sometimes the spinal fluid is examined for infection, inflammation or markers of some degenerative diseases.

Psychiatric evaluation

Determine the presence of mental illness and depression.

Treatment

Most types of dementia can't be cured, but there are ways to manage the symptoms.

Medications

The following are used to temporarily improve dementia symptoms.

- **Cholinesterase inhibitors.** These medications — including donepezil (Aricept), rivastigmine (Exelon) and galantamine (Razadyne) — work by boosting levels of a chemical messenger involved in memory and judgment.

Although primarily used to treat Alzheimer's disease, these medications might also be prescribed for other dementias, including vascular dementia, Parkinson's disease dementia and Lewy body dementia.

Side effects can include nausea, vomiting and diarrhea. Other possible side effects include slowed heart rate, fainting and sleep disturbances.

- **Memantine.** Memantine (Namenda) works by regulating the activity of glutamate, another chemical messenger involved in brain functions, such as learning and memory. In some cases, memantine is prescribed with a cholinesterase inhibitor.

A common side effect of memantine is dizziness.

- **Other medications.** Medications to treat other symptoms or conditions are prescribed, such as depression, sleep disturbances, hallucinations, Parkinsonism or agitation.

Therapies

Several dementia symptoms and behavior problems might be treated initially using nondrug approaches, such as:

- **Occupational therapy.** An occupational therapist can help how to make home safer and teach coping behaviors. The purpose is to prevent accidents, such as falls; manage behavior and prepare for the dementia progression.
- **Modifying the environment.** Reducing clutter and noise can make it easier with dementia to focus and function.
- **Simplifying tasks.** Break tasks into easier steps and focus on success, not failure. Structure and routine also help reduce confusion in people with dementia.

PREVENTION

Dementia is hard to prevent, because what causes it often is not known. But people who have dementia caused by stroke may be able to prevent future declines by lowering their risk of heart disease and stroke. There are different strategies for the prevention of Dementia:

- Don't smoke.
- Stay at a healthy weight.
- Get plenty of exercise.
- Eat healthy food.
- Manage health problems including diabetes, high blood pressure, and high cholesterol.

- Stay mentally alert by learning new hobbies, reading, or solving crossword puzzles.
- Stay involved socially. Attend community activities, church, or support groups.

LIFE STYLE MODIFICATIONS FOR DEMENTIA

Lifestyle changes helps with Alzheimer disease (AD) manage the disease and plan for the time when they are no longer able to do daily tasks.

Here are some lifestyle modifications that may help.

Exercise

Exercising at least 150 minutes a week may help boost mental and physical health. It may also lower the risk of falls.

Create a Calm Home

People with AD may get upset and disoriented. A home that is quiet and restful can help. Examples include staying on a routine and not moving furniture and objects.

Adapt the Home for Safety

Changes will need to be made to keep the home safe for a person with AD. These may be steps like installing grab rails, removing throw rugs, and ensuring proper lighting.

Monitor Personal Comfort

People with AD will have a harder time taking care of themselves. Caregivers will need to check for things like their hunger, thirst, and emotions.

Use Memory Aids

These aids can help a person with AD live on their own for a longer time. Examples are having a list of phone numbers and writing down daily routines.

Plan for the Future

Friends and family should help a person start to make plans early. A healthcare proxy will need to be chosen to make decisions when the person is no longer able to do so. A specialized setting will also be needed when caregivers are no longer able to help. Legal and financial plans should also be made.

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