

Compensatory Strategies for Cognitive Deficits Related to Dementia

Problem: Dementia is a chronic, irreversible disorder of the mental processes caused by damage to the brain. There are many forms of dementia including Alzheimer's Disease (60%-75% of dementia cases), Dementia with Lewy Bodies, Vascular Dementia, Parkinson's Disease Dementia, Frontotemporal Dementia, and Mixed Dementia (Barney, Emerita, & Perkinson, 2018). Onset of dementia is gradual and usually progresses over years. Additional information can be found at <https://www.healthline.com/health/dementia/early-warning-signs>.

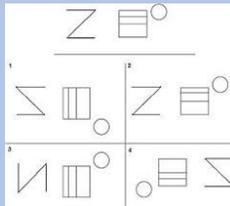
Initial signs of dementia often include:

Decreased short-term memory



An example of decreased short-term memory, or short-term memory loss, could be forgetting names or appointments, but remembering later. Another example is they can remember an event that happened in their childhood but can't remember what they had for breakfast.

Decreased visual-perceptual skills



An example is having a harder time distinguishing where steps are. It is important to keep the environment clutter free as vision changes and perceptual deficits are common.

Decreased problem-solving skills



An example is making occasional mistakes when paying bills or being unable to think through the next move when playing a game. Problem solving skills help determine the source of the problem and the solution for it.

Problems with language and communication



An example is being repetitive due to memory loss, such as repeating the same questions that have already been answered during a conversation.

Personality changes



An example of a personality change would be to see a shift from outgoing to shy. Depression is typically an early sign of dementia. General behavioral changes, confusion, problems with speaking/writing and loss of interests in hobbies are also common.

The different types of dementia, listed above, lead to various symptoms in later stages of the disease. Below is a short description of each type of dementia along with specified symptoms that are commonly seen as the dementia progresses.

Alzheimer's Disease (AD): Alzheimer's is an age-related dementia which is more common in women and accounts for 60% to 75% of dementia cases. It is most prevalent in those 65 and older and there is currently no known cure for Alzheimer's. Those with Down Syndrome are at a high risk of developing this disease with symptoms becoming prominent at younger ages (40s and 50s).

Later symptoms: difficulty learning and recalling new information, and progressive language disorder and trouble word finding. Short-term memory deficits leading to more evident memory loss and disorientation in later stages. Inability to name objects will progress to inability to recognize familiar objects and people (Barney, Emerita, & Perkinson, 2018). More information about Alzheimer's disease symptoms along with the stages associated with the progression can be found at <https://www.nia.nih.gov/health/alzheimers-disease-fact-sheet#stages>.

Dementia with Lewy Bodies (DLB): DLB is more common in males and accounts for 15% to 20% of all older adult dementia cases (Barney, Emerita, & Perkinson, 2018). Symptoms of DLB vary greatly from day to day. High-potency antipsychotic medications should be avoided as individuals with DLB are highly sensitive them.

Later symptoms: Loss of ability to create new memories, increased confusion for days at a time, changes in thinking and reasoning, visual hallucinations, delusions, slow walking/impaired balance, fluctuation between being *zoned out* and fully alert, sleep disturbances and feeling tired or lethargic during the day (even after getting enough sleep) are all common symptoms of DLB.

Vascular Dementia (VaD): The onset of vascular dementia is sudden, often associated with a stroke or evidence of an infarct. As many as 30% of stroke survivors have dementia 6 months after; having a stroke increases the risk of dementia by ninefold (Barney, Emerita, & Perkinson, 2018). Along with strokes, VaD is also caused by having small vessels.

Later symptoms: Slowing signs in mental process, impaired judgement, personality changes, confusion, difficulty concentrating, agitation, decreased language skills, urinary incontinence and visual disturbances. Parkinsonian symptoms such as restlessness, shuffled gait, and loss of postural reflexes are also commonly seen in those who have VaD.

Parkinson's Disease Dementia (PDD): Often occurs in a person who has already had a Parkinson's diagnosis for at least a year. Up to 80% of those with Parkinson's disease will develop PDD (Barney, Emerita, & Perkinson, 2018).

Later symptoms: Resting tremors, slowed movements, soft voice, rigidity/stiffness of arms and legs, masked facial expression, tiny handwriting, shuffled gait, and abnormal postural reflexes.

Frontotemporal Dementia (FTD): Second most common dementia in people under the age of 65. Typically, there are a lack of neurological signs and symptoms upon initial diagnosis. FTD is sometimes misdiagnosed for a psychiatric disorder (depression, bipolar, etc.) and corrected when symptoms including memory deficits, balance problems, and stiffness progress.

Later symptoms: Slow onset of behavioral and personality changes, lack of insight, lack of emotion, poor judgement, impolite behavior, loss of empathy for others, excessive weight gain, stubbornness, compulsive behaviors, pacing, substance abuse, and social misconduct.

Mixed Dementia: Mixed dementia is common.

Later symptoms: Presentation of simultaneous symptoms of AD and VaD, AD and DLB, AD and PDD, and VaD and DLB are possibilities.

Occupational Therapy Treatment Approaches

Although it is rare that cognitive performance improves, the person's function may improve when using adaptation or compensatory strategies.

<https://www.aota.org/AboutOccupationalTherapy/Professionals/PA/Facts/Dementia.aspx>.

Compensatory strategies may be used for individuals to learn specific methods and skills so they are able to compensate for areas there may be deficits. For example, if Mary who is in the pre-dementia stage of Alzheimer's Disease is having a hard time remembering the times of her appointments, compensatory strategies she may use could include making all her appointments at the same time of the day. Another compensatory strategy for Mary could be to use a calendar to keep track of her appointments where she could refer to her schedule as often as she needed. More compensatory strategies include:

<p>Appointments - Make appointments and plans at the same time of the day</p> 	<p>Keeping phone/wallet in the same place when not in use</p> 	<p>Make lists use sticky note reminders</p> 
<p>Keep a calendar</p> 	<p>Organize daily pills in a pill box</p> 	<p>Use of assistive technology</p> 

What Can I do to Help Maintain My Independence?

- Home Modifications

- Reduce Clutter

- Do you find yourself losing items all the time or feeling overwhelmed? Clutter around the house can cause many problems. It is important to stay organized and keep your home tidy. This can help you to locate items easier feel less overwhelmed.



Becoming less mobile often accompanies cognitive deficits as symptoms of Dementia progress. Other compensatory techniques could be use of adaptive equipment including:

Adaptive Equipment	Rationale	Price Range	Resource Link
<p>Bathroom Grab Bars</p> 	<p>This assistive device can provide support and stability for an individual who is confused or agitated with an unsteady gait. Maintaining balance during bathing by using grab bars with textured handles will greatly increase safety and decrease fall risks on slippery surfaces.</p>	<p>\$20.00 - \$150.00</p>	<p>https://www.healthproductsforyou.com/p-carex-textured-wall-grab-bars.html</p>
<p>Tub transfer bench</p> 	<p>Poor balance may be more prevalent in later stages of Dementia. Individuals need extra support to compensate for instability. A tub transfer bench will provide the additional support that is necessary during bathing.</p>	<p>\$30.00 – \$3,000.00</p>	<p>https://www.healthproductsforyou.com/p-lumex-imperial-collection-transfer-bench.html</p>
<p>Walker</p> 	<p>A walker can have a profound effect on stability for individuals with walking difficulties. Stiffness is a common symptom of this progressive disease making this assistive device medically necessary. A walker can act as a support for functional mobility while greatly increasing safety.</p>	<p>\$45.00 - \$500.00</p>	<p>https://www.healthproductsforyou.com/p-graham-field-lumex-two-button-adult-folding-steel-walker.html</p>
<p>Contrast tape</p> 	<p>Outlining edges of counters, steps, coffee tables, doorways, bathtub with contrast tape makes edges easier to distinguish. Without contrasts, the likelihood of falls and accidents are increased. Contrast tape is medically necessary to ensure safety of individuals with visual perceptual deficits with Dementia.</p>	<p>\$19.95 - \$75.00</p>	<p>https://www.maxiaids.com/low-vision-reflective-tape-black-and-yellow-striped</p>

● Mental Exercise

- There are many ways to exercise your brain. The following are good ways to keep your mind going and strong:
 - **Rehearse** new tasks over and over. The more you practice, the easier the task will be.
 - Practice **mindfulness**. Take one task at a time. This will help you to focus and complete one task before moving on to another.
 - Stick to a **routine**. Doing your morning activities in the same order will help you to remember each and every one. You will less likely miss a step the more you do it.
 - Engage with **family** members. Family will help you through difficult times and encourage you to keep going. Talking about old memories can also help keep your mind strong.
 - **Safety** is important. Make sure to talk about your safety with your family or caregivers. Have your family take out any items in the house that may cause you harm.

Helpful Resources

- www.amazon.com
 - Use this website to purchase items described above. Once you are on the website, click in the search bar and type in: Alexa, medication boxes, notebooks, etc. and hit enter.
- <https://ocfch.org/hand-in-hand/declutter/>
 - This website provides a great explanation and video on the best process of de-cluttering a home.

Resources

Online Tools – community resource finder: Local support groups, community programs and resources available can be navigated through this website. Programs and events, home care information, community services, housing options, and medical service based on your location can be found here: <https://www.communityresourcefinder.org/>

Helpline phone number: This is a free 24/7 helpline through Alzheimer’s Association that clinicians help in providing reliable information and confidential support for those who need assistance; for the individual with AD/dementia, family members, caregivers and the public. The helpline phone number is (800)272-3900.

Memory Loss Concerns: Guides for notetaking and directed conversations are provided for both caregivers/family members who have noticed changes in their loved ones and individuals who have noticed changes in themselves. These guides can be found on <https://www.alz.org/help-support/resources/memory-loss-concerns>.

Caregiving assistance: Topics including understanding Alzheimer’s and dementia, driving, doctors visits, financial planning, legal planning, and caregiver strategy program and effective communication strategies according to stage of dementia are provided. <https://www.alz.org/help-support/resources/care-training-resources>.

Further Professional Assistance

Dementia is a progressive disease and staying physically active has a big impact on the well-being of the individual experiencing dementia. Physical, occupational, recreational, and speech therapy could greatly assist an individual with dementia.

-**Physical therapy:** increase strength, endurance, and safety for the individual; making a daily exercise program and providing specialized care.

-**Occupational therapy:** help in assisting in ADLs (dressing, bathing, brushing teeth) and provide continuous support with compensatory strategies and adaptive equipment, including those listed above, to increase meaningful activities quality of life overall.

-**Recreational therapy:** provide leisure and recreational activities for the individual as well as assist in identifying leisure pursuits and hobbies to promote physical activity.

-**Speech pathology:** assist with any speech or swallowing issues as well as stimulate cognitive activities. As the disease progresses therapy could greatly benefit an individual with dementia.



Improving Occupational Engagement – Further Considerations

Common symptoms for all types of dementia are initially similar; short-term memory loss, decreased problem solving skills and decreased visual perceptual skills. Treatment approaches relating to compensatory strategies can be applied to all the initial symptoms. Making appointments and the same time, writing yourself reminders, and keeping a calendar are great compensation techniques for decreased short-term memory and can help decrease the effects of these symptoms on daily life. Reminders can influence attention, thought process, and help to orient the individual to the experience of self and time.

Organizing a pill box can promote consistency of daily routines as using it becomes a habit, while also providing memory compensation. Decluttering the living environment will ease difficulty with motor and process skills such as coordination, pace, and ambulation. Having clear walkways in the home will also increase safety and decrease fall risks. Assistive technology, such as electronic reminders and apps, can challenge perception and thought while also being a compensatory strategy for memory.

Lastly, during later stages of dementia adaptive equipment can help support physical deficits including joint stabilization, gait patterns, lack of visual function, and postural reactions. Medication use for dementia symptoms may also result in weakness. Adaptive equipment will usually be a later modification when other compensatory techniques can no longer be implemented. As the disease progresses more chronic physical and mental changes take place during later stages of dementia.

Age-related Changes Related to Dementia Affecting Occupational Performance

- *Reaction time*: Slower thinking process and body movements.
 - *Proprioception*: Potential postural instability and falls; changes in joint-position sense during movement.
 - *Balance*: Postural control is disturbed by changes in sensory, motor, and central nervous system function, and affected by a decrease in sensory cues and reflexes.
 - *Motor activity*: Posture, movement, gait, and reflexes are altered with aging.
 - *Sleep disturbance*: Changes in sleep patterns are commonly experienced to people over age 65, insomnia is the most frequent aging-related sleep complaint. Typical aging-related changes in the sleep cycle include lighter, more easily interrupted sleep, with more time spent in the lightest sleep stage and less time in deepest sleep. Comorbidities may affect sleep patterns, as may medications, smoking, or napping.
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