

Recognizing and Responding to  
Depression in Dementia

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## Abstract

One-third of people living with dementia also experience depression. Treating symptoms of depression may be a protective factor and reduce cognitive decline in dementia. People suffering from depression experience sad mood, reduced energy, poor concentration, loss of interest, diminished activity and they are at risk for death by suicide. Screening instruments include the Cornell Scale for Depression in Dementia (CSDD) and the Geriatric Depression Scale (GDS). Typical treatments include antidepressant medications, which may have limited efficacy; and Electroconvulsive Therapy (ECT), which may heighten memory loss. Psychotherapeutic approaches, including cognitive-behavioral therapy, interpersonal therapy and supportive counseling can be helpful. Lifestyle modifications addressing healthy diet, exercise and the inclusion of enjoyable activities can promote improved quality of life. Providing needed education and support to caregivers, who often experience depression, anxiety and sleep disorders themselves is critical. This paper provides health professionals with an overview of approaches for recognizing and responding to co-occurring dementia and depression.

## Introduction

Co-occurring dementia and depression, particularly in older adults, presents unique challenges for health care practitioners. Symptoms of dementia, such as deterioration in memory, thinking, behavior and the ability to perform everyday activities [1] can appear similar to symptoms of depression, which include sad mood, reduced energy, poor concentration, loss of interest and diminished activity [2]. Approximately 32% of people living with dementia are also likely to experience depression [3].

In the 2017 Draft Global Action Plan on the Public Health Response to Dementia, the World Health Organization (WHO) identified that preventing and managing depression may be a protective factor and reduce the risk of cognitive decline in dementia [4]. Existing research has focused on diagnosing depression in dementia and evaluating treatment with antidepressant medications. Most of this work has been directed to physicians. However, health professionals from a variety of different settings encounter people struggling to cope with co-occurring dementia and depression in their practice. Increasing understanding of depression among all members of health care teams can make an important difference in helping to prevent decline in dementia. Geared to a multidisciplinary audience, this article explains approaches for recognizing and responding to depression in dementia.

## Defining Dementia

Dementia, or neurocognitive disorder is a syndrome characterized by an acquired and observable decline in cognition in one or more cognitive domains such as learning and memory, language, executive function, complex attention, perceptual-motor, and social cognition [5]. As many as 36 million people currently live with dementia and this number is expected to double every 20 years [6]. 10% of people 65 years of age and older have dementia [7].

Many conditions are considered potential causes of dementia. These include Alzheimer's Disease (AD), Vascular Dementia (VaD) and Lewy body dementia. Alzheimer's disease is the most common form of dementia and accounts for almost 80% of cases of dementia [8]. Vascular dementia, a form of brain damage caused by impaired blood flow to the brain because of diseased blood vessels [9] is the second most common form of dementia and affects about 20% of the dementia population [10]. Although the true frequency of Lewy body dementia is unclear, this condition is increasingly becoming recognized as a common cause of dementia in older people [11]. In this article, the term dementia will refer to dementia caused by Alzheimer's disease. Unless otherwise specified, the information presented can be considered relevant to the care of people experiencing any form of dementia.

## Recognizing Depression

The decline in neurocognitive function and memory impairment that people with dementia experience reduces both their own quality of life and that of their caregivers [12]. Neuropsychiatric

symptoms, such as depression, also compromise quality of life and have even been related to faster progression of dementia symptoms [13]. 97% of people with dementia experience neuropsychiatric symptoms, and 29-47% of these are depression [14].

## Types of Depression

Differentiating among varied types of depression, or feelings of overwhelming sadness, is foundational to the process of recognizing depression in dementia. Major (clinical) depression; persistent depressive disorder (dysthymia); adjustment disorder with depressed mood; Seasonal Affective Disorder (SAD); and late life depression are five common types of depression. Major depression is characterized by either a depressed mood or a loss of interest or pleasure in daily activities that occurs consistently for at least a 2 week period [5]. This acute depressed mood signals a significant change from the person's normal mood; is in addition to a normal response to significant loss; and it negatively impacts social, occupational, educational and everyday functioning [5].

Persistent depressive disorder also involves depressed mood and loss of interest, but the symptoms are chronic, occur for more than 2 years and may not fully impair functioning [5]. People with persistent depressive disorder often also experience co-occurring bouts of major depression [15].

Adjustment disorder with depressed mood can occur at times when people are facing a change or new and stressful life event [5]. The life event can be positive, such as experiencing a marriage or a new baby in the family; or it can be negative such as experiencing an illness or moving to a care facility.

Seasonal affective disorder is related to variations in light exposure in different seasons and occurs most frequently in winter [5]. Symptoms include overeating, craving carbohydrates and sleeping too much or too little [16]. While these symptoms also occur in other types of depression, SAD is diagnosed when people have a consistent pattern of experiencing the same seasonal depression for several years.

Late-life depression frequently occurs when people experience age related physical illnesses such as arteriosclerosis [5]. Arteriosclerosis in the elderly may induce vascular neurocognitive disorder (vascular dementia) [5], which in many cases may explain the co-occurrence of late-life depression. Symptoms primarily impair executive functions, attention, information processing, psychomotor speed and working memory [5]. Chronic inflammation, hormonal, and immune issues can impact the integrity of frontostriatal circuits as well as the amygdala and the hippocampus, ultimately increasing the vulnerability to depression [17]. Older adults living with psychosocial stressors such as poor socioeconomic status, disability, and social isolation are particularly vulnerable to late-life depression [18]. In old age, depressive symptoms have an association with cognitive decline [19]. Associations between late-life depression and dementia, although not conclusive, are increasingly being questioned and investigated [20-23].

It is important to emphasize that suicidal ideation (thoughts of suicide) can be expected in any type of depression. The risk of suicide is significant in the elderly. For example, rates of death by suicide in men over age 70 are higher than in any other demographic

group worldwide [24]. People with dementia who are most at risk of suicide are male, receiving or have a history of receiving treatment for psychiatric symptoms and newly diagnosed with dementia [25]. Whenever health professionals determine that individuals in their care are experiencing depression, it is critical to question and report whether suicidal ideation is present.

Treatment approaches for the types of depression mentioned above differ. While time-limited support may be fitting for major depression, adjustment disorder and seasonal affective disorder, more long term approaches will likely be needed for persistent and late-life depressions. In this article, the term depression will refer to major, persistent and late-life depressions. Unless otherwise specified, the information presented can be considered relevant to the care of people experiencing any type of depression.

## Screening for Depression

An important first step in the process of recognizing depression in dementia is to remain aware that overwhelming sadness, loss of interest in activities once enjoyed and changes in eating and sleeping patterns are symptoms of depression and not part of normal aging. Another important step is to invite people with dementia to talk about their feelings, even when cognitive impairment is present. A further step is to document comments from family members which describe previous life experiences with depression. This documentation should include depressions people have experienced, how they coped and treatments that helped.

Screening tools also play a key role in recognizing depression in dementia. Valid rating scales are available to practitioners from different disciplines and these can be implemented with people who live in the community, in long term care facilities or are temporarily being treated in acute settings. Two scales that have been validated for use in the older adult population are the Cornell Scale for Depression in Dementia CSDD and the Geriatric Depression Scale GDS [26-27].

The Cornell Scale for Depression in Dementia, as the name implies, was designed specifically for use in dementia, includes interview information from both clients and their caregivers and can be completed in about 20 minutes [28]. Scores illustrate the severity of depression. A score of 0-7 indicates that few depressive symptoms are present; one of 8-10 indicates moderate depressive symptoms, and >10 indicates major depressive symptoms [28].

The Geriatric Depression Scale (15 item shortened version) is a self-report measure and can be used both with older adults who have or do not have symptoms of dementia [29]. Using a 'yes' or 'no' format, the scale can be completed in about 5 minutes and the cut-off score for depression is 6 points [29]. This scale is considered most effective for people with only mild cognitive impairment as internal consistency decreases in the later stages of dementia and when used with those experiencing moderate to severe dementia [30].

## Responding to Depression

### Pharmacological Approaches

Antidepressant medications are one important approach in the complex treatment of depression in dementia [31] and they may be helpful [32]. As many as 88% of people with co-occurring dementia and depression are treated with antidepressant medications

[33]. Selective Serotonin Reuptake Inhibitors (SSRI's) (e.g., citalopram, escitalopram, paroxetine, sertraline) are the first-line pharmacotherapy although mirtazapine, a Selective Norepinephrine Reuptake Inhibitor (SNRI) may be useful when insomnia is present [34]. Tricyclic antidepressants are usually avoided as they can cause anticholinergic effects which may further impair cognitive function in people with dementia [34].

Research indicates that evidence of antidepressant efficacy in the treatment of depression in people with dementia is inconclusive [35-37]. Studies have revealed that people with dementia who are on antidepressants have increased odds of further cognitive impairment [38]. Independent of depression, the antidepressant medications themselves have even been identified as a potential risk factor for dementia [39]. Discontinuing antidepressant treatment in people with co-occurring depression and dementia can lead to an increase in depressive and other neuropsychiatric symptoms [40]. In general, antidepressants are recommended mainly for individuals with depression where the symptoms are especially distressing and surpass the threshold for major depression [41].

### Non Pharmacological Approaches

Electroconvulsive Therapy (ECT), which involves the electrical stimulation of the brain with the intent of inducing seizures, is a viable treatment for depression, especially in urgent situations where an immediate treatment response is needed [42]. When symptoms of severe agitation are present in people living with dementia, electroconvulsive therapy has been found to reduce these symptoms [43]. However, the side effects of cognitive impairment and memory loss [42] must be taken into consideration when implementing electroconvulsive therapy with older adults who are already experiencing confusion.

### Psychotherapy

Moderate evidence suggests that psychotherapeutic approaches, such as Cognitive-Behavioral Therapy (CBT), interpersonal therapy and supportive counseling are effective for people living with co-occurring depression and dementia [44]. Cognitive behavioral therapy aims to challenge the distorted and negative ways people interpret situations and to support them towards finding new and more adaptive views [45]. Interpersonal Therapy (IPT), based on the premise that depression is related to interpersonal conflicts, provides people with techniques to explore and cope with grief, interpersonal conflicts, interpersonal deficits and role transitions [45]. Supportive counseling, also referred to a person-centered or non-directive therapy, uses principles of warmth, empathy and respect to help people explore issues that are important to them [45].

These psychological interventions have the potential to improve peoples' quality of life, cognition, activities of daily living and they may reduce caregiver burden [44]. Therapeutic strategies that have been used effectively in late-life depression without cognitive impairment, such as reminiscing, problem solving and instigating environmental changes [45] are not usually implemented in people with dementia.

### Lifestyle Modifications

Modifying patterns of diet, exercise and enjoyable activities may exert a positive influence on some symptoms of depression.

Recommendations for modifying dietary patterns include: following the Mediterranean diet; increasing consumption of fruits, vegetables, legumes, wholegrain cereals, nuts, and seeds; including a high consumption of foods rich in omega-3 polyunsaturated fatty acids; replacing unhealthy foods with wholesome nutritious foods; and limiting intake of processed-foods, 'fast' foods, commercial bakery goods, and sweets [46].

Exercise, especially activities that stimulate moderate cardio respiratory gains, such as 45 minutes of walking, running or swimming each day, can improve memory performance and reduce hippocampal atrophy in the brain [47-48]. Encouraging both people living with co-occurring depression and dementia and their caregivers to join exercise classes, walking groups and structured water exercise activities can help them maintain healthy exercise regimes.

Enjoyable activities, such as spending individual time with family or staff caregivers and 'walking and talking' in pleasant surroundings may improve mood [49]. Animal-assisted activities, such as petting and feeding dogs in sessions facilitated by dog handlers, have also been shown to have a positive effect on symptoms of depression and quality of life in older adults with dementia, especially those in a late stage [50]. Music care, for example, playing selected music with specific background melodies and rhythms, while inviting participants to move in time with the music, can bring much needed comfort [51-52]. Massages, usually provided in chairs rather than on massage tables, can help people feel less combative and restless [53].

### Caregiver Support

Education and ongoing support for caregivers is a critical element in the process of responding to depression in dementia. Caregivers can be spouses, family members, care facility staff, home support workers, volunteers and others who are interested in helping. While caregiver burden can be expected to be more severe in family members who are closest to those who are suffering, others involved in their care can experience distress as well. The burden of caregiving is amplified in situations where people are especially frail [54].

Anxiety, depression and sleeping problems are known to occur among caregivers of people living with co-occurring depression and dementia [55-57]. Caregivers can struggle with feeling incompetent, guilty, and overburdened [58]. They can also feel grief and an ambiguous sense of loss when people they care for are physically with them, but yet not usually mentally or emotionally present in the same way as before [59]. Providing needed resources and respite for caregivers can in turn help those in their care. Group activities, where caregivers can connect with like-minded others and ensuring that their time with service providers is not rushed may begin to ease the burden.

### Conclusion

Dementia, usually caused by Alzheimer's disease or vascular insufficiencies, is characterized by difficulty performing everyday activities and deterioration in memory, thinking and behavior. Depression, which is also characterized by difficulty performing everyday activities, co-occurs in at least one-third of people living with dementia. Depression causes overwhelming feelings of sadness, loss of interest in activities once enjoyed and changes in eating and sleeping patterns.

Depression can occur acutely as a major or clinical episode, as a seasonal affective disorder, or as an adjustment to a new situation. It can also occur chronically as a dysthymia or persistent depression that extends over several years. Most frequently, it presents as a late life depression possibly associated with inflammation, hormonal, and immune issues impacting the frontostriatal circuits, the amygdala and or the hippocampus. Cognitive decline is associated with late life depression, making it especially difficult to differentiate from dementia. Neither the symptoms of dementia nor those of depression are normal as people age. They are symptoms that significantly decrease the quality of life for both those who are afflicted and their caregivers.

Remaining vigilant in assessing for these symptoms and implementing screening instruments such as the Cornell Scale for Depression in Dementia (CSDD) and the Geriatric Depression Scale (GDS) are useful elements in the complex process of recognizing depression in dementia. Reports from family members or previous medical histories documenting any history of depression and treatment approaches that helped should be available to all those who provide care. When symptoms of any type of depression are observed, health professionals from all disciplines are expected to immediately assess and report any thoughts of suicide.

Responding to co-occurring depression and dementia is seldom straightforward. Typical pharmacological responses, such as selective serotonin reuptake inhibitors antidepressant medications, have limited efficacy despite their frequent use. Non pharmacological responses, such as electroconvulsive therapy, may increase the memory impairment already present in dementia. It is prudent to reserve the use of antidepressant medications for severely depressed people, and the use electroconvulsive therapy for those unable to find relief from their agitation through other means.

Psychotherapeutic approaches such as cognitive-behavioral therapy, interpersonal therapy and supportive counseling can be helpful. Lifestyle modifications addressing healthy diet patterns that replace processed items with wholesome nutritious foods; and maintaining exercise programs, particularly those that provide moderate stimulation to the cardiac and respiratory systems can also be helpful. Integrating enjoyable activities which provide opportunities for people to spend individual time with family or caregivers; to handle animals; to listen to and move with music; and to receive a massage all have the potential to improve quality of life.

Caregivers, who play an essential role in the lives of people living with depression in dementia, are likely to experience depression themselves. They also may be struggling to cope with anxieties, sleep disorders and caregiver burden. At times, they can experience feelings of incompetence, guilt, grief and an ambiguous sense of loss. Providing needed education and support is invaluable. Although caregivers are not formally identified as needing services from health care professionals, treatment of people with co-occurring dementia and depression is incomplete unless the needs of their caregivers are also addressed. All those who care for and about people living with dementia can contribute to the process of recognizing and responding to depression. This is both a challenge and an opportunity for health care professionals from all disciplines.

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