
Wide Awake in Assisted Living

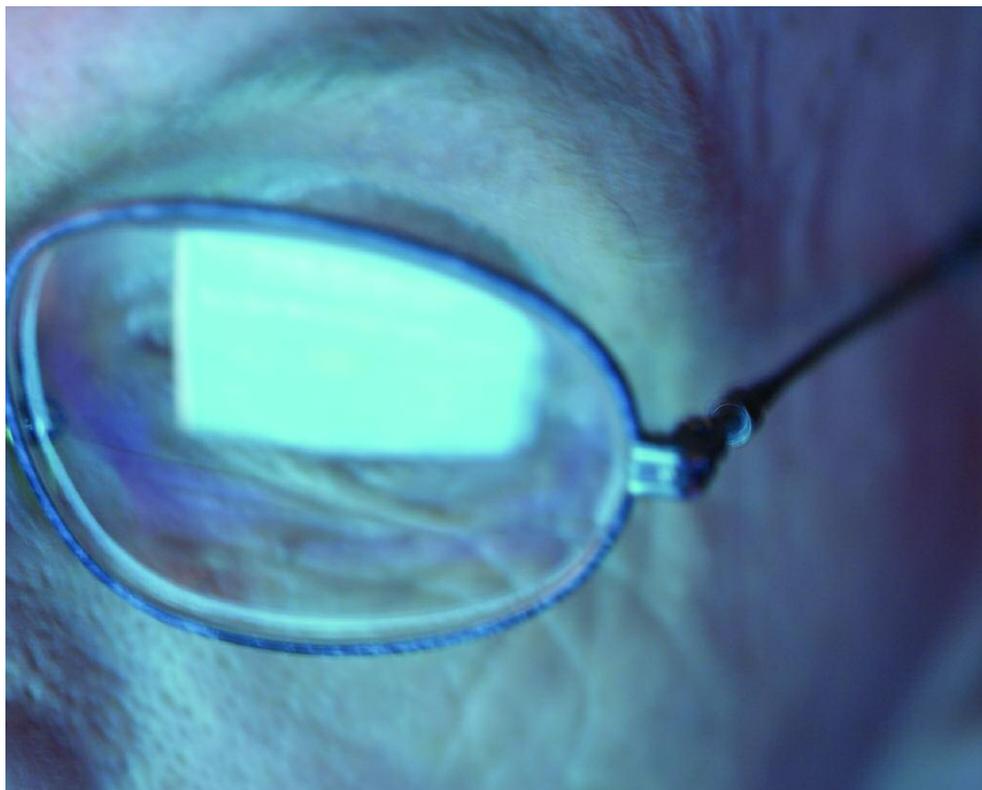
Philip Gehrman, Gina Diana, and Allison Impastato

People often spend much of their adult lives lamenting the fact that they don't get enough sleep. Either they are too busy or they are too stressed out—or both. Ironically, when people move to an assisted living facility and finally have more time and less stress, they find that they still have problems sleeping.

There are a number of factors that can impair sleep. If recognized and treated, many of these can be managed successfully. Practitioners working with assisted living facility residents need to know how to recognize and address sleep disorders in this population. The result will be that these residents not only will sleep better but also will enjoy the waking hours more.

Do We Need Less Sleep as We Age?

There are varying opinions about this issue. There is some evidence that older adults need just as much sleep as their younger counterparts. However, what is certain is that many seniors aren't getting enough sleep to feel rested during the day. On the whole, older adults report more trouble falling and staying asleep at night and greater difficulty with sleepiness during the day compared to younger individuals.¹ The sleep they do get is mostly in lighter stages of sleep and is not as restorative. They also spend more time napping during the day, which can be a reflection of both poor sleep at night and a lack of regular daytime activities.



Sleep Disorders and Aging

In addition to these general age-related changes in sleep, there are numerous sleep disorders that are commonly found in older adults. Effective treatments exist for each of these, so it is important to be able to recognize specific signs and symptoms of each condition.

Insomnia

The most prevalent sleep disorder in older adults is insomnia, defined as difficulty falling asleep or staying asleep that is associated with daytime consequences such as fatigue, irritability, and difficulty concentrating. The prevalence of insomnia in-

creases with age, such that 20% to 30% of older adults meet criteria for insomnia compared to 6%-10% of younger adults.^{1,2} Traditionally, insomnia has been considered to be purely a symptom of another condition such as medical and psychiatric disorders. It logically follows that the focus of treatment should be on the underlying condition. While such cases of *secondary insomnia* represent a large proportion of cases, it is now recognized that insomnia can occur as a *primary* disorder of its own that requires treatment.

When insomnia occurs concurrently with another condition, there

are some helpful alternatives. If there is a medical condition present such as arthritis, chronic obstructive pulmonary disease (COPD), or other various disorders, the pain associated with the condition may be the cause of insomnia. Treating these conditions as adequately as possible may lessen the insomnia.

It is important to note that any current medications for another disorder may interfere with a person's sleep. Medications such as beta-blockers, CNS stimulants, and decongestants are just a few of commonly prescribed drugs that may produce insomnia. Many older adults may be on multiple over-the-counter and prescription medications at any given time, so a review of the resident's medication regimen should be standard procedure any time an individual has problems sleeping—either sleeping too little or too much. At the same time, it is important to avoid medications with stimulating side-effects at night, as well as medications with sedative side effects during the day.

Insomnia frequently occurs as a symptom of depression and anxiety disorders in older adults. Pharmacologic or psychotherapeutic treatment of underlying psychiatric disorders should remain a priority. However, there is a growing recognition that insomnia co-occurring with mental illness frequently persists after successful treatment of the primary condition and merits targeted treatment.³

Treatment of insomnia traditionally has consisted of prescriptions of hypnotic or sedative medications such as benzodiazepines and sedating antidepressants. Unfortunately, residual daytime sleepiness and problems with motor control are common side effects that increase the risk of falls in older adults. Newer benzodiazepine agonists selective to particular portions of the receptor have been introduced. They have more optimal pharmacokinetic properties such as shorter half-lives that may make them safer

in this population, although long-term data on this remain scant.

Non-pharmacological strategies to treat insomnia have been shown to be efficacious in older adults.⁴ One element of these behavioral interventions is promotion of good sleep habits, also called sleep hygiene. Some rules of sleep hygiene include:

- Limiting naps
- Walking outdoors (increases exercise as well as light exposure if done during the day)

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- Using caution with medication and the times medications are taken
- Avoiding caffeine, alcohol and tobacco
- Limiting liquids at night
- Keeping a regular bedtime and wake time

Other components of behavioral interventions include education about normal age-related changes in sleep, training in relaxation exercises, and stimulus control. In stimulus control, the goal is to enhance the association between being in bed and sleeping. Individuals are instructed to avoid using the bed for watching television,

reading, or other waking activities. At night, if they cannot fall asleep within 15-20 minutes, they should get out of bed until they feel tired enough to fall asleep quickly. Following the instructions can re-establish a healthy association between the bed and sleep.

Circadian Rhythm Disorder

Virtually all physiological processes, including sleep and waking, follow predictable 24-hour, or *circadian*, rhythms. As one ages, circadian rhythms may start to become out of sync. A common complaint in the older adult population is feeling tired early in the evening and waking at early hours such as 4:00 a.m. This situation can be diagnosed as advanced sleep phase syndrome (ASPS) and is due to a shift in underlying circadian rhythms. When one tries to combat this situation by staying awake later at night, often times they will still wake extremely early in the morning and spend the rest of the day feeling sleepy.

ASPS can often be effectively treated using behavioral techniques. Bright light plays a large role in regulating circadian rhythms. Light exposure in the evening can delay circadian rhythms so that the drives for sleep and waking occur later in the evening and morning, respectively. It is recommended that older adults try to spend time outdoors towards the evening, as well as to avoid bright lights in the early morning which can move rhythms earlier in the day. Maintaining a regular sleep schedule also can help strengthen circadian rhythms.

Sleep Apnea

Sleep apnea is a sleep disorder that affects breathing during sleep. With this condition, there is a partial or complete obstruction of air flow such that the individual must awaken in order to resume breathing. This may arise due to respiratory neuron dysfunction (central apnea), airway collapse (obstructive apnea), or a combination of both (mixed

apnea). An overnight sleep study can be performed to determine the respiratory disturbance index (RDI) defined as the number of times per hour that airflow is restricted. An RDI greater than 10-15 events per hour is considered to be clinically significant.

Sleep apnea is much more common in older adults than younger generations. One study of adults over the age of 65 found that 62% had an RDI >10.⁵ Common symptoms of sleep apnea include snoring (often extremely loud) and excessive daytime sleepiness. Apnea also has been linked to attention and memory problems, hypertension, myocardial infarction and stroke.⁶

The most common and effective treatment for apnea is nasal positive airway pressure (PAP). PAP works by delivering pressure into the airway through a mask that is worn during the night. The air pressure acts as a splint to prevent the airway from collapsing. There are several variations of PAP that use either consistent or varying levels of pressure when inhaling and exhaling. Although these devices are very successful in treating sleep apnea, they often have very low compliance rates. This can be increased by providing complete usage instructions and by providing regular follow ups. If these devices are not successful in treating the disorder, another option is surgery that eliminates excess fatty tissue in the throat area in order to increase airflow.

Periodic Limb Movements in Sleep

Periodic limb movements in sleep (PLMS) is a sleep disorder characterized by leg kicks occurring during sleep about every 20 to 40 seconds. They cause momentary arousals that last between 0.5 and 5 seconds.⁷ The prevalence of PLMS is about 5% to 6% in younger adults, but increases with age; 45% of older adults may have this condition.⁸ Sleep in patients with this disorder is disturbed, which often

can lead to insomnia and daytime sleepiness. Individuals may be unaware of these leg kicks because arousal from sleep is brief, although bed partners often will report that they are awakened during night because they are kicked. The cause of PLMS is not fully understood, but it has been suggested that neurological motor control abnormalities are involved. Restless legs syndrome (RLS), characterized by a tingling sensation in the legs that can only be relieved with movement, often is comorbid with PLMS. These sensations occur when the individual is resting and, therefore, can interfere with falling asleep.

Natural light exposure, outdoor activities, physical activity, and increasing environmental structure may promote good sleep.

Treating PLMS and RLS involves medications to either reduce the frequency of leg kicks throughout the night or to prevent arousals due to leg kicks. Dopamine agonists have been found to be effective for reducing the frequency of leg kicks and the tingling sensations.

Dementia

Patients with dementing illnesses such as Alzheimer's disease and Parkinson's disease have been shown to have more difficulties with their sleep than someone of the same age without dementia. The most common symptoms that lead caregivers to place loved ones with dementia into skilled care facilities are frequent awakenings throughout the night, night wandering, wakefulness, and confusion.⁹ Because of the

unpredictable sleep behavior of dementia, distress is placed on caregivers who must monitor residents constantly to prevent wandering during daytime and nighttime hours.

Sleep studies have shown that frequent awakenings, decreased REM sleep, and reduced slow wave sleep are all common in dementia patients. Much of the night is spent awake, while the daytime is spent asleep.¹⁰ Management of disturbed sleep can be difficult because sedating medications can worsen symptoms of dementia.¹¹ Melatonin has been explored as a safer alternative, but results thus far have been disappointing. Non-pharmacologic interventions that have been shown to improve sleep quality include exposure to bright light¹² and increasing physical activity and environmental structure.¹³

Promoting a Healthy Sleep Environment

Treatment studies in patients with dementia highlight the importance of structuring the living environment in a way that promotes healthy sleep. Assisted living facilities can be designed to maximize natural light exposure for residents. In addition, regular outdoor activities (weather permitting) can be encouraged and built into structured programs where they exist. Regular physical activity and increasing environmental structure also may promote good sleep. Such strategies could serve both as a treatment for those with poor sleep and as a preventive measure in healthy sleepers.

Summary

The prevalence of most sleep disorders—including insomnia, sleep apnea and PLMS—increases with age and are prevalent in ALFs. However, these conditions can be treated with a combination of pharmacologic and behavioral interventions. So it is important to recognize pathologic factors that can disturb sleep for which treatments exist. It behooves both ALF staff

and practitioners to recognize when sleep disorders are present and to address these in a way that restores residents' ability to sleep well and maximizes their quality of life. ALC

Philip Gerhman, PhD, is Assistant Professor of Psychology in the Department of Social Sciences at the University of the Sciences in Philadelphia. Gina Diana and Allison Impastato are USP students.

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Plugging into Alzheimer's Disease

(continued from page 22)

symptoms, alternative treatment, monitoring, assessment, and more, providing information and associated tools. Residential care, insurance coverage, and coordinated care are also areas detailed in the "Health Professionals" content area.

Alzheimer's Foundation of America

www.alzfdn.org/index.shtml

This is another organization devoted to providing "optimal care and services to individuals confronting dementia, and to their caregivers and families—through member organizations dedicated to improving quality of life." Formed in 2002—and still growing—the Foundation comprises a consortium of interdisciplinary or-

Symptoms, Treatment, Research, Statistics, and Medicare issues. In many cases, associated links are included for further information. Several of the sections, such as "Education and Care," are fairly detailed, and include practical tips and strategies for providing effective care.

Two quality publications are also available through this site. *care AD-vantage*, published especially for the caregiving audience, contains pertinent, timely articles, addressing a gamut of issues. There is no charge to view current or past issues, and a free subscription is only a mouse click away. A second publication, the AFA Voices newsletter, also is available here and provides information about the Foundation and its activities, plus articles of interest to those involved in Alzheimer's and dementia care.

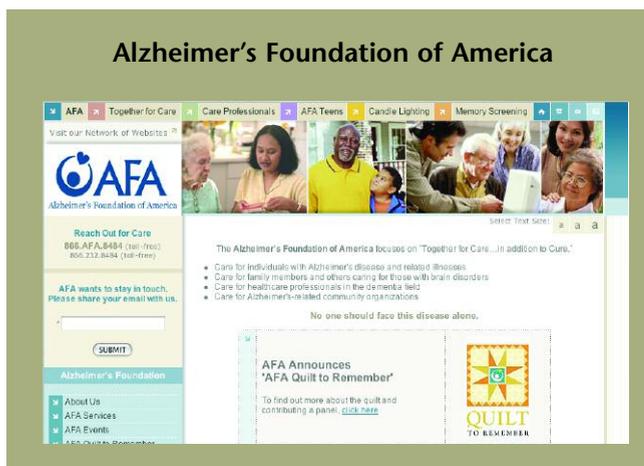
In order for busy clinicians, administrators, pharmacists and others to make wise use of limited time, easy access to timely, authoritative information is essential. A wealth of free information exists at their fingertips, and knowing how to navigate

the Internet provides background information to answer questions and critical evidence that can aid in decision making. ALC

Cynthia S. McClellan, MLS, is Coordinator of Access Services at the J.W. England Library and Assistant Professor, Information Science, at the University of the Sciences in Philadelphia.

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ganizations. With the unifying aim of improving patient care and quality of life for those afflicted, these groups collaborate across a wide range of issues and initiatives. A state-by-state directory of member organizations is available here; and it provides a convenient networking tool. Additionally, an e-mail newsletter containing current information on Alzheimer's, dementia, and related illnesses, as well as coverage of sponsored events and legal and Medicare-related issues, are offered.

Content on the Web site for non-members is organized under topical headings including Diagnosis,