

# SLEEP IN THE OLDER ADULT

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*Sonia Ancoli-Israel*

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*Michael V. Vitiello*

The sleep of an older adult is not necessarily disturbed or of poor quality. Many high-functioning older adults are satisfied with their sleep, even though it is of objectively poorer quality compared with younger adults. When the various factors that can disrupt sleep are screened out, optimally or successfully aging adults can expect to undergo little change in their sleep, relative to those in the early to middle adult life span, and not be likely to experience excessive daytime sleep and the concomitant need to nap regularly during the day. Nevertheless, even successfully aging older adults can expect on average to be earlier to bed and to rise and to be less tolerant of circadian phase shifts than younger similarly healthy adults.

### **Napping in Older Adults** **177**

*Jennifer L. Martin and Sonia Ancoli-Israel*

Research shows that napping and subjective daytime sleepiness are more common among older than among younger adults. This age-related increase in napping is likely caused by disruption in nighttime sleep, changes in circadian rhythms, lifestyle factors, and medical and psychiatric comorbidities. Some studies show that napping is associated with negative health outcomes, cognitive impairment, and increased mortality risk among older persons. Additional epidemiologic research is needed to describe more fully the timing and characteristics of daytime sleeping among older people, and further experimental research is needed to explore the mechanisms underlying the relationship between napping and health outcomes.

### **Circadian Rhythm Alterations with Aging** **187**

*Erik Naylor and Phyllis C. Zee*

This article discusses the current knowledge and theory underlying circadian changes with age and their possible contribution to decreased sleep quality in this population. Sleep disturbances show higher prevalence with advanced age. Age-related circadian changes are seen at all levels; however, modifications in circadian rhythms alone do not

fully explain common age-related difficulties. It is likely that changes in both circadian and sleep homeostatic processes, or the interaction between the two, are responsible for the impaired sleep of older adults. Advances in understanding of the circadian system and its interactions with sleep have resulted in some promising treatment options.

**Sleep in Midlife Women**

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*Kathryn A. Lee*

For midlife women, sleep disturbance is a major complaint associated with menopausal transition. Sleep during the menopausal years was reviewed using a biopsychosocial framework; cross-sectional and longitudinal study findings are compared. Biologic factors associated with sleep disturbance include diet and body mass index, inactivity, ovarian hormonal changes, and temperature fluctuations associated with hot flashes and night sweats. Psychologic factors include anxiety and depression. Sociocultural factors include race and ethnicity; income and education; and multiple role demands related to employment, relationships with family members, children leaving home, and caregiving for young children and elderly parents.

**Sleep and Cognition in Older Adults**

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*Amanda Schurle Bruce and Mark S. Aloia*

There has long been interest in the relationship between sleep and cognitive functioning. The literature demonstrating a negative effect of sleep abnormalities on cognitive functioning has developed rapidly over the past decade. This article addresses questions designed to summarize the existing literature and to theorize about the mechanisms behind the findings and their implications for future research. Addressed are questions of specificity, including which aspects of cognition are most affected by different types of sleep changes in the elderly. Also explored is functionality, asking how sleep might interfere with functional abilities.

**Insomnia in the Elderly**

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*Kenneth L. Lichstein, Kristen C. Stone, Sidney D. Nau,  
Christina S. McCrae and Kristen L. Payne*

Compared with other age groups, insomnia is more prevalent and more severe among older adults. Insomnia can signal the presence of other sleep disorders and is a health risk factor for depression, anxiety, substance abuse, and suicide. This article comprehensively examines older adults with insomnia, emphasizing a behavioral sleep medicine perspective.

**Comorbidities: Psychiatric, Medical, Medications, and Substances**

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*Steven R. Barczi and Timothy M. Juergens*

As the field of medicine continues to advance, people are living longer with more comorbid medical and psychiatric conditions. This higher burden of illness and the numbers of medications used to treat these conditions plays an important role in the quality and quantity of sleep in older adults. In approaching sleep complaints in geriatric patients, it is essential that practitioners recognize the multidimensional mechanisms by which illness impacts sleep. Equally important, a balanced management approach that includes optimizing the underlying illness, adjusting medications, using cognitive-behavioral approaches, and using judicious hypnotic therapy seems justified based on the current evidence.

**Sleep-Related Breathing Disorders in the Elderly** 247*Katie L. Stone and Susan Redline*

Sleep disordered breathing (SDB) is common in older adults. Clinical features include snoring and excessive daytime sleepiness. SDB is associated with increased morbidity and mortality, in particular increased risk of cardiovascular and metabolic consequences, and cognitive impairment. There is some evidence that sequelae of SDB may be less strong in older adults as compared with their younger counterparts. Older adults who present with symptoms of SDB should be further evaluated and treatment options should be considered.

**Periodic Leg Movements in Sleep and Restless Legs Syndrome: Considerations in Geriatrics** 263*Donald L. Bliwise*

Both periodic leg movements in sleep (PLMS) and restless legs syndrome (RLS) are common conditions in elderly populations. This article reviews relevant knowledge regarding their prevalence and associated conditions, discusses technical considerations related to the polysomnographic characterization of PLMS in relation to age, evaluates possible manifestations of these conditions in dementia, and offers some brief perspectives on treatment considerations. Although PLMS does not approach 100% sensitivity and 100% specificity as a marker of RLS (specificity lags because many patients without RLS still demonstrate PLMS), both conditions show a high prevalence in the older adult.

**Sleep and Neurologic Problems in the Elderly** 273*Alon Y. Avidan*

Sleep changes dramatically with old age and even more dramatically with dementia. When encountering daytime sleepiness in an older patient with dementia or neurodegenerative disorders, it is crucial first to review the patient's medical history, psychiatric history, medications, underlying medical illnesses, and sleep-wake schedule pattern. Many sleep disorders are potentially reversible. A carefully thought out clinical decision-making process can greatly benefit the patient and family. Sleep problems of the elderly contribute heavily to the decision to institutionalize an elder and to the social and economic cost of institutional care and seem to do this largely by interfering with the sleep of caregivers.

**Sleep Disturbances in Nursing Home Patients** 293*Lavinia Fiorentino and Sonia Ancoli-Israel*

Sleep disturbances in nursing home patients are common, and often a consequence of multiple factors including primary sleep disorders, medical and psychiatric illnesses, concomitant drug use, circadian rhythm changes, and environmental factors. Sleep difficulties in nursing home patients may increase the risk of falls, affect the ability to concentrate and recall, and decrease the overall quality of life. Sleep difficulties are not an inevitable part of aging or of residing in an institutionalized setting. Sleep and circadian rhythm disorders can and should be treated in this population to avoid the burdensome health problems that they might cause or accentuate.

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