

NAMS PRACTICE PEARL

Screening Midlife Women for Sleep Problems: Why, How, and Who Should Get a Referral?

Released March 18, 2015

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Advancements in sleep medicine have been escalating ever since research began appearing in the 1950s. As with most early clinical trials, women were excluded from participation. Even if researchers included women or addressed sex differences by age, reproductive stage was seldom considered. Recently, there has been an exponential increase in research on sleep in midlife and older women. This Practice Pearl briefly reviews the importance of adequate sleep, clinical assessment for sleep disorders, and guidelines for practice.

Only recently have scientists clarified that adequate sleep is essential for healthy immune function, metabolic function, physical and cognitive functioning, and overall quality of life. Inadequate sleep includes getting fewer than 5 or 6 hours of sleep at night (short sleep duration), difficulty falling asleep (initiation insomnia), difficulty staying asleep (maintenance insomnia), and nonrestorative sleep or difficulty staying awake during the day (excessive daytime sleepiness). These measures can be subject to poor recall, so it is helpful to ascertain how often the sleep problem occurred in a typical week, what your patient thinks is causing it, and whether it has been a chronic problem. Her responses can be evaluated using the *International Classification of Sleep Disorders*¹ codes. Brief generic [clinical screening tools](#) are also available.²

Compared to men, women report worse sleep and take more sleep medication. In initial findings from the cross sectional survey in the Study of Women's Health Across the Nation, with more than 16,000 participants aged between 40 and 55 years, 37% reported difficulty with sleep.³ Women with surgical menopause have the highest prevalence of difficulty sleeping (48%), followed by late perimenopausal (45.4%) and premenopausal (30%) women.³ Large epidemiologic studies in Europe and the United States⁴ find that sleep problems are more prevalent in women than men, regardless of age. This discrepancy does not appear to be related to intake of caffeine or alcohol or the number of children in the home,⁵ and women who have a bed partner report better sleep than women who sleep alone.^{3,5} After adjusting for age and sex, poor sleep is associated with short sleep duration and obvious comorbidities including obstructive sleep apnea syndrome, obesity, restless legs syndrome, alcohol dependency, and bipolar, anxiety or major depression disorders.⁴ Less obvious are the significant associations

between excessive sleepiness and use of over-the-counter sleep medication, narcotic analgesics, antidepressants, and use of computers near bedtime or in the bed. In large cross-sectional studies, cause and effect cannot be determined, so it remains unclear whether higher use of sleep medication is not effective, whether the prevalence would be even higher without medication, or whether a medication actually helps one type of sleep problem but creates a different sleep complaint as an adverse effect or interaction with another medication.

Sleep medication. [Medications](#) are very effective for short-term situations of high stress or jet lag. However, with continuous use, they become less effective over time, and adverse effects continue. Meta-analyses conclude that hypnotics are not as effective as behavior interventions for chronic insomnia.⁶ Sudden discontinuation of these medications after months of use results in rebound restless nights. Slow discontinuation of sleep medication and other sedating drugs, such as alcohol, should be the clinical goal. This tapering process requires educating and encouraging the patient, offering alternative strategies, and reinforcing healthy behaviors such as smoking cessation, physical activity, and weight loss.

Women's self-report of sleep quality differs from objective sleep measures. Regardless of age or sex, there is a consistent discrepancy between self-report and objective measures with polysomnography or wrist actigraphy recordings. When midlife and older women are studied; self-report is typically worse than objective data, and estrogen therapy reduces sleep complaints but fails to change polysomnography sleep parameters. Furthermore, women who complain about sleep because of vasomotor symptoms do not differ from asymptomatic women on objective recordings; some women who report no symptoms are unaware of hot flashes during sleep recordings.⁷ Recent findings that sleep and vasomotor symptoms may be affected by the rate of change in hormone levels over time may in part explain these discrepancies.^{3,8}

Short sleep duration. Over repeated nights of short sleep duration, function deteriorates. Making up for lost sleep on weekends can create a cycle of initiation insomnia at the start of the next work week. Women also need to know that some drugs and herbal remedies interfere with sleep, and although drinking alcohol at bedtime can be sedating, it results in fragmented, restless sleep when the effects wear off.

Initiation insomnia. Women who complain about falling asleep (taking longer than 30 minutes on 3 or more nights a week) are best helped by behavior strategies that reduce arousal, stress, and anxiety. These patients are often not sleepy during the day but complain of fatigue. With research findings that sleep complaints are not related to multiple roles, number of children, or employment, advising women to reduce the stress in their lives is not as helpful as offering specific behavioral strategies for stress reduction at bedtime, eliminating stimulants such as caffeine and nicotine, and prioritizing sleep with good [sleep hygiene](#) and 7 hours in bed every night. If a woman does not want to eliminate caffeine, remember that stopping intake 4-6 h before bed will improve sleep and that even decaffeinated coffee can impair sleep.

Initiation insomnia in a woman demands 2 key assessments: 1) is she afraid to go to sleep because of history of intimate partner violence or other trauma?⁹ and 2) does she have restless legs? Restless legs syndrome is more prevalent in women, particularly in pregnancy and in chronic illness associated with anemia.¹⁰ It is distinguished from peripheral neuropathy by its circadian timing and by relief when standing and walking. Restless legs syndrome is diagnosed only from self-report of evening onset of sensations in the leg that cause an urge to move, so

sleep onset is delayed. It responds to therapies such as massage and warm baths or dopaminergic medication.

Assessing short sleep duration and initiation insomnia with a sleep diary. Because of potential discrepancies between self-report and objective monitoring, it is helpful to ask women with sleep complaints to self-monitor with a [diary](#) for two weeks. When they complete this diary, which can be an empowering intervention, they may gain important insight into their insomnia, and may be able to address it with behavioral interventions. Others will still require your professional expertise. It is then important to determine the type of sleep complaint because of differences in mechanisms and treatment options. Referral for a diagnostic overnight sleep study may not be useful for initiation insomnia, because sleep is often better in a different or controlled environment. If more intensive cognitive behavioral therapy is needed for insomnia, this service is often available from trained sleep clinic staff.

Maintenance insomnia, nonrestorative sleep, and excessive daytime sleepiness. A woman who says she falls asleep as soon as her head hits the pillow may not be aware that this symptom of chronic sleep deprivation is part of a continuum leading to potentially dangerous excessive daytime sleepiness. She may be in bed long enough to get adequate sleep but feels just as tired in the morning as when she went to bed. Sleep disorders increase with age, and she may not be aware of problems during sleep unless she awakens with an acidic taste (gastroesophageal reflux) or a choking sensation (sleep apnea). She may or may not have a bed partner who witnesses excessive limb movements, snoring, or apnea episodes. Asking her about snoring may not be as informative as clinical indicators of obesity, hypertension, and falling asleep in the clinic waiting room. Because of the dangers to herself and to society, any unexplained excessive daytime sleepiness requires referral to an accredited sleep disorders center for evaluation and treatment. Referral for a diagnostic sleep study can be lifesaving, as treatment with nasal continuous positive airway pressure (CPAP) is often very effective. One screening tool specifically for assessing the seriousness of sleep disordered breathing is the 8-item STOP-Bang; if three or more items are endorsed, then [referral to a sleep specialist](#) is warranted. Once sleep improves, regardless of the type of disorder, women will often have more energy for participation in exercise and weight-loss programs, feel less fatigued and irritable, and improve their overall quality of life as well as family and social relationships.

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Disclosures:

Dr. Lee and Dr. Anderson report no significant financial relationships.



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Made possible by donations to the NAMS Education & Research Fund.

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