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Practice Pearl

Sleep Disturbances in Midlife Women: Prevalence, Correlates, and Treatments

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Karen Jakubowski, PhD
(University of Pittsburgh School of Medicine)

Sleep disturbances, including fragmented and poor-quality sleep and clinical insomnia, are common in midlife women and may be attributed in part to the menopause transition. Sleep disturbances often co-occur with depressive and anxiety symptoms, vasomotor symptoms, substance use, trauma history, and relationship stressors during midlife. Chronic sleep disturbance is related to poorer health and productivity. Numerous pharmacologic and nonpharmacologic treatments exist for sleep disturbance, including evidence-based cognitive-behavioral sleep interventions. Clinicians should query midlife women about their sleep and provide support, resources, and connection to sleep specialists or sleep interventions to improve women's long-term health and well-being.

Midlife is a period in which women are particularly vulnerable to poor sleep, in part because of vasomotor symptoms (eg, hot flashes and night sweats; VMS), low estradiol, and effects of chronologic aging.^{1,2} Sleep disturbances broadly include short, fragmented, and poor-quality sleep and insomnia symptoms (ie, difficulty falling asleep, staying asleep, or waking earlier than planned, with inability to return to sleep). Approximately 40% to 69% of midlife women report sleep disturbances across the menopause transition.¹ Increased wake-after-sleep onset (WASO) is a cardinal feature of menopause-related sleep disturbance and has been related to VMS. Although a relatively smaller number of women (roughly 4-40%) meet criteria for insomnia disorder per the *Diagnostic and Statistical Manual of Mental Disorders* (ie, at least one insomnia symptom as noted that causes significant distress or affects daytime function ≥ 3 nights/wk for ≥ 3 mo), many women report distressing subclinical symptoms.

Some midlife women experience other clinical sleep disorders, including obstructive sleep apnea (OSA) and restless legs syndrome.¹⁻³ Women have increased risk for OSA during and after the menopause transition, partly related to hormone changes and weight gain. Obstructive sleep apnea can be difficult to detect in midlife women compared with men, because women's symptoms tend to be more subtle, and self-report measures are generally better at identifying men.³

Notably, sleep duration associated with menopause and VMS is not always shortened,⁴ and for some women, may improve over time. Results from the Study of Women's Health Across the Nation, a multisite, multiethnic observational study of women across the menopause transition, suggested that objectively assessed sleep disturbances tended to stabilize or improve for many women aged into their 60s, including longer sleep duration and fewer nighttime awakenings.⁵ However, self-reported sleep problems remained relatively consistent over this period, in part related to VMS, unemployment, and mood, highlighting the need to query sleep and psychosocial factors across midlife.

Vasomotor symptoms, psychosocial factors, and substance use are key considerations when assessing sleep disturbances. Accumulating evidence indicates that VMS may interfere with sleep, including WASO and difficulty returning to sleep.^{1,2} Even in women who do not report awakenings from VMS, objectively assessed VMS and sleep data indicate that VMS are indeed related to greater WASO.⁶ Moreover, psychological and behavioral responses to VMS-related sleep issues (eg, worrying about sleep loss and effects on next-day function, napping, going to bed too early, or staying in bed longer to extend sleep opportunity) can produce conditioned arousal to the bed or to sleep and maintain sleep problems even without VMS.⁷

Many midlife women experience change across work, relationships, and caregiving, which may affect sleep directly or indirectly via mood. Depressive and anxiety symptoms have well-studied bidirectional relationships with sleep disturbance. Less is known about the role of trauma and posttraumatic stress disorder (PTSD) symptoms. Epidemiologic data from the Nurses' Health Study II indicate that more than three-quarters of midlife women report at least one traumatic exposure over the life-course, including more than 40% who report sexual violence or intimate partner violence (IPV). In one sample of midlife women, childhood trauma and adult trauma exposure, respectively, were associated with clinically poor sleep continuity and quality over 5 years of midlife.⁸ Other results indicate that IPV (ie, physical, sexual, and/or psychologic violence from a current or former romantic or sexual partner) was related to clinically elevated insomnia symptoms in midlife women veterans.⁹ Women, relative to men, have greater risk of developing PTSD, insomnia, and nightmares after trauma exposure.¹⁰ Clinicians should implement a universal trauma-informed approach within comprehensive midlife healthcare, including sleep assessment.

Alcohol and cannabis use are associated with sleep disturbance, yet few studies focus on women. A review of sleep and alcohol in women reported that sleep disturbance during or after the menopause transition can increase women's risk of developing alcohol-use disorder.¹¹ In a large survey of midlife Canadian women who reported current cannabis use, more than 73% reported using cannabis to help with menopause-related sleep problems.¹² Over time, chronic alcohol and cannabis use may increase risk for adverse sleep, cardiovascular, and mental health outcomes. Screening women for sleep disturbances may help identify or even prevent problematic substance use.¹¹

Sleep disturbance in midlife can affect physical health, well-being, and productivity. Some reviews describe a range of adverse effects related to sleep disturbances, including cardiovascular disease risk, impaired cognition and alertness, poor mental health, and reduced quality of life.^{1,2} Moreover, new-onset sleep problems during midlife are associated with greater risk of

unemployment and lost productivity.¹ Thus, there is value in addressing sleep issues across midlife in order to prevent or reduce other ill effects on health and well-being.

Effective interventions are available for sleep disturbances during midlife. The pharmacologic treatment options for sleep disturbance in midlife women include novel therapeutics (eg, orexin antagonists), nutraceutical use, and antidepressants.^{1,2} Some evidence supports modest benefit of hormone therapy (HT) for sleep, largely related to improvement in VMS.^{1,2,13} Prescription sleep medications (eg, benzodiazepines), most commonly prescribed by primary care practitioners, are generally not recommended for treatment of sleep disturbance in midlife women because of health risks and should only be used for short-term purposes under close management.^{1,2} Emerging research suggests that neurokinin-receptor antagonists (eg, elinzanetant) may be efficacious for VMS-linked sleep disruption.¹⁴ There is also value in treating depression, anxiety, pain, and other comorbidities that may negatively affect sleep.

Many midlife women are interested in nonpharmacologic interventions. Cognitive-behavioral therapy for insomnia (CBT-I) is a first-line treatment for insomnia disorder and as effective as sleep medications for treatment of insomnia in the general adult population.⁷ A systematic review suggests that CBT-I is effective in midlife women,¹⁵ including group- and telephone-based approaches, although research is needed in diverse samples of women. Evidence also supports mobile apps such as CBT-I Coach (developed by the US Department of Veterans Affairs). Critically, CBT-I may help with insomnia even in the context of VMS,¹⁴ further underscoring the relevance of CBT-I for midlife women.

Brief behavioral treatment for insomnia (BBTI) is an evidence-based intervention that involves the behavioral components of CBT-I but does not directly target cognition or mood. Brief behavioral treatment for insomnia is shorter than CBT-I (ie, 4-5 wk vs up to 8 wk) and can be delivered by health professionals without specialized training in cognitive therapy. Brief behavioral treatment for insomnia may expand access to sleep treatment, but rigorous studies in midlife women are warranted. Additionally, mindfulness-based therapies may be beneficial for midlife women, but evidence is limited.⁷

When warranted, women should be referred to sleep medicine specialists, although there is a widespread lack of these professionals in the United States. The Society of Behavioral Sleep Medicine and the American Academy of Sleep Medicine provide clinician directories and patient-friendly information on healthy sleep habits.

Pearls. Sleep disturbances are common in midlife. There are well-studied and effective psychosocial and behavioral treatments for poor sleep, even in women with VMS, including CBT-I, which may be administered in person or via telemedicine and app-based formats. Women are encouraged to discuss sleep concerns with their healthcare professionals to ensure optimal functioning during midlife. Addressing other psychosocial and behavioral risk factors and consequences of poor sleep, including depression, anxiety, trauma history, and substance use, can improve midlife health and decrease risk for persistent sleep issues and long-term effects on physical health and function.

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