

Sleep HealthCenters® Newsletter

David P. White, MD, Editor October 2005

Dear Colleague,

In this issue of the Sleep HealthCenters® Newsletter, we present menopause and sleep disturbance. Dr. Cindy Dorsey presents menopause and the hormonal, behavioral, physiological and social changes that can impact a woman's sleep. She also discusses treatment options for menopausal symptoms and a case study of a menopausal woman complaining of insomnia.

In the CEO Section, we introduce our new full service sleep medicine center in Beverly, MA, which will open in October 2005. We welcome two CPAP counselors, Paula Martineau, CRT, and Denise Sacco, CRT, as well as Michael D'Amore, Regional Business Development Manager. We also recognize Sleep HealthCenters® staff who hold positions at the national and local level in professional organizations.

If you have any questions about sleep disorders, our services, or our new location, please feel free to contact us.

Sincerely,

David P. White, MD
Corporate Medical Director
Sleep HealthCenters® LLC




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**1-877-SLEEPHC
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Menopause and Sleep Disturbance

By Cynthia M. Dorsey, PhD

Dr. Dorsey is the Clinical Director of the Sleep HealthCenters® affiliated with McLean Hospital. She is certified by the Massachusetts Board of Psychology and the American Board of Sleep Medicine. She is the Director of the Sleep Research Program and Associate Psychologist, Department of Psychology at McLean Hospital. She is Assistant Professor of Psychology, Department of Psychiatry, at Harvard Medical School. Dr. Dorsey was Executive Board Member of the American Sleep Disorders Association from 1996-1997, Publications Committee Chair, American Sleep Disorders Association from 1993-1996, and is on the Behavioral Sleep Medicine Committee, American Academy of Sleep Medicine (2000-present).




Between the ages of 45 and 55, most women will enter menopause, signaling the end of the reproductive cycle and the beginning of a series of hormonal, behavioral, physiological and social changes. Sleep disturbance is one of the hallmark symptoms of menopause and the peri- and post-menopausal periods. Women complain of difficulty falling asleep, less restorative sleep and/or daytime sleepiness during this life stage. The complaint of insomnia is often associated with mood changes and vasomotor symptoms. Depression is more common during this phase of life and has been attributed to the associated hormone changes, although the causal relationships between the vasomotor, mood, and sleep changes have not been clarified. Menopause and the post-menopausal period are associated with a higher risk of sleep-disordered breathing. The incidence of fibromyalgia also increases with menopause, resulting in awakenings and difficulty falling asleep due to pain. Poor sleep subsequently exacerbates pain. Clearly, careful assessment and treatment for sleep disorders and sleep-related symptoms are key components to successful management of the health problems associated with menopause.

Insomnia, Hot Flashes/Hot Flashes and Depression

The prevalence of self-reported sleep difficulty increases as women enter menopausal transition (Johnson, 1998; Kravitz et al., 2003; Shaver and Paulsen, 1993). According to a community survey, 23.6% of women between the ages of 45 and 49 years report not sleeping well versus 39.7% of women in their early 50's. Corresponding statistics in men are 14.4% and 15.3%, respectively (Kravitz et al., 2003). Estimates of complaints of insomnia range from 44% to 61% in peri- and post-menopausal women compared to 33% in pre-menopausal women (Brugge et al., 1989).

In addition to insomnia, symptoms of the peri- and post-menopausal syndrome include night sweats, emotional lability, depression, and vasomotor instability (hot flashes/hot flashes) (Hunter, 1992). The majority of peri-menopausal women (87%) have one or more menopausal symptoms including: insomnia (57.8%), joint pain (55.8%), night sweats (55.6%) and hot flashes (40.2%) (Goonartha et al., 1999). A "hot flash" is defined as a sensation of heat involving the whole body. A "hot flush" is defined as sudden vasodilation with a sensation of heat, usually involving the face and neck and upper part of the chest. Either can be preceded or followed by profuse sweating, though "night sweats" can also occur alone. Women with hot flashes report poorer sleep quality (Hollander, 2001). However, there is not consistent objective evidence to support a relationship between vasomotor symptoms and sleep disturbance. Some studies have shown disrupted sleep in menopausal women (Woodward and Freedman, 1994; Woodward and Freedman, 1995; Shaver, 1991), yet other studies indicate no difference in the number of awakenings, arousals or sleep architecture for women with vs. without hot flashes (Freedman 2004; Young 2003).

The discrepancy between subjective and objective complaints may be explained in part by mood disturbances. Mood disorders are associated with menopause (Freeman et al., 2004) and sleep disturbance often is associated with depression during menopause (Baker et al., 1997). Conversely, several large, carefully controlled studies have shown that individuals with insomnia are at significantly greater risk for the development of depression, anxiety and substance abuse disorders (Ford and Kamerow, 1989; Breslau et al., 1996). The respective roles that depression, anxiety, hot flashes and age play in the development of insomnia during menopause remain controversial. (continued on page 2)


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In this issue of the Sleep HealthCenters® Newsletter...

- ▶ Menopause and Sleep Disturbance
- ▶ CEO Corner:
 - October 2005, Sleep HealthCenters® opens new sleep medicine center in Beverly, MA
 - Sleep HealthCenters® welcomes new staff, Paula Martineau, CRT, CPAP Counselor; Denise Sacco, CRT, CPAP Counselor; and Michael D'Amore, Regional Business Development Manager
 - Sleep HealthCenters® staff is recognized at national and local levels
- ▶ Research Activities

Sleep HealthCenters® is a network of sleep medicine clinics and labs staffed by experts in the field of sleep medicine. Our integrated care system provides all the services needed to diagnose and treat patients with an entire array of sleep disorders including obstructive sleep apnea, insomnia, narcolepsy and restless legs syndrome. Sleep HealthCenters® has locations throughout eastern Massachusetts and is affiliated with the Brigham and Women's Hospital, Beth Israel Deaconess Medical Center, BWH/Faulkner Hospital, McLean Hospital and Hallmark Health.

Sleep HealthCenters® locations include Newton, Boston, Jamaica Plain, Bedford, Malden, Beverly and Weymouth.

For more information, please contact us at: 1-877-SLEEPHC (1-877-753-3742) or visit our website at www.sleephealth.com.

Referral forms are available on our website.

Sleep HealthCenters® Newsletter

(continued from page 1) To complicate matters further, insomnia and menopause may be related to the development of other sleep disorders.

Menopause and Sleep Disordered Breathing

The prevalence of obstructive sleep apnea increases post-menopausally (Young et al., 1997; Dancey et al., 2003). A loss of progesterone and a change in hypercapnic drive may contribute in part to the development of post-menopausal obstructive sleep apnea as may the weight gain associated with menopause. Women may complain of sleep disturbance at night without the complaint of daytime sleepiness typical of sleep apnea. Because sleep apnea may present atypically, it is necessary to consider the possibility of sleep-disordered breathing when evaluating sleep complaints coincident with menopause.

Menopause and Other Sleep Disorders

Restless legs syndrome is not directly related to menopause, but the prevalence of this sleep disorder increases with age (Phillips, 2004). Pre-existing restless legs syndrome may become more evident with the onset of menopause and/or more pronounced. Pre-existing insomnia may also worsen.

Menopause and Fibromyalgia

Fibromyalgia is a musculoskeletal pain disorder characterized by hypersensitivity to pain that occurs with a 7:1 female predominance and a typical onset at menopause (Menefee, 2000). It is characterized by poor sleep and can contribute to complaints of insomnia. Furthermore, sleep disturbance at night can exacerbate pain, resulting in an unfortunate cycle of increasing insomnia and chronic pain. Treatment of insomnia may improve fibromyalgia symptoms.

Treatment for Menopausal Symptoms

Hormone Replacement Therapy (HRT)

Studies such as the Women's Health Initiative (2002), which showed no long-term cardiovascular benefit to HRT and increased risk for breast cancer, have resulted in a significant reduction in use of HRT and a search by many women for other treatments for their menopause symptoms and sleep difficulties. Current recommendations are to use HRT in low doses and not for longer than the first five years following menopause (Writing Group for Women's Health Initiative Investigators, 2002). Low doses have been found to be effective in reducing vasomotor symptoms (Rebar et al., 2000).

Estrogen may have a direct effect on sleep quality and maintenance (Moe et al., 2001) and has been shown to improve sleep continuity (Soars et al., 2001; Polo-Kantola et al., 2001). The mechanism of this benefit is not well understood. Estrogen changes core body temperature during sleep (Freedman, 1996), may reduce sleep fragmentation and may have direct effects on mood. Estrogen also affects sleep disordered breathing. Women with sleep apnea have lower estrogen levels (Netzer et al., 2003) and estrogen replacement has been shown to improve sleep disordered breathing (Keefe et al., 1999; Manber et al., 2003).

Pharmacotherapy

Other agents have been found to improve menopausal symptoms to some extent (e.g., gabapentin, clonidine, SSRIs and other antidepressants, herbal therapies). These therapies have focused more on the treatment of vasomotor and mood symptoms, rather than sleep disturbances associated with menopause. Some of these agents (e.g., some of the SSRIs) may in fact worsen insomnia.

Assessment and Treatment for Sleep Disturbance Associated with Menopause

Critical to effective and appropriate treatment of sleep disturbances associated with menopause is a careful assessment. An extremely careful history must be taken in order to determine whether depression, fibromyalgia, insomnia or symptoms of other sleep disorders, such as obstructive sleep apnea or restless legs syndrome are present in the context of menopausal symptoms. Inquire about sleep habits, sleep schedule and cognitions related to sleep, both before and after menopause onset, to determine possible contribution of these factors to sleep disturbance. Patients should be referred for a sleep study if a disorder of sleep fragmentation is suspected. Follow-up treatment with CPAP for sleep apnea, medications for restless legs syndrome and periodic limb movements and cognitive behavior therapy for insomnia may be helpful. If depression and insomnia are both evident, use of a sedating antidepressant can be helpful. If a patient has been treated for depression and mood has improved but sleep has not, pharmacotherapy for sleep and/or cognitive behavior therapy for insomnia may be indicated. Referral to a sleep specialist can help to sort out the complexities of the relationships between mood, vasomotor symptoms and various possible sleep problems in peri- and post-menopausal women.

(AASM) and its Weymouth facility was approved for its initial accreditation by the AASM. Pursuit of accreditation for other facilities is underway.

We are happy to welcome the newest members of our clinical team, Denise Sacco, CRT and Paula Martineau, CRT. Both come with years of experience in both hospital and homecare therapy and will provide respiratory therapy services for those patients recommended for CPAP treatment. Ms. Sacco will see patients in our Malden facility and Ms. Martineau will see patients in our Newton facility. We are also delighted to welcome Michael D'Amore, Regional Business Development Manager, to our marketing and development team. Mr. D'Amore has business development and sales management experience in the healthcare field and will be educating our referring providers and their staff on our services and programs. If you would like Mr. D'Amore to visit your practice, please contact him at 781-340-3336.

Please contact us at 1-877-SLEEPHC (1-877-753-3742) if you are interested in taking a tour of our new facility or if you have any questions about the services we will be offering. We look forward to continuing to service your patients at our new Beverly facility, as well as our other sleep medicine centers.

MENOPAUSE AND INSOMNIA: A CASE STUDY

Ms. M is a 56 year old woman, who presented with a complaint of insomnia. She was waking up 5-7 times a night and often had difficulty returning to sleep. Hot flashes began with the onset of menopause approximately two years ago. She often has to throw the bed covers off and change bed clothes because they are wet from perspiration. After she returns to bed, she sometimes cannot return to sleep no matter how hard she tries. She usually lies in bed trying to think of something peaceful, but often ends up tossing and turning for an hour or more before she finally falls asleep and then sleeps only lightly until morning. She has come to dread going to bed at night. She feels tired and irritable during the day and attributes this to getting less sleep at night.

Her primary care doctor reassured her that sleep disturbance is an expected part of menopause and should resolve. However, her insomnia continued, she began to feel depressed and stopped going out of the house. She was diagnosed with depression and prescribed venlafaxine. Her mood improved but she still had multiple prolonged awakenings each night. At this point she was referred to the sleep clinic for evaluation.

A sleep diary revealed that most of her awakenings were not associated with hot flashes and her sleep schedule was more irregular than she'd thought. She was spending 10 hours in bed, but obtaining about 6.5 hours of sleep. The

patient denied daytime sleepiness or snoring, though her husband reported moderate snoring. She had gained 12 pounds since the onset of menopause. Ms. M had an overnight sleep study that showed mild sleep apnea. She was started on CPAP therapy.

She returned to the clinic three weeks later. She had adapted to using CPAP and was sleeping better and feeling more refreshed. The frequency of her awakenings was reduced. However, she still woke up once or twice per night and had difficulty returning to sleep. Sometimes she became anxious and fearful that she would not return to sleep. She would lie in bed, watching the clock, tossing and turning and becoming frustrated. She was afraid that if she didn't obtain enough sleep, she would not be able to baby-sit her grandchild and she would become severely physically ill. She was spending 8-9 hours in bed, of which about 2 hours were spent awake.

Cognitive behavioral therapy for insomnia was introduced at this point. This included several behavioral strategies, called stimulus control and sleep restriction, to improve the efficiency of sleep and break counterproductive associations that interfere with sleep. With sleep restriction, time in bed is limited until the person can sleep in a single block, then the amount of sleep time is increased. She was advised to limit time in bed to 6.5 hours, the amount of time she actually spent sleeping. To break the negative associations that

were interfering with sleep and to set a new sleep pattern, a stimulus control regimen was introduced. She was given a set sleep schedule to follow and was advised to keep her alarm set at the same time every morning. She was encouraged to get out of bed at her nocturnal awakenings, go to the family room and read or do her needlepoint, until she felt sleepy, at which time she should return to bed. She was told to turn the clock face away and not look at the time. Cognitive therapy was used to encourage her to focus on long term change of sleep habits rather than trying to sleep well on any given night. She was instructed to give up the notion of actively trying to sleep at all.

On her next visit she was sleeping much better, still awakening once or twice to use the bathroom, but returning to sleep immediately. She was adhering to the sleep schedule and complained only of feeling tired in the afternoon. Her sleep diary data reflected consolidated sleep within her 6.5 hours spent in bed. She was advised to increase time spent in bed by 15 minute increments every two nights, provided sleep remained consolidated, until she was waking up refreshed and feeling rested during the day. Two weeks later, the patient telephoned to say that she did not feel the need to come back. She was sleeping well, spending 7 hours and 15 minutes in bed, and feeling adequately rested during the day. She would call us if she needed to in the future.

Research Activities

Sleep HealthCenters® and their related research affiliations are actively recruiting patients for the following studies:

Apnea Positive Pressure Long-Term Efficacy Study (APPLES) A NIH-funded study examining the long-term effects on quality of life, neurocognitive function, sleepiness and mood of using Continuous Positive Airway Pressure (CPAP) to treat sleep apnea. The Sleep HealthCenters® affiliated with Brigham and Women's Hospital is recruiting patients age 18 or older who suspect they may have sleep apnea but have not been previously treated with CPAP or surgery. Subjects will be enrolled for six months (maximum of seven months) and will receive monetary compensation. *Study contact: Denise Clarke 617-527-3501 ext. 146.*

Heart Failure and Cheyne-Stokes Respiration A research study investigating a new mode of positive pressure therapy for the treatment of Cheyne-Stokes respiration during sleep. The Sleep HealthCenters® affiliated with Brigham and Women's Hospital is recruiting patients age 21-80 with congestive heart failure (LVEF < 40%). The study involves one home study and up to four overnight studies in our sleep lab. *Study contact: Mary MacDonald 617-527-3501 ext. 162.*

Restless Legs Syndrome A research study of a new drug is being tested (in the form of a patch) for Restless Legs Syndrome. The Sleep HealthCenters® affiliated with Brigham and Women's Hospital is recruiting individuals age 18-75 who suffer from Restless Legs Syndrome (achy, creepy-crawly sensations in the legs, which get worse at night). Males and females are eligible. Participation in this study requires 14 clinic visits over an eight-month period. There will be no overnight stays. Up to \$600 for participation. *Study contact: Erin Johnson 617-527-3501 ext. 115.*

Sleep HealthCenters® Recognizes Staff Involvement on National and Local Levels

Sleep HealthCenters® is proud to recognize the following individuals for their interest and dedication to the practice and promotion of sleep medicine:

David White, MD, is editor of the journal SLEEP, Chair of the Test Committee, American Board of Medical Specialties Board in Sleep Medicine and member of the NIH Respiratory Integrative Biology and Translational Research Study Section. **Lawrence Epstein, MD**, is president of the American Academy of Sleep Medicine (AASM), member of the Governing Council of the World Federation of Sleep Research and Sleep Medicine Societies and medical director of the Northern Essex Community College PSG Tech program. **John Winkelman, MD, PhD**, is chair of the Nosology Committee for the AASM. **Atul Malhotra, MD**, is director of the National Sleep Medicine Course for the AASM and member of the Central Advisory Committee for the AASM section on Sleep Disordered Breathing. **Steve Shea, PhD**, is vice chair of the research committee for the AASM. **Will Eckhardt, RPSGT, RRT**, is a director of the Association of Polysomnographic Technologists (APT), director of the New England Polysomnographic Society, member of the Technologists' Issues Committee for the AASM and a faculty member of the Northern Essex Community College PSG Tech program. **Elise Franko, MS, RPSGT**, is vice chair of the Standards and Guidelines Committee for the APT.



CEO Corner

Paul S. Valentine
President and Chief Executive Officer

We are pleased to announce that Sleep HealthCenters® is opening its seventh sleep medicine center in Beverly, Massachusetts, in October 2005. The new facility is located at 900 Cummings Center, Suite 112T, Beverly, MA, 01915. This new location is conveniently located off of route 128 and will be accessible to your patients living north of Boston.

The Beverly center will offer six quiet bedrooms with full-size beds and full private bathrooms, as well as four clinic rooms. It will provide comprehensive sleep medicine services including sleep diagnostics, clinician consults, treatment including CPAP, patient monitoring and education. In addition to managing our Bedford lab, Patricia Hughes, RPSGT, RRT, will manage the Beverly lab. Dr. Lawrence Epstein will be the medical director of the new facility.

Sleep HealthCenters® received notification recently that its Newton facility was reaccredited by the American Academy of Sleep Medicine