American Chronic Pain Association

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CHRONICLE

Putting Pain to Rest through Better Sleep

by Alison J. Conte, Editor, ACPA Chronicle

Getting a good night's sleep—so simple in theory—is an elusive goal for many people who live with chronic pain. About two-thirds of those experiencing chronic pain report poor or non-refreshing sleep, according to the National Sleep Foundation.

Pain and limited mobility can make it difficult to get comfortable, hindering attempts to relax and fall asleep. Pain can also produce a cycle of sleeplessness and trigger intense microarousals (changes in the sleep state to a lighter stage of sleep), which can lead to awakenings. As a result, people with pain often wake up tired and go through the day feeling foggy, inattentive, and exhausted. Some of them turn to sleep therapists for help.

Jeanne Melvin, MS (MFT), OTR/L, FAOTA, is director of Solutions for Wellness in Santa Monica, California. She has developed a behavioral, non-drug approach for treating chronic pain and sleep disorders, including fibromyalgia. She has been practicing for over 30 years. Melvin has been providing behavioral sleep medicine programs to the UCLA Sleep Medicine Program for eight years.

The Difference Between "Sleep" and "Restorative Sleep"

Melvin explained that research sleep labs have demonstrated that when sleep is disturbed, test subjects will experience "performance inefficiency" during their waking hours: slower response times, lower problem-solving skills, and poorer cognitive functioning. Other studies have demonstrated a significant decrease in immune function with a single night of disturbed sleep.

Research has also shown that chronic sleep deprivation increases the risk of weight gain by reducing leptin—a hormone which helps the brain sense when you're full—and increasing ghrelin—a hormone which triggers hunger. The less sleep you get, the lower your leptin levels and the higher your ghrelin.

Basically, sleep quality affects how we look, feel, think, eat, work, relate to others, and generally cope with life.

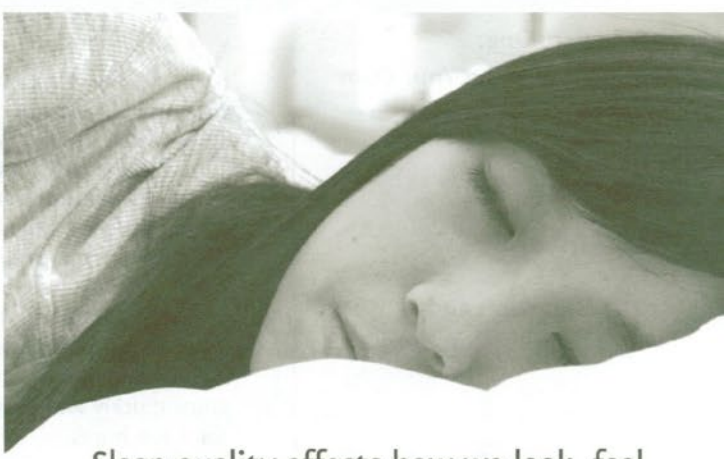
"Restorative sleep without medications is essential to good health," said Melvin. "And for everyone I treat with chronic pain, getting more restorative sleep has reduced their pain scores. During full, restful sleep of seven to eight hours, the human body undergoes muscle repair and consolidates memory. We know that deep sleep is essential for optimal functioning."

Melvin helps people adopt healthier behaviors and make lifestyles changes so they can achieve improved sleep, experience better moods, and suffer less pain. Her non-drug approach for management of both chronic pain and sleep disorders integrates behavioral sleep training, wellness education, biofeedback, cognitive-behavioral therapy, exercise, stress-management, and nutrition.

One of the program's core concepts is learning how to control the nervous system, known as neuro-cognitive self-regulation. Meditation, mindfulness training, and biofeedback training help teach people how to stop their minds from racing or worrying at night. It is an essential step to being able to let go of the day and focus on sleeping. "I guide them to healthy sleep, which I define as going to sleep when you want, returning to deep sleep if you wake during the night, and waking up feeling rested five mornings out of seven," she said.

When Pain Disrupts Sleep

"Sometimes when a person goes to a physician and is told, 'No wonder you are tired. You have lupus (or rheumatoid arthritis or fibromyalgia),' they assume the disease is the cause. They give up looking for solutions to their fatigue, pain, and/or sleep problems. "Even if you have rheumatoid arthritis, or fibromyalgia, or failed back surgery, if you are not sleeping well or waking rested without sleeping medications, improving your sleep behaviorally can lessen your pain and improve your quality of life," Melvin said.



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About 40 to 50 percent of people with fibromyalgia (FMS) have non-restorative sleep. They fall asleep easily, sleep through the night, and still wake up exhausted. "These people don't realize they have a sleep disorder. They think they are tired because they have FMS. When the people improve their sleep quality and start waking feeling rested, their pain and other FMS symptoms dramatically decrease," said Melvin. "Other factors can affect your energy level, too—poor nutrition, lack of exercise, depression, difficulty coping, and medications."

"It is very common for a person with severe chronic pain to tell me that they were sleeping fine before the injury or painful disorder and that the only reason they cannot sleep is because of their pain. They are amazed when they improve their sleep duration from three hours to seven hours a night through behavioral sleep techniques without changing their pain disorder or management," she said.

"Certainly pain, disability, depression, and poor sleep quality are intertwined," said Melvin. Although a painful disorder may have started all these problems, she explained, the sleep disorder can "uncouple" from this train of symptoms and become a separate perpetuating force that promotes pain sensitivity (central sensitization), depression, anxiety, irritability, impaired thinking, and fatigue.

"Two recent studies have demonstrated that insomnia can "uncouple" from major depression, even when the depression initially caused the insomnia. In these studies, behavioral treatment of the insomnia reduced the depression. Understanding this concept can encourage people with chronic pain to reexamine the role sleep is playing in promoting their pain, fatigue, moodiness, and irritability." she said.

But pain itself isn't always the sole culprit when it comes to sleep disruption. "You may have slept fine before your accident, but now you are on disability, not working, and worried about the future. You are angry about your injury, unable to do daily activities and sports, and anxious about caring for yourself or your family. All of these additional factors can disturb your sleep," Melvin said. The challenge is to cope with these stressors in a way that does not destroy your sleep and health.

Medications and Sleep

People who have a non-restorative sleep pattern—sleep all night, but wake up feeling tired—are generally not helped by sleeping pills such as Ambien (zolpidem) or Lunesta (eszopiclone), because these drugs don't allow one to reach the deeper stages of sleep.

"I have several people each month referred to me to help them get off of these medications because they are not feeling rested in the morning. Some medications, especially antidepressants like Trazodone, Elavil (amitriptyline) and Remeron, which are used to encourage sleep, can cause an obvious hangover affect in the morning, producing daytime fatigue and impaired thinking," she said.

"Sleeping pills are not correcting sleep disorders. They are knocking people out through a specific drug pathway, not utilizing normal sleep chemistry. Sleeping pills often mask sleep disorders, but do not correct them," Melvin said, adding, "They can be a good stepping stone to help someone in a crisis, but they are not a good long-term solution."

Medications taken for pain can disturb sleep and cause teeth grinding and jaw clenching at night. These include drugs such as morphine, hydrocodone (Vicodin), codeine, and antidepressants (especially serotonin and dual reuptake inhibitors e.g. Prozac, Zoloft, Paxil, Celexa, Effexor, Cymbalta). Steroid medications, even through inhalers, can cause insomnia. Antihistamines like Benadryl (diphenhydramine), and over-the-counter sleep aids can cause daytime fatigue and impair thinking. They are not recommended for older adults.

If pain is keeping you awake, Melvin suggests that a topical analgesic like Biofreeze®, Aspercream®, or Icy Cold® may help reduce it or distract you until you can fall asleep. They are worth trying even for deep nerve pain. Lidocaine or heat patches can also help a person with pain reduce his or her night time pain medications.

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Behavioral Sleep Medicine

Behavioral Sleep Medicine is a field that focuses on the evaluation and treatment of sleep disorders by addressing behavioral, psychological, and physiological factors that interfere with sleep. Most approaches in BSM do not involve medications.

The focus is on systematically introducing behavioral changes to improve sleep, known as cognitive-behavioral therapies (CBT). These have been scientifically proven and have a successful track record for treating a variety of sleep disorders, chronic pain, and mood disorders.

The behavioral aspect of CBT for sleep disorders focuses on eliminating habits, behaviors, and environmental disruptions that stand in the way of quality rest. A cognitive approach focuses on looking internally to examine, manage, or modify thoughts and beliefs that can interfere with sleep.

Insomnia and Other Sleep Disorders

Classic insomnia is defined as having difficulty falling asleep, staying asleep, or waking too early.

If you have trouble falling asleep for an hour or more but then get seven to eight hours of restorative sleep, you may have a circadian rhythm disorder caused by shift work or a pattern of late nights for work or homework. This results in a delay in the onset of the sleep phase of your biologic sleep clock.

Medications are not helpful for this problem. You need a sleep behavior therapist to learn how to reset the clock and slowly advance your sleep back to a more suitable time. This problem can also occur in reverse, falling asleep too early, say at 8 p.m., and waking at 4 a.m. Again, the treatment is not medications but learning how to delay the start of your sleep phase.

Sleep Apnea

Sleep apnea is a breathing disorder that obstructs the upper airway during sleep. This cuts off or reduces oxygen to the brain, which is very stressful to the body. Symptoms are snoring, poor concentration, loss of libido, tiredness upon waking, and daytime sleepiness. This stress can lead to health problems, obesity, diabetes, high blood pressure, and erectile dysfunction, as well as memory and concentration impairment.

There are no medications for improving sleep apnea, and many medications make apnea worse, including drugs for pain and anxiety, muscle relaxants, sleeping pills, alcohol, and antidepressants (anything that represses respiration). Caffeine and other stimulants, can also add to the problem.

Correcting sleep apnea can involve losing weight, if you are overweight, or sleeping on your side instead of the back. For some, surgery can be helpful. Continuous positive airway pressure (CPAP) devices can be worn at night to keep the airway open. The newer models are easier to use. If a person has both insomnia and sleep apnea it is possible to correct the insomnia with behavioral strategies and improve daytime functioning. Sleep apnea can cause awakenings but it generally does not cause insomnia.

Fibromyalgia Syndrome

Fibromyalgia is now generally accepted as a disorder of central sensitization, an imbalance of the neuro-chemistry of the brain and spinal cord that makes the entire body hypersensitive or irritable. Correcting the sleep disorder and improving restorative sleep is the most effective intervention for treating and reducing central sensitization.

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Nighttime Habits that Disturb Sleep

* Mind-racing and worrying in bed
* Taking vitamins, especially C and B in the evening—mineral supplements are okay at night, but all vitamins should be taken in the morning.
* Drinking acidic or citrus juices or teas before bed
* Taking SSRI or SSNRI anti-depressants at night
* Spending too much time in bed after waking up or before sleep
* Falling asleep with the TV/radio on
* Watching the clock during the night
* Tossing and turning in the bed during long awakenings
* Having a light (e.g. TV) on in the room or using a white light during the night (Use a red holiday bulb in a nightlight instead.)
* Children or pets with disruptive habits sleeping on or in the bed
* Bedroom disturbances during early morning sleep—sunlight, pets, spouses, or children

Even if your pain disorder initially caused your sleep problem, improving your level of restorative sleep is possible, leading to reduced pain and improving your ability to cope with daily activities. There are sleep centers, sleep medicine physicians, and behavioral medicine therapists across the country that can help.

Resources

* To find a behavioral sleep specialist in your area, see the Society for Behavioral Sleep Medicine (**www.behavioralsleep.org**), or call a sleep medicine clinic for a referral.
* The American Sleep Apnea Association (**http://sleepapnea.org**)
* National Institute of Neurological Disorders and Stroke, National Institutes of Health (**http://www.ninds.nih.gov/disorders/brain_basics/understanding_sleep.htm**)
* National Sleep Foundation (**http://sleepfoundation.org/**)
* Jeanne Melvin, MS (MFT), OTR/L, FAOTA, Solutions for Wellness, Behavioral Sleep, and Pain Management (**http://solutions-for-wellness.com**)
* American Academy of Sleep Medicine's patient education site: **www.sleepeducation.com** or **http://yoursleep.aasmnet.org.**