



Painful Sleep: Insomnia in Patients with Chronic Pain Syndrome and its Consequences

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Abstract

Insomnia is a chronic condition that occurs a minimum of three times per week over a period of three or more subsequent months. There are multiple causes of insomnia, and even though it is considered a symptom, it can be associated with chronic illnesses. Chronic pain syndrome, which is defined as pain that persists for a period longer than 3 months, is one of several etiologies of insomnia. The prevalence of insomnia among chronic pain patients is greater in comparison with the general population (percentage or ratio). Chronic pain is common in patients with rheumatoid arthritis, spinal pain (such as chronic back pain) and fibromyalgia. The prevalence of insomnia is also higher in cancer patients when compared to the general population. When the clinical history indicates a straightforward diagnosis of chronic pain syndrome, patients will complain of insomnia as part of their symptomatology. It is imperative to manage their underlying illness to alleviate their sleep disorder. Various medications may be used to relieve and even improve pain symptoms. Other than pharmacological interventions, non-pharmacological alternatives such as yoga, meditation, acupuncture, and psychotherapy can help improve the quality of life of these patients. The purpose of this article is to review the diagnosis and management of insomnia in chronic pain syndrome and its impact on the quality of life.

Keywords

chronic pain syndrome, insomnia, lifestyle impact, mental health, pain, sleep apnea, sleep disorder, somnolence

INTRODUCTION

The combination of sleep disturbances and pain disorders is considered one of the most devastating pathologies affecting the quality of life. Simultaneously with other sleep disorders, insomnia is one of the most frequently reported. Insomnia can be defined as difficulty in initiation and/or preservation of the sleeping process.¹ It is a chronic condi-

tion which presents in patients at least three times per week for three months or more.³ Patients with insomnia experience inadequate sleep quality, constant nocturnal disruption, and an inability to experience a restful sensation in the morning.² Insomnia is associated with multiple conditions, modification of physiological, physical, social, or environmental factors, that can severely affect the nature of sleep among individuals.^{4,5}

The prevalence of insomnia differs between groups sharing specific primary diagnoses. Data shows that insomnia is present in 6% of individuals and up to one-third of the general population.⁶ Among more specific groups of patients, data reports that insomnia impacts approximately 19% to 27% of people over 18 years of age.² Primary care physicians document that 10% to 36% of their patients present with complaints of insomnia.^{4,7} Furthermore, this sleep disturbance is present in 30% to 48% of the elderly population.⁸ This data acknowledges the prevalence of insomnia increasing with age, making advanced age an important risk factor for its development.

A variety of conditions can produce pain in one individual. Pain can occur as an acute episode, or manifest as a chronic presentation (duration of three or more months) of an illness. Pain commonly emerges as the direct result of an injury to the nervous or/and musculoskeletal systems, or from secondary damage from a disease process.⁹ Pain stimulus can travel to any region of the human body. Clinically, chronic pain can be divided in three categories: a) local pain, like a headache, b) regional pain, an example of orofacial pain, and c) widespread pain, such as polyarthritism or fibromyalgia.^{10,11} Analogous to insomnia, several factors may be considered in the evolution of chronic pain. Studies assert that females are at a higher risk for development of a chronic pain disorder compared to males.¹² In addition, elderly patients are more likely to experience chronic pain disorders, making advanced age a major risk factor. Other relevant factors include a family history of pain, chronic comorbidities and psychiatric disorders such as anxiety, depression and insomnia.¹³

The prevalence of chronic pain syndrome in the general public is of considerable scope and it continues to escalate, affecting 10% to 40% of the population.⁷ It is reported that 1.9 billion people are affected by tension-headaches, the most documented chronic pain presentation.¹⁴ Moreover, chronic pain is estimated to be reported in 25%-85% of the elderly worldwide¹⁵; 50% of independent older adults and 80% of elderly nursing home residents report chronic pain.¹⁶ Even though chronic pain is a common condition in elderly persons, it is not limited to this age group. Chronic pain presents in approximately 20.6% of the young population. It is largely characterized by headaches, abdominal and back pain¹⁷, and accounts for 30% of the population between 18 to 39 years of age affected with any type of chronic pain.¹⁸

Insomnia and chronic pain typically present as individual disorders, but it is normal to find them linked as a cause and effect and vice-versa. These disorders are directly and indirectly related.⁵ Patients who experience chronic pain frequently refer to insomnia as their primary sleep disorder.² Other studies have concluded that as insomnia increases in duration and severity, there is a likely direct increase in hyperalgesia intensity.^{2-4,6,7,11,13} More than 40% of patients with insomnia complain of chronic pain conditions.^{6,19,20} Around 50% of older adults experience these two conditions concomitantly.²¹ Inversely, patients with chronic pain disorders experience insomnia in 50 to 88%

of the cases in elderly and non-elderly population.^{3,6,7,13} Patients complaining of both chronic pain and insomnia are much more significantly impacted and limited in their daily activities in comparison with activities reported in patients without chronic pain and a prevalence of insomnia at 7.4%.¹¹ The literature supports that pain is attached to a sleep disturbance. Individuals who experience pain are likely to express complaints of insomnia, making these conditions appear part of a vicious cycle.

The combination of insomnia and chronic pain is associated with numerous negative outcomes. Subgroups with a history of insomnia and chronic pain report a substantial number of health problems, which can severely limit daily living and functionality. Their history, oftentimes, details medical and psychological comorbidities including cognitive impairment (memory and concentration problems), daytime fatigue, and weight gain. Other medical conditions such as cardiovascular disease and diabetes are reported. Mental disorders like anxiety, depression, and suicidal ideations^{2-4,6,13} are noted and profoundly affect the quality of life of individuals suffering from sleep and pain disorders. These conditions also create overwhelming personal economic costs. Moreover, they generate a critical economic strain on the healthcare system, which leads to health and social limitations.^{7,22}

One important challenge that clinicians experience is addressing the combination of insomnia and chronic pain as a single condition. The most common misconception for providers is not recognizing that these diseases usually are manifested as a symptom of one another. Consequently, insomnia and chronic pain often go unnoticed, which leads to a misdiagnosis and inadequate treatment. Understanding the complexity of insomnia and chronic pain disorder, acknowledging them as individual disease processes, reviewing their similarities and differences, as well as their associated consequences, will allow providers to target this problematic combination. This approach may prompt more effective medical management, and thus move towards restoring an improved quality of life for those affected by this condition.

Diagnosis

Etiology and correlation of both entities.

Dopaminergic and serotonergic pathways are cardinal for sleep regulation, circadian rhythm, analgesia, and pain modulation.²³ Sleep disturbances cause central sensitization (increased neuronal response to stimuli) and impair endogenous nociceptive-inhibitory function.^{24,25}

Insomnia commonly coexists with other medical conditions and most of the time there is an identifiable condition known to cause insomnia.²⁶ Studies have found that 41% of patients with insomnia, simultaneously have a history of health problems added to their sleep disturbance.^{27,28} People diagnosed with insomnia are 3 times more likely to have a history of painful physical conditions.²⁹

Chronic pain has many different etiologies. The most common are a history of trauma, spinal injuries, arthritis, and many other underlying diseases.³⁰ Palliative Care providers report pain as the leading cause of insomnia of their patients (60%), with 53%–90% relating the onset of insomnia with the onset of pain.^{25,31}

The relationship between chronic pain and insomnia is bi-directional, perpetuating a process cyclical in nature.³² Experimental studies show that sleep deprivation/disruption decreases thresholds of pain in individuals and causes somatic symptoms, mimicking fibromyalgia.³³ Insomnia courses with hyperarousal during sleep, and chronic pain may directly contribute to hyperarousal.^{34,35} Insomnia causes chronic pain patients to experience more severe pain of longer duration and worse physical impairment. Simultaneously, chronic pain causes insomnia patients to have a delayed sleep onset, frequent awakenings during the night, shorter sleep duration, and poor quality of sleep.³²

Clinical approach

There are four diagnostic criteria of insomnia according to the International Classification of Sleep Disorders³⁶:

- Difficulty initiating and maintaining sleep or waking up too early.
- Difficulties occur despite adequate circumstances for sleep.
- Daytime impairment attributable to sleep difficulties.
- The condition cannot be explained by another sleep disorder.

According to the Center for Disease Control and Prevention (CDC) guidelines, a pain that lasts more than 3 months or past the time of normal tissue healing is defined as chronic pain.

Clinical history of insomnia, documented sleep history, and comorbidities are key factors lending to the diagnosis.^{37,38} Therefore, it becomes crucial to obtain such clinical history. When evaluating all the important factors contributing to insomnia, clinicians must ask for all the valuable clues that may be predisposing, precipitating and/or perpetuating the cycle of sleep disturbance. Pain, anxiety, late night activities, consumption of substances like alcohol and/or caffeine, environmental changes, etc. are also characteristics evident in an individual with a history of insomnia.²⁶

Although routine physical examination may reveal medical problems contributing to insomnia, these features will often be normal even if the patient has a condition associated with insomnia.²⁶ However, a baseline physical exam complete with a neurologic exam will aid in the evaluation of a patient's progress, functional capacity, and other pain-related manifestations.³⁹

Several tools may be used for the assessment of insomnia, one of which is maintaining a sleep diary.³⁷ The diary should detail the number and duration of awakenings, bedtime, duration until sleep onset, nap times and lengths, and symptoms experienced throughout the day (i.e. fatigue,

sleepiness). If patients have variability between nights, they should complete a sleep diary for a longer period; up to 2 weeks. Several validated questionnaires are available for the evaluation of insomnia. The Pittsburgh Sleep Quality Index and the Sleep problems questionnaire is the most widely used.²⁶ This questionnaire may also be useful for patients with chronic pain to evaluate information collected about the sleeping disturbance.^{40,41}

Even though additional diagnostic studies are usually unnecessary – unless there is a suspected clinical comorbidity contributing to insomnia²⁶ – laboratory and imaging studies are helpful tools used to evaluate certain pain-related conditions. However, an abnormal test alone does not confirm a source of pain.³⁹

Polysomnography

Polysomnography is not appropriate in the diagnosis of insomnia, and it does not evaluate quality of sleep.⁴² Therefore, it is usually not a required test and is only indicated when other sleep disorders are suspected.⁴³ Its usage is currently documented as effective by some clinicians, especially when it comes to the workup of sleep disturbances, or for the purposes of research.

Workup of insomnia and chronic pain syndrome

Current research data is often poorly focused on quality sleep measures and specific pain conditions, thus limiting the practical meaning to the wider chronic pain patient population. A meta-analysis made by Mathias et al. included 22 polysomnographic studies and 15 sleep disorder studies. The results showed that the use of polysomnographic measures indicated that individuals with chronic pain experience disturbance in sleep continuity (sleep time, onset and efficiency, staying asleep), sleep architecture (increased NREM 1 or lighter sleep) and sleep fragmentation (more awakenings and movement-related disturbances, more stage shifts and respiratory-related events).⁴⁴ Hence, people with chronic pain are 16 times more likely to have a clinically diagnosed sleep disorder than healthy people. Complaints related to sleep are common in patients with fibromyalgia and other etiologies of chronic pain. An electroencephalogram (EEG) has shown an alpha-delta pattern and low amplitudes of an event-related potential (ERP) in patients being subjected to different stimuli.^{45,46}

Treatment of insomnia combines several approaches that must be tailored to the individual. Correcting the cause is crucial and attempting to relieve the underlying medical illness is fundamental in patients with chronic pain syndrome. Providing sufficient analgesia and reducing environmental disruptions may be helpful for symptom relief.⁴⁷

Practicing good sleep hygiene is a non-pharmacological recommendation as an initial intervention for all adults with insomnia. Personal habits and environmental factors

that affect the sleep pattern need to be identified and corrected. The effectiveness of sleep hygiene can be improved using methods such as exercising regularly, avoidance of large meals and fluid intake in the evening, limitation of caffeine, tobacco and alcohol 4-6 hours before bedtime, and using the bedroom only for sleep and sex. Maintaining a regular sleep cycle and avoiding daytime napping and negative bedtime stimulus (bright lights or loud noises) can be an effective therapy in comparison with a placebo.⁴⁸ The improvement of insomnia severity has shown significant improvement in patients with chronic fatigue due to chronic pain.⁴⁹

Complementary and integrative medicine could help to standardize medical treatments and enhance positive outcomes for patients with chronic diseases and mental health disorders. A study conducted by Hull et al. details the practice of acupuncture and yoga for military veterans, including recommended holistic approaches for patients with chronic pain, fatigue, sleep disturbances and anxiety. A total of 118 individuals used acupuncture and 186 practiced yoga as part of their intervention (iRest Yoga Nidra Clinic). Improved quality of sleep was reported in 44% of the subjects who used acupuncture for trouble sleeping, and 99% of those respondents would recommend acupuncture to another veteran. Also, sleep disturbance was somewhat improved at a rate of 64% in subjects who used yoga.⁵⁰ In addition, psychological treatments can be considered to enhance the sleep onset and improve the clinical pain, such as CBT. This therapy has been studied to help patients who are under the use of opioid medications. A recent study made by McCrae et al. suggested the addition of CBT-insomnia and CBT-pain to medication protocols to successfully reduce sleep and pain opioid medication use. However, future research is highly recommended by them.⁵¹

It is often difficult to manage these two conditions (insomnia and pain), but using pharmacologic and non-pharmacologic approaches can lead to successful therapy. Pharmacological approaches to treat insomnia need to be carefully selected, especially in patients with chronic pain who have a history of opioids use/abuse, antiepileptic drugs, and neuropathic and muscle relaxants. They can be split into hypnotic and psychotropic medications to induce and maintain sleep.⁵² Benzodiazepines are among the most commonly prescribed medications because they facilitate a sedative effect. However, its usage may be linked to a higher risk of developing Alzheimer's disease as seen in a case-control study by Billioti de Gage et al.⁵³

It is essential to address the pain symptoms of this population. It is also important to address the appropriate management of insomnia. Additional medications to consider are antidepressants with sedative properties like tricyclic antidepressants (doxepin, nortriptyline, amitriptyline, and the tetracyclic antidepressant mirtazapine), or the selective serotonin reuptake inhibitor, trazodone. Moreover, melatonin has an important role in sleep initiation. In supplement form, melatonin may be used at a low dose several hours before bedtime.⁵⁴

Furthermore, it has been suggested that more research on the circadian timing of treatments may be required to help decrease sleep disorders in some patients with chronic pain, including cancer patients undergoing chemotherapy or radiation therapy.⁵⁵ (See **Table 1**).

Impact on lifestyle and quality of health

Sleep quality has largely focused on analyses of subjective categorizations of poor sleep (i.e. shorter sleep duration, difficulty falling/staying asleep, etc.). The approach of administering validated psychometric sleep questionnaires is all too important in the evaluation of general characteristics of sleep quality. However, it may be worthwhile to determine whether there are appreciable socioeconomic disparities affecting favourable sleep quality. Is it possible for all who employ good sleep hygiene measures to achieve a good night's sleep?

Physiologic Determinants

Animal studies of exposure to postnatal sleep deprivation and stress have yielded important results of how we may acquire cognitive deficits, mental illness, and poor neurological development of oxidative-inflammatory responses to infection.⁵⁶ Endogenous melatonin counteracts the anticipated cognitive deficits from oxidative stress brought on by sleep deprivation.⁵⁷ The hypothalamic-pituitary-adrenal axis feedback loop is impressively disrupted during an acute sleep restricted state. The physiologic response of a sleep restricted person is an activated hypothalamic-pituitary-adrenal axis causing an uptick in release of feedback hormones such as ACTH, total cortisol, and free cortisol. The circadian rhythm is prompted to respond as it would in a state of wakefulness due to elevated levels of evening cortisol resulting in short-term difficulty sleeping.⁵⁸

Direct implications of insomnia and the sleep deprived state

Insomnia is directly correlated with cognitive impairment, immunocompromise, increased risk of cardiovascular disease, ineffective metabolism of glucose, mood, and speech disturbances (frontal cortex alterations in cognition), depressive symptoms, memory impairment, and other alterations in behaviour.⁵⁹ Emotional lability is strongly correlated with sleep deprivation, including within an acute setting of prolonged wakefulness. Facial expressions are often able to reveal the most important events of our circumstances, including in scenarios of stress and sleep deprivation.⁶⁰ In a study of Hispanic college students, high BMI and acute stress events led to poorer sleep outcomes and an increased risk of acute physical illness.⁶¹ Acute physical illness can develop into chronic illness, which means more time may be spent with doctors, and less time in the classroom setting.

It comes as no surprise that college students exhibit a high frequency of insomnia.⁶² The Pittsburgh Sleep Quality

Table 1. Alternatives of treatment for insomnia in chronic pain syndrome

Authors – year – reference	Title	Subjects by gender associated with insomnia	Mean age or min-max range	Procedures performed	Therapeutic outcome	Total of subjects
Kallestad H, Jacobsen HB, Landrø NI, Borchgrevink PC, Stiles TCl. 2014 ⁴⁹	The role of insomnia in the treatment of chronic fatigue	Mostly women (98 females, 24 males)	44	Rehabilitation program, multidisciplinary inpatient intervention with ACT as an overarching treatment model.	Improvement in insomnia severity had a significant impact on improvement in fatigue that was independent of improvements in pain, depression and anxiety.	122
Hull A, Reinhard M, et al. 2014 ⁵⁰	Acupuncture and Meditation for Military Veterans: First Steps of Quality Management and Future Program development	Mostly men; iRest Yoga Nidra sample (29 females and 157 males) and the Acupuncture sample (45 females and 73 males)	-	iRest Yoga Nidra and acupuncture sample, satisfaction questionnaires were administered and collected for data analysis.	Data suggest that the vast majority of sampled veterans who received acupuncture and iRest Yoga Nidra were satisfied with care quality, noticed symptom improvement, and would recommend these services to other veterans.	304
Pinheiro ES dos S, Queirós FC de, Montoya P, et al. 2016 ⁴⁶	Electroencephalographic Patterns in Chronic Pain: A Systematic Review of the Literature	Mostly women (75.3% of all studies)	Range of 19-63	EEG during sleep, recording protocol, findings.	Quantitative EEG can be a simple and objective tool for studying the mechanisms involved in chronic pain, identifying specific characteristics of chronic pain conditions and providing insights about appropriate therapeutic approaches.	570
Mathias JL, Cant ML, Burke ALJ. 2018 ⁴⁴	Sleep disturbances and sleep disorders in adults living with chronic pain: a meta-analysis (N studies 22)	Mostly women (4590 females, 2154 males)	Polysomnography with Chronic pain: 47.6. Polysomnography healthy controls: 45.1. Diagnosed sleep disorders with chronic pain: 49.4.	Three databases were searched (PubMed, Psych INFO, Embase; inception to June 2017) for case- controlled polysomnography studies and studies that reported the prevalence of diagnosed sleep disorders in adults with CP.	Indicate that individuals with Chronic pain experience significant sleep disturbances, particularly with respect to sleep initiation and maintenance.	6744
Lina Fine. 2015 ⁵²	Sleep: Important Considerations in Management of Pain	Mostly women	Range of 20 –80	A Survey using quick screening tool such as the STOP BANG questionnaire example: snoring (yes/no) tired (yes/no). Answering “yes” to more than 3 of these questions suggests a high risk of sleep apnea. Diagnostic criteria for RLS and underlying psychological factors, including pain. Pharmacologic approaches to treat the insomnia.	CBT alone was the most effective long-term treatment at 6-month follow up. Behavioral components focus on healthy sleep habits, there is evidence to suggest that both components are important for the management of insomnia.	18,980

Richard Berlin. 1984 ⁴⁷	Management of insomnia in hospitalized patients		This review is to present hospitalized patients and the common causes of acute insomnia as the environmental sleep disruption, medication, anxiety and depression. Special clinical problems include chronic pain and delirium in elderly.	Treatment should correct underlying medical disorders; reduce environmental sleep disruptions; and lower anxiety with psychological interventions, sedative or hypnotic medication and relaxation training.
Dikeos D, Georgantopoulos G. 2011 ⁵⁵	Medical comorbidity of sleep disorders	Mostly women associated with menopause and with the severity of the vasomotor symptoms that accompany it.	This review is to present and discuss the most important of these comorbidities, focus on medical comorbidities of insomnia, sleep-related limb movements (Restless legs syndrome [RLS] and Periodic leg movement syndrome [PLMS]) rapid eye movement (REM) sleep behavior disorder (RBD), and hypersomnia/excessive daytime sleepiness (EDS).	The comorbidity of sleep disorders and various medical conditions is quite frequent and its presence has a substantial negative impact on patient overall status and the health system resources. Chronic pain and diabetes, as well as various cardiovascular, respiratory, gastrointestinal, urinary and neurological disorders, coexist frequently with insomnia.
Maness D, Khan M. 2015 ⁴⁸	Nonpharmacologic Management of Chronic Insomnia	Mostly women (menopause and during late pregnancy, also in elder population)	Nonpharmacologic therapies include sleep hygiene, cognitive behavior therapy, relaxation therapy, multicomponent therapy, and paradoxical intention.	The effectiveness of sleep hygiene as a single therapy is unclear, but it is superior to placebo. Single therapies such as stimulus control therapy and sleep restriction therapy are as effective as multicomponent therapy. However, multicomponent therapy had higher remission rates and thus may be preferred over single component therapy.
James M. Parish. 2009 ⁴⁵	Sleep-Related Problems in Common Medical Conditions	Mostly women (more common on menopausal women and postmenopausal women)	Review literature on sleep-associated problems observed in common medical conditions	Sleep disorders occur in patients with common medical conditions as COPD, restrictive lung disease, GERD, CRD, fibromyalgia, menopause, HIV-related disease.
McCrae CS. 2020 ⁵¹	Effect of cognitive behavioural therapy on sleep and opioid medication use in adults with fibromyalgia and insomnia	Patients with fibromyalgia and insomnia, mostly women.	Clinical trial investigating the effectiveness of CBT-Insomnia and CBT-Pain in patients with fibromyalgia.	CBT-P led to immediate reductions in sleep medication usage, despite lack of explicit content regarding sleep medication. CBT-I and CBT-P may be ineffective as stand-alone treatments for altering opioid use in FMI.

ACT: acceptance and commitment therapy; CBT: cognitive behavior therapy; CDC: Center for Disease Control and Prevention; COPD: chronic obstructive pulmonary disease; CRD: chronic renal disease; GERD: gastroesophageal reflux disease; OSA: obstructive sleep apnea; RLS: restless legs syndrome

Index (PSQI) has been administered on several college campuses to highlight the potential risk of sleep disorders contributing to depression, anxiety, and stress. It has been shown that many individuals in this age group choose to self-medicate with cannabis products and/or alcohol.⁶³ This may worsen symptoms, including more frequent bouts of daytime sleepiness, inability to concentrate leading to poor academic performance, and ultimately, withdrawal from school.⁶² In addition, insomnia may make it difficult to hold a steady job. A prolonged state of wakefulness can be compared to significant incremental increases in blood-alcohol levels. Reduced hand-eye coordination, unstable movement and balance, wakefulness, sensory perception (i.e. visual hallucinations), and impaired judgement are all observed in sleep deprivation, much like a person in a state of drunken stupor.⁶³

Studies show that postmenopausal women are significantly more susceptible to osteoporosis. However, regardless of hormonal status and age, women and men may be especially at risk for intermittent osteoporotic and osteopenic states when sleep deprived. The Army conducted a research study of osteoclastic activity and bone resorption during acute sleep deprivation.⁶⁴ The study recruits were controlled for several environmental factors, including adherence to the ADA-recommended diet, recommended daily calcium intake, age, low-impact physical activities, use of OTC medications and normal sleep schedule prior to the study. Recruits who were evaluated for their physical fitness prior to taking part in the study were subjected to acute sleep restricted periods consisting of 2-hour nightly sleep intervals over 72-hours. Blood and urine were evaluated for serum cortisol (assessment of wakefulness and catabolic response), serum and urine calcium, and levels of hormones directly affecting bone metabolism. In peak physical fitness, acute and chronic sleep deprivation has detrimental effects on the body's ability to metabolize glucose, hormones, and reduces skeletal remodeling.

Socioeconomic determinants

A closer look at socioeconomic determinants may aid in the explanation of how specific populations are affected by acute and chronic exposure to sleep restrictions. Many studies have demonstrated that taking measures to improve sleep hygiene should result in better sleep quality. For example, removing specific types of light sources, including televisions, electronic devices, and other potential sleep disruptors (i.e. pets) from the room where sleep is achieved are likely to improve the environment conducive to sleeping. These modifiable factors might contribute to smaller, yet notable changes. Nevertheless, geographic location, family size, socioeconomic status, level of education, conditions affecting health, race, gender, age, noise pollution, medications, and other inorganic features can be less efficacious for accomplishing and/or maintaining good sleep quality. Few studies have tested sleep quality in varying racial and ethnic backgrounds. One such population-based study in Chicago

evaluated how 35 to 64-year-old patients self-reported and were clinically tested for reduced sleep quality in the absence of conditions such as Obstructive Sleep Apnea (OSA).⁶⁵ OSA was excluded so that a more specific look at whether environmental factors affecting the ability to achieve better quality sleep could be assessed. Adjusted for several modifiable and nonmodifiable factors, non-white study participants reported less time spent sleeping than whites.⁶⁵

This is supported by other studies, including adjusting for socioeconomic factors alone in which people identifying themselves as U.S.-born, non-whites and more likely to achieve less than 5 hours of sleep nightly. Lower household income, lower levels of education, access to healthcare insurance, and whether you reside in food desert significantly impact the duration of sleep.⁶⁶ It is probable that this combination of factors, including challenges in adaptability to U.S. culture, is likely to contribute to overall higher mortality risk.⁶⁶

CONCLUSIONS

Chronic pain syndrome and insomnia are frequently inter-related, and many would prefer to address these processes as a single entity. Patients who present with chronic pain often experience poor sleep quality. On the other hand, patients who report characteristics of insomnia have a low pain threshold and an increased duration of their pain. Providers should consider a combination of pharmacological and non-pharmacological therapy to appropriately manage these patients. Nevertheless, some patients may not be open or have physical limitations to attending acupuncture sessions or practicing yoga, although the outcomes of several studies have confirmed these treatment modalities to offer some benefit. Lastly, providers may need to approach these patients and assess their quality of life; ease their symptoms with more than exclusive pharmacologic intervention and cognitive behavioral therapy, and education based upon practicing good sleep hygiene.

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Болезненный сон: Бессонница у пациентов с хроническим болевым синдромом и его последствия

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Резюме

Бессонница – это хроническое заболевание, которое возникает не реже трёх раз в неделю в течение трёх или более месяцев подряд. Существует множество случаев бессонницы, и хотя она считается симптомом, она может быть связана с хроническими заболеваниями. Синдром хронической боли, который определяется как боль, длящаяся более 3 месяцев, является одной из нескольких этиологий бессонницы. Частота бессонницы у пациентов с хронической болью выше, чем в общей популяции (в процентах или соотношении). Хроническая боль часто встречается у пациентов с ревматоидным артритом, болью в спине (например, хроническая боль в спине) и фибромиалгией. Частота бессонницы также выше у онкологических больных, чем среди населения в целом. В случаях, когда в истории болезни поставлен чёткий диагноз хронического болевого синдрома, пациенты жалуются на бессонницу как на часть симптомов. Обязательно необходимо контролировать их основное заболевание, чтобы облегчить расстройство сна. Для облегчения и даже улучшения симптомов боли могут быть использованы различные лекарственные средства. В дополнение к фармакологическим вмешательствам, такие немедикаментозные альтернативы как йога, медитация, иглоукалывание и психотерапия, могут помочь улучшить качество жизни этих пациентов. Целью данной статьи является обзор диагностики и лечения бессонницы при хроническом болевом синдроме и её влияния на качество жизни.

Ключевые слова

синдром хронической боли, бессонница, влияние на образ жизни, психическое здоровье, боль, апноэ во сне, нарушение сна, сонливость