

Overview of the Non-Pharmacological Treatments for Sleep Disorders

Amina Khambalia, Ph.D. and Colin M. Shapiro, M.D.

This article discusses non-pharmacological interventions for sleep disorders. Recently, alternative forms of treatment are becoming more common and desirable in the medical community and society at large. With the continued effort to relieve suffering and eliminate the side effects and the dependence related to some pharmaceutical agents, it is important that we examine the literature concerning alternative treatments and identify the useful evidence. By acknowledging positive findings we can broaden the array of medical interventions and locate which areas require further attention and clinical investigation. (*Sleep and Hypnosis* 2001;3(3):117-119)

Key words: non-pharmacological, sleep, sleep disorder

INTRODUCTION

In striving to optimize medical treatments and patient quality of life, researchers and health care professionals have begun to explore the efficacy of alternative methods for managing medical conditions. Unconventional approaches for treating sleep disorders have received little attention in the past; an unfortunate fact that is gradually changing as an increased interest in behavioral strategies develop. Researchers have investigated many possibilities; Schwartz et al. (1) studied the effects of electrical stimulation to the soft palate on snoring and obstructive sleep apnea, and Guilleminault and colleagues (2) have analyzed the effect of electrical stimulation on obstructive sleep apnea. Non-pharmacological tactics for treating narcolepsy have dealt with structured sleep schedules, including nap regimens (3), dietary factors (4), and applying attention to the social and psychiatric aspects of the patient's life and environment (3). There are very few studies

that exist concerning alternative approaches to treating narcolepsy and sleep apnea, a plausible reason being that narcoleptic drug therapies have been effective in managing symptoms and enhancing patient's quality of life. Moreover, fixed continuous positive airway pressure (CPAP) (5) machines work well for sleep apnea patients by improving sleep quality, mood and quality of life.

In contrast, a significant amount of information can be found regarding non-pharmacological strategies for attending to insomnia. Conceivably, insomnia is a more frequently studied sleep disorder because it is one of the most common complaints heard by health care professionals (6,7) and the most common of all sleep disorders (8). Patients with insomnia also require alternative therapies to pharmacological treatments because they often suffer from psychiatric illnesses and because there is a growing concern over the negative side effects of hypnotic drugs (9). Recent studies have demonstrated that the traditional use of benzodiazepines (e.g. triazolam, temazepam) causes problems after chronic use (7). Kripke (9) reports a number of hazards, including performance, cognition and memory impairment, increase risk of auto accidents and unfavorable personality changes due to chronic use of hypnotics. Furthermore, it has been shown that long-term use of hypnotics may make sleep worse

From the University of Toronto, Toronto Western Hospital, Sleep and Alertness Clinic, Department of Psychiatry

Address reprint requests to: Amina Khambalia, Ph.D., University of Toronto, Toronto Western Hospital, Sleep and Alertness Clinic, Department of Psychiatry, Toronto Canada

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due to a physiological tolerance (9). Detrimental effects of biomedical agents include: psychological dependence and tolerance, poor sleep quality, decreased daytime functioning and "rebound insomnia" after withdrawal (7).

Two excellent literature reviews, which describe details of behavioral strategies and their application to patients with insomnia, are Morin and coworkers' 1999 articles: "Non-pharmacological treatment of late-life insomnia" and "Non-pharmacological treatment of chronic insomnia." Treatments include: stimulus control, progressive muscle relaxation, paradoxical intention, biofeedback, sleep restriction, multi-component cognitive behavioral therapy, sleep hygiene education, imagery training, and cognitive therapy (6,8,10,11). Although integrated behavioral and pharmacological treatments have not acquired great empirical attention, recent studies have shown their effectiveness in concomitantly improving subjective sleep reports, increasing patient control over sleep problems, and in reducing sleep medication, and withdrawal effects (12).

In addition to behavioral strategies, the practice of acupuncture is an emerging therapy, which has demonstrated to be a useful technique for ameliorating insomnia (13,14). Kayumov and coworkers (15) demonstrated significant improvements in sleep onset latency, stage 3 sleep and alpha scores in anxious patients who experienced insomnia. According to Dr. William Jarvis, executive director of the U.S. National Council Against Health Fraud, acupuncture is the "most recognized but least used of the nonconventional medical therapies," and is frequently employed in clinical trials attending to various conditions, such as pain relief and treating addictions (16). Expressing intense skepticism over the efficacy of acupuncture in clinical settings, Dr. Jarvis warns patients and physicians about the placebo effect and criticizes acupuncture as being "largely quackery."

Moreover, Dr. Jarvis states that beyond supported use in vomiting and nausea, only conflicting data exists concerning its effectiveness in other medical areas (16). Despite his claim that acupuncture is an illegitimate practice, Dr. Jarvis does not criticize physicians using acupuncture in combination with other therapies (16). Many studies have explored the efficacy of acupuncture in alliance with other treatments. For instance, acupuncture has proved effective

in combination with light therapy (17). Dating back to ancient Egypt, light therapy has made appearances in contemporary studies for its effectiveness in treating seasonal affective disorder (17). Recent findings have shown melatonin (hormone modulated by exposure to light and darkness) as an important component for treating jet lag, circadian rhythm disorders, and other sleeping problems (18). With the renaissance of alternative medicines and therapies, researchers and clinicians are expanding treatment resources. Alternative therapies promote a melange between eastern and western medicine and allow treatments to incorporate patient psychopathology and attend to drug sensitivity. However, these new strategies are often more time consuming for clinicians and usually do not present strong results as quickly as pharmacological agents. Integrated approaches that use both drug and behavioral techniques have been most commonly recommended. A need exists for non-pharmacological methods to be studied further to fully understand their role and mechanism of action. Many of these alternative strategies may prove useful in treating addictive patients in whom there are particular concerns vis-à-vis drug regimens. Lichstein et al (19) have studied the use of relaxation to assist in sleep medication withdrawal, while Greef and colleagues (20) have focused specifically on relaxation training in patients with insomnia who have chronic alcohol dependence problems.

The use of alternative methods for treating sleep disorders and sleep-related problems is a new and open field. Further studies on acupuncture, acupressure, and behavioral strategies are needed to clarify their impact and use in various patient populations. Other alternative methods apart from those mentioned here also exist and pose potential areas of interest for researchers and clinicians. These additional techniques include dietary regimens, and artistic therapies, involving drama, art and music. Mindful meditation is also a plausible treatment that has not received a great deal of attention other than a few articles relating to its preventive potential and use in reducing stress (21-23). With the convergence of advanced scientific knowledge and traditional therapies, these and other methods will hopefully develop from their present infancy to create new options and improvements in current medical treatments in sleep and sleep-related fields.

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