

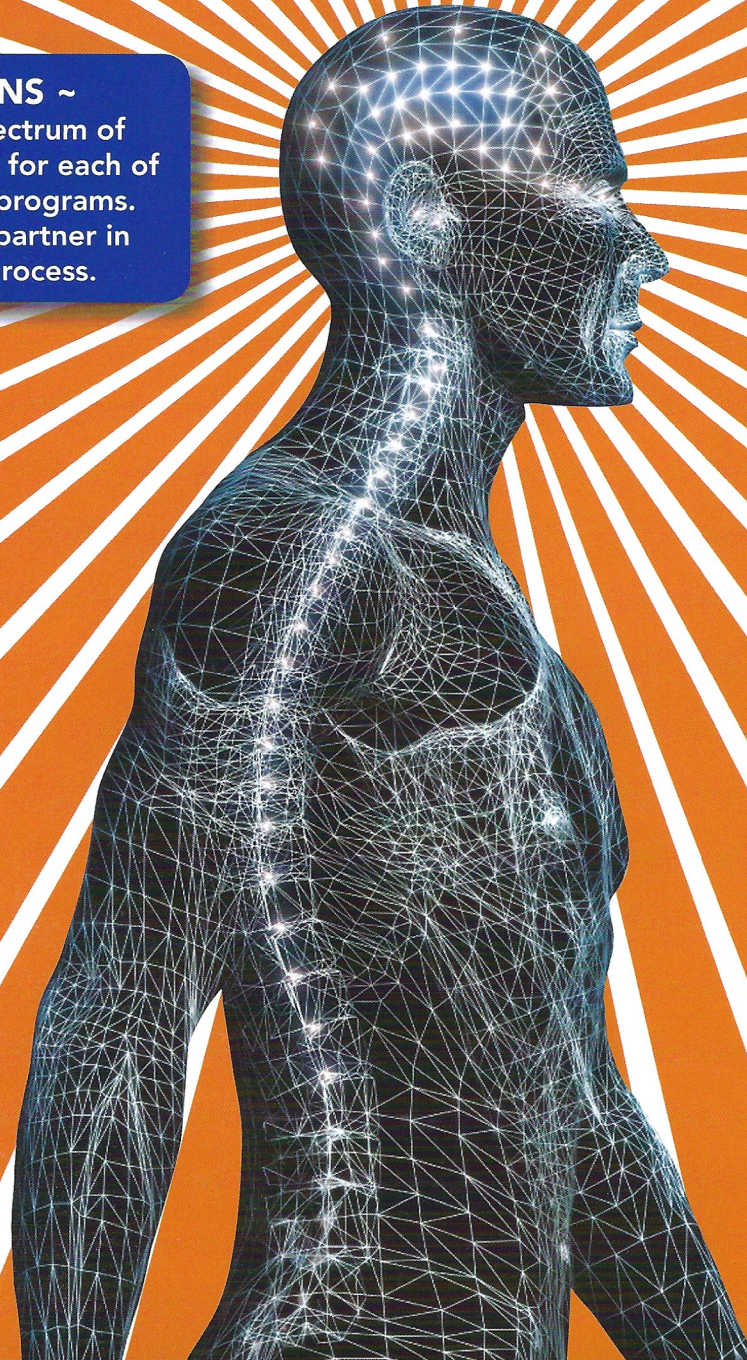
Neuroscience **Innovations**

A Case Study Compendium

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Cognitive Behavioral Therapy as a First Line Treatment for Chronic Insomnia

Introduction

With an estimated incidence of 15 percent in the general population, insomnia presents a serious and highly prevalent health condition that is known to significantly lower overall life satisfaction and can confer an increased risk of comorbidities such as depression, anxiety and substance abuse. Cognitive Behavioral Treatment for insomnia (CBT) is an effective first line treatment supported by both the American Academy of Sleep Medicine (Morgenthaler et al., 2006) and the National Institutes of Health (NIH, 2005). Cognitive Behavioral Therapy, its efficacy, role in treatment and rationale are reviewed briefly in this article.



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The Natural History of Chronic Insomnia

Most cases of insomnia begin with a temporary and identifiable precipitant. This can come in the form of job stress, a medical condition causing worry, discomfort, or pain or can be secondary to an existing or emerging mood or anxiety disorder. Whatever the initial cause, the critical issue to underscore is that an insomnia that occurs in response to a time limited stressor or in response to another medical or psychiatric disturbance may not remit with the resolution of the precipitating disorder or stressor. In fact, the insomnia can often long outlast the precipitant, if counterproductive sleep habits are allowed to develop.

Counterproductive Compensatory Behaviors and CBT Techniques

CBT incorporates a set of techniques, including familiar methods such as sleep hygiene, but with additional procedures that are designed to address the unique features and needs of each patient. Often, in response to the inability to sleep, patients will engage in compensatory behaviors such as spending too much time in bed awake "trying" to sleep under the mistaken impression that rest, in itself, can bestow the benefits of actual sleep. Rest in bed awake, while comforting and comfortable for some, is not the same as sleep and can serve, over time, to strongly associate the bedroom environment with wakefulness. Consistent with this observation, patients will often report falling asleep more easily while away from home or on the couch, but then becoming "suddenly awake" when entering the bedroom. Through a CBT technique called Stimulus Control (Bootzin, 1972), the patient can be helped to reassociate the bedroom environment with good sleep. Based upon conditioning principles, the primary aim of stimulus control is to have the bedroom stimulus evoke only a narrow range of responses – namely, relaxation and sleep. Any other activity such as reading, watching television, heated discussions and work are examples of stimulus

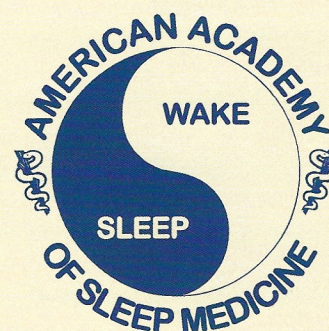
dyscontrol and only serve to uncouple the connection between the bedroom and sleep.

Another technique is sleep restriction (Speilman et al., 1987). This is a controlled form of sleep deprivation and is implemented by limiting the amount of time in bed to only the average amount of time actually slept. For example, if a patient reports, on average, sleeping only five of the eight hours spent in bed (62.5 percent sleep efficiency) then nighttime sleep opportunity is restricted to just those five hours. Under these conditions, patients will have, at bedtime, a significant increase in sleep pressure which will then lead to much shorter sleep latencies and a more consolidated pattern of sleep. As long as sleep efficiencies remain around the 85 to 90 percent range, patients can advance their time to bed by about 30 minutes every four to seven days. This periodic advancement continues until the patient arrives at one consolidated sleep period of roughly eight hours duration that is also associated with good daytime functioning.

Nighttime hyperarousal – both cognitive and physiologic – is another common complaint and can be reduced with various modes of relaxation training (e.g., diaphragmatic breathing, autogenic training). A common cause of this nighttime upswing in activation is worry about the perceived consequences of sleep loss. While there are certainly realistic daytime impairments associated with the loss of a good nights' sleep, patients with this kind of worry will often imagine and then focus upon the most catastrophic of events. This, of course, only serves to interfere with their ability to initiate and maintain sleep, further feeding the worry. CBT can help these patients form more realistic appraisals of the consequences of their sleep loss. A quite effective cognitive approach is to simply review the patients' inventory of perceived fears and then demonstrate how, in most cases, none of these have ever actually materialized.

Hypnotics Drugs Versus CBT

Certainly, hypnotics may be a good choice for transient episodes of insomnia. They are faster to implement as compared to behavioral strategies and may prevent



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a transient sleep problem from becoming a chronic condition. In particular the newer hypnotic formulations (e.g., Lunesta) can be quite useful as they act on the same benzodiazepine and gamma aminobutyric acid receptors (GABA_A) as their older counterparts, but have the advantage of providing more selective hypnotic properties, less pronounced changes in sleep architecture and a reduced risk of dependence. However, hypnotics are generally not recommended for long term use, and, although side effects are usually mild, they are not negligible. Moreover, patients often express the desire to address the underlying psychological processes which serve to drive their insomnia, as well as wanting to experience the sense of self-efficacy that comes from learning to improve sleep without medications. Another advantage to the CBT approach is that clinical improvements are quite durable post-treatment and can confer the possibility of normal sleep patterns for up to one year (Espie et al., 2001).

Closing Remarks

Insomnia is a common and complex disorder that merits early identification and proactive treatment to forestall the development of a chronic condition. CBT can provide needed relief for millions of insomnia sufferers and can be used effectively as a stand-alone treatment or as an adjunct to hypnotics. Because insomnia needs to be differentiated from and taken in context with medical, psychiatric and other sleep disorders, it is important to consult with a behavioral health provider who is a specialist in the assessment and treatment of sleep. A good first resource in finding such a practitioner would be to consult your local accredited sleep center or to visit the National Sleep Foundation website which maintains a directory of sleep centers and individual providers. Additionally, the website maintained by American Academy of Sleep Medicine provides a listing of those psychologists who are certified in the practice of behavioral sleep medicine.

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Psychologist**

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