



Published in final edited form as:

JAMA Intern Med. 2015 September ; 175(9): 1472–1473. doi:10.1001/jamainternmed.2015.3015.

Treating Insomnia Disorder in the Context of Medical and Psychiatric Comorbidities

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Insomnia is a common condition

It is estimated that approximately 30% of the population experiences some symptom of insomnia, and approximately 5% to 15% of these individuals are likely to meet criteria for an insomnia disorder.¹ Traditionally, insomnia was considered as either a primary disorder or secondary to another medical or psychiatric condition. During the past 2 decades, multiple lines of evidence have converged to support the proposition that insomnia, regardless of concurrent medical and/or psychiatric illness, is an independent disorder and should be treated accordingly.² Partially in response, insomnia is now formally classified in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) as a separate disorder, and the diagnosis of insomnia secondary to another condition was removed. Numerous studies have shown that targeted treatment for insomnia is effective in the context of other conditions. The success of cognitive behavioral therapy for insomnia (CBT-I) with secondary or comorbid insomnia strongly suggests that, although insomnia may be precipitated by psychiatric and/or medical illness, it is likely perpetuated by the same factors that are responsible for primary (chronic) insomnia.² The application of CBT-I in patients with comorbid insomnia also had one significant and unexpected outcome: treatment gains were evident for the so-called *parent disorder*. For example, CBT-I in patients with depression led to 29% lower depression ratings vs medication alone.³

Given that numerous studies have found that CBT-I produces significant treatment outcomes in insomnia comorbid with such disorders as depression, chronic pain, and cancer (and often with outcomes that equal or exceed the norms with uncomplicated insomnia), the time seems ripe to take stock of such findings within the framework of a proper meta-analysis. The investigation in this issue of *JAMA Internal Medicine* by Wu and colleagues⁴ does precisely this.

Cognitive-behavioral therapy for insomnia generally includes several components, such as sleep restriction therapy (aligning sleep opportunity with sleep ability to maximize sleep

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Conflict of Interest Disclosures: None reported.

efficiency), stimulus control therapy (maximizing the stimulus value of the bed and bedroom for sleep), sleep hygiene (alleviating obvious barriers to sleep), cognitive therapy (addressing nighttime ruminations, worries, and fears), and sometimes relaxation interventions (reducing physiologic arousal).⁵ Prior meta-analyses⁶ have shown that CBT-I is an efficacious treatment for reducing sleep latency, wake time after sleep onset, and early morning awakenings, as well as increasing sleep efficiency. Furthermore, comparative meta-analyses⁷ have shown that CBT-I performs at least as well as pharmacotherapy or even slightly better in the short term, with superior results in the long term. Based on these and other findings, CBT-I has been adopted as a recommended first-line treatment for insomnia by the American Academy of Sleep Medicine.

The study by Wu and colleagues⁴ examined available clinical trials that evaluated CBT-I for insomnia in the context of other conditions. Studies were found that examined insomnia treatment in the context of substance abuse, renal disease, chronic pain, cancer, depression, posttraumatic stress disorder, and other conditions. Overall, this study found that CBT-I was associated with an increased likelihood of remission from insomnia (odds ratio, 3.28; 95% CI, 2.30–4.68; $P < .001$). In addition, positive findings were seen for improvements in sleep efficiency and overall sleep quality. Positive findings were also seen for the comorbid condition in general, such that CBT-I improved noninsomnia outcomes as well. There was a significant interaction: effects on psychiatric comorbid conditions were more robust than were effects for nonpsychiatric comorbidities. The meta-analysis showed that not only was CBT-I effective in the face of comorbid conditions, but the effects were relatively large (although slightly smaller than might be seen in primary insomnia).

The study had a few limitations that suggest directions for future research. First, the meta-analysis focused on remission and did not summarize outcomes with respect to treatment response. Second, the study could have placed more focus on the benefits of CBT-I for the comorbid condition. As noted above, there are several studies in the literature showing that treatment of comorbid insomnia not only improves the insomnia but also improves severity and/or tolerance of symptoms of the comorbid condition (eg, produces treatment gains with pain, depression, posttraumatic stress disorder, and other conditions). Third, the meta-analysis included studies that variably evaluated each of the components of CBT-I. Accordingly, it may have been possible to compare which forms of CBT-I produced the most change (eg, CBT-I with and without sleep restriction). With enough studies conducted in the future, it may be possible to further assess which forms of CBT-I produce the most change for which specific disorders (eg, insomnia comorbid with depression, insomnia comorbid with chronic pain). Fourth, the meta-analysis could have addressed the effects on total sleep time more explicitly. In this meta-analysis by Wu et al,⁴ as in other CBT-I meta-analyses, effects on total sleep time were minimal. This outcome is not surprising but rather represents confusion regarding some aspects of CBT-I. Cognitive behavioral therapy for insomnia focuses on sleep latency and waking after sleep onset as targets for the intervention (collectively assessed as sleep efficiency). Gains in these areas are accomplished by reducing sleep opportunity (either directly with sleep restriction or indirectly with stimulus control) and thereby total sleep time. Thus, within the context of acute treatment with CBT-I, lack of gains with respect to total sleep time is not only

expected but speaks to the rigorousness of the prescribed intervention and the degree of patient adherence to treatment.

This meta-analysis demonstrates that CBT-I is an effective treatment for insomnia even in the context of potentially overshadowing medical and psychiatric conditions. Clinicians who provide treatment for patients with insomnia should consider CBT-I; even if the insomnia exists in the context of depression, pain, or some other condition, the therapy is likely to be helpful. Further research is needed to better understand (1) treatment response with CBT-I in comorbid insomnia; (2) what components of CBT-I work best for comorbid insomnia; (3) to what extent CBT-I has effects on severity of and tolerance for noninsomnia symptoms; (4) the role of insomnia treatment in other chronic health conditions, such as obesity and cardiometabolic disease⁸; and (5) the role of insomnia as an important indicator of health and functioning.

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