

Stimulus control combined with relaxation improved sleep in secondary insomnia

Lichstein KL, Wilson NM, Johnson CT. *Psychological treatment of secondary insomnia. Psychol Aging* 2000 Jun;15:232-40.

QUESTION: In older adults with secondary insomnia, how effective is a combined treatment consisting of stimulus control and relaxation in improving sleep?

Design

Randomised (allocation concealed*)†, unblinded,* controlled trial with 3 months of follow up.

Setting

Outpatient psychological services centre in Memphis, Tennessee, USA.

Patients

49 patients who were ≥58 years of age and had insomnia secondary to a psychiatric or medical condition. Inclusion criteria were concern about sleep, daytime impaired functioning, and disturbed sleep (taking >30 min to fall asleep, awake during night for ≥30 min, or early morning awakenings). Disturbed sleep had to occur >3 times per week for ≥6 months and mirror the onset and severity of the primary disease. Exclusion criteria were sleep medication, antidepressants taken at night, or other sleep disorders. 44 patients (90%) (mean age 68 y, 52% men) completed the study.

Intervention

Patients were allocated to a treatment group (n = 23) or a delayed treatment control group (n = 21). Treatment consisted of 4 weekly 1 hour sessions with a therapist involving sleep hygiene instructions (guidelines for preparing for sleep including avoiding caffeine after noon and alcohol, nicotine, and heavy meals within 2 hours of bedtime); stimulus control (instructions to follow for going to sleep and strategies if sleep is not forthcoming); and relaxation (deep breathing, focusing, and repeating an autogenic phrase). Control group patients were offered treatment after the 3 months of follow up.

Main outcome measures

Change in sleep measures using sleep diaries; clinical improvement measured by the sleep efficiency percentage; and daytime functioning assessed by the Insomnia Impact Scale, the Geriatric Depression Scale, and the State-Trait Anxiety Inventory.

Main results

Treatment group patients showed an improvement in sleep quality compared with control group patients at post-treatment and at follow up (p < 0.05). More treatment group patients than control group patients

had substantial to significant clinical improvement (p < 0.01) (table). The groups did not differ for change in measures of daytime functioning.

Conclusion

In older adults with secondary insomnia, a combined treatment of stimulus control and relaxation improved sleep.

*See glossary.

†Information provided by author.

COMMENTARY

Insomnia is a common complaint in clinical practice. Non-pharmacological interventions have been studied extensively in the treatment of primary insomnia, and the method of stimulus control has been documented as an effective treatment.¹ The study by Lichstein *et al* shows that a non-pharmacological intervention is effective for improving sleep in older patients with insomnia secondary to a medical or mental disorder. This particular regimen, a combination of sleep hygiene guidance, stimulus control, and relaxation, has a substantial and prolonged effect on the subjective quality of sleep. The evidence adds new knowledge to the field of sleep therapy.

The results are encouraging and should be of great interest to healthcare professionals. The treatment is short in duration, easy to give, and can also be given in group sessions. It may be a good alternative to prescriptions of sleeping pills in many patients. It may also benefit health promotion in the elderly for avoiding the build up of tolerance with sedative drugs and, subsequently, of drug induced insomnia.

Despite the benefit for sleep, the intervention did not decrease daytime sleepiness. A key aim in future studies of insomnia should be to improve sleep and daytime performance. Loss of sleep and tiredness are important safety issues for public health because they affect behaviour by reducing performance and increasing the likelihood of accidents. Furthermore, sleep deprivation may also compromise well-being in the long term.²

Insomnia is often a symptom of an underlying condition. Successful treatment of the primary disorder may lead to improvement in sleep but the results of this study suggest that a specific psychological treatment for secondary insomnia should also be considered.

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Stimulus control and relaxation (treatment) v control for secondary insomnia at 3 months‡

Outcomes	Treatment	Control	RBI (95% CI)	NNT (CI)
Clinical improvement	57%	19%	197 (25 to 677)	3 (2 to 12)

‡Clinical improvement = substantial to significant improvement in the sleep efficiency percentage. Other abbreviations defined in glossary; RBI, NNT, and CI calculated from data in article.