Trouble sleeping: spend less time in bed?

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Clinical question

Can sleep restriction therapy (SRT) improve outcomes in primary insomnia (not related to other conditions)?

Bottom line

Sleep restriction therapy improves time to fall asleep by 12 minutes and time asleep in bed by 5% to 10%. Sleep restriction improves sleep for 1 in every 2 to 6 patients compared with sleep hygiene advice alone.

Evidence

- Seven RCTs[1-7] of 20 to 179 patients (35% male, mean age 62) with follow-up of 4 to 24 weeks mostly compared SRT with sleep hygiene advice[2-4,6,7]; outcomes were mostly self-reported.
  -In 4 studies, SRT statistically significantly improved sleep efficiency (time asleep in bed) over controls (79% to 87% with SRT vs 68% to 79% with controls).
  -In 3 studies, SRT statistically significantly decreased sleep latency (delay getting to sleep) by 6 to 19 minutes over controls.
  -Other outcomes:
    —Time asleep was not statistically different from controls,[1,2,4] but was slightly lower with SRT at 8 weeks.[7]
    —Response, remission, and improvement were variably defined[1-3,6]; number needed to treat (NNT)=2 for any improvement[6] to NNT=6 for remission.[1]
    —Overall, 53% were able to stop hypnotic medications with SRT versus 15% of controls (NNT=3).[4]
    —Adverse events were not reported and benefits persisted for 6 to 12 months.[1,2,4]
- In the best RCT that used primary care patients, all 97 got sleep hygiene advice and half were randomized to SRT.[2] At follow-up, GPs gave SRT that included sleep prescription (afterward, SRT was self-administered). Results were similar to the above, plus the following:
  -Sleep quality scores (0 to 21, mean of 10.4) improved with SRT (3.9 vs 2.2; clinically meaningful difference=3); fatigue scores improved by 18% versus controls; and accidents occurred in 14% with SRT versus 29% with controls (not statistically different).

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- Issues include underpowered studies,[3-7] many analyzed outcomes,[1,2,4-7] and unbalanced baseline characteristics.[1,6,7]

Context

- Self-report outcomes are worse than actigraphy results.[1,2]
- Cognitive-behavioural therapy is highly effective for insomnia (eg, it improves sleep efficiency by 10%,[8] while "Z" drugs improve sleep efficiency by about 5%[9]).

Implementation

Sleep restriction therapy condenses time in bed to the time usually slept.[10] If a patient usually sleeps 6 hours, add 0.5 hours (for nonsleep time) to get 6.5 hours in bed. To get up at 6:00 AM, a patient goes to bed at 11:30 PM.[10] Do not condense to less than 5.5 hours. Bedtime is slowly made earlier until the patient is sleeping well and feels rested. Patients might initially feel more tired during the day. Naps should be avoided. This method was studied in primary care and seems at least as effective as medication, without long-term safety concerns.[1,9] Handouts are available for patients[10] and practitioners.[11]

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Competing interests
None declared

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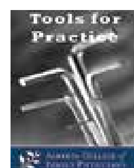

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