

Sleep-Deprivation Regimen Brings FAST Results

Insomnia patients treated with new therapy show improved sleep latency, efficiency, and total sleep time.

BY BRUCE JANCIN
Denver Bureau

DENVER — A novel behavioral therapy conducted over just 26 hours in a single weekend shows promise for the treatment of chronic primary insomnia, Leon Lack, Ph.D., reported at the annual meeting of the Associated Professional Sleep Societies.

Perhaps the most attractive feature of the new Flinders Accelerated Sleep Therapy (FAST) is that it brings an immediate therapeutic response, he said. After their treatment weekend, patients have improved sleep latency, sleep efficiency, and total sleep time.

In contrast, stimulus-control therapy and other forms of cognitive-behavioral therapy, while shown to be quite effective for insomnia, typically require 2-3 weeks before patients begin to see results. During this lag time, daytime sleepiness worsens, which adversely affects quality of life, noted Dr. Lack of Flinders University in Adelaide, Australia.

Also, cognitive-behavioral therapy for insomnia requires considerable patient effort and commitment to comply with the required homework instructions.

"Even though stimulus-control therapy

and other cognitive-behavioral therapies have been shown [to be] very effective in clinical trials, we sometimes wonder whether they're as effective in real-world situations where we give instructions to patients and have them carry them out in the home environment. We don't know much about that. And there could be difficulties with people complying with the instructions. If they do, we think they're very effective, but some of these instructions are rather rigorous," he said.

In contrast, FAST is a modified sleep-deprivation regimen involving constant bed rest during the treatment weekend, the psychologist explained. Patients arrive at the sleep laboratory at about 8 p.m. Saturday and get hooked up to the EEG machine. From then until 11 p.m. Sunday they're encouraged to fall asleep—but every time they do, they are awakened after 4 minutes. This typically happens at least 50 times.

During this period patients get very sleepy. Their sleep latencies start dropping. Starting at 11 p.m. Sunday, patients are permitted to have uninterrupted recovery sleep until Monday morning. Then they go home.

Dr. Lack reported on 17 patients (mean age 39 years) with primary insomnia.

Their chief sleep problem involved delayed onset, although some also had sleep maintenance difficulties. They were assessed using sleep diaries, actigraphy, and psychological questionnaires for 2 weeks at baseline, immediately after FAST therapy, and again 6 weeks after treatment.

Sleep-onset latency as reflected in diaries dropped from 70 minutes at baseline to 40 after treatment, rebounding slightly to 47 at follow-up. Sleep latency as measured by actigraphy also showed significant improvement: 45 minutes at baseline, 33 post treatment, and 38 at follow-up, he said.

Mean total sleep time from patient diaries was 5.29 hours at baseline, 6.36 hours right after FAST, and 6.0 hours at 6 weeks. Sleep efficiency rose from 62% to 76% immediately after treatment and was 74% at 6 weeks.

Results of the Profile of Mood States documented significant improvements in fatigue, vigor, and sleep anticipatory anxiety. There were trends toward reductions on measures of depression, anxiety, and stress, none of which reached significance.

Speculating on FAST's possible mechanism of action, Dr. Lack said that the therapy retrains patients to fall asleep

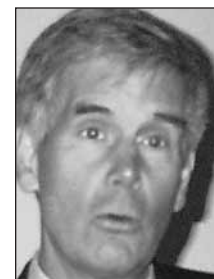
quickly, presumably reducing the psychophysiological conditioned response of insomnia. It could be viewed as a form of desensitization to sleep deprivation.

"Insomniacs typically are very frightened to put themselves into situations where they might lose some sleep. Here they lose sleep over a 25-hour period and find they don't die from it—they just get very, very sleepy. And sleepiness is actually an experience that many of

them don't have much of the time. It may be therapeutic," he said.

It's also conceivable that the clinical benefit is attributable to a placebo effect, since there was no control group.

To remedy this shortcoming, Dr. Lack and his associates are currently conducting a randomized controlled trial involving 100 patients with primary sleep-onset insomnia. The patients are being randomized to a wait-list control group, stimulus-control therapy, FAST alone, or FAST followed by stimulus-control therapy. The combination is being studied in hopes that it achieves a greater, more durable treatment effect than FAST alone. The investigators are also exploring the possibility of conducting FAST in the patient's home, which would be far less costly. ■



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DR. LACK

Jet Lag Is Avoidable Through Preflight Phase-Shifting

BY BRUCE JANCIN
Denver Bureau

DENVER — With the right combination of morning bright light exposure, low-dose melatonin, and gradually advancing bedtimes in the days prior to flying eastward, travelers can avoid the hassles of jet lag, Victoria L. Revell, Ph.D., said at the annual meeting of the Associated Professional Sleep Societies.

"With a little bit of preparation you can arrive with no jet lag, and not waste any days, and be more

productive at your meeting, and enjoy your trip," added her coinvestigator, Charmane I. Eastman, Ph.D., professor of psychology and director of the Biological Rhythms Research Laboratory at Rush University Medical Center, Chicago.

The investigators explained that jet lag is the result of misalignment between circadian rhythms and the destination time zone. It is worse after flights eastward because people find it more difficult to phase advance than phase delay. The purpose of pretrip re-entrainment is to help travelers, once they arrive at their destination, keep their circadian temperature drop where it belongs: during the night, when they're sleeping.



"People think, 'Oh, if only I could sleep at night; I'll just take a sleeping pill.' But that only solves half the problem because if you do that to sleep, you'll still feel bad during the day walking around out of phase with your temperature minimum," Dr. Eastman added.

The program developed by the Chicago investigators involves four 30-minute light-box sessions in the morning, alternating with 30 minutes of ordinary room light. The first session begins upon awakening. The single light box emits about 5,000 lux

The investigators decided low-dose therapy was best; a higher dose led to daytime sleepiness.

DR. REVELL

again, a matter of convenience.

It's possible, for example, to fit in one light box session while reading the morning paper, then go take a shower, then return to the light box while eating breakfast, then go get dressed before having another light session while working at the computer.

Bedtime is moved 1 hour earlier each evening for the same number of days as time zones to be crossed. Melatonin at a dose of 0.5 mg is taken roughly 5 hours before bedtime, which prior sleep lab

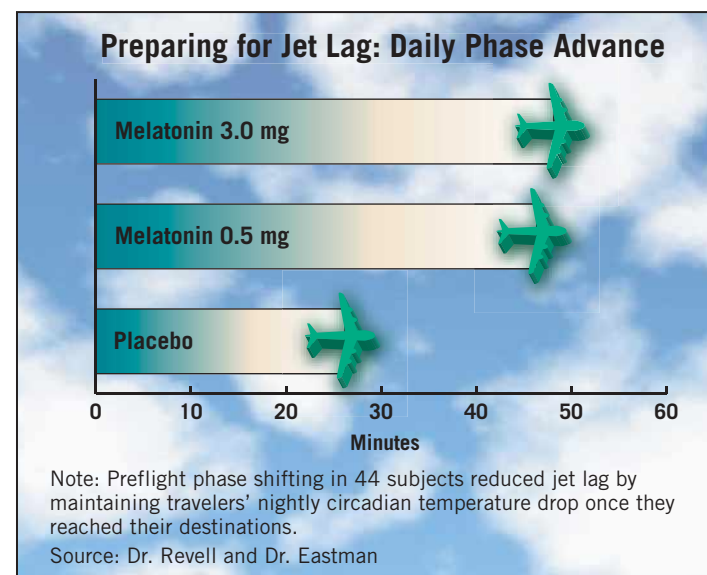
work has established as the optimal time to take the hormone in order to induce phase advances. The melatonin enhances the size of the daily phase advance, thereby cutting down on the number of days a traveler needs to follow the program.

The investigators reported on 44 healthy volunteers who participated in a blinded three-night sleep lab study that established 0.5 mg as the optimal melatonin dose. Each morning the participants received four intermittent 30-minute sessions of bright light. Each night they went to bed 1 hour earlier than the night before. And each afternoon they took 0.5 or 3.0 mg of melatonin or placebo.

The mean phase advance was determined by dim-light melatonin onset measured via saliva samples. (See box.)

To ensure that the phase advancement wasn't causing jet lag-type symptoms, participants completed the Columbia Jet Lag Scale daily and the Stanford Sleepiness Scale five times per day.

The results were reassuring except that



subjects on 3.0 mg/day of melatonin reported a slight increase in daytime sleepiness. It wasn't enough to pose a safety hazard, but since the efficacy wasn't significantly greater than with 0.5 mg/day, the investigators decided low-dose therapy was the way to go, Dr. Revell explained.

Outside of the controlled laboratory setting, Dr. Eastman said she and numerous friends and colleagues have employed the phase-shift travel preparation method with great success.

The study was supported by the National Institutes of Health. Melatonin and matching placebos were provided by Ecological Formulas. ■