MedicalXpress

Chronic insomnia sufferers may find relief with half of standard pill dose

August 3 2015

The roughly nine million Americans who rely on prescription sleeping pills to treat chronic insomnia may be able to get relief from as little as half of the drugs, and may even be helped by taking placebos in the treatment plan, according to new research published today in the journal *Sleep Medicine* by researchers from the Perelman School of Medicine at the University of Pennsylvania. Their findings starkly contrast with the standard prescribing practices for chronic insomnia treatment.

The findings, which advocate for a dosing strategy of smaller and fewer doses of sleep drugs and use of placebos, would decrease the amount of medication needed to maintain medication effects over time. The new approach allows the individual to maximize their clinical gains with respect to falling and staying asleep while reducing side effects and cutting prescription drug costs.

Chronic insomnia is characterized by difficulty falling asleep or staying asleep at least three nights a week for at least one month.

"The clinical effects of sleeping pills cannot be relied on to last forever, and long-term use increases risk of psychological dependence and side effects including daytime drowsiness, nausea, and muscle pain," said the study's senior author Michael Perlis, PhD, an associate professor in Penn's department of Psychiatry and director of the Penn Behavioral Sleep Medicine Program. "Our research found that changing the industry standard for maintenance therapy can maintain treatment responses and lower the incidence of side effects."

The study treated 74 adults experiencing chronic insomnia with 10 mg of the sleeping pill zolpidem (Ambien) for four weeks. Those responding to the treatment were randomized into three dosing groups for 12 weeks: nightly dosing with 10 mg or 5 mg, "intermittent dosing" of 10 mg 3 to 5 days a week, or "partial reinforcement" through nightly pills in which half were 10 mg capsules and half were placebo capsules.

All three strategies the team tested were effective in maintain peoples' ability to fall and stay asleep, but those in the intermittent dosing group slept worse and reported more medical symptoms and greater symptom severity than those in the other dosing groups.

"When it comes to day-to-day quality of therapeutic outcomes, the strategy we use most frequently, the intermittent doing strategy performed worst," Perlis said. "Our findings also go against the standard practice of 'start low and go slow,' in favor of a 'start high and go low' dosing strategy in which a patient starts with 10 mg nightly and then when the desired result is reached, switch to either a lower nightly dose or intermittent dosing with placebos on non-medication nights."

The authors see the findings as a path diverting from the tendency to increase dose over time, thus making use of these medications potentially safer in the long run with the added benefit (in the case of nightly dosing with 5mg or 10mg doses interspersed with placebos) of being up to 50 percent less expensive. These savings could cut costs drastically for both consumers and pharmaceutical companies (as consumers take a higher percentage of placebos, the profit margin would be higher on placebos than it is on the drug).

"The full dose may or may not be required to get the initial effect," said Perlis, "but certainly maintaining the effect can be done with less medication."

The Penn study also offers the first data confirming that 5 mg can be effective as a maintenance strategy. This supports the 2013 decision of the FDA which required lowering the recommended dose of the sleep medication zolpidem in non-elderly women, citing a risk of next-morning impairment, including problems with alertness while driving.

"What is particularly novel about the present study is the use of placebos on non-medication nights and that such a practice appears to extend a level of therapeutic benefit that is not seen with intermittent dosing," Perlis said. "This effect is thought to occur owing not only to the enhancement of patient expectancy but to the conditioning of medication effects, i.e., the medication induced effects may be elicited, with conditioning, by the medication capsule itself and that this can be sustained over time with occasional use of full dose medication (partial reinforcement)."

Perlis notes that if sufficient data can be gathered to show that such conditioning is possible, in the future, this may influence how medications are prescribed for maintenance therapy. That is, in the future, the prescriber may not only indicate what drug, and what dose and/or what time of day to use the medication, but also what starting dose and what schedule of medication and placebo use is needed for maintenance therapy.

Provided by University of Pennsylvania School of Medicine