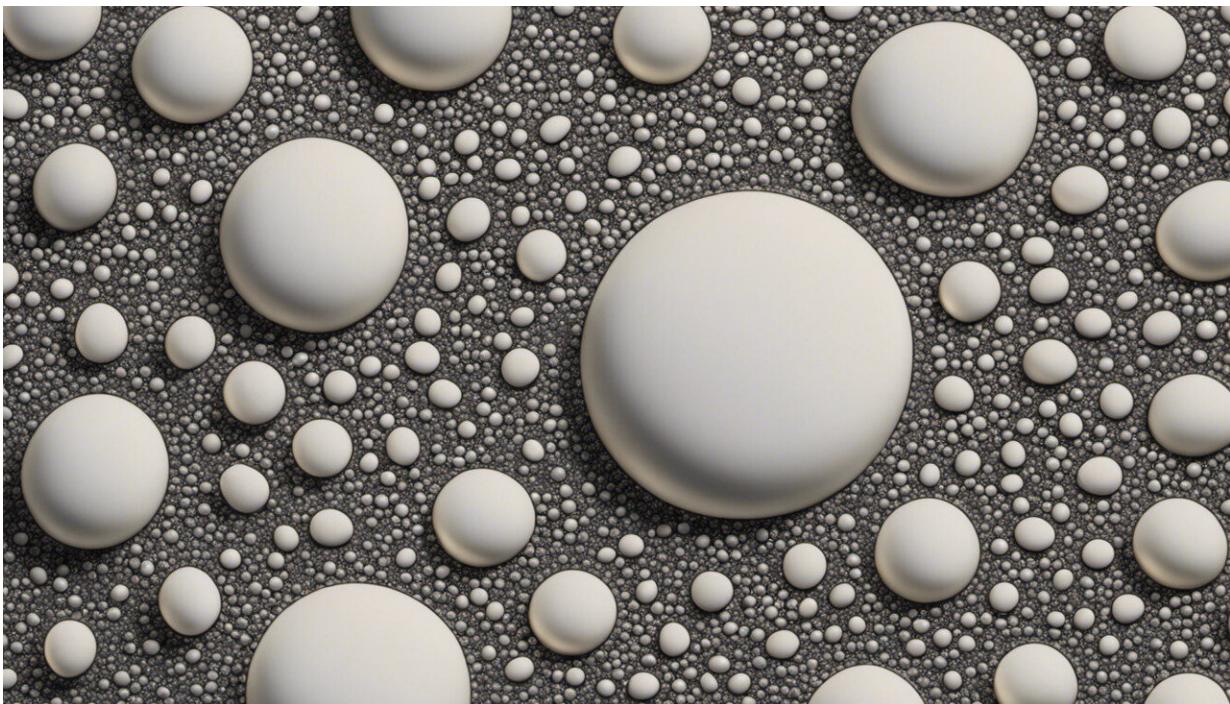


Sleep quality improves with help of incontinence drug

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A drug used to curtail episodes of urinary incontinence in women also improves quality of sleep, a researcher at the Stanford University School of Medicine reports.

People who experience urinary incontinence, especially at night, often

have trouble maintaining normal sleep cycles. Now, the Stanford researcher sees promise in using one drug to help remedy both problems.

"Two of the biggest [quality](#)-of-life factors for older [women](#) are [poor sleep](#) quality and incontinence, and the older you get, the more prevalent both conditions are, and they do seem to be correlated," said Leslee Subak, MD, professor and chair of obstetrics and gynecology. "And so, if we can find a drug to treat one and effectively decrease the other too, that could be big for improving quality of life."

A paper describing the study was published online Jan. 11 in *Obstetrics & Gynecology*. Subak is the senior author. Qurratul Ann Warsi, MD, a former clinical research scholar at the University of California-San Francisco, is the lead author.

In 2012, Subak, who was then on the faculty of UCSF, and her colleagues conducted a study called Bringing Simple Urge Incontinence Diagnosis and Treatment to Providers, or BRIDGES, which analyzed a specific drug's around-the-clock efficacy in curbing urgency incontinence, a condition characterized by a sudden urge to urinate and sometimes accidental leakage. The researchers conducted the study in women, as urgency incontinence is five to 10 times more common in women than it is in men.

The drug, fesoterodine, decreased accidental urination in study participants. The researchers also observed that it produced a handful of secondary beneficial effects, including less nighttime wakefulness caused by an urge to urinate.

Given the drug's success in diminishing urgency incontinence, including while sleeping, Subak followed up with a new question: Could this drug simultaneously help women catch extra shut-eye? Self-reported data from 645 female participants indicated that the answer was yes.

Two birds with one drug

In the initial 12-week BRIDGES study, Subak and her team recruited 645 female participants from 13 sites in the United States, whose average age was 56, and used a standardized evaluation of urgency incontinence to determine which participants would be best-suited for the trial. To qualify, participants had to indicate that they had experienced problems over the previous three months with accidental urination, occurring with a sudden urge to urinate.

Fesoterodine belongs to a larger class of drugs known as antimuscarinics. These agents help control accidental urination by blocking receptors in the bladder that, when activated, tell it to contract, a key physiological part of urination.

To determine if the drug also improved sleep quality, the researchers gave participants a standardized sleep evaluation, called the Pittsburgh Sleep Quality Index. The self-reported evaluation measures seven sleep-associated aspects, such as sleep duration, daytime sleepiness and how long it takes for an individual to fall asleep. Each category is scored on a scale from 0- 3; at the end, the score is tallied—the higher the score, the poorer the sleep quality. According to the Pittsburgh Sleep Quality Index, a score of 5 or more indicates poor sleep, and for the 57 percent of the cohort who reported poor sleep, the average score was a 6.4.

Women in the study recorded their baseline sleep patterns, the majority reporting that they were getting up one to two times per night to urinate. Those numbers may not seem bad on paper, but Subak said disrupting the sleep cycle more than once every night can start to take a toll.

"Getting up one time per night is acceptable for most people, but twice really starts to be disruptive and is associated with poorer quality of life and more daytime sleepiness," Subak said.

Women in the study who took the drug reported better sleep: Instead of having to empty their bladder once or twice a night, the group, on average, reported urinating just once per night, or not at all. Subak points out that finding a [drug](#) that can simultaneously address urinary incontinence and poor sleep is crucial for women, especially as they get older.

"As age increases, so do the prevalence and frequency of nighttime urination, and that especially poses risks for someone who is older," Subak said.

Thinking holistically

About a quarter of reproductive-age women, about half of menopausal women and about 80 percent of women who are 80 and older experience urgency incontinence. The older a woman is, the more dramatic the effect incontinence has on her quality of life.

Subak recalls a patient from the study telling her that incontinence doesn't kill you, but it takes your life away. "Patients might end up secluding themselves socially because they're worried about their bladder," she said. "But far worse, [urinary incontinence](#) is also one of the biggest factors for falling and fracturing for older women, especially those who have osteoporosis. That's why addressing 24-hour incontinence, especially in the geriatric population, is so critical."

Drugs such as fesoterodine empower physicians to think through the most well-rounded treatments for patients, Subak said, and there are many other similar pharmaceutical options that could work in the same way, too.

"It's a reminder to us as physicians to look at many co-morbid conditions that are synergistic. If an older person is saying 'I'm having trouble

sleeping,' ask about nighttime urination; ask about urgency [incontinence](#)," Subak said. "It's important to look holistically at a patient, and especially at [older women](#) who have many of these problems co-existing. We have an opportunity to really look at how treating one can improve the others too."

More information: Qurratul A. Warsi et al. Association of Pharmacologic Treatment of Urgency Urinary Incontinence With Sleep Quality and Daytime Sleepiness, *Obstetrics & Gynecology* (2018). [DOI: 10.1097/AOG.0000000000002443](https://doi.org/10.1097/AOG.0000000000002443)

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