

## Insomnia Is Linked to Trouble Breathing

By BENEDICT CAREY

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Subtle breathing problems during sleep may play a larger role in causing insomnia than the usual suspects, like stress and the need for a bathroom, a small study of poor sleepers suggests.

The report, published in the current issue of the journal *Sleep*, found that chronic insomniacs woke an average of about 30 times a night, and that a brief respiratory problem — a drop in the volume of oxygen inhaled, due to a narrowed airway, for instance — preceded about 90 percent of those interruptions. None of the people had any idea they had breathing problems during sleep.

The study is hardly conclusive, experts said, because it included only 20 people and had no control group of normal sleepers for comparison. But these experts said that it was worth following up, because it challenged the predominant theory of insomnia as a problem of “hyper-arousal,” in which the body idles on high psychologically and physiologically. Earlier studies have linked measures of hyper-arousal to delays in falling asleep and problems nodding off after interruptions. But the theory does not satisfactorily explain what prompts awakenings in the first place.

The new study compared chronic insomniacs’ opinions about why they awoke at night with data from a sleep test monitoring breathing and brain waves — and does provide a possible explanation.

“It is a striking finding that by no means can be discounted,” said Dr. Michael J. Sateia, a professor of psychiatry and sleep medicine at Dartmouth College’s school of medicine, who was not involved in the research. Still, he added, “we know arousal can in and of itself promote instability of the upper airway,” and it is not always clear which comes first.

Dr. Sateia co-wrote an editorial accompanying the study, with Wilfred R. Pigeon, of the Canandaigua VA Medical Center, in Canandaigua, N.Y.

In the study, sleep researchers in Albuquerque interviewed 20 men and women with chronic insomnia, asking about the causes of their nightly awakenings. The people all sought help at Maimonides Sleep Arts and Sciences, a private clinic. None showed signs of having a breathing disorder like sleep apnea, or sleep-disordered breathing, a milder form. Most were taking sleep pills.

The group members attributed most of their awakenings to nightmares, a need for the bathroom, pain or “racing thoughts.”

But their sleep told a different story. The participants each spent a night at the sleep clinic, wired to sensors that tracked brain waves and breathing. Researchers charted every awakening, when brain waves shifted to a waking state for at least 16 seconds, and every breathing issue causing oxygen intake to dip well below normal.

“Almost all of the awakenings turned out to be preceded within a second by an abnormal breathing process — which led to the awakening,” said Dr. Barry Krakow, medical director of the Maimonides clinic and its research arm, the Sleep and Human Health Institute.

Dr. Krakow’s co-authors were Victor A. Ulibarri and Shara Kikta, both of Maimonides; and Edward Romero, a third-year student at the University of New Mexico School of Medicine.

Sleep medicine specialists usually treat insomnia with talk therapy intended to unwind people’s mistaken, and often subconscious, assumptions about sleeping. These include thinking of sleep as an exercise in frustration and

approaching the bed with performance anxiety. Medications can help, too, but rarely resolve the underlying problems.

The new finding, if replicated, suggests that breathing disorders may be an underappreciated cause of insomnia and treatment of those problems could help. Doctors can prescribe dental inserts to keep airways open during sleep, or in more extreme cases, a “positive airway pressure” machine, known as a CPAP.

Such sleep therapies can run into the thousands of dollars and are not always covered by insurers. “A larger, controlled replication study would not only clarify the central question of whether” breathing problems are common in insomniacs, Dr. Sateia and Dr. Pigeon wrote in their editorial, but “perhaps even change reimbursement policies.”