

Parents of newborns pay high price for interrupted sleep, study says

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The familiar cry in the night, followed by a blind shuffle to the crib, a feeding, a diaper change, and a final retreat back into oblivion—every hour on the hour. Such is the sleep pattern of most new parents, who report feeling more exhausted in the morning than when they went to bed the night before.

Now, in the first study of its kind, Prof. Avi Sadeh and a team of researchers from Tel Aviv University's School of Psychological Sciences explain why interrupted [sleep](#) can be as physically detrimental as no sleep at all. In the study, published in the journal *Sleep Medicine*, Prof. Sadeh and his colleagues Michal Kahn, Shimrit Fridenson, Reut Lerer

and Yair Ben-Haim establish a causal link between interrupted [sleep patterns](#) and compromised cognitive abilities, shortened attention spans, and negative moods. The researchers discovered that interrupted sleep is equivalent to no more than four consecutive hours of sleep.

"The sleep of many parents is often disrupted by external sources such as a crying baby demanding care during the night. Doctors on call, who may receive several phone calls a night, also experience disruptions," said Prof. Sadeh. "These night wakings could be relatively short – only five to ten minutes – but they disrupt the natural sleep rhythm. The impact of such night wakings on an individual's daytime alertness, mood, and [cognitive abilities](#) had never been studied. Our study is the first to demonstrate seriously deleterious cognitive and emotional effects."

Putting Mom and Dad in a bad mood

"In the process of advising these parents, it struck me that the role of multiple night wakings had never been systematically assessed," said Prof. Sadeh, who directs a [sleep clinic](#) at TAU, where he advises exhausted and desperate parents on how to cope with their children's persistent night wakings. "Many previous studies had shown an association, but none had established a causal link. Our study demonstrates that induced night wakings, in otherwise normal individuals, clearly lead to compromised attention and negative mood."

The study was conducted on student volunteers at TAU's School of Psychological Sciences. Their sleep patterns were monitored at home using wristwatch-like devices that detected when they were asleep and when they were awake. The students slept a normal eight-hour night, then experienced a night in which they were awakened four times by phone calls and told to complete a short computer task before going back to sleep after 10-15 minutes of wakefulness. The students were asked each following morning to complete certain computer tasks to assess

alertness and attention, as well as to fill out questionnaires to determine their mood. The experiment showed a direct link between compromised attention, [negative mood](#), and disrupted sleep—after only one night of frequent interruptions.

Paying a high price

"Our study shows the impact of only one disrupted night," said Prof. Sadeh. "But we know that these effects accumulate and therefore the functional price new parents—who awaken three to ten times a night for months on end—pay for common infant sleep disturbance is enormous. Besides the physical effects of interrupted sleep, parents often develop feelings of anger toward their infants and then feel guilty about these negative feelings.

"Sleep research has focused in the last 50 years on [sleep deprivation](#), and practically ignored the impact of night-wakings, which is a pervasive phenomenon for people from many walks of life. I hope that our study will bring this to the attention of scientists and clinicians, who should recognize the price paid by individuals who have to endure frequent night-wakings."

Prof. Sadeh is currently researching interventions for infant sleep disturbances to reduce the detrimental effects of disrupted sleep on parents.

Provided by Tel Aviv University

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