

# Does chronic pain affect a spouse's sleep?

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Research suggests that a patient's chronic pain affects a spouse's emotional well-being and marital satisfaction. In a novel study of behavioral health outcomes published in the journal *Pain*, researchers examined the effects of patients' daily knee osteoarthritis pain on their spouses' nightly sleep. They determined that couples who expressed a high degree of closeness in their marriage experienced a stronger association between pain levels and the spouse's ability to sleep restfully. Findings further illustrated that chronic pain may place the spouse's health at risk and suggest an important therapeutic target for couples.

"Sleep is a critical [health behavior](#), and individuals whose sleep is affected by their partner's pain are at risk for physical and [psychiatric problems](#)," says lead investigator Lynn M. Martire, PhD, Department of Human Development & Family Studies, Penn State University, University Park, Pennsylvania. "Spouses whose sleep is compromised may also be less able to respond empathically to patients' symptoms and need for support."

The research team chose to study knee pain because of the difficulty many patients experience in getting comfortable in bed and staying asleep. In addition, the resulting restlessness may disturb the patient's partner. Investigators sought to test two hypotheses:

- Greater [osteoarthritis](#) pain during the day would be associated with poorer sleep for the spouse that night
- A couple's degree of closeness affects the relationship between pain and sleep

The team collected data from 145 couples who recorded their levels of pain, sleep quality, and level of feeling rested or refreshed over 22 consecutive nights of sleep. Eligible participants were husbands or wives who had been diagnosed with [knee osteoarthritis](#) by a physician, who experienced usual knee pain of moderate or great intensity, were at least 50 years old, and were married or in a long-term relationship in which they shared a residence with their partners.

Data analysis indicated:

- Patients' reports of sleep quality did not significantly correlate with their pain on the previous day, but they did relate to beginning-of-day reports of pain.
- When patients reported greater knee pain at the end of the day, their spouses slept poorly that night and reported feeling less refreshed the following morning.
- Spouses who reported symptoms of depression and negative moods upon awakening were more likely to experience poor sleep quality and less refreshing sleep.
- In close relationships, the greater a patient's pain, the less refreshing the sleep for the spouse.

"Compromised sleep caused by exposure to a loved one's suffering may be one pathway to spousal caregivers' increased risk for health problems, including cardiovascular disease," concludes Dr. Martire. "In developing behavioral couple-oriented interventions for arthritis, it is important to identify the couples in which the spouse is most affected by patient suffering. Our findings suggest that assessing the extent to which partners are closely involved in each other's lives would help to identify spouses who are especially at risk for being affected by patient symptoms and in need of strategies for maintaining their own health and well-being."

**More information:** "The Impact of Daily Arthritis Pain on Spouse Sleep," by Lynn Martire, PhD; Francis J. Keefe, PhD; Richard Schulz, PhD; Mary Ann Parris Stephens, PhD; Jacqueline a. Mogle, PhD (DOI: [dx.doi.org/10.1016/j.pain.2013.05.020](https://doi.org/10.1016/j.pain.2013.05.020)). The article appears in *Pain*, Volume 154, Issue 9 (September 2013)

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