

For young adults, sleep problems predict later pain problems

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For at least some groups of "emerging adults," sleep problems are a predictor of chronic pain and worsening pain severity over time, suggests a study in *Pain*, the official publication of the International Association for the Study of Pain (IASP).

In contrast, the presence of [pain](#) generally doesn't predict worsening sleep problems during the transition between adolescence and young adulthood, according to the new research by Drs. Irma J. Bonvanie and colleagues of University of Groningen, the Netherlands. They believe that early identification and treatment of sleep problems might help reduce later problems with pain in some groups of emerging adults.

Which Comes First—Sleep Problems or Pain?

Drs. Bonvanie and colleagues analyzed "bidirectional" relationships between sleep problems and pain in a follow-up study of young adults, ages 19-22. The study focused on overall chronic pain as well as specific types of pain: musculoskeletal, headache, and abdominal pain.

The long-term associations between sleep problems and three pain types were compared between the sexes, and the mediating effects of anxiety and depression, fatigue, and physical activity were explored. The study included approximately 1,750 young Dutch men and women who were followed for three years.

About half of young people who had sleep problems at the initial evaluation still had them three years later. At baseline, subjects with sleep problems were more likely to have chronic pain and had more severe musculoskeletal, headache, and abdominal pain.

Three years later, those with sleep problems were more likely to have new or persistent chronic pain. Overall, 38 percent of emerging adults with severe sleep problems at initial evaluation had chronic pain at follow-up, compared with 14 percent of those without initial sleep problems.

The relationship between sleep problems and pain was stronger in women than men—a difference that may start around older adolescence/emerging adulthood. Fatigue appeared to be a modest mediating factor, while anxiety/depression and lack of physical activity were not significant contributors.

Sleep problems predicted increased severity of [abdominal pain](#) in women only but did not predict headache severity in either sex. Abdominal pain was the only type of pain associated with a long-term increase in sleep problems, and the effect was small.

"Emerging adulthood...is characterized by psychosocial and behavioral changes, such as altered sleep patterns," Drs. Bonvanie and coauthors write. Chronic pain is also common in this age group, especially among women. Sleep problems might be an important risk factor for increased pain, acting through altered pain thresholds, emotional disturbances, or behavioral changes.

The new study suggests that sleep problems are significantly associated with chronic pain and specific types of pain problems in emerging adults. "Our findings indicate the sleep problems are not only a precursor for pain, but actually predict the persistence of chronic pain and an

increase in pain levels," say the researchers. In addition, they conclude, "Our findings suggest that [sleep problems](#) may be an additional target for treatment and prevention strategies in female emerging adults with [chronic pain](#) and [musculoskeletal pain](#)."

More information: Irma J. Bonvanie et al. Sleep problems and pain, *PAIN* (2016). DOI: [10.1097/j.pain.0000000000000466](https://doi.org/10.1097/j.pain.0000000000000466)

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