

Short sleep duration causally linked to rheumatoid arthritis

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Short sleep duration is causally associated with an increased risk for

rheumatoid arthritis (RA), according to a study published online June 30 in *Frontiers in Public Health*.

Rui-Chen Gao, from the School of Nursing at Anhui Medical University in Hefei, China, and colleagues examined whether [sleep disorders](#) are causally associated with RA. Seven sleep-related traits were selected: short sleep duration, frequent insomnia, any insomnia, sleep duration, getting up, morningness (early-to-bed/up habit), and snoring and 27, 53, 57, 57, 70, 274, and 42 individual single-nucleotide polymorphisms were obtained for these traits as instrumental variables. Outcome variables were obtained from a public genome-wide association study, including 14,361 cases and 43,923 controls of European ancestry. A two-sample Mendelian randomization (MR) analysis using inverse variance weighted (IVW), MR-Egger regression, weighted median, and weight mode methods was used to assess the causal correlation between sleep disturbances and RA.

The researchers found no evidence of a correlation between RA and frequent insomnia, any insomnia, sleep duration, getting up, morningness, or snoring. A causal effect was seen for short sleep duration (six hours) on RA, as supported by IVW and weighted median (odds ratios, 1.47 and 1.43, respectively). These results were stable in sensitivity analyses.

"Our results reveal the causal relationship between gene-predicted sleep traits and RA, and we only identify the [causal relationship](#) between short sleep and RA, which is somewhat inconsistent with many published [observational studies](#)," the authors write.

More information: Rui-Chen Gao et al, Association Between Sleep Traits and Rheumatoid Arthritis: A Mendelian Randomization Study, *Frontiers in Public Health* (2022). [DOI: 10.3389/fpubh.2022.940161](https://doi.org/10.3389/fpubh.2022.940161)

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