

# **Evidence found of causal link for multisite chronic pain and multiple sclerosis, rheumatoid arthritis**

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Multisite chronic pain is causally associated with a higher risk for multiple sclerosis (MS) and rheumatoid arthritis (RA), but not with other autoimmune diseases (AIDs), according to a study published online Feb. 9 in *Frontiers in Immunology*.

Yidan Tang, from Sichuan University in Chengdu, China, and colleagues used a two-sample Mendelian randomization (MR) method to determine the causal relationship between [chronic pain](#) and AIDs, namely amyotrophic lateral sclerosis (ALS), celiac disease (CeD), inflammatory bowel disease (IBD), MS, RA, systemic lupus erythematosus (SLE), type 1 diabetes (T1D), and psoriasis using genome-wide association study summary statistics.

The researchers identified associations between multisite chronic pain and a higher risk for MS and RA (odds ratios, 1.59 and 1.72, respectively) with utilization of an MR analysis. No significant effect was seen for multisite chronic pain on ALS, CeD, IBD, SLE, T1D, or psoriasis. Positive causal effects of multisite chronic pain on [body mass index](#) (BMI) were identified, as were causal effects of BMI on MS and RA. Genetically predicted chronic widespread pain was not causally connected to the risk for most types of AIDs.

"Our results demonstrated genetic evidence of a potential [causal relationship](#) between multisite chronic pain and MS or RA in the European population, which may partially mediate through BMI," the authors write.

**More information:** Yidan Tang et al, Multisite chronic pain and the risk of autoimmune diseases: A Mendelian randomization study, *Frontiers in Immunology* (2023). [DOI: 10.3389/fimmu.2023.1077088](https://doi.org/10.3389/fimmu.2023.1077088)

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