

# Pain thresholds linked to inflammation and sleep problems in arthritis patients

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Despite recent advances in anti-inflammatory therapy, many rheumatoid arthritis (RA) patients continue to suffer from pain. Research published in BioMed Central's open access journal, *Arthritis Research & Therapy* found that inflammation is associated with heightened pain sensitivity at joint sites, whereas increased sleep problems are associated with heightened pain sensitivity at both joint and non-joint sites.

Researchers from the Division of Rheumatology and [Pain](#) Management Center of Brigham and Women's Hospital, and the Chronic Pain and Fatigue Center of the University of Michigan Medical School, assessed experimental [pain sensitivity](#), disease activity, [sleep problems](#) and psychiatric distress in 59 women with RA. The researchers used questionnaires to assess the women's sleep problems and psychiatric distress and measured the levels of C-reactive protein as an indicator of disease activity. They also measured pain sensitivity with pressure pain threshold testing at joint and non-joint sites. Lower pain thresholds are indicative of higher pain sensitivity.

"Sleep problems were inversely associated with pain threshold at all sites, suggesting a defect in central pain processing", state the authors. This finding emphasises the need for research into the mechanisms underlying sleep disorders and pain in RA patients, particularly given the common occurrence of sleeping problems among these patients. This autoimmune disease, causing chronic inflammation, affects nearly 1% of the population and sufferers often report ongoing pain in spite of successful anti-inflammatory treatment.

"Since differences in pain sensitivity may shape the course of pain complaints and influence treatment decisions, it is important to understand the factors associated with enhanced pain sensitivity", lead author Yvonne Lee says, adding, "Physicians and researchers should consider both inflammatory and non-inflammatory factors when evaluating pain in research settings and in the clinic."

More information: The relationship between disease activity, sleep, psychiatric distress and pain sensitivity in [rheumatoid arthritis](#): a cross-sectional study, Yvonne C Lee, Lori B Chibnik, Bing Lu, Ajay D Wasan, Robert R Edwards, Anne H Fossel, Simon M Helfgott, Daniel H Solomon, Daniel J Clauw and Elizabeth W Karlson, [Arthritis Research & Therapy](#) (in press), [arthritis-research.com/](http://arthritis-research.com/)

Source: BioMed Central ([news](#) : [web](#))

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