

# Weather conditions do not affect fibromyalgia pain or fatigue

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Dutch researchers report that weather conditions including temperature, sunshine, and precipitation have no impact on fibromyalgia symptoms in female patients. Results published in *Arthritis Care & Research*, a journal of the American College of Rheumatology (ACR), suggest that individual patients may be sensitive to some changes in the weather.

Medical evidence shows that fibromyalgia affects 2% of the world population with a greater prevalence among women. In the U.S., the ACR estimates that five million people experience the widespread pain, unexplained fatigue, headaches, and sleep disturbances from this chronic pain syndrome. While the cause of fibromyalgia remains a mystery, studies suggest patients have increased sensitivity to a range of stimuli and up to 92% cite [weather conditions](#) exacerbate their symptoms.

"Many fibromyalgia patients report that certain weather conditions seem to aggravate their symptoms," explains first author, Ercolie Bossema, Ph.D. from Utrecht University in the Netherlands. "Previous research has investigated weather conditions and changes in fibromyalgia symptoms, but an association remains unclear."

To further explore the impact of weather on pain and fatigue in fibromyalgia, the team enrolled 333 [female patients](#) with this pain syndrome in the study. Participants had a mean age of 47 years and had a diagnosis of fibromyalgia for nearly 2 years. The patients completed questions regarding their pain and fatigue symptoms over a 28-day period. Researchers obtained air temperature, sunshine duration,

precipitation, atmospheric pressure, and relative humidity from the Royal Netherlands Meteorological Institute.

Findings indicate that in 10% of analyses, weather variables showed a significant but small effect on pain or fatigue symptoms. In 20% of analyses, researchers found significant small differences between patients' responses to weather, suggesting pain and fatigue symptoms were differentially affected by some weather conditions, i.e. greater pain with either low or high atmospheric pressure. The differences in individual symptom response to weather conditions did not appear to be associated with any demographic, functional or mental health status, nor seasonal or weather-related variations.

"Our analyses provide more evidence against, than in support of, the daily influence of weather on fibromyalgia pain and fatigue," concludes Dr. Bossema. "This study is the first to investigate the impact of weather on fibromyalgia symptoms in a large cohort, and our findings show no association between specific fibromyalgia patient characteristics and weather sensitivity." The authors suggest that future research include more patient characteristics, such as personality traits, beliefs about chronic pain, and attitude regarding the influence of weather on symptoms, to help explain individual differences in [weather](#) sensitivity and its impact on [fibromyalgia pain](#) and fatigue.

**More information:** "The Influence of Weather on Daily Symptoms of Pain and Fatigue in Female Patients with Fibromyalgia: A Multilevel Regression Analysis." Ercolie R. Bossema, Henriët van Middendorp, Johannes W.G. Jacobs, Johannes W.J. Bijlsma and Rinie Geenen. *Arthritis Care and Research*; Published Online: June 4, 2013 ([DOI: 10.1002/acr.22008](https://doi.org/10.1002/acr.22008)).

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