

## **The influence of weather on daily symptoms of pain and fatigue in female patients with fibromyalgia: A multilevel regression analysis.**

[Bossema ER](#), [van Middendorp H](#), [Jacobs JW](#), [Bijlsma JW](#), [Geenen R](#).

### **Source**

Department of Clinical and Health Psychology, Utrecht University, the Netherlands.

### **Abstract**

**OBJECTIVE.:** While patients with fibromyalgia often report that specific weather conditions aggravate their symptoms, empirical studies have not conclusively demonstrated such a relation. Our aim was to examine the association between weather conditions and daily symptoms of pain and fatigue in fibromyalgia, and to identify patient characteristics explaining individual differences in weather sensitivity. **METHODS.:** Female patients with fibromyalgia (n = 333, mean age 47.0 years, mean time since diagnosis 3.5 years) completed questions on pain and fatigue on 28 consecutive days. Daily weather conditions including air temperature, sunshine duration, precipitation, atmospheric pressure, and relative humidity were obtained from the Royal Netherlands Meteorological Institute (KNMI). Multilevel regression analysis was applied. **RESULTS.:** In five (10%) of 50 analyses, weather variables showed a significant but small effect on either pain or fatigue. In ten analyses (20%), significant small differences between patients were observed in the random effects of the weather variables, suggesting that symptoms of patients were - to a small extent - differentially affected by some weather conditions, for example, high pain with either low or high atmospheric pressure. These individual differences were explained neither by demographic, functional, or mental patient characteristics, nor by season or weather variation during the assessment period. **CONCLUSION.:** There is more evidence against than in support of a uniform influence of weather on daily pain and fatigue in female patients with fibromyalgia. While individuals appear to be differentially sensitive to certain weather conditions, there is no indication that specific patient characteristics play a role in weather sensitivity. © 2013 by the American College of Rheumatology.