



# Cystic Fibrosis Research News

## **Citation:**

Psoter KJ, DeRoos AJ, Wakefield J, Mayer J, Rosenfeld M. Season is associated with *Pseudomonas aeruginosa* acquisition in young children with cystic fibrosis. Clin Microbiol Infect. 2013; 19(11):E483-9.

## **What was your research question? (50 words maximum)**

The objectives of this study were to: (i) evaluate the seasonal acquisition of *P. aeruginosa* in young children with CF in the USA and (ii) determine whether seasonal acquisition varied by climate zone.

## **Why is this important? (100 words maximum)**

Insight into seasonal variations in the rate of *P. aeruginosa* acquisition throughout the USA could explain climatic factors in the timing of acquisition and inform recommendations for monitoring respiratory cultures in young children with CF.

## **What did you do? (100 words maximum)**

We performed a study using the Cystic Fibrosis Foundation (CFF) Patient Registry data from 1 January 2003 to 31 December 2009. First incidence of *P. aeruginosa* was calculated for each season over the study period.

## **What did you find? (100 words maximum)**

We observed significant seasonal variation in the rate of initial *P. aeruginosa* acquisition in a large US cohort of young children with CF over a 7-year period. Compared with winter, incidence of initial *P. aeruginosa* acquisition was significantly higher in summer and autumn and lower in spring. These seasonal differences in *P. aeruginosa* acquisition rates were seen in the continental and temperate climate zones but not in the dry zone. However, our power to detect seasonal variation in the dry zone was limited by the small number of individuals residing in this zone.

## **What does this mean and reasons for caution? (100 words maximum)**



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In summary, increased rates of initial *P. aeruginosa* acquisition were observed in young CF patients in summer and autumn compared with winter in this national study. Results of such analyses could inform recommendations regarding prevention strategies and clinical care, including reinforcing the importance of regular follow-up visits with cultures, particularly during higher-risk months. These results could also help us identify high risk populations that might benefit from more frequent monitoring.

## **What's next? (50 words maximum)**

Similar approaches could identify climatic risk factors for other CF pathogens.