Journal of Cystic Fibrosis
The Official Journal of the European Cystic Fibrosis Society

CYSTIC FIBROSIS FOUNDATION
ADDING TOMORROWS

Cystic Fibrosis Research News

Citation: Collaco JM, McGready J, Green DM, Naughton KM, Watson CP, Shields T, Bell SC, Wainwright CE; ACFBAL Study Group, Cutting GR. Effect of temperature on cystic fibrosis lung disease and infections: a replicated cohort study. *PLoS One*. 2011;6(11):e27784. doi: 10.1371/journal.pone.0027784. Epub 2011 Nov 18.

What was your research question? (50 words maximum): We wanted to determine whether environmental factors are associated with lung function in cystic fibrosis (CF).

Why is this important? (100 words maximum): Progressive lung disease accounts for the majority of increased symptoms and death observed in CF. Beyond secondhand smoke exposure and socio-economic status, the effect of specific environmental factors on CF lung function is largely unknown.

What did you do? (100 words maximum): We tested whether specific environmental factors and the presence of disease-causing organisms were associated with better or worse lung function. We used data from individuals with CF in the United States and Australia/New Zealand.

What did you find? (100 words maximum): We found that warmer temperatures were associated with higher rates of culturing *Pseudomonas aeruginosa* and lower lung function. This was the case for both the United States and Australia/New Zealand.

What does this mean and reasons for caution? (100 words maximum): The results do not necessarily imply that warmer climates lead to poorer health outcomes as there could be other social and economic factors involved. However, the results do show that health for people with cystic fibrosis may be impacted by geographic factors.

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What's next? (50 words maximum): We plan to examine whether other infectious organisms besides *Pseudomonas aeruginosa* are more commonly found in CF patients in warmer climates. We also plan to see whether warmer climates are associated with lower lung function in people without cystic fibrosis.