



# Cystic Fibrosis Research News

## **Article citation:**

Effect of ambient air pollution on pulmonary exacerbations and lung function in cystic fibrosis. Am J Respir Crit Care Med 2004 Apr 1;169(7):816-21.

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

How does ambient air pollution affect pulmonary exacerbation and lung function in CF?

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

Environmental factors affect CF related lung disease. Understanding the role of air pollution and lung function and exacerbation rate is important for patients and public policy.

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

We linked the CFF Patient Registry to the EPA's air quality data base and assessed the impact of local air pollution on pulmonary exacerbation rate and lung function decline.

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

The paper demonstrated that annual average exposures to particulate air pollution was associated with an increased risk of pulmonary exacerbations and a decline in lung function, suggesting a role of environmental exposures on prognosis in CF.



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

This study suggested that patients with CF who live in areas of higher air pollution may have more exacerbations due to air pollution. They may also have decrements in lung function due to air pollution. This paper supports findings in asthma. The studies are observational and cannot fully infer causality.

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

We are completing two separate studies. The first creates height independent lung function assessment for adolescents to improve longitudinal modeling. Second, we assess the impact of air pollution on lung growth in CF children.