



# Cystic Fibrosis Research News

## Citation:

Cogen JD, Onchiri F, Emerson J, et al. Chronic Azithromycin Use in Cystic Fibrosis and Concern for Treatment-Emergent Pathogens. *Ann Am Thorac Soc*. 2018 Jun; 15(6): 702-709

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

Does the use of azithromycin by patients three times per week lead to earlier acquisition of eight common cystic fibrosis (CF)-fibrosis related respiratory pathogens?

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

Chronic use (three times weekly) of azithromycin benefit patients with cystic fibrosis (CF) by reducing inflammation and inhibiting growth of *Pseudomonas aeruginosa* (*Pa*). As chronic azithromycin use in patients with CF becomes more widespread, it is important to understand the relationship between azithromycin and acquisition of CF respiratory pathogens. A better understanding of the risk of infection associated with chronic azithromycin use could inform decisions by health care providers and patients regarding the potential balance of risks and benefits of chronic azithromycin therapy.

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

We used data from the Cystic Fibrosis Foundation Patient Registry. We compared chronic azithromycin users to non-azithromycin users. We wanted to see whether azithromycin users acquired several pathogens earlier than patients who did not use azithromycin. We used innovative methodologies to adjust for biases between azithromycin users and nonusers.

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

Chronic azithromycin users had a significantly lower risk of detection of new methicillin-resistant *Staphylococcus aureus* (MRSA), nontuberculous mycobacteria (NTM), and *Burkholderia cepacia* complex. The risk of acquiring the remaining five pathogens we studied was not significantly different between azithromycin users and nonusers.

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

We were reassured to find in this study that chronic use of azithromycin did not increase the risk of earlier acquisition of serious CF respiratory pathogens. These results may ease concerns that chronic azithromycin exposure increases the risk of early acquisition of respiratory pathogens among patients with cystic fibrosis.



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

There are no follow-up studies planned related to this current project.