

Cystic Fibrosis Research News

Citation:

Psoter KJ, De Roos AJ, Wakefield J, Mayer JD, Rosenfeld M. Seasonality of acquisition of respiratory bacterial pathogens in young children with cystic fibrosis. BMC Infect Dis. BMC Infect Dis. 2017 Jun 9;17(1):411. doi: 10.1186/s12879-017-2511-9 PMID: 28599639

What was your research question? (50 words maximum)

Are CF bacteria more likely to be acquired in different seasons in young children with CF?

Why is this important? (100 words maximum)

We know that respiratory infections are more common during certain seasons. However, we do not know whether common CF bacteria are acquired more often during certain seasons. If we can understand how patients acquire bacteria, we can better understand how to prevent these infections.

What did you do? (100 words maximum)

We looked at data from the Cystic Fibrosis Foundation (CFF) National Patient Registry from 2003-2009 from children less than 6 years old. We identified when (during which season) children acquired four CF bacteria: *Staphylococcus aureus*, *Stenotrophomonas maltophilia*, *Achromobacter xylosoxidans*, and *Haemophilus influenzae*. We then compared rates of infection in spring (March-May), summer (June-August), and autumn (September-November) to the winter (December-February) season.

What did you find? (100 words maximum)

Acquisition of CF-related respiratory pathogens varies by season in young children with CF. The highest rate of acquisition for most pathogens occurred in the winter, particularly for MRSA.

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

Knowing why there is a seasonal difference in acquiring certain kinds of bacteria can help us learn more about these infections. CF care teams must be proactive when it comes to infection prevention, and it is helpful to know that winter may be a higher-risk time period



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for getting infections. There is one major limitation with this study. The exact date of bacterial infection is unknown because throat cultures were generally done during routine CF appointments, so the actual acquisition may have occurred during a different season than the one that it was identified in.

What's next? (100 words maximum)

There are no next steps planned for this study.