



Cystic Fibrosis Research News

Title:

Assessment of Endothelial Function is Reproducible in Patients with Cystic Fibrosis

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What was your research question?

We wanted to know if assessments of vascular health, as measured by flow-mediated dilation (FMD), are reproducible within-day, between-days, and between-months in people with cystic fibrosis (CF).

Why is this important?

New therapies have helped to improve the life expectancy of people with CF; however, age-related conditions, such as cardiovascular complications are now a growing concern. As the awareness of vascular complications increases, there is a need for a reliable measure of cardiovascular disease risk in CF.

What did you do?

We used the non-invasive FMD test to measure vascular function in people with CF at different time points to assess if the measurement is stable over time. A total of 13 people with CF (six males, seven females, age range: 13-43 years old; mean forced expiratory volume in 1 second = 71 % predicted) participated and complete the study. Measurements were repeated within the same day, on different days and three months apart for a between-month assessment. Lung function and other health measures were also monitored during these different times.

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What did you find?

In people with CF, measuring vascular function with the FMD test is reproducible not only within a single day, but also between-days and between-months as well.

What does this mean and reasons for caution?

The FMD test may be used more regularly as a reliable measurement of vascular health in people with CF. The findings of this study also support the use of FMD to monitor vascular function in response to new therapies developed for people with CF. It is important to understand that this study was completed in people with stable lung function across visits; therefore, the findings may not apply to those experiencing a pulmonary exacerbation.

What's next?

Further research is needed to assess how poor lung function and acute exacerbations can influence vascular health using the FMD test.

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