



# Cystic Fibrosis Research News

## Title:

**EARLY LIFE GROWTH PATTERNS PERSIST FOR 12 YEARS AND IMPACT PULMONARY OUTCOMES IN CYSTIC FIBROSIS**

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## What was your research question?

Our earlier studies have shown that when children with cystic fibrosis (CF) establish good body growth by the age of 2, that is correlated with better growth and less lung disease at age 6. Now, we wanted to understand whether these improvements were sustained through age 12. We also wanted to know if children who only established good body growth between ages 2-6 had better lung function at age 12 than those who did not establish good growth.

## Why is this important?

There is a strong link between nutrition and lung function in people with CF. This has led to specific recommendations for nutrition management in hopes of delaying progression of lung disease. We have previously shown that children who recovered from any growth faltering by age 2 years had better growth and less lung disease when they were 6 years old. The current nutrition recommendations could be refined if we knew that this relationship held through age 12 years. The recommendations might also change if we knew that recovering from growth faltering between ages 2-6 also had some benefit with respect to lung disease.

## What did you do?

Using data from the Wisconsin Randomized Clinical Trial of CF Neonatal Screening, we compared growth and measures of lung disease at age 12 years between infants with CF who recovered from

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growth faltering by age 2 years and those who recovered and maintained adequate growth through age 6 years. We also determined whether infants with CF who did not recover from early growth faltering recovered after age 6 years, and whether growth after age 6 years was associated with pulmonary status at age 12 years.

## **What did you find?**

We found that recovery from early growth faltering was associated with improved height at age 12 years. Recovery from early growth faltering that was maintained through age 12 years was associated with less lung disease at age 12 years. Children whose growth did not recover by age 2 years were unlikely to recover later.

## **What does this mean and reasons for caution?**

Our results suggest that recovery from early growth faltering is associated with better growth and lung function through 12 years of age. Our results are observational, so we cannot say if the recovery from early growth faltering causes the less severe lung disease, or if less severe lung disease allows for the early recovery from growth faltering.

## **What's next?**

Results from this study will be used to optimize nutrition recommendations to maximize the chance of early growth recovery.

## **Original Manuscript citation**

<https://www.ncbi.nlm.nih.gov/pubmed/29396025>