



Cystic Fibrosis Research News

Title: PREDICTIVE EFFECTS OF LOW BIRTH WEIGHT AND SMALL FOR GESTATIONAL AGE STATUS ON RESPIRATORY AND NUTRITIONAL OUTCOMES IN CYSTIC FIBROSIS

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What was your research question?

Previous studies have shown that newborns with cystic fibrosis (CF) are more likely to have low birth weights (<2.5 kilograms) or be smaller than their non-CF peers. We were interested in determining whether newborn birthweight and size affected long term outcomes in CF such as lung function and body mass index (BMI).

Why is this important?

Early life events can have long term health consequences. Identifying early life events that impact long term outcomes may suggest interventions that could help individuals with CF.

What did you do?

To study this we reviewed data collected by the CF Twin and Sibling Study for 1677 people with CF.

What did you find?

We found that babies with CF were more likely to be born prematurely (<37 weeks gestation) (14.3% of babies with CF) compared to the general U.S. population (approximately 10%), but the overall birth weights were similar. The average birth weight in our study was 3.3 kg (7.3 pounds). We found that low birth weights were associated with lower BMI at 2, 6, and 12 years of age, but not at 18 years of age. Lung function (FEV1) was also lower at 6 years of age (2.9% for every kilogram less of birth weight), but not at 12 or 18 years of age.

What does this mean and reasons for caution?

We believe that while low birth weight may be associated with an increased risk of lower BMI and lung function in early childhood. These effects appear to decrease with time, suggesting that other factor, such as infections, secondhand smoke exposure, etc. become more important.

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What's next?

Although long term effects of low birth weight and size are not seen at 18 years of age, we would advocate for optimizing nutritional support during infancy to improve later life outcomes.

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