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Cystic Fibrosis Research News

Title:
Improved early growth in Danish children with Cystic Fibrosis from 2000-2022

Lay Title:
Improved growth in young children with Cystic Fibrosis

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What was your research question?
How has growth in the first five years of life among Danish children with cystic fibrosis changed over the last two decades?

Why is this important?
A previous study investigating growth in Danish children with cystic fibrosis found notable increases in body-mass-index in children from 1960 through the 1990s, however median body-mass-index remained below reference values for the healthy population. Since then, care for children with cystic fibrosis has improved continuously and in 2016, newborn screening for cystic fibrosis was implemented in Denmark. The impact of these developments on the growth in young children with cystic fibrosis had yet to be explored.

What did you do?
We evaluated changes in growth in terms of weight, height, and body-mass-index from diagnosis to five years old in children with cystic fibrosis in Denmark. This was done by categorizing children into four groups: those born between 2000-2004, 2005-2009, 2010-

2015, and 2016-2022. Average weight, height, and body-mass-index were compared over five years between these four groups.

What did you find?

We included 255 children in total. Our analysis showed that gains of weight, height, and body-mass-index were higher in the most recent group (children born 2016-2022) compared with the group born 2000-2004. Children in the 2016-2022 group that were diagnosed by newborn screening had additional improvements in weight and body-mass-index.

What does this mean and reasons for caution?

This study shows that growth in young Danish children with cystic fibrosis has improved over the past two decades, and that these changes may be related to better care for cystic fibrosis in general, as well as the impact of newborn screening since 2016. Nonetheless, careful nutrition management remains a priority in preventing both under- and overweight. Missing weight and height measurements may have impacted our analysis, however our data set contained highly detailed, frequent measurements that allowed for meaningful results.

What's next?

In the past, cystic fibrosis has been characterized by undernutrition. The improved growth of young children reflects general improvements for people living with the disease. However, the increases in weight and body-mass-index in early childhood may lead to weight-related complications for these children in the future. It is imperative that nutrition and care management remain a priority in preventing both under- and overnutrition.

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