

Cystic Fibrosis Research News

Title:

Body Mass Index and Nutritional Intake following Elexacaftor/Tezacaftor/Ivacaftor Modulator Therapy in Adults with Cystic Fibrosis

Lay Title:

Changes in weight and how much you eat after starting triple modulator therapy in adults with cystic fibrosis

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What was your research question?

People with cystic fibrosis (pwCF) can often put on weight after starting triple (Elexacaftor/Tezacaftor/Ivacaftor - ETI) treatment. In this study, we explored changes in body

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mass index (your weight according to your height) and calorie intake after starting ETI therapy.

Why is this important?

It is often presumed that weight gain after ETI therapy reflects an increase in appetite and calorie intake, reduced chest infections and generally feeling better. However, there is no published data to on dietary intake and weight gain. Understanding the mechanisms of weight gain with ETI treatment is important as it will allow health care professionals to modify dietary recommendations and support individuals with evidenced based advice on how best to manage rapid changes in their weight.

What did you do?

We analysed changes in body mass index (BMI) and dietary intake in 40 individuals before and after starting ETI therapy. We also analysed data for 10 pwCF who finished the study before ETI therapy was available to see how stable their intake and BMI were between two time points, as a reference group.

What did you find?

We found that the BMI and energy intake were stable between two time points (around 28 weeks) apart in the reference group, who had not yet received ETI. In those who commenced ETI therapy between time points, BMI increased significantly and energy intake (calories consumed) significantly decreased. For these participants, time points were around 68 weeks apart, during which time they had been taking ETI therapy for around 23 weeks.

What does this mean and reasons for caution?

We need to be cautious on how we interpret these results because they could be influenced by lots of factors, including restrictions during the COVID pandemic, which potentially could also affect weight and energy intake. We also only collected dietary information at two time points and what we eat can fluctuate, which we did not measure. However, our findings provide the first tentative evidence which could suggest that the weight gain seen with ETI therapy may not simply be due to eating more but other mechanisms may be coming into play. This needs to be investigated further.

What's next?

We need larger studies to explore changes in dietary intake with ETI therapy and identify potential factors which could be contributing to weight gain including changes in inflammation and body metabolism.



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