

# Cystic Fibrosis Research News

**Title:**

Suicide Attempts in Adolescents with Cystic Fibrosis on Elexacaftor/Tezacaftor/Ivacaftor Therapy

**Lay Title:**

Suicide Attempts in Adolescents with Cystic Fibrosis on Elexacaftor/Tezacaftor/Ivacaftor Therapy

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**What was your research question?**

In this case series of children with cystic fibrosis (CF), we investigated whether the new therapy with elexacaftor/tezacaftor/ivacaftor might have caused mental side effects and have played a potential role in recent suicidal attempts. We also tried to understand how other factors, such as the Covid-19 pandemic or living with a chronic disease, affect the mental well-being of children with CF.

**Why is this important?**

ETI is a relatively new CF drug that the FDA approved in late 2019. ETI has significantly improved the pulmonary functions and quality of life for many people with CF; hence, it is an important part of their treatment plan. However, some individuals have experienced adverse effects with this medication. A small group of people with CF experienced side effects on mental health. While some adverse effects have minimal impact, others, such as depression, can be more serious. Therefore, it is crucial to understand the role of ETI on mental health to develop guidelines for monitoring the mental health of individuals with CF on this treatment to prevent serious mental health events such as suicidal attempts.

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## What did you do?

We described 2 cases with CF, who experienced a suicidal attempt shortly after starting ETI. In addition, we did a literature search for other reports of ETI-related mental health events. We also investigated how living with a chronic disease affects mental health and the effects of the Covid-19 pandemic on mental health.

## What did you find?

Studies suggested that lockdown measures negatively affected the mental health of people with CF. Also, mental health care delivery to people with CF was impacted by pandemic disruptions.

Even though clinical trials did not find a significant increase, multiple studies reported mental health side effects related to modulator therapies. The number of individuals with CF on ETI who experienced severe mental health adverse effects seems to be small, but this needs to be defined.

In our clinic, two adolescents with CF committed suicide shortly after starting ETI therapy. One of them reported improvement in her mood after stopping ETI. The second individual reported an improved mood with reduced-dose ETI.

## What does this mean and reasons for caution?

Health providers should perform screening to assess the mental health status of people with CF and establish a baseline before starting them on ETI therapy. Afterward, regular monitoring and assessments of their mental health status should be part of routine CF care.

## What's next?

Evidence-based guidelines on the management of people with CF on modulator therapy, experiencing mental health issues should be developed. In addition, further research is needed to better understand the mechanisms of how ETI might potentially affect mental health.

## Original manuscript citation in PubMed

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