

# Cystic Fibrosis Research News

**Title:**

Bariatric surgery in a patient with cystic fibrosis and diabetes: a case report

**Authors:**

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**What was your research topic?**

Providing information about type 2 diabetes (T2D) and describing the effect of bariatric surgery in an obese patient with a mild form of cystic fibrosis (CF). To our knowledge, this is the first report describing these subjects in a patient with CF. This means that this case is extremely rare and does not apply to the majority of CF patients.

**Why is this important?**

In patients with a severe form of CF, the nature of diabetes is CF-related diabetes, which is a chronic complication and cannot be reversed. This form of diabetes is treated differently than T2D. Contrary to severe CF, mild CF patients are more likely to be pancreatic sufficient (regarding insulin production), have better lung function and good survival. Given the increasing number of diagnoses of mild CF, coupled with the increase in overweight/obese patients worldwide, it is likely that CF patients can also develop T2D instead of CF-related diabetes. If treated correctly, T2D can go into remission and obesity can be cured, thereby improving quality of life of these patients.

**What did you do?**

We described a patient with a mild form of cystic fibrosis who developed obesity (BMI of 35.2 kg/m<sup>2</sup>) along with diabetes due to unhealthy lifestyle. At first, lifestyle advices were provided to treat her diabetes and to promote weight loss. She was referred to a multidisciplinary obesity centre. However, she was not capable of losing weight with non-surgical methods and her diabetes was not regulated adequately. Furthermore, she was pancreatic sufficient and did not suffer from other illnesses. Therefore, bariatric surgery was proposed.

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## **What did you find?**

Regarding bariatric surgery, no complications were observed during the operation. 2.5 years after bariatric surgery, her weight reduced and remained stable at a BMI of 24.1 kg.m<sup>2</sup>. Her lung function remained stable as well. Moreover, her diabetes went into remission due to excessive weight loss after bariatric surgery. Given her mild form of CF and the clinical presentation of T2D, she suffered from type 2 diabetes instead of CF-related diabetes.

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

Firstly, our patient demonstrates a clinical presentation of T2D instead of CF-related diabetes. We therefore would like to suggest that insulin sufficient CF patients with obesity are able to develop other forms of diabetes, instead of only CF-related diabetes. Secondly, bariatric surgery may be a treatment option for obesity if a patient cannot lose weight despite lifestyle advices (non-surgical methods). However, one should realize that bariatric surgery should be considered carefully given the potential cause of serious adverse effects.

## **What's next?**

In our view, both T2D and bariatric surgery are new phenomena in CF that will both require further research to determine their effects on the quality of life of patients with CF.

## **Original manuscript citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/36693768/>