

# Cystic Fibrosis Research News

**Title:**

Prevalence and severity of functional urinary and anorectal disorders and their impact on quality of life in cystic fibrosis

**Lay title:**

Frequency of urinary and anal incontinence in patient suffering from cystic fibrosis and their impact on quality of life

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**What was your research question?**

Are urinary incontinence and/or faecal incontinence more frequent/severe in people with cystic fibrosis (CF) than the general population? What impact do they have on quality of life?

**Why is this important?**

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Urinary incontinence is defined as "the complaint of any involuntary loss of urine". The most common type is stress urinary incontinence, defined as urinary incontinence on effort or physical exertion, such as during sporting activities or when sneezing or coughing. The second type is urge urinary incontinence, defined as incontinence associated with urgency (a sudden compelling need to urinate that is difficult to defer). Urinary incontinence could be more frequent in people with CF because the associated coughing causes repeated high pressure on the pelvic floor. Faecal incontinence, i.e. the involuntary loss of bowels or gaz, could be more frequent in CF because of Pancreatic insufficiency and malabsorption, or frequent use of antibiotics which perturb gut microbiota.

## **What did you do?**

We collected data from adult with CF followed in 7 different centers of the North-West French CF network. Urinary disorders, faecal incontinence, their severity and impact on general quality of life were assessed using self-administered questionnaires. We also evaluated the impact of these symptoms on respiratory care : chest physiotherapy, pulmonary function test performance.

## **What did you find?**

178 patients were included in this study. 34% reported stress urinary incontinence, with a large female predominance (63.5% of females vs. 7.5% of males), and 16% reported urge urinary incontinence. The frequency of stress urinary incontinence in women with cystic fibrosis is considerably higher than that of the general population of women of similar ages. 50% of patients reported faecal incontinence (as uncontrolled flatulence or diarrhoea), also with a female predominance. Neither urinary nor faecal incontinence were related to the severity of the respiratory impairment. Quality of life was particularly affected in women. Incontinence symptoms affected respiratory care in both sexes.

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

The frequency of functional urinary and faecal disorders was high in adults with CF and impacted on quality of life and respiratory care. However, most people with incontinence have never discussed their problems with their medical team despite the fact effective treatments and management strategies exist. The results of our homemade questionnaire showed that the fear of leakage in patient reported SUI can disrupt respiratory care. It induces discomfort during physiotherapy and autogenic drainage sessions, particularly during forced exhalation and coughing manoeuvres and causes discomfort during pulmonary function testing. The high prevalence of incontinence (urinary and faecal) and the impact on quality of



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life and respiratory management highlights the importance of improving the treatment of these symptoms.

However, our results should be read with cautions: data were obtained using self-questionnaires and not corroborated by physical exam. We did not register CFTR modulators treatment status even if at the time of the study few people were concerned in France.

## **What's next?**

The incontinence treatment must consider the wishes of the individuals who are often already burdened by multiple treatments and follow-up consultations. The strategies should be considered by multidisciplinary expert groups (pulmonologists, urologists, physiotherapists, midwife, gynaecologist physical and rehabilitation medicine doctors, etc.) and integration of pelvic floor contraction in chest physiotherapy should be systematic to prevent or treat urinary and faecal incontinence. CFTR Modulators are now widely prescribed in France and have very positive impact on coughing and sputum production, it leads to reduce pulmonary exacerbation and the use of IV antibiotics. These improvements will likely reduce the prevalence of UI and FI but further studies need to be carried out.

## **Original manuscript citation in PubMed**

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