



Cystic Fibrosis Research News

Title:

Sleep breathing disorder frequency, risk factors and treatment among adults with cystic fibrosis

Lay title:

Sleep breathing disorders in adults with cystic fibrosis (CF)

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What was your research question?

Among adults with CF, we described: 1) how often sleep breathing disorders (such as, obstructive sleep apnea [OSA]) occur and their severity; 2) what individuals were more at risk for sleep breathing disorders; and, 3) how often specific treatments (like continuous positive airway pressure [CPAP] or oxygen) were used.

Why is this important?

Previous studies with few participants have reported that sleep breathing disorders are uncommon among adults with CF. With advances in treatment, persons with CF are living longer and are heavier in weight, and these changes may make sleep breathing occur more frequently. Appreciating how often sleep breathing disorders presently occur among adults with CF, and who is at risk for getting them, are key first steps on the journey to understanding the importance of treating sleep breathing disorders in CF.

What did you do?

We looked at persons with CF ages 19 years and older followed at the Toronto CF Clinic who underwent a sleep study between 2002 and 2021 and reported how often sleep breathing disorders occurred, how severe they were, who was at risk for getting them, and how often affected persons were treated with CPAP or oxygen.

What did you find?

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We found that OSA commonly occurred among adults with CF (it occurred in 64% of participants in our study). Most of the persons with OSA had a mild degree of the disorder. Less than half (41%) of persons with OSA were prescribed CPAP for treatment. Risk factors for having OSA in the general population (such as, male sex, older age, obesity, and being sleepy), and CF-related markers of poor lung health (such as, having low lung function, specific bacteria growing in the lungs, and history of hospital admission) did not predict having OSA among adults with CF.

What does this mean and reasons for caution?

In contrast to earlier studies, OSA occurs more commonly among adults with CF than previously thought. Treatments like CPAP and oxygen are also prescribed infrequently. The identification and treatment of sleep breathing disorders may be an important gap in care for adults with CF. Our study only considered data from one CF clinic centre, so it is possible that our results may not apply to the broader adult CF population. Our study was also not designed to answer the question does treating sleep breathing disorders among adults with CF make a difference to quality of life or lung health.

What's next?

Our results need confirmation with larger and broader numbers of adults with CF. More work is needed to understand which adults with CF are at risk for sleep breathing disorders. Future studies also need to examine whether treating sleep breathing impacts quality of life or lung health (or both) in CF.

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