



Cystic Fibrosis Research News

Title:

Efficacy and safety of inhaled dry-powder mannitol in adults with cystic fibrosis: An international, randomized controlled study

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What was your research question?

Mannitol is a dry-powder medication inhaled into the airways for the purpose of loosening mucus on the surface of the airways, allowing it to be more easily cleared from the lungs. We wanted to confirm whether mannitol improves lung function in adults with cystic fibrosis (CF) and evaluate its safety profile.

Why is this important?

Previous studies of mannitol in CF had been conducted in adults and children aged ≥ 6 years. There was an improvement in lung function but the effect was mainly demonstrated in the adult subjects. As mannitol is intended for use by adults with CF, a study in adults only was needed to confirm the benefit and safety of mannitol in this population.

What did you do?

This was a randomized, double-blind study, which means that the people in the study were assigned in a random way to one of two study drugs, and neither the people in the study nor the investigators knew which drug people were taking. Of the 423 adults with CF that we included in the study, 209 received mannitol and 214 received control (a very small dose of mannitol that is not effective) for 26 weeks. We measured lung function and assessed for side effects during this 26 week period.

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What did you find?

We found that adults with CF who received mannitol had better improvements in lung function than those who received control. We also found that the proportion of adults who had side effects with mannitol was similar to the proportion who had side effects with control. One of the most common side effects with mannitol was cough, but this did not make participants more likely to stop treatment.

What does this mean and reasons for caution?

The results of the study suggest that mannitol is a suitable treatment for adults with CF, offering an additional treatment option to manage lung disease. Mannitol was studied as an add-on therapy and was not tested as a replacement for other daily CF treatments, with the exception of hypertonic saline.

What's next?

Mannitol has been approved for use by adults with CF in the US, along with a number of countries around the world.

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