Cystic Fibrosis Research News

Title:
Cardiovascular Complications in Cystic Fibrosis: A Review of the Literature

Lay Title:
Complications relating to the heart and blood vessels in people with Cystic Fibrosis: A Review of the Literature

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What was your research question?
Most research in cystic fibrosis (CF) has been focused on the lungs. In this article, we summarize research studies focused on the heart and blood vessels (cardiovascular system) in people with CF.

Why is this important?
Cardiovascular problems are common in people as they get older. As people with CF are living longer, they may also develop cardiovascular problems. In addition, CF causes inflammation in the body which can also cause problems with the heart and blood vessels. Attention to heart health early in life is an important part of overall health. We reviewed previous research to help guide researchers and clinicians to assess and treat cardiovascular disease in people with CF.

What did you do?
We searched medical databases to find studies on cardiovascular disease in CF. We then examined the studies in people with CF that described the heart, the blood vessels in the lungs and chest, and the blood vessels outside of the lungs. Finally, we reviewed studies describing treatments and recommendations for cardiovascular conditions in people with CF.

What did you find?
The CF protein, called CFTR (Cystic fibrosis transmembrane conductance regulator), is present in many parts of the cardiovascular system. Studies in laboratory animals and in people with CF suggest that problems with the CFTR protein can cause changes in the cardiovascular

system. Lung disease and inflammation in people with CF can affect blood vessels. Many people with CF have diabetes, which can also cause problems with the cardiovascular system.

What does this mean and reasons for caution?

Because CF has changed dramatically since it was first described, particularly since the approval of treatments that impact the basic problem in CF (i.e. CFTR channel function), new research needs to be designed and conducted to update and add to our understanding of cardiovascular function in the modern era of CF treatment.

What's next?

This article summarises our current understanding of how the cardiovascular system function in people with CF and may help researchers design future studies to assess and treat cardiovascular changes in people with CF as they age.

Original manuscript citation in PubMed

https://pubmed.ncbi.nlm.nih.gov/34140249/