Cystic Fibrosis Research News

Title:
The effectiveness of exercise interventions to increase physical activity in Cystic Fibrosis: A systematic review

Lay Title:
How effective are exercise interventions at increasing physical activity in people with Cystic Fibrosis?

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What was your research question?
The aim of this review was to determine if exercise interventions are effective in increasing physical activity in people with Cystic Fibrosis. We also aimed to find out what parts of an intervention are most effective to increase physical activity levels.

Why is this important?
Physical activity and exercise have numerous benefits in Cystic Fibrosis including improved lung function, fitness levels and quality of life. Most notably, it has been found that people with Cystic Fibrosis that are fitter live longer than people with Cystic Fibrosis who are not as fit. Therefore, it is not surprising that physical activity is a key component of Cystic Fibrosis

management. Despite these benefits, the effectiveness of interventions to increase physical activity in this population is still largely unknown.

What did you do?

We undertook a review of studies that had investigated an exercise intervention in people with Cystic Fibrosis. Each study had to measure physical activity participation to be included. In total, 15 studies were included. We compared the exercise intervention used in each study to look at the effective components of the interventions that increased physical activity.

What did you find?

Eleven studies showed improvements in physical activity across both short- and long-term exercise interventions. However, there was a wide variety in terms of the type of exercise intervention, how long they were each carried out for, as well as using different methods to assess physical activity across each study. We found that aerobic training and activity counselling were two elements which most consistently improved physical activity. An example of activity counselling is the provision of regular telephone support to participants to encourage them to comply with the intervention.

What does this mean and reasons for caution?

Aerobic training and activity counselling were the two elements identified in this review which most consistently improved physical activity in people with Cystic Fibrosis. However, comparisons were difficult, as there were a lot of differences observed across the exercise interventions. The optimal training components (e.g. type, frequency, intensity, duration) to increase physical activity require further research and investigation. Further research is also required to evaluate the use of telehealth interventions to increase physical activity levels.

What's next?

We are currently conducting a research study to determine if using a Fitbit, goal setting and text messaging feedback can increase physical activity in people with Cystic Fibrosis.

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