

Cystic Fibrosis Research News

Title:

What do people with cystic fibrosis eat? Diet quality, macronutrient and micronutrient intakes (compared to recommended guidelines) in adults with cystic fibrosis – A systematic review.

Lay Title:

What do people with cystic fibrosis eat? – A systematic review

Authors:

Cian Greaney ^{a b}, Ailish Doyle ^a, Nicola Drummond ^a, Susannah King ^c, Francis Hollander-Kraaijeveld ^d, Katie Robinson ^{a e}, Audrey Tierney ^{a b f}

Affiliations:

- a. School of Allied Health, University of Limerick, Limerick, Ireland.
- b. Health Implementation Science and Technology Research Group, Health Research Institute, University of Limerick, Limerick, Ireland.
- c. Nutrition Department, Alfred Health, Melbourne, Victoria, 2004, Australia.
- d. The Hague University of Applied Science, Nutrition and Dietetics, The Hague, The Netherlands.
- e. Aging Research Centre, Health Research Institute, University of Limerick, Limerick, Ireland.
- f. Discipline of Food, Nutrition and Dietetics, La Trobe University, Melbourne, Victoria, 3086, Australia.

What was your research question?

What are the food and nutrient quantities and the overall quality of diet consumed by adults with Cystic Fibrosis (CF) and to what extent does intake and quality data conform to the recommended CF-specific and population guidelines concerning the consumption of energy, macronutrients (carbohydrates, protein, and fat) and micronutrients (vitamins and minerals)?

Why is this important?

Advances in treatments in CF and improvements in clinical practices have extended the lives of those living with CF, alongside reducing symptom burden and associated conditions, such as improving lung function and nutritional deficiencies. While these improvements have lowered instances of malnutrition, there has been a noticeable rise in overweight, obesity and

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factors contributing to diet-related chronic diseases (e.g., cardiovascular disease; type II diabetes). Evaluating the nutrient profiles and diet quality of adults with CF is a crucial first step towards formulating an ideal dietary framework, dietary patterns, and recommended intakes, tailored specifically for adults with CF.

What did you do?

Existing research on the diet quality of adults with CF and the amounts of nutrients they consume within their normal diets were compiled by performing literature searches using a systematic approach involving five electronic databases. The search incorporated studies published from data inception up until April 2023 and key words related to cystic fibrosis, diet quality and nutrient intakes were included to find the relevant papers available. Furthermore, the nutrient profiles reported within studies were compared to regional and CF-specific dietary recommendations to assess adherence.

What did you find?

The review included 21 studies (19 study populations), reporting data from 724 adults with CF. Energy intakes and macronutrients consumed were reported in 17 of 19 study populations and micronutrient intakes were reported in eight study populations. Diet quality was assessed in four study populations by using a diet quality score and / or categorising food intake into servings per day for food groups and comparing the findings to national dietary guidelines. Although adults with CF were meeting energy targets, micronutrient requirements were mostly achieved through supplementation; energy being consumed from fat was above recommendations, and diet quality was poor.

What does this mean and reasons for caution?

Despite the depth of data evaluated, it was difficult to compare between research studies due to the differences in populations, study design, data collection and reporting measures used. Even so, this systematic review was the first to comprehensively evaluate research on dietary intakes of adults with CF. Energy dense foods low in nutrients contributed to intakes which may be associated with the development of diet-related chronic diseases. Therefore, to optimise long-term health and nutrition for people with CF, it is important that dietary guidelines and practices in clinical settings are revised to address the changing landscape in CF.



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What's next?

Future research should endeavour to determine the optimal dietary pattern and intakes for adults with CF. The views and experiences of adults with CF should be evaluated in relation to what informs food choices, and what are the enablers or barriers to eating healthy, to create up-to-date, patient-informed nutrition guidelines that can be translated within the adult CF population.

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cfresearchnews@gmail.com