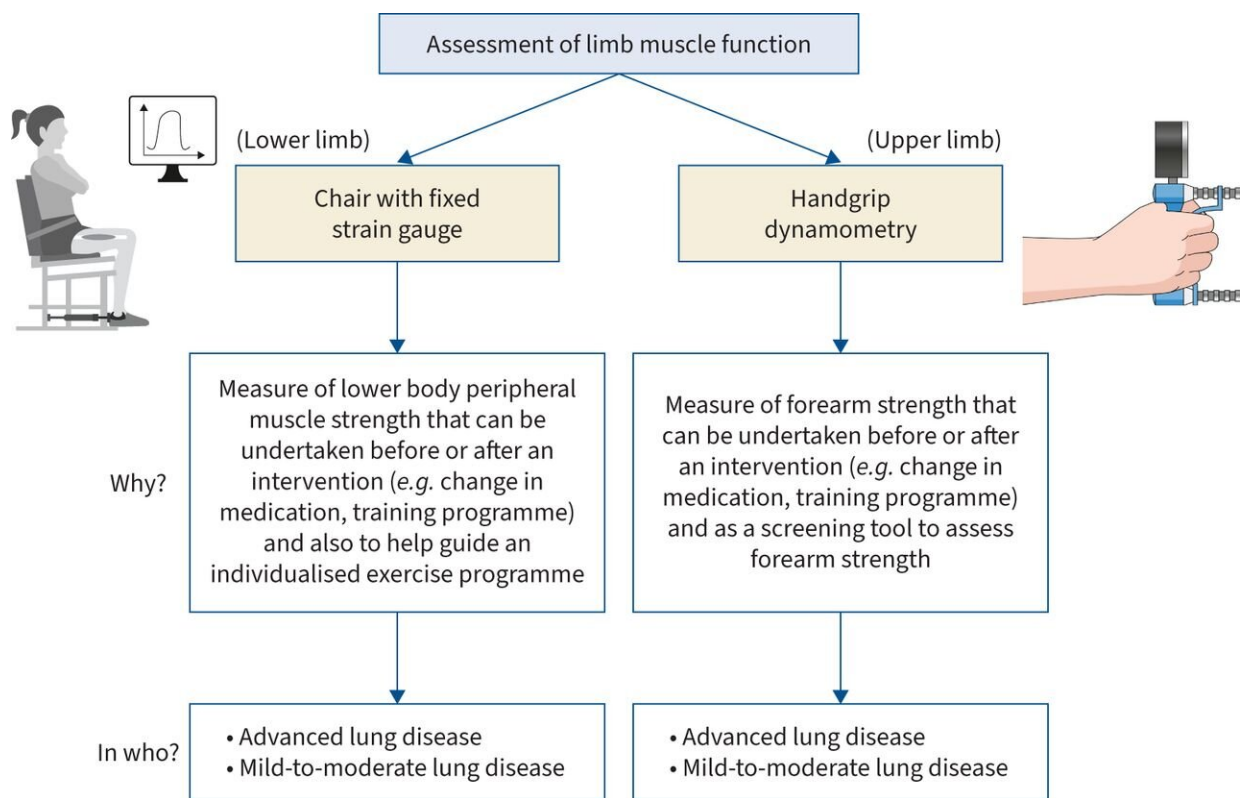


# New international guidelines for functional exercise testing will improve cystic fibrosis treatment

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Overview of limb muscle function tests of peripheral muscle function selected for use in people with cystic fibrosis. Credit: *European Respiratory Review* (2023). DOI: 10.1183/16000617.0029-2023

People living with cystic fibrosis (CF) will benefit from improved

treatment as international experts produce clinical practice guidance for exercise assessments.

The European CF Society Exercise Working Group (ECFS) document, led by Dr. Zoe Saynor from the University of Portsmouth in England, provides comprehensive recommendations and instructions for health and care professionals carrying out exercise tests on individuals with the condition.

There are approximately 11,000 people living with CF in the U.K. and approximately 100,000 people worldwide.

The inherited condition is caused by a faulty gene that affects the movement of salt and water across cell surfaces. It is a multisystem chronic condition, and the mutation in the gene results in the accumulation of sticky mucus in the lungs and digestive system, leading to a range of challenging symptoms.

While there is no cure, a wide range of treatments including physical activity and exercise are recommended to manage CF. NICE guidelines, CF UK Trust physiotherapy management guidelines, and international guidelines all recommend regular exercise testing of people with the condition.

These tests include establishing aerobic fitness, measuring performance, and assessing muscle strength. The tests are also able to assist in evaluating health trends, response to treatment, and health outlook.

However, many people across the world don't have access to routine testing, and execution of the testing has inconsistencies across CF centers.

Exercise tests are increasingly being used by clinicians to evaluate

exercise performance in individuals with the condition. Until now, there has been a lack of global standardization, resulting in some people benefiting more than others.

Extensive research carried out over a ten-year period has been used to produce standard operating procedures that can be used by clinicians all over the world—including low and middle income/resource [poor countries](#).

The document, published in *European Respiratory Reviews*, was a collaboration between more than 60 experts, from countries including the U.K., France, America, Switzerland, Germany, Australia and others.

Dr. Saynor from the School of Sport, Health & Exercise Science at the University of Portsmouth, said, "The big focus of the project was to change and improve [clinical practice](#) across the world, so we've been working together collectively over a number of years.

"We wanted to involve colleagues from areas with different medical care systems, and from both low and middle-income countries, to ensure our recommendations had as much stakeholder involvement as possible.

"Our goal is that all people with CF of an appropriate age have access to regular exercise testing to better understand their health and be given individualized exercise advice."

[A recent survey](#) by specialist CF clinics in the U.K. revealed that the majority now offer some exercise testing and training advice for people with the condition.

"We've seen some progress, but nowhere near the amount we should have over a ten-year period," explained Dr. Saynor.

"Current guidelines recommend every person with [cystic fibrosis](#) should have access to an exercise test at least once a year. That doesn't happen in most parts of the world, including in many clinics here in the U.K.

"It's important that everyone is on the same page when it comes to exercise and activity plans, so that the quality of treatment doesn't vary depending on where a person is from."

The clinical practice guidance offers valuable insights, test instructions, and a selection of commonly used validated tests.

The document also highlights previously used tests that are no longer recommended for individuals with CF, as well as areas that require further research.

It represents the work of a multidisciplinary panel of physiotherapists, exercise scientists, and clinicians, all members of the European CF Society Exercise Working Group.

A number of hospitals in the U.K. have begun using the guidelines, and the team has been running physiotherapy educational courses for clinicians at international conferences and events, as well as developing free online resources.

Deputy Coordinator of the ECFS Exercise Working Group, Dr. Don Urquhart from the University of Edinburgh, said, "We want everybody with CF to be able to have access to an exercise test and an exercise training program within the next few years.

"There is still a lot we don't yet know about people living with CF, but exercise is becoming increasingly important in the management of the condition. We hope that these guidelines will help improve confidence and understanding by having everyone undertake tests in a standardized

manner."

CF Physio President, Jenny Hauser, added, "Global standardization across many aspects of physiotherapy management in CF is a strong focus for clinicians in the rapidly developing and changing landscape of this chronic condition.

"Moving towards a consensus internationally on the choices of validated [exercise tests](#), standardized protocols and objective measures in exercise testing will assist in developing robust multicentre research opportunities.

"The guidelines will improve equity in practice across CF centers, and will help clinicians in appropriately supporting their patients to develop individualized exercise programs for improved health outcomes."

CFPhysio.com Inc are working together with the ECFS EWG to develop an online learning package, translating the guidelines into practical self-paced learning tools for clinicians, accessible to all.

Zoe Saynor and the University of Portsmouth team are involved in a number of other research projects focused on [physical activity](#), exercise and health in cystic fibrosis. This includes a project exploring whether [exercise](#) can be used to replace chest physiotherapy for airway clearance in people with CF, which is a patient driven priority.

A few years ago, they also partnered up with "superhuman" athlete, Josh Llewellyn-Jones OBE, who has cystic fibrosis (CF), to help others with the disease.

**More information:** Zoe L. Saynor et al, Guidance and standard operating procedures for functional exercise testing in cystic fibrosis, *European Respiratory Review* (2023). [DOI:](#)

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