

Title: Experts unite to provide guidelines on exercise and physical activity in Cystic Fibrosis

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Introduction

This editorial summarises a recently published, international and multidisciplinary, expert consensus statement about the important role of physical activity and exercise for people with cystic fibrosis (pwCF) – a genetic condition that currently affects ~11,000 people in the UK. This work from Williams et al. (2022) synthesises previous guidelines, clinical practice, and interpretation of evidence about the benefits of activity and exercise for patient health and management of illness.

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The study entitled '*The Exeter Activity Unlimited Statement on Physical Activity and Exercise for Cystic Fibrosis: Methodology and results of an International, multidisciplinary, evidence-driven expert consensus*' was published in *Chronic Respiratory Disease* and represented a cap-stone project of a highly successful international 'Strategic Research Centre' grant from the Cystic Fibrosis Trust. *The Exeter Activity Unlimited Statement* involved 39 collaborators from the UK, USA, Canada, Australia, Ireland, Greece, Chile, France, and the Netherlands, and included a mix of academics and clinical professionals, representing 43 different institutions.

Whilst physical activity guidelines for healthy children, youth, and adults, such as the one by the UK Chief Medical Officer are well established, less data is available to construct guidelines for people with chronic medical conditions e.g., muscular dystrophy, congenital heart disease, or cystic fibrosis. Therefore, the purpose of the 24-point evidence-driven document, *The Exeter Activity Unlimited Statement*, was to assist health professionals in understanding the evidence base for recommending activity and exercise to manage individual needs of people living with cystic fibrosis. The promotion of physical activity and exercise prescription for people with complex medical conditions within a hospital setting is unfortunately not a consistent practice, although evidence shows it to be effective in disease management (Lane-Cordova et al., 2022). This consensus integrates physiological, psychological, and social benefits of being physically active and provides clinical teams a rationale to promote activity and practical suggestions to enable pwCF to lead a life unlimited.

Although it was not possible to quantify explicitly the frequency, intensity, and duration of physical activity per week that pwCF should undertake, it was agreed that a "focus on an individualised and comprehensive training programme, undertaken at a moderate intensity [defined as a pace where the patient is able to walk/jog and be able to hold a conversation] or higher [pace where the patient can no longer hold a conversation], as part of the ongoing therapeutic routine is recommended in people with cystic fibrosis" (Williams et al., 2022, p.7). As a starting point, this physical activity advice is suitable for healthcare professionals to promote, whilst accounting for any individual patient circumstances and having consulted with them and/or their caregiver.

So, what are the practical implications of this consensus statement? We suggest there are three implementable actions that all hospital staff can begin using immediately.

1. Be a champion to promote physical activity and exercise for patients.
2. Ask patients about their fitness and activity levels.
3. Use the measurement of physical activity as a 'vital' sign.

The first action point is for senior clinicians (such as consultants and registrars) to initiate conversation about physical activity and exercise with their patients. The importance of initiating conversation cannot be underestimated. It supports the UK's 'Make Every Contact Count' initiative (Health Education England, 2018), and the National Institute for Health and Care Excellence (NICE) advice to

take advantage in each clinical instance between healthcare professionals and patients and is viewed as crucial to deliver patient-driven behavioural change (NICE, 2015). However, we acknowledge that whilst many clinicians recognise the importance of these contacts and conversations, there is a gap between the perceived importance and the regularity of conversations on physical activity (Lobelo et al., 2009). This is where the wider multi-disciplinary health care team take over the conversation to implement an action plan, with many nurses, physiotherapists, clinical physiologists, exercise therapists, and support workers better placed to deliver this task.

The second action point is to enquire about the physical fitness levels of the patient. Cardiorespiratory fitness is known to be significantly associated with morbidity and mortality in CF (Hebestreit et al., 2018). In pwCF, high levels of cardiorespiratory fitness have been shown to add years to survival and is recommended to be assessed regularly. A cardiopulmonary exercise test (CPET) is the gold-standard test, being valid and reliable, to assess maximal function of the heart, lungs, and muscle of a patient (Saynor et al., 2013), and whilst its implementation is established in hospitals throughout the U.K., it is not yet utilised enough (Stevens et al., 2010). Moreover, if gold-standard CPET is unavailable, field tests are available to assess function in this clinical group, meaning that no patient is denied the opportunity of enhanced physiological assessment.

The final action point is for senior staff to actively embed the assessment of physical activity into clinical practice, use it as a 'vital' sign and encourage patients to become more active. Most patients, even those with severe chronic medical conditions, will benefit from some form of physical activity. In pwCF, increasing physical activity has been shown to have important psychological (confidence, self-esteem, positive feelings of mood) and social (friendship, decreased loneliness) effects, in addition to health benefits (facilitate airway clearance and could slow the decline in lung function). This approach to promoting activity links well to such global health initiatives as Exercise is Medicine® and Moving Medicine but requires training of the medical workforce (Asif et al., 2022); a strategic development of NHS staff that the *Exeter Activity Unlimited* consensus recommends (Williams et al 2022).

Key Points

- Engaging in physical activity is a well-known and established strategy for the prevention of non-communicable diseases, but engagement in physical activity for patients with complex medical conditions has been given less attention.
- Physical activity for patients with complex medical conditions should be actively promoted as it is known to benefit physical, psychological, social, and economic factors related to health and well-being.
- Clinicians have an important role in promoting activity by engaging in conversations with patients about the benefits of physical activity.
- In advising about physical activity for patients, physical health benefits should not be the only factor promoted, other important psychological and social benefits should also be emphasised.
- Cardiorespiratory fitness is a global marker of health, and it should be routinely assessed.

Conclusion

The approach to physical activity promotion and planning for patients must start with regular conversations with the medical/allied healthcare team, to support behavioural change and move beyond the classical medical model of dealing with symptoms, diagnoses and treatment. This consensus statement provides a holistic evidence base for how we can rethink the use of physical activity, a cost-effective management strategy for pwCF. The authors would welcome an explicit management strategy of physical activity as part of the NHS, and other worldwide healthcare pathways, not just in CF but other chronic medical disease conditions.

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