

Benefits of Physical Exercise

For People with Cystic Fibrosis

Exercise and physical fitness is of extreme importance for individuals with cystic fibrosis. Not only is it a natural form of chest physiotherapy that increases lung capacity and facilitates airway clearance, it is also instrumental for enhancing the quality of life.

Scientific Evidence to Support the Benefits of Exercise for People with CF

Regular participation in physical activities may also contribute to greater adherence in the long term, which strengthens the case for incorporation of exercise into the routine care of patients with CF (1,2). Physical exercise should however only serve as a complement to chest physiotherapy for maximum impact on sputum clearance (3). A patient's perception of physical exercise may also be a positive one compared with other treatments since exercise is focused on health promotion as opposed to management on an illness (4).



A Cochrane systematic review has reported that exercise has a positive effect on exercise capacity, strength and lung function in CF (5). Dr Judy Bradley (Reader in Physiotherapy, University of Ulster), who is an author on this publication, has also written to the CFAI to demonstrate her support for, and urge our continuation of, this grant scheme in 2011 and onwards.



Regular exercise of moderate intensity and duration has also recently been shown to exert anti-inflammatory effects and is associated with a reduced disease incidence and viral infection susceptibility (6).

Ref 1: Exercise and physical activity in children with cystic fibrosis. Wilkes DL, Schneiderman JE, Nguyen T, Heale L, Moola F, Ratjen F, Coates AL, Wells GD. *Paediatr Respir Rev*. 2009 Sep;10(3):105-9. Epub 2009 Jul 21. Review.

Ref 2: Airway-clearance therapy guidelines and implementation. Lester MK, Flume PA. *Respir Care*. 2009 Jun;54(6):733-50; discussion 751-3. Review.PMID: 19467161 [PubMed - indexed for MEDLINE]

Ref 3: Bilton D, Dodd ME, Abbott JV et al. The benefits of exercise combined with physiotherapy in the treatment of adults with cystic fibrosis. *Respir. Med* 1992; 86 507-511.

Ref 4: Incorporating exercise into the routine care of individuals with cystic fibrosis: is the time right? Moran F, Bradley J. *Expert Rev Respir Med*. 2010 Apr;4(2):139-42.

Ref 5: Bradley JM, Moran F. Physical training for cystic fibrosis. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD002768.

Ref 6: Infection, inflammation and exercise in cystic fibrosis. van de Weert-van Leeuwen PB, Arets HG, van der Ent CK, Beekman JM. *Respir Res*. 2013 Mar 6;14:32.

How important is exercise in the management of physiotherapy?

During exercise the secretions in our lungs increase in water content and therefore are easier to clear; so, as you can imagine this is of great benefit to effective airway clearance, making any secretions in the lungs easier to move. During exercise the oxygen demands of the body increase, and in response to this our lungs increase their ventilation by opening up all the parts of the lungs we don't use when sitting down and resting. Therefore, you are moving air through every section of your lung and helping move any secretions you have in areas that are not ventilated at rest. Exercise is equally important in building oxygen efficient muscles that we can rely on to prevent injury and also during exacerbation can maintain function.

Excerpt above taken from the Physio Feature in Spectrum, Issue 22; Clare Reilly, CF Physiotherapist, St Vincent's University Hospital

How have our members benefited from the Exercise Grant Scheme?

Here is some feedback we have received from people with CF that have already availed of our Exercise Grant.

- *"We were delighted to receive an exercise grant towards a trampoline to enable our 3 boys with CF to do some fun exercise. It has proved to be a wonderful addition to their exercise regime as they don't really view it as exercise. Even in the wintertime they go out and have a quick bounce before bed! The CFI have been wonderful in supporting us as a family and their help is truly invaluable."*
- *"The Exercise Grant will make life easier to keep fit."*
- *"It is a wonderful thing to get this as it helps and encourages me to keep up the exercise and thus keep well."*
- *"My energy and fitness levels have increased so much during my months on the exercise grant scheme. Beforehand I would probably walk for 30 mins in the evening as I could not afford to join a gym. But now I can spend 1 hr 15 mins in the gym and maybe 30 mins swimming 3-4 times a week. I feel fantastic! My lung function is slowly climbing and hopefully will continue to do so."*
- *"I do spinning classes, step aerobics and weights – it's so hard but I'm getting so strong! I am so grateful for the grant; I would encourage all PWCF to exercise regularly. I could write a book on how much I love it, but I have to rush off to the gym!"*
- *"Working out in the gym is not weather dependent. I tried many different techniques to keep my work-outs both effective and interesting, for example, aerobics and circuit classes. Being around other people exercising pushed me to do more."*



- *“I found the Exercise Grant a great help – I could maintain and improve my lung function and also I haven’t needed IV antibiotics in 12 months – this is the longest I’ve gone without IVs in 10 years!”*
- *“The exercise grant has been a great benefit to me. Due to the bad weather we’ve had this year it’s been very hard to motivate myself to go out in the wind and rain for a walk but with the equipment I purchased thanks to the grant I can do my exercise without going outside. The exercise is also a good form of physio and it makes me cough up some stuff. After the exercise you always feel good for doing something and not sitting down all day. I can see my equipment being a great benefit over the coming months as the evenings are getting shorter and colder. It’s also harder to go outside when you’re sitting in front of a fire so I can see myself using the equipment a lot more over the next few months.”*
- *“I swim and do aqua aerobics classes and I have even started to run lately. Overall I feel my fitness has improved a great deal for me. I would feel my level of fitness has risen from a 4 to 7 out of ten. I really hope that this scheme is continued as I have really felt the benefits of it and would definitely avail of it again in the future.”*
- *“I bought a York treadmill at Argos. I decided to turn one of the spare rooms in the house into my own little gym. Over a few weeks I added a boxing bag and weight lifting bench. Before I received the grant I was going to the local gym which is 16miles from my house this lasted for 6 months when my membership was up I couldn’t afford to renew it so I started exercising outdoors this didn’t happen every often with bad weather etc... Since I got the grant and set up the gym I exercise every day sometimes twice a day and I’m am feeling the benefits I have more energy I am not as tired as I use to be and I’m able to work out for a lot longer without getting out of breath. I think the money is well spent on home equipment as it will last for years and there is no risk of infection.”*

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