Physical activity and Exercise in Cystic Fibrosis - Adults

Why have you been given this leaflet?

Physical activity and exercise have an essential role in the treatment and management of Cystic Fibrosis (CF). Therefore the following leaflet aims to provide you with advice to help you benefit from increasing your activity and gaining the most from your exercise.

What is the difference between physical activity and exercise?

Physical activity:
Is any bodily movement produced using your muscles which increases the amount of energy used. This includes activities like walking the dog, housework and gardening.

Exercise:
Is any kind of deliberate, structured and repetitive bodily movement performed to improve one or more components of physical fitness (cardiovascular, strength, flexibility, co-ordination, balance). This could include training for a specific sport or activity or using the gym.

Physical activity is great and we should all attempt to be physically active, however exercise is required to gain specific benefits, for example improving cardiovascular fitness, muscle strength, flexibility or training for a sport or activity.

What are the benefits of exercise?

- Improves quality of life
- Social benefits (enjoyable, activity with family & friends, confidence etc.)
- Reduces exacerbations and hospitalisations
- Improves airway clearance
- Improves lung function/ reduces decline in lung function
- Improves and maintains bone health
- Improves glycaemic control/helps manage blood sugars
- Improves posture
- Reduces anxiety and depression
- Improves sleep quality
- Reduces fatigue
- And much more

Recommendations for exercise

Definitions:
Moderate-intensity physical activity leads to faster breathing, increased heart rate and feeling warmer.

Activities could include walking briskly, and household tasks such as vacuum cleaning or mowing the lawn.
Vigorous-intensity physical activity leads to very hard breathing, shortness of breath, rapid heartbeat and should leave a person unable to maintain a conversation.

Activities could include running, cycling and fast-paced sports.

Aerobic exercise or cardiovascular exercise is prolonged exercise which uses large muscles which increases the body's need for oxygen making the heart and lungs work harder. This could include walking the dog, running, cycling, exercise classes and sport.

Resistance exercise is exercise that improves muscle strength by applying a weight causing the muscles to contract. Examples of this could be supporting your own bodyweight, lifting heavy objects or weights and using weights machines. Exercise to improve strength could also include Yoga or Pilates.

No single activity is ‘best’, activity should part of a healthy lifestyle. Activity should be enjoyable and a variety of activities should be encouraged.

**Adults (>19 yrs)**

150 minutes per week or more of moderate to vigorous activity in a variety of activities of choice.

Aerobic activity should be in bouts of at least 10 minutes, ideally 30-60 minutes daily of moderate to vigorous exercise on 3-5 days per week. Resistance exercise should be encouraged on 2-3 days per week and a formal programme may be introduced to train for specific goals. This may be to train for a specific event or sport or could be to address a particular concern you may have.

Something is better than nothing, starting with a small amount of activity is still beneficial for your health and helps you to build up to more.

**How do we measure exercise capacity?**

You will complete an exercise test as part of your annual review, there are a number of tests available but we predominately use the modified shuttle walk test, 6 minute walk and cardiopulmonary exercise test (CPET). Each test provides information about your aerobic exercise capacity and allows us to do a number of things. Firstly it allows us to measure exercise capacity over time and identify any changes in exercise capacity which may relate to changes in physical function. It allows us to identify a limitation to exercise, including exercise associated symptoms. It allows us to make training recommendations. Finally exercise capacity is related to quality of life and the ability to perform everyday tasks.

We can also measure daily activity in a number of ways including using accelerometers (physical activity monitors worn on the wrist), pedometers (measure steps) and diaries. This provides us with information on how much activity you do in your normal day and allows you to measure this in an accurate and visual way. There are also an increasing number of and variety of ‘apps’ able to track activity.

**Barriers to exercise**

Exercise capacity can often be reduced in CF and there are a number of factors involved in this, one of the main reasons is physical inactivity. Many people with CF avoid physical activity as they think they are not able or could trigger symptoms. Infections, treatment burden and implanted devices also make being active more difficult. Although this can make exercising feel more difficult it does not mean that exercise should be avoided. This can be managed and if you have any concerns you should speak to the CF team.

There is much more to exercise capacity than just lung function and it is also important to keep our cardiovascular system and muscles working efficiently through regular exercise.

Many people have many barriers to exercise ranging from time, space and equipment to motivation and confidence. As a team we are here to help you overcome these barriers. At times you may want more support than others.

**What support is available?**

Your CF team is here to support you with leading an active lifestyle, below are just some of the ways we can support you;
Face to face exercise sessions tailored to your needs

Exercise testing and training recommendations

Skype exercise sessions

Gym/local facilities referrals (where possible)

Advice for training for specific goals

Support with becoming physically active/increasing physical activity

Physical activity monitoring (accelerometers/pedometer/apps)

Advice on exercise and other aspects of CF care (physiotherapy, nutrition, bone health, CF-related diabetes, O2 requirements, implanted devices)

Take home messages

- Reduce time spent sitting, lying down and watching TV (being sedentary)
- Try to do some activity daily
- Fit activity into your lifestyle where ever possible, walking instead of taking the car or climbing the stairs instead of using a lift.
- Find an activity you enjoy and involve friends and family where possible
- Something is definitely better than nothing, start with something small.

Contact details

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The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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