

# Cystic Fibrosis all about physiotherapy

## Active Cycle of Breathing Techniques (ACBT)

Active Cycle of Breathing Techniques, or ACBT, is an airway clearance technique. It uses a number of different breathing techniques that, when combined, help to clear sputum from the lungs.

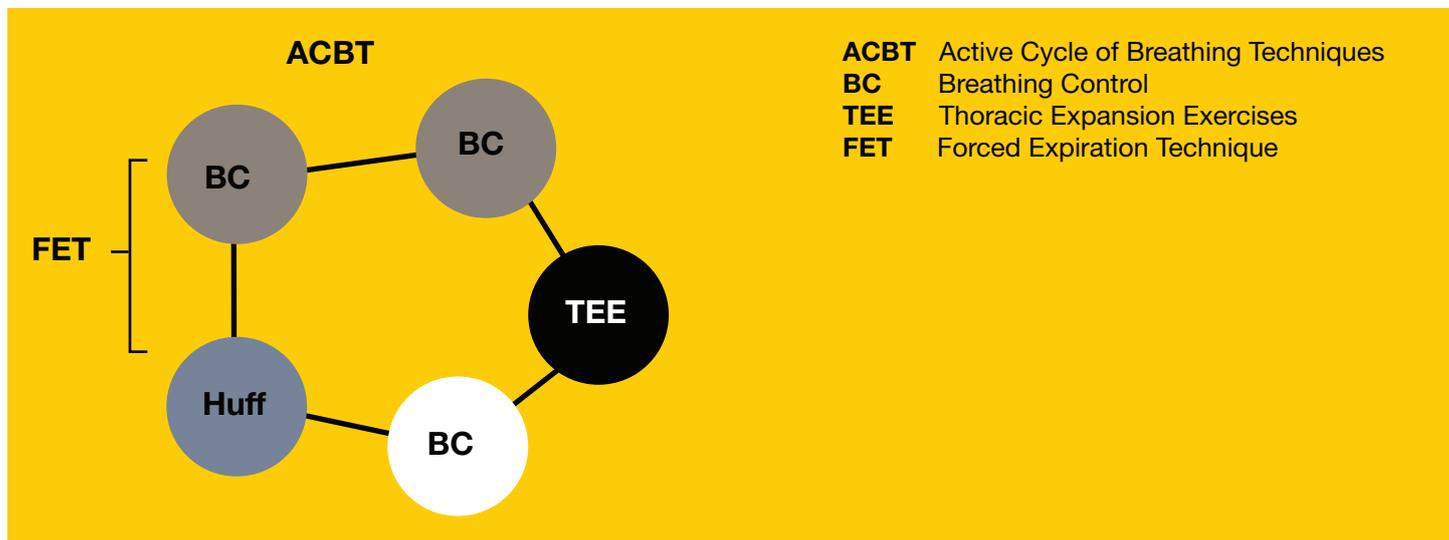
With thanks to Helen Parrott, Royal Brompton Hospital, and Monica Musgrave, Addenbrookes Hospital, for preparing the information in this leaflet.

Patient name			
DOB		Hospital number	
Physiotherapy recommendations			
This leaflet was issued by: (Physiotherapist name and contact details)		This leaflet was issued on:	

## How does ACBT work?

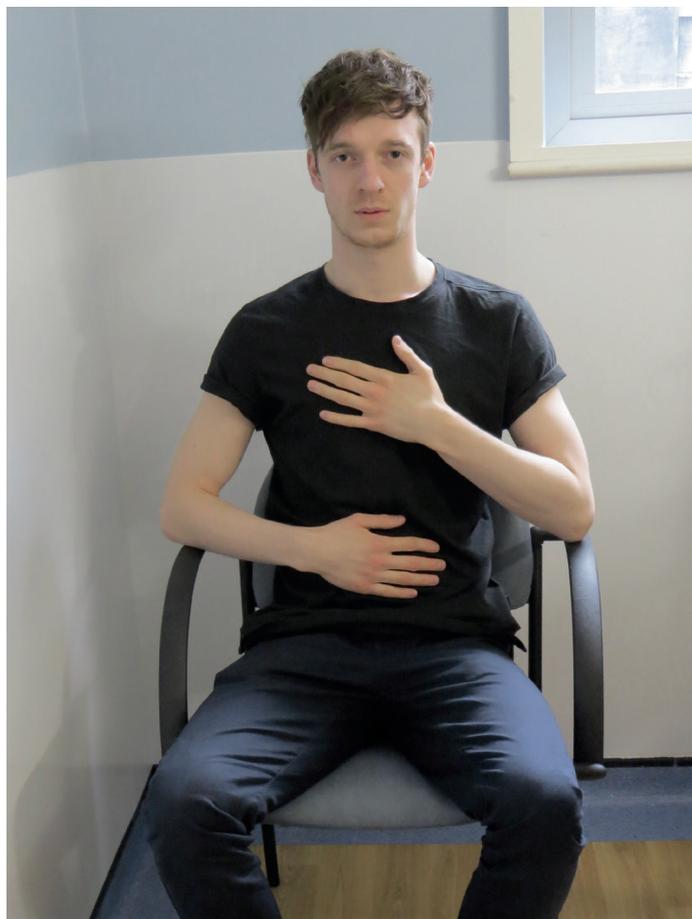
ACBT is a treatment that can be performed anywhere as it does not require any equipment. It can be completed in any supported position as advised by your physiotherapist.

ACBT is a cycle of breathing control, thoracic expansion exercises (bigger deep breaths), and forced expiration technique (huffing). The definition of these techniques can be found on the following pages. The cycle can be adapted depending on your needs. Your physiotherapist will be able to advise you.



### Breathing Control (BC)

This is relaxed normal breathing using the lower chest. This helps to relax the airways for the next stage of deep breathing, called 'thoracic expansion exercises'. During ACBT you will need to return to 'breathing control' to rest so that the sputum can continue to be cleared effectively.



### Thoracic Expansion Exercises (TEE)

These are three-to-four deep, full breaths (ideally in through your nose) where your lungs are slowly filled to full expansion. If it is comfortable for you to do so, a short three-second pause at full expansion (before you breathe out) can give time for the air to move throughout your lungs.

These deeper breaths help to loosen and move the sputum in your chest because, at the end of each breath in, the air filters through to the small airways, which can then get behind the sputum. When you breathe out, the exhaled air can 'push' it upwards towards the larger airways (towards the mouth).



## Forced Expiration Technique (FET or 'Huffing')

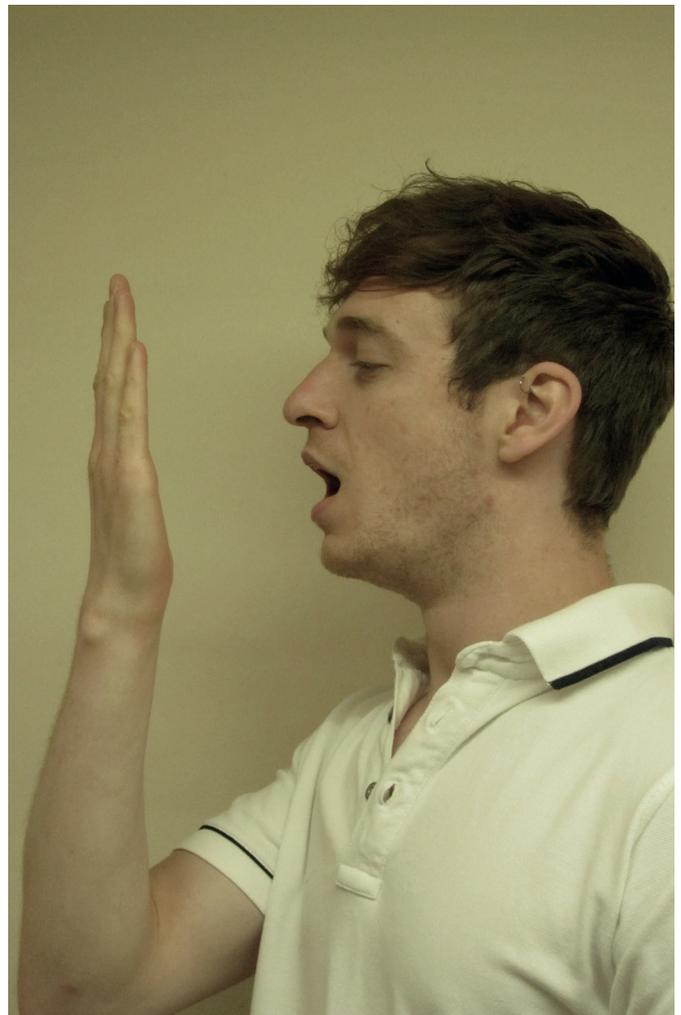
After loosening the sputum in the small airways, the forced expiration technique (huff) will help to move it further and eventually clear it from your lungs.

The FET is a combination of one or two forced expirations (huffs that should be performed by opening your mouth, keeping the back of your throat open and breathing out like you are steaming up a mirror – pictured right) and breathing control. The size of the breath in before the huff and the length of your huff out will move sputum from different parts of the lung. Your physiotherapist will guide you in this.

Your forced expiration technique (huff) needs to be taught and checked by your physiotherapist regularly, as it is easy to get into bad habits and perform it incorrectly, which can waste a lot of energy. A huff that is too strong may create a wheeze or whistling noise, which might make it harder for sputum to move.

If huffing clears your sputum you should not need to cough. You should only cough if the sputum can be cleared easily.

Please visit [www.youtube.com/user/RBandH](https://www.youtube.com/user/RBandH) and search for **ACBT** to watch a [video](#) of this technique.



An example of ACBT with a physiotherapist

**This leaflet should only be used if it has been given to you by your physiotherapist, who will have decided if this is a suitable treatment for you to undertake. Do not use this leaflet without first consulting with your physiotherapist.**

The information on this leaflet is based on clinical best practice and consensus of opinion by physiotherapists within the ACPCF. For a detailed review of the evidence for this technique, please review the 'Standards of Care and Good Clinical Practice for the Physiotherapy Management of Cystic Fibrosis' 2017. Third edition. To view our consensus documents please visit [cysticfibrosis.org.uk/publications](http://cysticfibrosis.org.uk/publications).

The Cystic Fibrosis Trust provides information about cystic fibrosis through our factsheets, leaflets and other publications. Most of our publications can be downloaded from our website or ordered from our helpline.

Our helpline can help you with a range of issues, no matter how big or small. Our trained staff can provide a listening ear, practical advice, welfare/benefits information or direct you to other sources of support. The helpline is open Monday to Friday, 9am–5pm, and can be contacted on 0300 373 1000 or at [helpline@cysticfibrosis.org.uk](mailto:helpline@cysticfibrosis.org.uk).

**For more information about the Association of Chartered Physiotherapists interested in Cystic Fibrosis please contact [ACPCFmembership@gmail.com](mailto:ACPCFmembership@gmail.com).**