

## Patient Information Leaflet

### Physiotherapy Department

# Active Cycle of Breathing Technique

Derriford Hospital  
Derriford Road  
Plymouth  
PL6 8DH

Tel: 0845 155 8155

[www.plymouthhospitals.nhs.uk](http://www.plymouthhospitals.nhs.uk)



Active Cycle of Breathing Technique (ACBT) is used to clear sputum (phlegm) for people with lung problems. It is important to clear sputum from your lungs to help you breathe more easily, preventing chest infection.

It can be done in sitting or in a postural drainage position, as advised by your Physiotherapist. Please adopt a comfortable, well supported and relaxed position.

ACBT is an airway clearance technique and consists of a set of breathing exercises that moves the sputum from your airways.

There are three parts to the technique:

1. Breathing Control (BC)
2. Thoracic Expansion Exercises (TEE)
3. Forced Expiratory Technique (FET) or Huffing

Please refer to the video link on YouTube to follow the technique (PLYMOUTHNHSPHYSIO):

<https://www.youtube.com/watch?v=XvorhwGZGm8>

## **1. Breathing Control (BC)**

Breathing control is breathing gently, using as little effort as possible.

- Place one hand on your stomach and relax your shoulders.
- Breathe in and out gently through your nose if you can. If you cannot, breathe through your mouth instead.
- Feel your stomach gently rise and fall as you breathe in and out.

- If you breathe out through your mouth you can use breathing control with 'pursed lips breathing'.

Breathing control will allow your airways to relax. It can also help you when you are short of breath or feeling fearful or anxious.

## **2. Thoracic Expansion Exercises (TEE)**

These are also known as deep breathing exercises. The aim of these exercises is to get the air behind the sputum in the smaller airways.

- Relax your chest and shoulders.
- Take a long, slow, deep breath in through your nose if you can.
- Feel your ribs expanding as you breathe in.
- Breathe out gently like a sigh.
- Repeat 3-4 deep breaths. If you feel light headed go back to relaxed breathing.

Some people find it helpful to hold their breath for about 2-3 seconds at the end of the breath in, before breathing out. Try the deep breathing exercises both with and without holding your breath and see which works best for you.

## **3. Forced Expiratory Techniques (FET) or Huffing**

This technique consists of huffing. A huff is breathing out through an open mouth and throat by contracting your tummy muscles. Do not force it so much that you cause wheezing or tightness in your chest. The aim is to squeeze air quickly from your lungs, out through your open mouth and throat, as

if you were trying to mist up a mirror or your glasses. Huffing should always be followed by breathing control.

Huffing moves sputum from the small airways to the larger airways, from where they are removed by coughing. Coughing alone does not remove sputum from small airways.

There are 2 types of huff, which help to move sputum from different parts of the lungs.

### **The Small-long huff**

Take a small to medium breath in and then huff the air out until your lungs feel quite empty. This will move sputum from low down in your chest.

### **The Big-short huff**

Take a deep breath in and then huff the air out quickly. This moves sputum from higher up in your chest, so use this huff when it feels ready to come out. This should clear your sputum without coughing.

## **Coughing**

Your huff should move the sputum in your chest by making it 'rumble' or 'rattle'. If huffing clears your sputum there is no need to cough. However if it does not clear your sputum, then you may need to. You should only cough if the sputum can be cleared easily. It is very important to avoid long bouts of coughing as these can be very tiring and may make you feel breathless, or make your throat or chest sore or tight.

Clearing your chest should be done often enough to keep it reasonably clear between doing the exercises. When you

have more sputum, you may need to do it more often. You should aim to continue your exercises for about 10 minutes and ideally until your chest feels clear of sputum.

**Please use this technique only if assessed and advised by a Physiotherapist.**

This information sheet is available in large print and other formats and languages. Please contact:  
Physiotherapy Department  
Tel: 0845 155 8208

Author: Achin Sobti