



# The Active Cycle of Breathing Techniques

People with a lung problems often cough and produce more phlegm (*sputum*) than is usual. It is important to remove sputum from your lungs to help you breathe more easily, prevent chest infections and reduce bouts of coughing. Leaving sputum in your chest can make your condition worse.

The Active Cycle of Breathing Techniques (ACBT) is one way to help you to clear sputum from your chest. ACBT is a set of breathing exercises that loosens and moves the sputum from your airways. It is best to be taught ACBT by a physiotherapist.

The ACBT exercises are breathing control, deep breathing and huffing which are performed in a cycle until your chest feels clear.

## Breathing Control

Breathing control is breathing gently, using as little effort as possible (also see leaflet GL- 02)

- Breathe in and out gently through your nose if you can. If you cannot, breathe through your mouth instead
- If you breathe out through your mouth you can use breathing control with 'pursed lips breathing'
- Try to let go of any tension in your body with each breath out
- Gradually try to make the breaths slower
- Try closing your eyes to help you to focus on your breathing and to relax

It is very important to do Breathing Control in between the more active exercises of ACBT as it allows your airways to relax. Breathing control can also help you when you are short of breath or feeling fearful, anxious or in a panic.

## Deep Breathing Exercises

Take a long, slow, deep breath in, through your nose if you can. Try to keep your chest

and shoulders relaxed. Breathe out gently and relaxed, like a sigh. You should do 3-5 deep breaths. Ask your physiotherapist to help you choose the right number of deep breaths for you. 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.

## Huffing

A huff is exhaling through an open mouth and throat instead of coughing. It helps move sputum up your airways so that you can clear it in a controlled way. To 'huff' you 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. Use your tummy muscles to help you squeeze the air out, but do not force it so much that you cause wheezing or tightness in your chest. Huffing should always be followed by breathing control. There are 2 types of huff, which help to move sputum from different parts of the lungs.

### *The Small-long huff*

This will move sputum from low down in your chest. Take a small to medium breath in and then huff (*squeeze*) the air out until your lungs feel quite empty, as detailed above.

### *The Big-short huff*

This moves sputum from higher up in your chest, so use this huff when it feels ready to come out, but not before. Take a deep breath in and then huff the air out quickly. This should clear your sputum without coughing. ►



► **How do I know I am huffing correctly?**

Your huff should move the sputum in your chest by making it ‘rumble’ or ‘rattle’. This will mean you are moving the sputum up the airways, it should then clear easily.

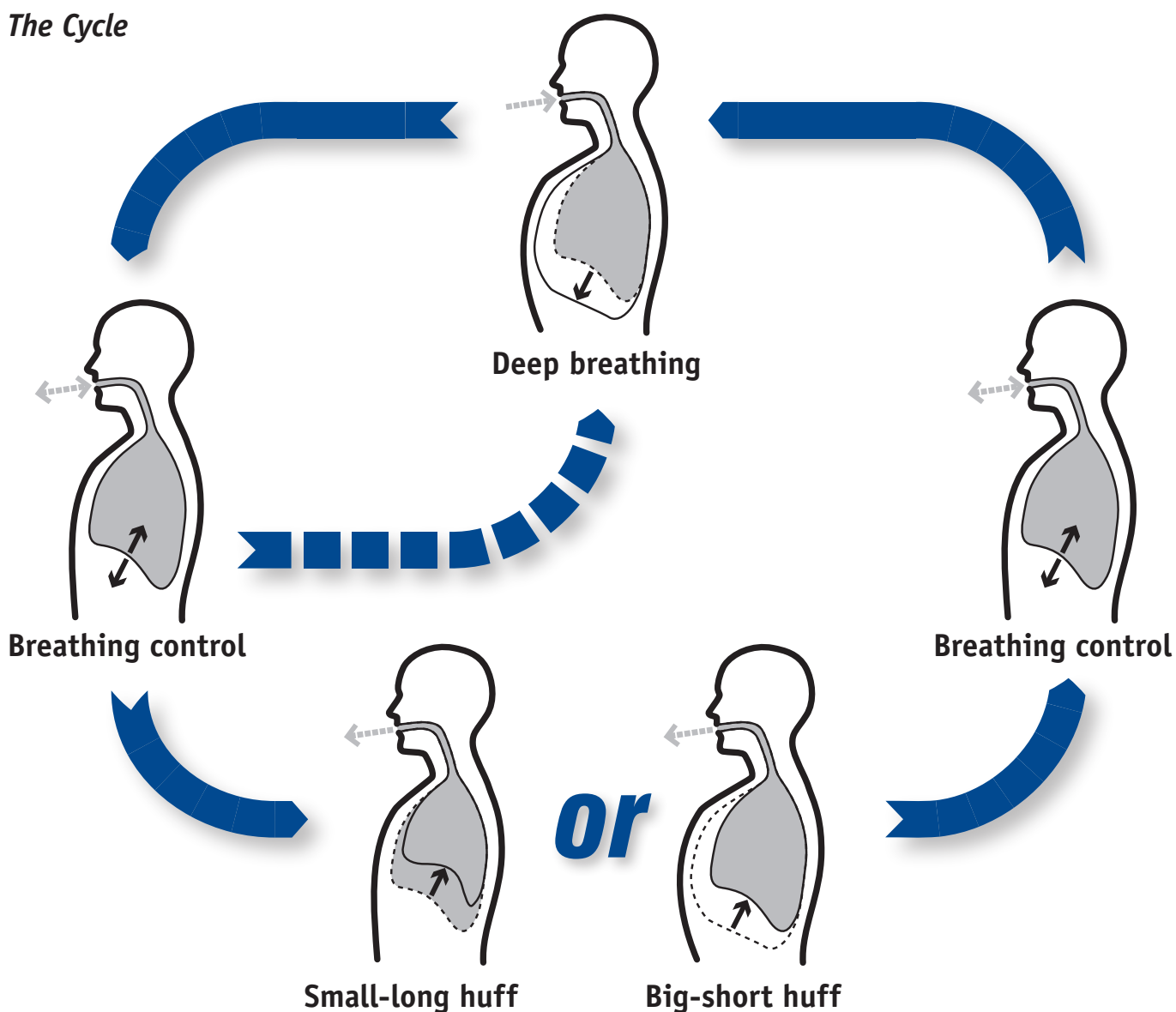
If you are wheezing with each huff you may be huffing too hard or for too long. Make sure you do not huff too hard and always do some breathing control after each two huffs.

If you find it hard to keep your mouth and throat open when huffing, you may find it useful to use a small tube (*eg the mouthpiece for a peak flow meter*) when practising. Ask your physiotherapist to show you how.

**Putting it together to form a ‘cycle’**

Your physiotherapist may adjust the Active Cycle of Breathing Techniques to suit your needs. ►

**The Cycle**





## ► **When should I cough?**

If huffing clears your sputum you should not 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.

## **How often do I need to do ACBT?**

Clearing your chest should be done often enough to keep it reasonably clear between doing the exercises. When you are well you may need to do ACBT only once or twice a day. When you have more sputum, you may need to do it more often. When you are unwell or have more sputum, you may need to do shorter and/or more frequent sessions.

## **When should I do my breathing exercises?**

You should do your exercises when it is easiest for you to move the sputum from your chest, or if you feel sputum has built up in your lungs. The first sign may be that you feel more breathless or that you are coughing more. It is also important to try and fit your

breathing exercises around your life and your daily routine, so that you are able to do them regularly. Try to avoid doing ACBT straight after a meal. You should discuss this with your physiotherapist.

## **How long should I do ACBT for?**

You should aim to continue your exercises for about 10 minutes and ideally until your chest feels clear of sputum.

## **What position should I do ACBT in?**

The best position for you to do the ACBT in will depend on your medical condition and how well it works for you. It can be done in sitting or in a postural drainage position (see leaflet GL-07), as advised by your physiotherapist. Whatever position you use make sure you are comfortable, well supported and relaxed. If you have any questions about the information in this leaflet, please contact your physiotherapist.

## **Useful contacts**

Association of Chartered Physiotherapists in Respiratory Care  
[www.acprc.org.uk](http://www.acprc.org.uk)

British Thoracic Society  
[www.brit-thoracic.org.uk](http://www.brit-thoracic.org.uk)

British Lung Foundation  
[www.lunguk.org](http://www.lunguk.org)

Chartered Society of Physiotherapy  
[www.csp.org.uk](http://www.csp.org.uk)

Asthma UK  
[www.asthma.org.uk](http://www.asthma.org.uk)

