

## Therapy

# Active cycle of breathing technique (ACBT)

People with a lung problem can produce more sputum than usual. It's important to do airway clearance exercises to remove the sputum from your lungs.

The active cycle of breathing technique (ACBT) is a cycle of breathing techniques that help to:

- loosen and clear sputum
- improve air flow to your lungs
- reduce the need to cough throughout the day
- improve your feelings of breathlessness
- reduce the number of chest infections

The ACBT cycle is made up of **breathing control**, **deep breathing**, and **huffing**. You perform the techniques in a cycle until your chest feels clear.

## Breathing control

Breathing control is a gentle breathing technique. It helps with breathlessness, anxiety, and panic.

Practice breathing control regularly when you feel relaxed. Practising little and often should help make breathing control feel natural when you lack control over your breathing.



## Patient Information

Breathing control focuses on making your breathing more efficient. You can do this by using the correct muscles rather than the top of the lungs and shoulders.

### How to practice breathing control

1. Start in a comfortable and well supported position. Keep your shoulders relaxed, chest open and elbows by your side.
2. Place your hands on your tummy, just above your belly button.
3. Breathe in and out gently through your nose. Focus on drawing air right to the bottom of your lungs and allow your tummy to rise. You could imagine a balloon inside your tummy is inflating.
  - If you cannot do this, breathe out gently through your mouth instead, like a sigh, not forced, through pursed lips if it helps. Let your tummy fall until the breath comes to its natural end.

### Tips for breathing control

- Only take in the air that you need - breathing control is not about taking in a deep breath.
- Always focus on the breath out. The breath in will take care of itself. This is especially important if you are feeling anxious.
- Gradually try to make your breaths slower, allowing a pause between each breath
- Closing your eyes may help you focus on your breathing and relax.

### Deep breathing exercises

Deep breathing exercises aim to get the biggest breath of air possible into your lungs. Deep breathing exercises can:

- increase the expansion of your lungs
- remove any sputum present
- increase your lung function in general

## Patient Information

### **How to do deep breathing exercises**

1. Sit upright with your back supported.
2. Keep your shoulders, chest and arms relaxed, elbows by your side.
3. Take a long, slow and deep breath in through your nose, breathing in fully, drawing air to the bottom of your lungs.
4. Breathe out gently, like a sigh, not forced.
5. Do 6 deep breaths unless advised otherwise by your physiotherapist.

### **Inspiratory hold**

An inspiratory hold is a technique that helps to increase lung volume and extra (collateral) airway opening. This re-expands any lung tissue. The air will also get behind sputum to move it up the airways, where you can remove it by coughing.

#### **To do an inspiratory hold:**

At the end of each breath in, hold the air in your lungs for 2 to 3 seconds before breathing out.

### **Forced expiratory technique – a ‘huff’**

At the end of the deep breaths, your physiotherapist may advise you to breathe out forcefully through an open mouth instead of coughing. This is a huff.

A huff helps to loosen and move sputum from small (lower) airways to large (upper) airways in the lungs. This causes it to ‘rumble’ or ‘rattle’. You can then remove the sputum with or without coughing.

Huffing is a useful alternative to coughing if you are in pain or tired. Huffing takes less effort to do than coughing due to the lower chest pressure generated.

## Patient Information

### To complete a huff:

1. Take a breath in through your nose.
2. Make your mouth into an 'O' shape and do a short sharp breath out. Imagine you are trying to steam up a mirror or your glasses.
3. Do not huff for so long that you force yourself to wheeze or uncontrollably cough.
4. You can repeat the huff to work the sputum higher if required.

## Coughing

If huffing alone does not clear your sputum, cough strongly from your stomach. Do not cough from your throat.

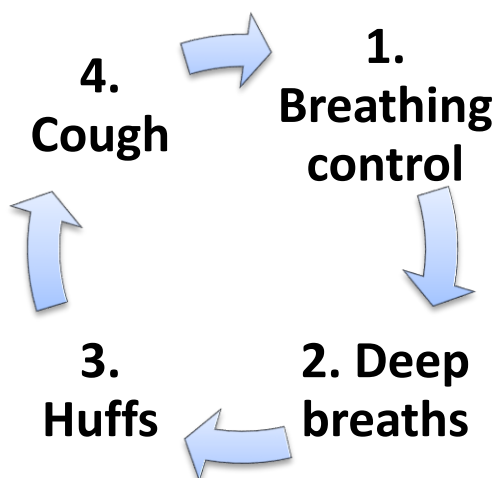
Avoid long bouts of coughing. This can be very tiring and may make you feel breathless or make your throat or chest sore or tight.

If you cough up some sputum, spit into a clean tissue and dispose of the tissue into a domestic waste bin.

Always do breathing control after huffing and coughing.

## Putting it together

Perform the **breathing control**, **deep breathing**, and **huffing** techniques in a cycle until your chest feels clear.



## **The best position for ACBT**

The best position to do the active cycle of breathing techniques depends on your condition. Your physiotherapist will advise you on the best position.

Usually, sitting is the best position. But this could be combined with postural drainage. The most important thing is to make sure you are comfortable, supported, and relaxed.

## **How often to perform ACBT**

Your physiotherapist will tell you how many sessions to perform each day. This will depend on the amount of sputum you produce.

Clear your chest often enough to keep it reasonably clear between doing the exercises.

When your symptoms are worse, you may have more sputum and need to perform ACBT more frequently.

Aim to continue the cycle for about 10 minutes, and ideally until your chest feels clear of sputum.

## **Your personal ACBT routine:**

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If you have any concerns or queries about your exercise, please ask a member of staff for advice. You can contact the Therapy Department on 024 7696 6013.

## Patient Information

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