

Patient information

Pulmonary Rehabilitation - Airway Clearance Techniques

Therapies Department - Aintree Hospital

There are many options/techniques that can be used to help clear your chest of secretions. Some techniques require aids whereas others techniques require no equipment.

Airway clearance techniques help to clear excess thick sticky mucus from the lungs.

It is important to try and clear mucus as it can increase the problems with infection / inflammation and can block the smaller airways, which can result in the lungs not being able to work effectively.

In addition to chest physiotherapy, antibiotics and inhaled medicines that help to open the airways and thin the mucus (mucolytics) are also used to help keep the chest clear. The amount of treatment needed depends very much on the individual.

- Once the lungs become productive, airway clearance treatment is usually needed on a daily basis, and may be required three-four times a day if there is active infection.

However, when well, treatment will be needed less frequently – once or twice a day.

- The length of each treatment session will again vary according to need.

Sessions may only be 10-15 minutes when there are only small amounts of mucus, however longer treatments will be necessary if there is a lot of mucus to be cleared.

Active Cycle of Breathing Technique (ACBT)

This can be done in either an upright sitting position or can be combined with postural drainage positions.

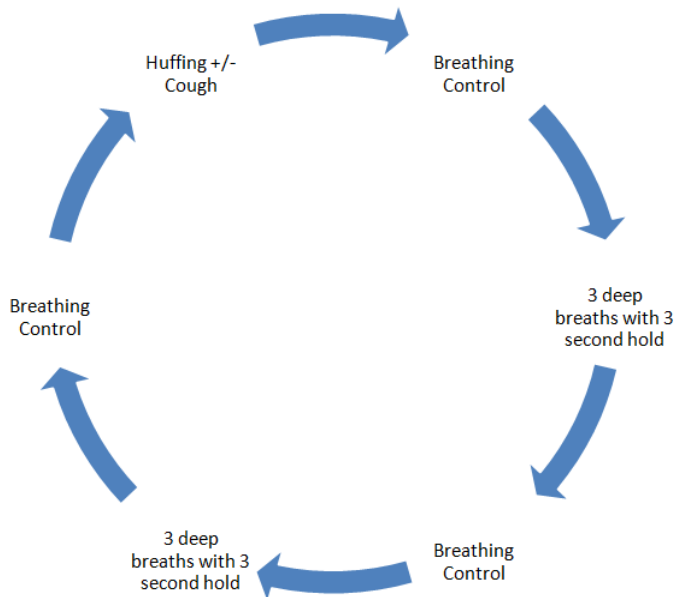
A.C.B.T. helps the movement of sputum to the upper airways, making it easier for you to clear

This treatment is a combination of:

- Breathing control.
- Deep breathing exercises.
- Huffing (Forced Expiratory Technique or F.E.T.).

The above are done as part of a cycle (hence the name) and this can be repeated several times if required.

How many times you repeat the cycle depends on how productive your chest is.



- For each session complete one to three cycles (more than three can cause fatigue).
- If you are feeling well/ not productive complete once per day.

Postural Drainage

Changing your position can make it easier to remove mucus from your lungs. This is known as postural drainage.

Postural drainage is a sputum clearance method using gravity to aid the removal of sputum from the deeper parts of your lungs.

It is most effective for people who produce a moderate to large amount of sputum (half a pot per day or more)

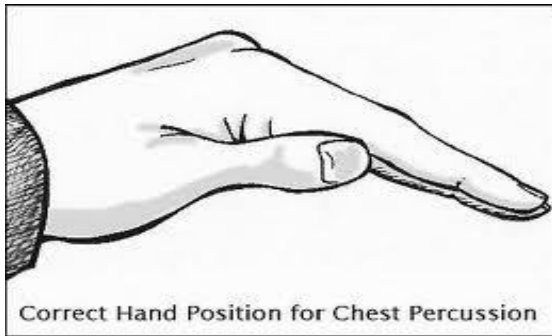
You should not do postural drainage as part of your physiotherapy regime if you have or develop any of the following:

- Gastro-oesophageal reflux.
- Acid reflux (stomach acid).
- Nausea.
- Significant increase in breathlessness
- Fresh blood in sputum
- Recent rib, spine or muscle injury
- Bronchospasm (wheeze).

Do not do postural drainage for at least an hour after eating a large meal.

Aim to do at a convenient time for you balancing with when you are at your most productive of sputum.

- Complete each position for three-five minutes.
- Practice A.C.B.T. while in the position.
- Try percussion while in the position.



General Ways to Improve Sputum Clearance:

Hydration

If you become dehydrated you may have difficulty in clearing any mucus on your chest.

The mucus can become very thick and sticky. Therefore, ensure that you take in enough fluid – approximately eight* glasses of fluid per day.

Try to avoid too much caffeine (tea, coffee) as this can make you more dehydrated. (*unless another health professional has told you differently).

Humidification

If sputum is particularly thick then hot water baths and steam inhalations may help expectoration.

If you find that your sputum is thick and sticky on a regular basis then discuss this with your GP – there are medications available to help loosen your sputum.

Other Options

We recommend trying ACBT and seeing if this technique works for you. If you feel it does not work for you there are other options available.

Airway clearance aids, such as the Flutter™ and Acapella™, are available to assist in clearance of your secretions. These devices tend to range in price from £30-£50.

The Flutter © – a handheld device, shaped like an asthma inhaler, which delivers vibration to the airway of your lungs, making it easier to cough out mucus



The Acapella © – a device, shaped like a small torch, that uses a combination of vibration and air pressure to help remove mucus



Sputum Colour

- Clear.
- White.
- Cream.
- Brown.
- Yellow.
- Green.
- **Blood streaked:**
 - None
 - Some (up to a teaspoon).
 - A little (up to a tablespoon).
 - Moderate (up to three tablespoons).
 - A lot (an egg cupful or more).

Self Management

Managing your lung condition is key in helping reduce the number of infections.

Self-Management includes:

- Healthy diet.
- Regular exercise (three-five times per week).
- Annual flu vaccine.
- Pneumonia jab.
- Proper use of medications.
- **Using airway clearance techniques regularly.**
- Being able to recognise when infections are occurring and making sure you get prompt treatment of infections.
- **Early intervention and treatment is important when you have worsening symptoms.**
- **You should see an improvement in symptoms within three days.**
- **If you are not better and/or your symptoms are getting worse contact your GP.**

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

If you have any questions please contact

Therapies Department

Aintree Hospital

Lower Lane

Liverpool

L9 7al

Telephone number: 0151 529 3910

Author: Therapies Department

Review date: May 2026

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

يمكن توفير جميع المعلومات المتعلقة بالمرضى الموافق عليهم من قبل انتمان المستشفى عند الطلب بصيغ أخرى، بما في ذلك لغات أخرى وبطرق تسهل قراءتها وبالحروف الطباعة الكبيرة وبالصوت وبطريقة برايل للمكفوفين وبطريقة مون والإلكترونية.

所有經信托基金批准的患者資訊均可以其它格式提供，包括其它語言、易讀閱讀軟件、大字體、音頻、盲文、穆恩體 (Moon) 盲文和電子格式，敬請索取。

در صورت تمایل می‌توانید کلیه اطلاعات تصویب شده توسط اتحادیه در رابطه با بیماران را به اشکال مختلف در دسترس داشته باشید، از جمله به زبانهای دیگر، به زبان ساده، چاپ درشت، صوت، خط مخصوص کوران، مون و بصورت روی خطی موجود است.

زانیاری پنهاندار به نه‌خوشانه‌ی له‌لایمن تراسته‌وه په‌سه‌ند کراون، نه‌گهر داوا بکرنیت له فورماته‌کانی تردا بریتی له زمانه‌کانی تر، نیزی رید (هاسان خونندنه‌وه)، چاپی گه‌وره، شریتی دهنگ، هیلای موون و نه‌لینکترونیکی هیه.

所有经信托基金批准的患者信息均可以其它格式提供，包括其它语言、易读阅读软件、大字體、音頻、盲文、穆恩體 (Moon) 盲文和电子格式，敬請索取。

Dhammaan warbixinta bukaanleyda ee Ururka ee la oggol yahay waxaa marka la codsado lagu heli karaa nuskhado kale, sida luqado kale, akhris fudud, far waaweyn, dhegeysi, farta braille ee dadka indhaha la', Moon iyo nidaam eletaroonig ah.