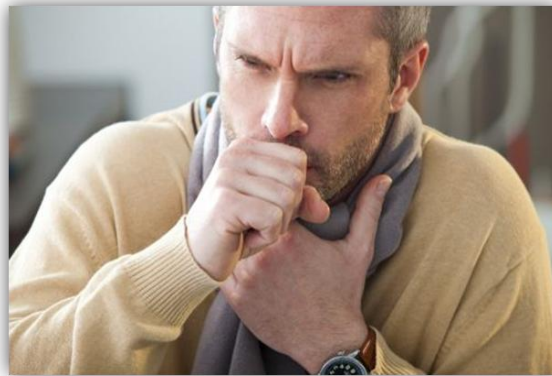


## Patient information

# Exacerbations, Chest Infections and Chest Clearance



### Non-Infective Exacerbations (Flare-ups)

If you have been diagnosed with a lung condition, there may be days when your symptoms of:

- breathlessness
- wheeze
- coughing
- phlegm production

may be worse than normal and you feel that you might have an infection starting.

However, if there is no change in:

- the colour of your phlegm, or
- your temperature

then you are probably experiencing an **exacerbation** or '**flare-up**' of your lung condition.

This can be quite normal and, unfortunately, can be quite common.

These episodes should be initially treated with:

- rest - to conserve your energy
- regular pain relief (e.g. paracetamol)
- plenty of fluids to drink (unless you are on a fluid restriction)

Occasionally your GP/Respiratory Nurse may recommend a short course of steroids, if this is appropriate.

However, if these symptoms persist then you should make an appointment with your GP/Respiratory Nurse to make sure that this has not developed into a chest infection.

## **Chest Infections**

Chest infections can often occur more frequently if you have a diagnosed lung condition.

This is because:

- it is more difficult to clear phlegm from your chest and this can then become infected
- the cilia (the lungs filter system) in the larger airways may not work properly or may be clogged by excess phlegm allowing dust, debris and pollutants to enter the lungs
- your immune system may be low

Chest infections can be caused by a virus, bacteria or fungus that enters the lungs and can occur anywhere from the nose to the lung tissue itself.

They are the commonest cause of a 'flare-up' or 'exacerbation' of your lung disease and are the most common acute problem treated in hospitals.

With every 'flare-up' or chest infection your lung function will deteriorate a little more.

With this in mind it is important for you to spot the signs and symptoms of an infection and to know what to do and when.

**Remember the earlier an infection is treated the more quickly you are likely to recover.**

## **Signs and Symptoms of a Chest Infection**

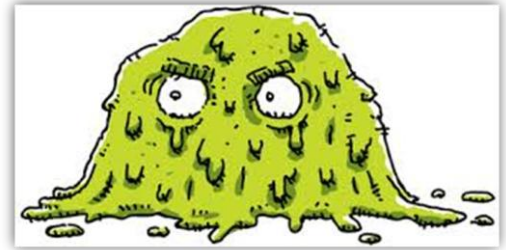
- Change in colour of phlegm
- Change in quantity of phlegm
- Change in consistency of phlegm
- Increased breathlessness
- Increased wheeze
- A high temperature, or more hot sweats/flushes than normal
- Increased tiredness or sleeping more often
- Difficulty getting air in
- Increased use of reliever (blue) inhaler
- Decreased effectiveness of inhalers
- Loss of appetite
- Increased use of home oxygen
- Reduced exercise tolerance (tasks are more effortful)
- Cough - can be dry or productive
- Chest pain or tightness
- Rapid heartbeat
- Increased confusion or disorientation



**You may have one or more of these symptoms if you have an infection.**

## Phlegm (sputum)

If you are someone who regularly expectorates (coughs up) phlegm it is a useful way to keep an eye on the health of your lungs.



The colour, quantity and consistency of your phlegm are important factors that can indicate whether there may be a problem.

### Phlegm Colour:

**White/Clear:** This is the normal colour of phlegm.

**Brown:** If you have recently given up smoking or are still smoking then your phlegm may be brownish in colour.

**Green:** Any shade of green, from the palest to the darkest, indicates that you have an active chest infection. This means that a visit to your GP would be advisable as antibiotics and/or steroids may be needed. Take a sputum specimen with you if you can.

**Yellow:** Any shade of yellow, from the palest cream to the darkest, means an old infection. This is the more common colour to see as it can often take a while to start to clear the infected phlegm from your chest. Be aware that an old infection can become active again if it has not been fully cured.

**Clear and frothy:** This may indicate that you may have some fluid in your lungs. This is especially important to keep an eye on if you are someone who suffers with swollen hands and feet or are on water tablets. Please visit your GP if you are concerned.

### Quantity

Most people who expectorate phlegm frequently will know their usual 'amount' that they bring up daily and usually at what time of the day.

Sometimes when an infection begins the quantity and frequency of the phlegm can increase.

### Consistency

Often phlegm can get thicker, stickier and more difficult to clear if an infection is imminent.

## **Pneumonia**

Pneumonia begins with either a bacterial, viral or fungal lung infection.

It causes the alveoli (air sacs) in the lungs to become inflamed and fill with fluid. It can occur in one lung or both.

Pneumonia can make you ill very quickly, and can be fatal, so it is very important to seek medical advice quickly if you think you may have it.

*Symptoms of pneumonia include:*

- A very high temperature
- Sweating and shivering
- Rapid heartbeat
- Sharp, stabbing chest pain
- Quick, shallow breaths
- Breathlessness at rest
- A dry, irritable cough
- Delirium or confusion

## **Treating a Chest Infection**

### **Antibiotics and Steroids**

If your GP or Respiratory Nurse diagnoses you with a 'bacterial' chest infection then they may prescribe you some antibiotics, with or without steroids.

Please be aware that if you are diagnosed with a viral infection, antibiotics will not help and you will be advised to take regular paracetamol and fluids and let your body's immune system tackle this type of infection.

### **Antibiotics**

These medications help kill the bacteria in your phlegm.

It is important that you take this medication as prescribed and finish the full course (even if you feel better beforehand).

Antibiotics can be prescribed with or without steroids.

It is vitally important that you do not consume any alcohol when taking antibiotics as this can stop them from working properly and will take longer for your infection to clear up.

## **Side effects of antibiotic medication:**

- diarrhoea
- nausea/vomiting
- bloating/indigestion

If you experience any of these side effects, please speak to your GP/Respiratory Nurse as you may need a change of antibiotic. Experiencing diarrhoea and/or vomiting when taking antibiotics could mean that the medication is not being absorbed by the body and may delay treatment of your chest infection.

## **Steroids**

Sometimes, if you have inflammation in your lungs, you will be given a course of steroids to help open up the airways in your lungs and make your breathing easier.

These can be prescribed with or without antibiotics, depending on whether you also have an underlying infection.

Steroids can improve your symptoms very quickly, but do not kill off a bacterial infection (you will need antibiotics for this).

Sometimes you will be started on a high dose of steroids and then gradually be weaned off. You must not skip doses or stop taking steroids abruptly as this can make you unwell.

## **Side effects:**

- increased appetite/weight gain
- bone thinning
- bruising of skin
- raised blood sugars
- increased sweating
- changes in mood/sleep pattern
- cause indigestion/irritation of stomach lining
- can increase symptoms of anxiety/depression/paranoia/psychosis in people with underlying mental health issues

If you experience any of the above side effects then please speak to your GP/Respiratory Nurse as you may need to try a different steroid that will suit you better.

## **Rescue Packs of Antibiotics and Steroids:**

If you regularly have more than 4 chest infections per year, then you may be given a 'rescue pack' of antibiotics and/or steroids to keep at home.

These can be used if you suspect you have an infection but are unable to get an appointment with your GP immediately.

Please be sure to inform your GP or Respiratory Nurse that you have started your Rescue Pack so that your medication can be replenished.

## **Recurrent Infections**

Sometimes chest infections can be difficult to treat and will require more than one course of antibiotics, or a change of antibiotics.

Please be make sure that you return to your GP for a review of your infection if:

- your symptoms return after you have finished your full course of antibiotics
- you feel no better after taking the full course of antibiotics
- **you are someone who regularly coughs when they eat or drink**

## **How to Clear Phlegm from your Chest**

Clearing phlegm from your chest is important so that your breathing improves and so that any bacteria does not cause too much damage to your lungs. This process should be as effortless as possible.

### **Loosening your Phlegm**

It is important to start by loosening your phlegm to make removal as easy as possible.

### **Steaming**

This 'old fashioned' technique is very effective at helping to clear thick phlegm from your chest and your sinuses.

Fill a large bowl with hot water (you may add Eucalyptus Oil to the water if you wish).

Sit with your face about 30cm above the steaming bowl and breathe in the vapours for about 5 minutes. This can be repeated 3-4 times per day if necessary.

## Mucolytics

Sometimes clearing thick phlegm may require a more regular intervention.

Please ask your GP or Respiratory Nurse about mucolytic medication (Carbocisteine) that can be taken daily to help with this problem. It can take up to 2 weeks for you to feel the benefits of this medication.

## Pineapple Juice

This is a natural remedy for loosening your phlegm. Drinking a quarter of a cup two or three times a day can help to thin your phlegm. Please make sure that you are allowed to take this with your current medication.

## Chest Clearance Techniques

Once you have loosened your phlegm, chest clearance techniques can help to move the phlegm higher in your lungs before removing it. These techniques should require **minimal effort** to gain **maximum effect** so that energy can be conserved.

### Active Cycle of Breathing Technique (ACBT)

The Active Cycle of Breathing technique uses different depths of breathing to move phlegm from the smaller airways at the bottom of your lungs to the larger airways at the top of the lungs where you can then huff or cough to clear it.

This exercise should be performed in a relaxed position (sitting or side-lying) with your shoulders relaxed.





This cycle can be repeated several times to help clear your phlegm. Your Physiotherapist will guide you on this.

## Bubble PEP

This is a very easy and effective technique to help you to clear the phlegm from your chest. It will also help to strengthen your lungs!

Bubble PEP is a technique used to help adults or children who have a build-up of phlegm (secretions) in their lungs and struggle to clear them. The technique involves blowing bubbles through water.

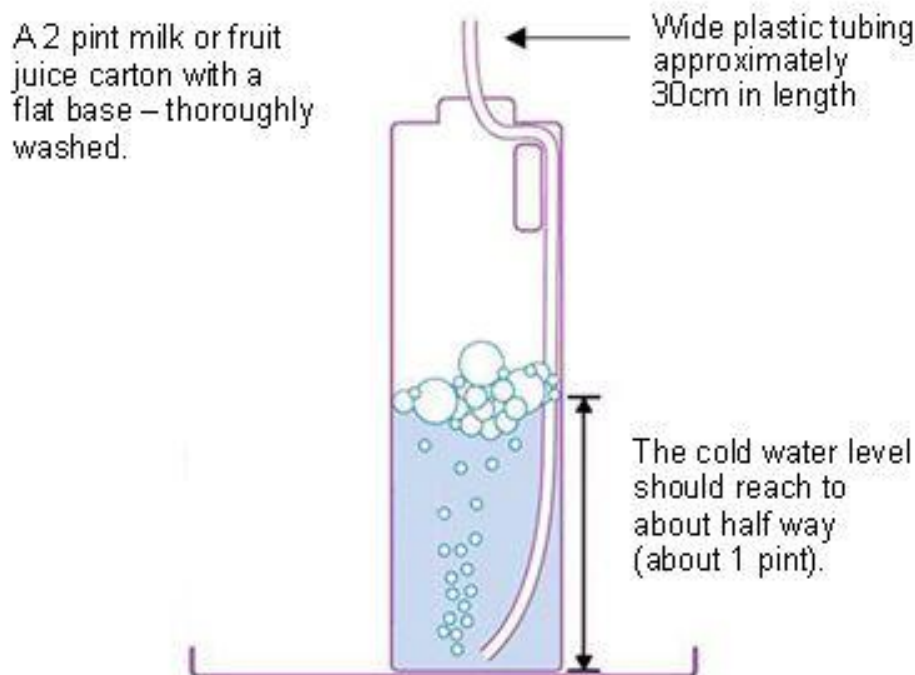
PEP is short for Positive Expiratory Pressure. As you blow out and make bubbles in the water, a positive pressure is created within the tubing and transferred into the airways in your lungs.

This positive pressure helps to hold open your airways, allowing more air to flow in and out.

The air can then get behind the phlegm helping to move it more easily upwards through the open airways.

You should then be able to cough or huff and clear the phlegm from your lungs.

## Bubble PEP Equipment



- Take a **deep breath** in (without the tubing in your mouth).

- **Blow out** through the tubing (creating bubbles in the water)
- Repeat this \_\_\_\_ times, making sure that you catch your breath between each blow out. This is one cycle.
- Then huff or cough to try and clear your phlegm – as instructed by your Physiotherapist.
- Always try to spit the phlegm out rather than swallow it.
- You can repeat the cycle as necessary or as instructed by your Physiotherapist

## Phlegm Removal Devices

For those who remove moderate to large amounts of phlegm from their chest on a daily basis, then a chest clearance device (Flutter, Acapella or Aerobika) may be appropriate. Please speak to your Physiotherapist, GP or Respiratory Nurse about this.

## Removing Phlegm from your Chest

Once your phlegm has moved towards the top of your lungs then it can be removed by coughing or huffing

### Coughing

Coughing is a good way to clear phlegm from your chest, but excessive coughing during an infection can be painful, exhausting and inconvenient.

- drink plenty of fluids to prevent your throat becoming dry and irritated
- try to 'huff' rather than cough
- support your chest when coughing



If you have an irritable, tickly cough which is uncontrollable then try taking very small and frequent sips of water, **or** suck a boiled sweet, **or** take a simple linctus to try to relieve the irritation.

### Huffing

This is a less tiring, but just as effective, way to clear the phlegm from your lungs. Start by taking a deep breath in, followed by a hard and fast 'huff' out through an open mouth (as if steaming up a mirror). Your Physiotherapist will show you how to do this.

## Other Tips to Help Manage Your Chest During an Infection

- keep well hydrated (you should drink approximately 2 litres of fluid per day, unless you are on a fluid restriction)
- eat little and often to maintain the energy to fight the infection
- rest frequently and keep tasks to a minimum to conserve energy
- use your 'positions of ease' to help cope with your breathlessness
- raise the head of your bed when sleeping to make breathing easier
- carry out your breathing exercises and/or chest clearance techniques regularly

## Useful contacts

For Pulmonary Rehabilitation enquiries:

### Suffolk Community Healthcare Care Co-ordination Centre (CCC)

**Tel:** 0300 123 2425

**E-mail:** [pulmonaryrehabilitation@wsh.nhs.uk](mailto:pulmonaryrehabilitation@wsh.nhs.uk)

## Clinical research

West Suffolk NHS Foundation Trust is actively involved in clinical research. Your doctor, clinical team or the research and development department may contact you regarding specific clinical research studies that you might be interested in participating in. If you do not wish to be contacted for these purposes, please email [info.gov@wsh.nsh.uk](mailto:info.gov@wsh.nsh.uk). This will in no way affect the care or treatment you receive.

## Accessibility

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