

Therapy

Deep Breathing Exercises

Introduction

People with a lung problem can produce more sputum than usual. It is important to do airway clearance exercises to remove sputum from your lungs. Taking a deep breath allows air to flow behind sputum and move it up the airways, where it can then be removed by coughing. This will prevent/ reduce the chances of a chest infection. Even if your lung problem is not producing sputum, you may do in the future.

People with a lung problem may lack expansion and volume, and/ or have partial or complete areas of collapse. It is important to do breathing exercises to get air to the bottom of the lungs and re-expand lung tissue again.

If you do not have a lung problem, while in hospital, you tend to be more inactive. This can increase the risk of having sputum on your chest and developing a chest infection.

In these instances, your Physiotherapist may advise you to do deep breathing exercises.

Deep Breathing Exercises and Coughing

Deep breathing exercises aim to get the biggest breath of air possible into the lungs to increase expansion, remove any sputum present, and generally enhance lung function. It consists of cycles of deep breaths, along with coughing. You may also be taught a forced expiratory technique, also called a “huff”, to further mobilise your sputum. It is completed in the following way:



Patient Information

- Sit upright in bed or preferably in the chair with your back supported.
- Keep your shoulders, chest and arms relaxed, elbows by your side.
- Take a long, slow and deep breath in through your nose, breathing in fully, drawing air to the bottom of your lungs.
- Breathe out gently, like a sigh, not forced.
- Do 6 deep breaths unless advised otherwise by your Physiotherapist.
- Cough strongly from your stomach not your throat.
- You should avoid long bouts of coughing as 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.
- Your Physiotherapist will advise you how often to do and when you can stop the exercise.

Inspiratory Hold

At the end of each breath in, your Physiotherapist may advise you to hold the air in your lungs for 2-3 seconds before breathing out. This is known as an inspiratory hold. This technique helps maximise lung volume and extra (collateral) airway opening, which re-expands any lung tissue, and the air will also get behind sputum to move it up the airways, where it can then be removed with coughing.

Forced Expiratory Technique (Huff)

At the end of the deep breaths, your Physiotherapist may advise you to exhale forcefully through an open mouth instead of coughing. This is known as a huff. This manoeuvre helps loosen and move sputum from small (lower) airways to large (upper) airways in the lungs, causing it to 'rumble' or 'rattle', where it can then be removed, with or without coughing. Huffing is a useful alternative to coughing if you are in pain or tired, as it requires less effort due to the lower chest pressure generated. It is completed in the following way:

- Take a breath in through your nose.
- 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.

Patient Information

- Do not huff for so long that you force yourself to wheeze or uncontrollably cough.
- You can repeat the huff to move the sputum higher if required.
- If huffing does not clear your sputum, cough strongly from your stomach and not your throat.
- You should avoid long bouts of coughing as 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.

If you have any concerns or queries regarding your exercise, please ask a member of staff for advice on **024 7696 6013**.

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