

# Using a lung volume recruitment (LVR) bag when you need help to clear mucus

Department of Physiotherapy

Information for Patients

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## What is a lung volume recruitment bag (LVR bag)?

The LVR bag is a self-inflating bag with a 1-way valve and tubing. It connects to a filter and correct mask, mouthpiece or tracheostomy mount (interface).

## Why do I need a LVR bag?

- Your physiotherapist has assessed that you are not able to take as deep a breath.
- This can lead to chest stiffness and a weaker cough.
- This means there is not enough secretion clearance.
- This raises the risk of respiratory complications such as a chest infection.
- The aim is to “breathe stack” 1 breath on top of the next.
- This raises the size of the breath and so the strength of the cough.

## When should I use the LVR bag?

Your physiotherapist will have explained your personal physio programme when you were given the equipment.

Good practice is to use the LVR bag 2 times a day (usually morning and evening). If you are unwell or have more mucus then it can be used more often.

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or call 111 for non-emergency medical advice**

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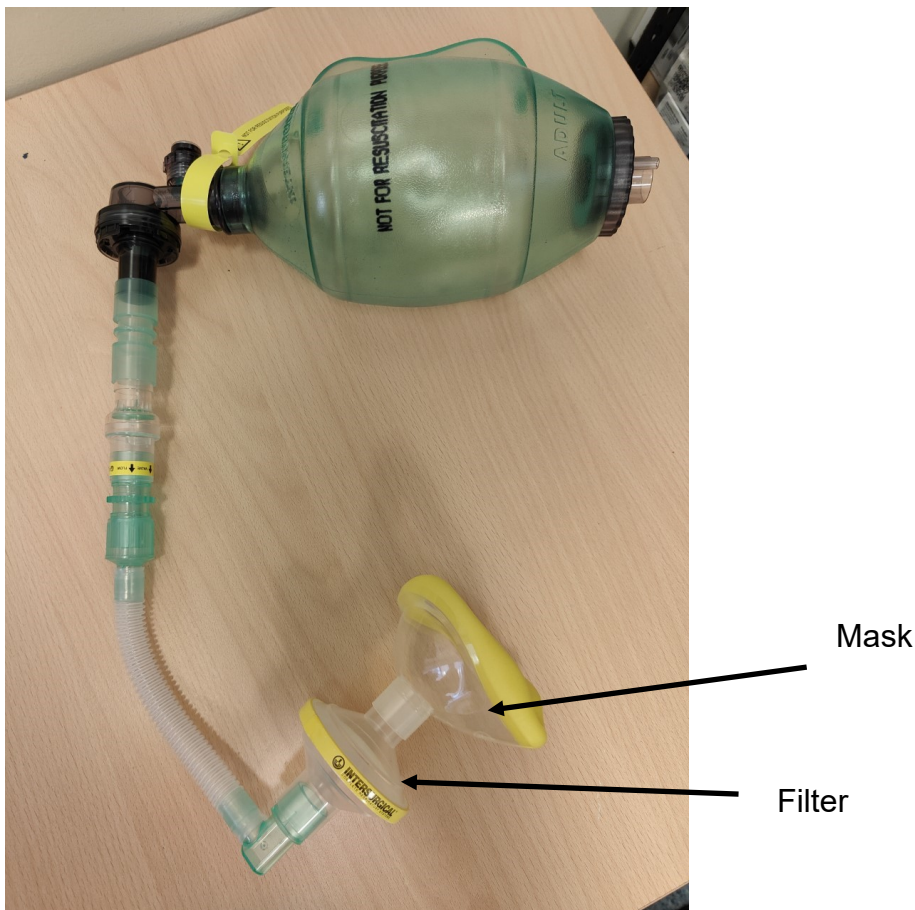
## When should I not use the LVR bag?

When issued the LVR bag you were assessed as being suitable for home LVR bag usage. However, if anything changes, please speak to your physiotherapist. Do not use if:

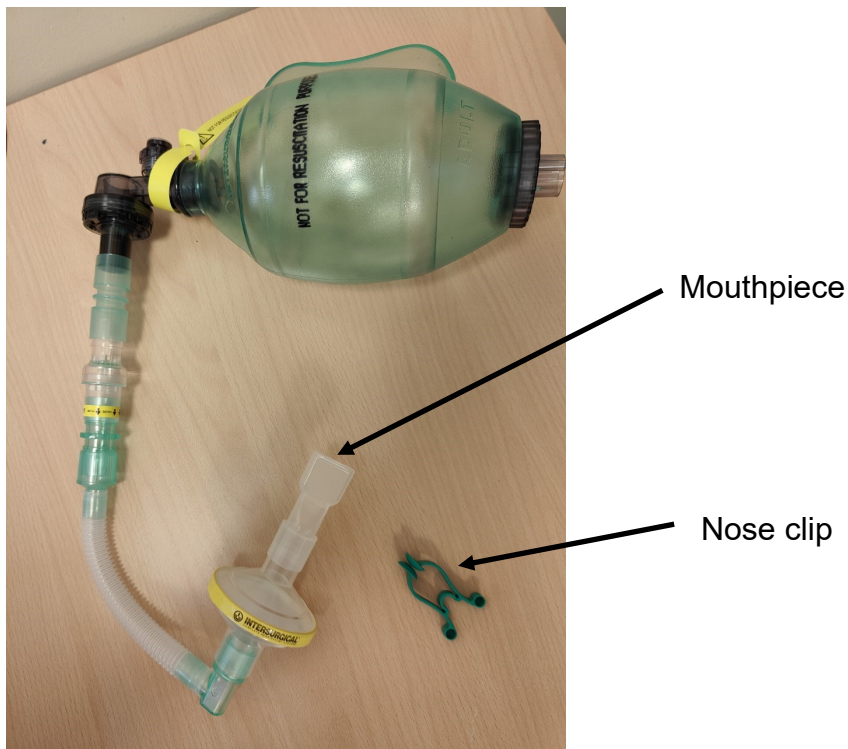
- You notice blood in your secretions or start coughing up blood
- Within 1 hour of a meal
- You are being sick (vomiting) or feeling sick (nauseous).
- You have had a recent lung injury or a collapsed lung (pneumothorax).
- You have had an injury or surgery to your face/ mouth/ skull or food pipe (oesophagus).
- You have a problem with your heart (for example unstable angina, palpitations, serious changes in blood pressure)
- You have a certain type of abnormal connection between you airway (tracheobronchial) or food pipe (tracheoesophageal fistula)
- Stop using the LVR bag if it makes you dizzy

If you have any concerns please get in touch with your physiotherapist.

## Setting up the LVR bag (mask)



## Setting up the LVR bag (mouthpiece)



## How to use it

1. Get into position (ideally sitting upright).
2. Agree a stop signal (such as hand waving, shaking head, eye blinking)
3. Take a breath in and get a seal with the mouthpiece or mask. If using a mouthpiece then put the nose clip on your to cover your nostrils. Try to hold this breath.
4. Take another breath in. As this breath is taken in, the patient or care provider should squeeze the bag to add air to the breath
5. Repeat for 2 to 5 breaths. This depends on what you prefer. Once the lungs feel full, remove the mouthpiece or mask and try and hold for 2 to 3 seconds
6. Slowly breathe out and rest for 30 seconds.
7. Repeat steps 3 to 6, 2 to 3 times
8. If you feel that secretions can be coughed up then try and cough these out at the end of the cycle, instead of a normal breath out

**It is important to get the right balance between clearing your mucus and tiring (fatiguing) yourself. If you feel there is mucus then you can increase the number of times you do this as a result.**

## How do I clean it?

### Interface

- Mask – wash in warm, soapy water daily.
- Mouthpiece – wash in warm, soapy water daily.

### Filter

- Check the filter in the circuit weekly. Replace if any signs of dust or discolouration.
- The bag itself does not need to be cleaned but does need to be replaced if damaged

**Important:** Due to the 1-way valve on the LVR bag it must **not** be used for resuscitation if there is an emergency. Please make sure your LVR bag has a sticker on it saying this.

## Contact details

If you have any questions or concerns please speak to your respiratory physiotherapist via the home ventilation team on **0116 258 3283**.

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