

# How to use non-invasive ventilation (NIV) at home to support your breathing

Respiratory Physiology Unit

Information for Patients

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## What is non-invasive ventilation?

Your doctor has asked us to treat you with non-invasive ventilation. This is a medical treatment that gives support for your breathing through a mask using a machine. This is known as a ventilator. It works by pushing air into your lungs with a prescribed amount of pressure. This helps to inflate your lungs and reduce the amount of effort needed to breathe.

## Why do I need it?

Some medical conditions can cause 'under-breathing' which may lead to respiratory failure. This is where you do not always breathe quickly or deeply enough, especially when you are asleep.

Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice

Visit [www.uhleicester.nhs.uk](http://www.uhleicester.nhs.uk) for maps and information about visiting Leicester's Hospitals  
To give feedback about this information sheet, contact [uhl-tr.informationforpatientsmailbox@nhs.net](mailto:uhl-tr.informationforpatientsmailbox@nhs.net)

This causes your oxygen level to fall and your waste gas (carbon dioxide) to rise. This can make you sleepy and lacking in energy in the daytime. It may also cause morning headaches.

## **What is my responsibility?**

We have given you the ventilator to use on a long-term loan basis. It is still the property of Leicester's Hospitals. It is your responsibility to use it as advised.

You must make sure:

- the machine is kept clean and in good working order.
- the machine is not damaged.
- you will need to return the machine when you no longer need it.
- you maintain contact with the Home Ventilation Team.
- you attend all clinic appointments, bringing your machine with you.
- you bring in your machine if you are ever admitted to hospital.

## **Fitting the mask**

You must wear the face mask fitted correctly with no leaks. This is so you can get the full benefit of the treatment. Large leakage of air around the mask will cause the machine to alarm.

This can cause discomfort and even damage to your eyes if high pressured air is blown into them.

The mask has holes in it to let you breathe out. This is called the expiration port. You should **not** be cover or tape these holes. These holes help you to breathe out your exhaled waste gas (carbon dioxide).

The mask is originally fitted to size by the ventilation team. You can put it on using the clips or magnets at the side of the mask. You will not need to adjust the Velcro straps. The Velcro straps may need to be adjusted if you have lost weight or if the straps have lost their elasticity.

## Setting up the ventilator

We will give you more instruction leaflets depending on the make/ model of your ventilator. The machine is simple to use:

1. **Put the mask on.**
2. **Attach the tubing.** You will attach a standard length of flexible tubing to the ventilator. One end will be attached to the machine and the other end will be attached to the mask.
3. **Switch on the ventilator.** We prescribe settings from your sleep tests. We make sure you are comfortable. Air will travel down the tubing to the mask on your face.

The ventilator will follow your breathing and give you extra air when you breathe in, or start a breathe in for you if there is a pause in your breathing.

## Common problems

**Pressure sores:** Pressure sores can happen around the straps, at the ears, the top of the head, and at the bridge of the nose. Applying Siltape to these areas can help relieve the pressure. If pressure sores worsen you must let the Ventilation Team know. We may need to change your mask. Your GP or district nurse should be made aware if the pressure sores need a review and dressing.

**Air leaking from the mask:** Put on the mask when the ventilator is switched off. Rest the mask on your face and make sure the cushion is not folded. Tighten the straps a little more and switch on the ventilator. A small leak from the mask is fine. Leaks into the eyes can cause them to become sore. If you cannot solve the leak you should contact the department.

**Cold/ dry throat and nose:** If this happens, you may want to keep your bedroom a little warmer. You may want to increase the humidity by placing a tray of water over the radiator. It may also help to put a couple of drops of olive oil at the entrance to each nostril. If this issue does not go away then please contact the Ventilation Team.

**Runny nose/ sneezing:** The ventilator can sometimes cause irritation to the lining of the nose. This can get better with time. If it does not there are nasal sprays that can help.

**Blocked nose:** If your nose becomes blocked overnight it may be hard to use the ventilator. A short course of a nasal spray may help.

**Warm air from the ventilator:** This may mean that the filter is blocked by something. Make sure that the unit is away from bedclothes and curtains so the air can enter the machine.

## **What do I do if I am unwell?**

If you start to get symptoms like green phlegm (sputum) or more breathlessness and think you may have a chest infection:

1. Keeping using your ventilator. This will help you.
2. Make an appointment to see your GP.
3. If you feel you need urgent medical help dial **999**.
4. Bring in your ventilator if you are admitted to hospital.

If you are having morning headaches, increased daytime sleepiness, increased shortness of breathe when walking, or you just feel that the ventilator is not having an effect, please let us know as we may need to make an appointment to see you.

## How do I care for my ventilator?

- **Once a day:** Wipe around the inside and outside of the mask with a damp cloth or baby wipe.
- **Once a week:** Wash the mask, straps and tubing in warm soapy water. Rinse well and hang up to dry. The straps can be removed and washed separately as needed.
- The ventilator should be cleaned on the outside only. Disconnect from the mains supply and wipe over with a lightly damp cloth.
- The ventilator needs to be checked at every ventilation clinic appointment. It will be serviced at regular intervals by the department.

## Can I travel abroad with the machine?

If you are travelling abroad, the department can give you a letter to show to customs officials should they ask about your machine. If you are travelling by air, please remember the ventilator should always be carried as hand luggage and never stored in the hold.

Remember, if needed, to take any adapters for the ventilator plug with you.

Some patients may need an oxygen assessment before flying. These are patients with neuromuscular conditions. If you are not sure if you need an assessment, please contact us for advice or ask the doctor at your next clinic appointment.

The equipment you have been loaned is valued at about £3000 and should be listed in your home and travel insurance.

## **Follow-up appointments**

After a trial period on the ventilator we may need to change the settings. We will make a follow-up appointment with you. We will make this for you a few weeks after we have given you the ventilator. You can use this appointment to talk about any problems you may be having. If you are worried about anything to do with the ventilator, tubing or mask you should call the department and ask to be seen sooner.

You should also get an appointment to see a consultant who specialises in ventilation. Always bring the ventilator, mains cable, mask and tubing with you, so they can be checked at these appointments.

## What do I do if my machine is not working?

1. Check the power lead is connected properly.
2. Check the power supply to the rest of the house. You may need to try a different plug socket.
3. If there is an alert on the screen make a note of this and contact the department. You may need to bring in your machine for checking.

**Please note** it is your responsibility to notify your energy provider that you are using a non-invasive ventilator so that they can put you on their priority list in case of power cuts.

## Contact details

If you have any problems or concerns please contact the Respiratory Physiology Unit:

For Respiratory Physiology appointment enquiries:

**0116 258 3420**

For equipment or mask enquiries: **0116 258 3419**

For any non-urgent ventilation queries email:

**[uhl-tr.RPUSupport@nhs.net](mailto:uhl-tr.RPUSupport@nhs.net)**



**Please note** we do not work at weekends or overnight. In the case of equipment failure, the Respiratory Support Team may be contacted at the weekend and bank holidays from 8am to 6pm on **0797 7582 194**. Overnight, a message can be left on the answer machine on **0116 258 3419** and we will get back to you as soon as possible.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔  
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل  
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

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Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email [uhl-tr.equalitymailbox@nhs.net](mailto:uhl-tr.equalitymailbox@nhs.net)