

When you need non-invasive ventilation (NIV) in hospital to support your breathing

Respiratory Unit

Information for Patients

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Introduction

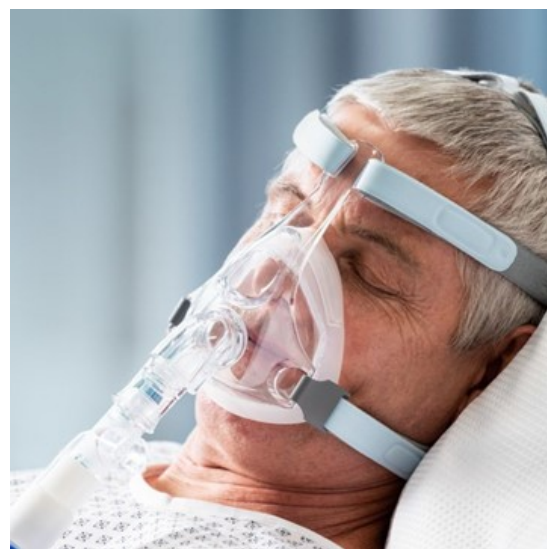
The aim of this leaflet is to give you information on NIV (Non-Invasive Ventilation) - what it does and why it is used. It may be helpful for patients and their relatives, carers and friends.

If there is anything you are not sure of, please speak to 1 of the nurses, doctors or physiotherapists looking after you. They will be able to answer further questions or queries you may have.

What is NIV?

Non-invasive ventilation is a way of helping you to breathe more deeply. This is done by blowing extra air into your lungs through a mask. If your breathing becomes difficult and your chest muscles become tired, it can lead to a build-up of carbon dioxide and not enough oxygen getting into your blood.

The NIV machine helps your breathing by gently assisting each breath you take. It does not breathe for you. It allows you to rest your breathing muscles, giving them time to recover. By assisting your breathing, NIV can raise the oxygen levels and lower the carbon dioxide levels in your blood.



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How does NIV work?

When you get NIV, you need to wear a cushioned mask connected to a machine.

The mask either

- fits over your nose alone,
- or over both the nose and mouth.

As you take a breath in, you will feel a flow of air and oxygen into your lungs from the machine. As you breathe out there will be a small amount of air or pressure to help keep your lungs open. This ongoing positive pressure helps to keep the airways open, allowing more air to get in and out of the lungs. It also helps you to take bigger breaths with less effort. This helps you to rest your tired breathing (respiratory) muscles.

How do you know if I need NIV?

- You will have a blood sample taken from an artery (usually in your wrist) to measure your oxygen and carbon dioxide levels.
- Poor levels of oxygen can be treated by giving you extra oxygen, (either by nasal cannula or a mask).
- High carbon dioxide levels will need NIV to help get rid of the carbon dioxide and to rest the respiratory muscles.
- If the carbon dioxide levels in your blood are too high, making you sleepy or unwell, then you should try NIV.

What happens during NIV?

A doctor, nurse or physiotherapist will set the machine up and make sure that you are as comfortable as possible.

You will need to wear a special type of facemask, which fits tightly over your nose and mouth.

The machine will be set for your needs.

NIV can feel a bit strange or even uncomfortable at first, but most patients adjust quickly. As NIV helps your breathing it often allows patients to relax and get some sleep.

Each machine is set up for the patient it is being used on.

A mask will be fitted attached with head straps, which keeps it in place to make sure that enough air from the machine gets into your lungs.

For the first 24hrs, you will be told to wear the mask as much as possible. You can remove the mask for short periods so that

- you can eat and drink as normal and for you to take your medicines (inhaled medicine can be given through the NIV machine if needed).

To see how well you are doing, a peg-like clip will be placed on your finger to measure the oxygen level in the blood. A blood test will also be taken from your wrist after the first hour to check your oxygen and carbon dioxide levels. This will usually be repeated after 4 and then 12 hours on NIV.

Will I feel any pain?

It is important that the mask is a close fit, but it should not cause any pain over the bridge of your nose. If this happens, please let us know as soon as possible. Staff will apply a special plaster to protect the skin before fitting the mask.

Will I be able to eat and drink during NIV?

After the first few hours, you will be able to have regular breaks from the mask and will be able to eat and drink as normal. The staff will help you with this.

Will I be able to clear my mucus (phlegm)?

You will be given breaks, whenever needed, to clear your mucus. Please tell a nurse if you have mucus that you need to clear. A physiotherapist can help you with this if you are struggling to clear it yourself.

Why does the alarm for the machine keep sounding?

Usually this is because there is too much air leaking from the sides of your mask. It is nothing for you to worry about. The staff will try to see to the problem by fixing or changing the mask so it is more comfortable for you.

What if I need help?

You will be given a call bell and the nursing staff will check on you frequently. This will give you a lot of chances to talk about any problems you are having.

How long do I need it for?

How long you would need to use NIV depends on how quickly the oxygen and carbon dioxide levels in your blood gets better. On average, NIV treatment lasts 3 days but this differs from person to person.

- For the first 24 hours, you will have the mask on without taking it off. You will only take it off to be able to eat, drink and take your medications. You may need some help from the nurses to get up to use the toilet. You can sleep with the mask on.
- On the 2nd and 3rd day of treatment, you will hopefully be able to have more time off the mask as you start to get better.

If you feel you need to take the mask off, you should call for help using your call bell by your bedside table. Wait for help from 1 of the nurses or doctors looking after you.

Sometimes, after stopping NIV, the carbon dioxide may rise again. If this happens then the NIV may be started again. In some cases you may be told to have a NIV machine at home to help stop it happening again. This will be discussed with you if necessary.

Contact details

Glenfield Hospital

Clinical Decisions Unit (CDU): 0116 2583009

Ward 20: 0116 2502562

Leicester Royal Infirmary

Emergency department : 0300 3031573

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