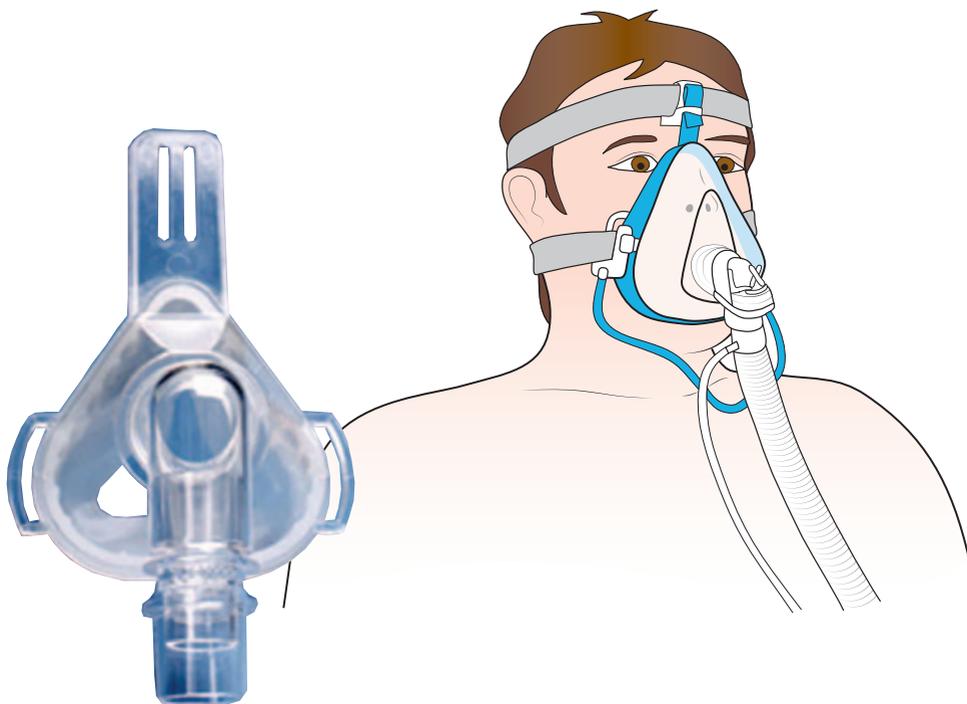


Acute inpatient non-invasive ventilation

i Information for patients and relatives
Chronic Obstructive Pulmonary Disease
Service



Non-Invasive Ventilation (NIV) is also referred to as Bi-level Positive Airway Pressure (BiPAP). It is an emergency treatment that some people require when they are critically ill due to problems with their breathing.

This booklet contains information for you and your relatives to help you understand the treatment that you are receiving while in hospital.

What is non-invasive ventilation?

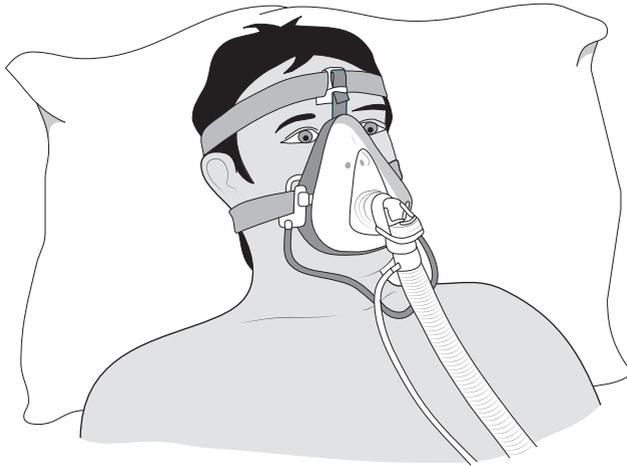
Non-invasive ventilation involves wearing a tight fitting mask. This is connected to a ventilator that pushes air and oxygen through the mask and into the lungs.

Why do I need non-invasive ventilation?

During a worsening of your breathing, the muscles that you use to breathe can get tired. This stops you from being able to take big enough breaths. This stops you getting oxygen into your lungs and carbon dioxide out of your lungs.

Carbon dioxide is a waste gas produced by the body. Normally this is removed when you breathe out. If you become short of breath and are unable to take deep breaths in and out, carbon dioxide may build up in the lungs and blood. Too much carbon dioxide can make your blood acidic which is very dangerous for your body.

Non-invasive ventilation helps you to take deeper breaths and flush the carbon dioxide from your lungs. This reduces it to a normal level and corrects the acid level of your blood.



What are the benefits?

Non-invasive ventilation makes it more likely that you will survive a worsening of your breathing that is causing increased acid in your blood. It also makes it more likely that you will get better more quickly.

In some people non-invasive ventilation has been shown to remove the need to be put to sleep and ventilated through a tube in the throat.

Non-invasive ventilation may help make you less short of breath by supporting your breathing. It gives you a rest when your breathing becomes hard work.

Are there any side effects or risks?

There is a small risk that the pressure used to give you a deep breath could cause damage to your lungs. In some people this pressure may cause a small hole (a pneumothorax) in the lung, allowing air to leak out. This would require a tube to be inserted into the chest to drain away the air. This is rare and only affects 1 in 1000 people.

The mask for non-invasive ventilation has to be relatively tight, and may be needed for several days. It is possible that this may make the skin of your face sore. Many people (1 in 10) develop some redness and soreness on the bridge of their nose. This is a very bony area where the mask may press. Your nurse will check your skin regularly to try and prevent this happening. In most people there will be no lasting effects and the soreness will heal in a few days.

There is also a risk that some of the air pushed into your lungs may go into your stomach instead. This may be uncomfortable and give you a full or bloated feeling. If this happens your doctor or nurse may discuss putting a tube down your nose and into your stomach to help release some of this trapped air.

It may be difficult for you to come off the mask for long enough for you to eat and drink. Your doctor or nurse might suggest putting a tube down your nose so that you can be fed by a drip directly into your stomach. It is important for you to get enough food into your stomach to give you the best chance of getting better.

Are there any alternatives?

Some people who don't get better with non-invasive ventilation may need to go to intensive care. Here you may be put to sleep and ventilated through a tube in the throat. A doctor will discuss this with you and your family and go through the risks and benefits of having this treatment. This type of ventilation is not suitable for everybody.

Some people decide that they no longer want to have non-invasive ventilation. This may be because they are finding the mask too uncomfortable. For some people it is because they decide that their breathing has become too bad for them to enjoy their life anymore. The staff looking after you will talk to you about how you are feeling. They will help you to make decisions about the care and treatment that you want. If you decide that you do not want non-invasive ventilation we

will make sure that you are comfortable and give you medication to help control your shortness of breath.

Having oxygen through a normal mask or prongs up the nose is not an alternative to non-invasive ventilation. Giving oxygen by itself will not help to get rid of carbon dioxide from the body. In some people it may actually make carbon dioxide levels worse.

Will I need to give my consent?

Non-invasive ventilation is an emergency treatment needed when you are critically ill. You may be too unwell to give your consent. We will give you the treatment that we think is best for you at the time. We will talk to you about this when you are well enough.

For how long will I need it?

How long you need non-invasive ventilation for depends on how long you remain short of breath. It also depends how long the carbon dioxide in your lungs and acid in your blood remain abnormal.

Most people will need non-invasive ventilation for around four days. You will need to wear it for as much time as possible for the first 24 hours. After this the amount of time that you are on non-invasive ventilation will gradually be reduced.

It will probably be necessary to wear the non-invasive ventilation at night time for a few days. This is the time that you will need most help with your breathing.

A small number of people may require non-invasive ventilation at home. If this is the case, your doctor, nurse and physiotherapist will discuss this with you and your family.

What else will I be attached to?

You will be attached to other equipment that your doctor, nurse and physiotherapist will use to monitor how well you are.

You will have a small probe on your finger to monitor the amount of oxygen in your blood. You will have small stickers on your chest to monitor your heart.

You will have an inflatable cuff on your arm to monitor your blood pressure.

You will have a small heated probe clipped to your ear to monitor the amount of carbon dioxide in your blood.

While you are receiving non-invasive ventilation we will need to take samples of blood from the artery in your wrist to measure the amount of oxygen and carbon dioxide in your body. This is important for us to be able to set the non-invasive ventilation correctly for you.

How do I talk, eat and drink?

The masks used for non-invasive ventilation are tight fitting. This means that it will be difficult for you to talk, eat and drink.

When you are first put on non-invasive ventilation it is important that you rest and let the non-invasive ventilation help you to breathe.

It is normal for you to catch up on lost sleep at this stage. This is good, as rest will help your body to recover more quickly.

Once you start to improve, the nursing staff will remove your mask for short periods of time. This will allow you to eat and drink, and talk to your visitors.

It might also be possible to use a mask that covers only your nose. This may allow you to talk, eat and drink while still receiving non-invasive ventilation.

Can I have visitors?

Visiting times on the Respiratory Support Unit are

- **10.00am - 8.00pm**

Visiting outside these hours may be discussed with the ward sisters.

It is important that you are allowed to rest to allow the non-invasive ventilation to help you recover. Your visitors might be encouraged to leave to allow you, and other patients, to rest.

How can I find out more?

If you or your relatives have further questions regarding non-invasive ventilation, please ask your nurse, physiotherapist or doctor on the ward.

If you have any problems or concerns once you have been discharged home please discuss them with your GP, or telephone the **NHS 111** service.

Other useful sources of information

British Lung Foundation - The British Lung Foundation exists to provide information and support for everyone living with a lung disease, and for the people who look after them.

- **Helpline: 03000 030 555**
- **www.blf.org.uk**

Breathe Easy - Breathe Easy is the support network of the British Lung Foundation providing information, support and friendship to all people living with a lung condition, their family, friends and carers.

They meet on the second Wednesday of the month 1.30pm-2.30pm at Graves Health and Sports Centre, Bochum Parkway, Sheffield, S8 8JR.

- www.blf.org.uk/support-in-your-area/breathe-easy-sheffield-support-group
- 0114 2656182
- email: rgvscot@aol.com

Stop smoking service

Yorkshire Smokefree Sheffield, Sorby House, 1st Floor, 42 Spital Hill, Sheffield S4 7LG

- 0114 3216149

Pulmonary rehabilitation

This is a specially designed programme for people with breathing problems. It combines exercise and education to help you become more in control of your breathing.

Contact Active programmes Team

- 0114 3078260



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