



Non-invasive ventilation (also called bi-level or BIPAP)



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Why do I need non-invasive ventilation (NIV)?

There are a number of different medical conditions related to the lungs, nerves and muscles that lead to an inability to pull enough air into and out of the lungs. If you have one of these conditions, your breathing may become harder work and your muscles may become tired. This can lead to a build-up of waste gas (carbon dioxide) and not enough oxygen getting into your blood, particularly at night.

With non-invasive ventilation (NIV) you may be able to breathe more effectively, and your muscles will have time to rest and recover. It will help to keep the oxygen and carbon dioxide levels within normal limits. Therefore, you may improve your sleep quality, which may lead to better energy and concentration levels during the day, so you may be able to complete more daily tasks. You may also feel more alert on waking, and headaches caused by increased carbon dioxide may be reduced. It may also decrease the likelihood of you being unwell.

To ensure that your condition is treated, you should aim to use NIV whenever you have a sleep – daytime or night-time. At night, a minimum time of four hours is recommended.

In most cases, NIV is enough to improve your breathing. However, occasionally additional oxygen may be needed; this will be assessed and prescribed by the respiratory consultant.

Why is my breathing worse at night?

During the day, you may use additional muscles to breathe in and out. However, those muscles and nerves relax and rest when you sleep, leading to breaths that are not as deep. When combined with your condition, this can lead to problems. This may cause you to feel tired and not refreshed the next morning, to wake up with headaches, and to feel sleepy during the day.

How does it work?

NIV is a machine (ventilator) attached to a tight fitting mask (facial or nasal depending on comfort) by a hose. The machine starts when you breathe in and will work with your breathing to support your muscles. The machine provides two pressures. One is a low continuous pressure (EPAP) which you will feel as a slight resistance when breathing out to keep your lungs open for longer. The other is a higher pressure (IPAP), felt when you breathe in, to assist with providing a bigger breath.

It can feel a bit strange to start with. However, most people find that they get used to it fairly easily.

Your ongoing care

Your ongoing care will be provided by University Hospitals Bristol, based at the sleep unit at the Bristol Royal Infirmary.

Patients are usually set up on NIV following a review with our respiratory consultants within an outpatient clinic. However, some patients are set up on NIV following an admission to their local hospital. Although the initial set-up may have happened elsewhere, all follow-up care relating to NIV takes place at the Bristol Royal Infirmary. This is where the equipment and specialists are based in relation to home NIV. All of your other usual care needs will still be met by your local hospital.

At the first appointment, the senior physiotherapist or senior clinical physiologist will set the machine up and make sure that it is as comfortable for you as possible. After you have been set up with the ventilator, you will be asked to come back for a review appointment within two to four weeks. Once everything is running smoothly, your ventilator and circuit must be checked every four to six months and you will have yearly reviews by the respiratory consultant checking the NIV treatment.

Please contact the sleep unit earlier if you have any problems using the machine, and we will try and help you to overcome your concerns or problems.

Are there any side effects of using NIV?

Some patients occasionally experience symptoms such as sneezing and a blocked nose from inflammation of the sinus (sinusitis), red marks or discomfort from the mask, and trapped stomach wind. Please contact the sleep unit if you experience any of these symptoms.

In very rare cases, a collapsed lung or bloodstained sputum may occur. However, this is often related to previous medical history, and is very unusual.

Stop using NIV if you suddenly feel more unwell, have a very sudden increase in breathlessness, or have chest pains. You should contact us and your GP as soon as possible.

Common queries and problems:

- your normal treatments for your breathing condition, such as medication, will continue alongside using the NIV
- it is essential that you only use the masks and tubes supplied by the sleep unit with your ventilator
- if you are experiencing any mask seal or machine problems, dryness of the throat, soreness on your nasal bridge or any other nasal problems, please get in touch with us on the next working day
- if you are admitted to the hospital, you should bring your NIV and mask with you to use each night
- if you are a driver, you may need to discuss your condition and treatment with the DVLA; the consultant will advise you on this.

Useful contacts

If you have any further questions, please do not hesitate to ask any of the specialised staff involved in your care.

Sleep unit

Appointments: **0117 342 2616**

For clinical problems: **0117 342 1636**

Email contact: NIV@uhbristol.nhs.uk

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:
www.uhbristol.nhs.uk/research-innovation
or call the research and innovation team on
0117 342 0233.

For access to other patient leaflets and information please go to the following address:

www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/.

Hospital switchboard: 0117 923 0000



Minicom: 0117 934 9869



www.uhbristol.nhs.uk



For an interpreter or signer please contact the telephone number on your appointment letter.



For this leaflet in large print, audio or PDF format, please email patientleaflets@uhbristol.nhs.uk.

