

## Non-invasive ventilation (NIV)

Non-invasive ventilation (NIV) is a way of helping you breathe more deeply by using a machine blowing extra air into your lungs via a nasal mask, face mask or hood. It helps you expand your lungs to blow off carbon dioxide (CO<sub>2</sub>) and improve oxygenation.

NIV is a common treatment for people with chronic lung conditions, like chronic obstructive pulmonary disease (COPD), obesity-hypoventilation syndrome, neuromuscular disorders, motor neurone disease (MND), neurological disorders, cystic fibrosis, and bronchiectasis.

### Why do I need NIV?

Having a chronic lung condition can sometimes make breathing laborious and can lead to your breathing muscles tiring. This can lead to accumulation of CO<sub>2</sub> (waste gas) in your blood and not enough oxygen. NIV supports your breathing, giving your breathing muscles rest and removes carbon dioxide in your blood.

### What to expect

Your doctor will discuss your treatment plan with you and take some blood samples from your wrist or earlobe. NIV can be uncomfortable, so please don't hesitate to ask about the treatment and what it involves to decide whether or not it is right for you. However, there may be times when you have altered level of consciousness or feel very poorly and this treatment may have already been started in your best interest.

### What does NIV require?

- **NIV machine** – a machine that blows out air. Pressure is adjusted by your nurse/doctor.
- **A tight-fitting mask** – that sits over your face and delivers pumped air into your airway.
- **A designated room** – pressure from the machine can make tiny droplets in the air that can harbour pathogens and we want to protect other patients; a side room is preferable.
- **Blood sample** – taken from your wrist or earlobe to monitor carbon dioxide levels in your blood and evaluate effectiveness of therapy.
- **Oxygen or air** – depending on the result of your blood sample, oxygen may be added in your therapy.



## What happens during NIV?

You will feel a bit of pressure on your face, similar to putting your head out the window of a moving car. As you breathe in, you will feel a flow of air from the machine to support your breath. As you breathe out, you will feel some resistance - this helps your smaller lung passages remain open to keep air inside your lungs. It will feel strange at first, and can be frightening for others; however, most people find they get used to it fairly easily.

## Benefits of NIV

- Improves survival.
- Shortens hospital stay.
- Reduces need for intubation and intensive care unit (ICU) admission.
- Decrease breathlessness.
- Improve ventilation.
- Decrease work of breathing.

## What happens next?

You will be referred to a specialist team who will monitor your progress and escalate your needs.

## Other important considerations

Patients who are at risk of CO<sub>2</sub> retention should be provided with a CO<sub>2</sub> retainer pack and oxygen card. This will identify you as someone who is sensitive to high levels of oxygen and your healthcare provider will need to identify a target oxygen saturation for you.

## Will I need NIV again in the future?

Although NIV benefits people with chronic lung conditions, you may have further episodes of lung failure in the future. There is a high possibility that you will have another NIV treatment should you need it. Feel free to speak to your doctor about your thoughts for having NIV treatment for your lung condition in the future.

## NIV care

- Make sure you are well hydrated.
- Make sure that the mask fits snugly, not too tight and not too loose.
- Regular skin care on pressure areas in contact with the mask.
- Regular mouth care.
- If using oxygen with your NIV, ask for information regarding the non-advised use of emollients/ointments/lotions/face creams.
- Daily cleaning of the NIV mask with water and a low residue soap, then wipe to dry.

## Further information

### British Lung Foundation

- Telephone 03000 030 555, Monday to Friday, 9am - 5pm

### Breathe Easy Support Group

- Website [www.blf.org.uk/support-for-you/breathe-easy](http://www.blf.org.uk/support-for-you/breathe-easy)

### Hertfordshire Stop Smoking Service

- Telephone: 0800 389 3998 or
- Text `Smokefree` to 80818
- Website [www.hertsdirect.org/stopsmoking](http://www.hertsdirect.org/stopsmoking)

## Useful contact details

### East and North Hertfordshire NHS Trust:

- Telephone 01438 314333
- Website [www.enherts-tr.nhs.uk](http://www.enherts-tr.nhs.uk)

### Respiratory Specialist Nurses:

- Telephone: 01438 285995, Monday to Friday, 9am - 5pm.

## Leaflet information

**You can request this information in a different format or another language; please speak to your doctor or nurse.**

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