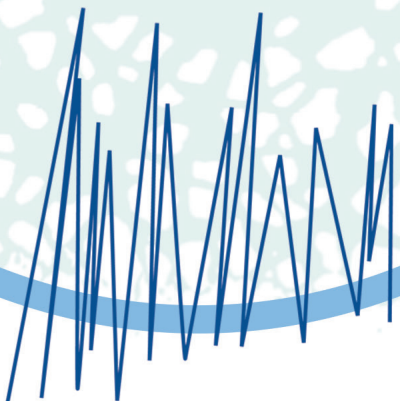
NHS
Royal Papworth Hospital
NHS Foundation Trust

Discharge information for NIPPY patients

A patient's guide



Compassion
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What is non-invasive ventilation (NIV)?

NIV is a treatment to help you with your breathing. It involves wearing a mask which is connected to a machine. The machine used to do this is called a NIPPY ventilator (non-invasive positive pressure ventilation). NIV works by blowing air into the lungs until a pre-set airway pressure is reached. This will assist your breathing at night.

The NIV can be used for a variety of respiratory conditions and muscle disorders. It can feel a bit strange to start with, but most people get used to it fairly quickly.

When your breathing is insufficient in the night, carbon dioxide in the blood can increase which can cause unpleasant morning headaches when you wake up and general tiredness during the day.

The settings on your NIV have been set for your respiratory condition; please ensure these are not altered.

We have different types of NIVs: NIPPY 3, NIPPY 4, VIVO

VIVO with mask

NIPPY 4 with mask

NIPPY 3

Risks and benefits of treatment

Benefits

The NIV is aimed at giving you a better-quality night's sleep which should result in you feeling more refreshed during the day.

There are also health benefits such as a decreased risk of you requiring unplanned or emergency admissions to hospital. If you experienced headaches, this might also improve your symptoms.

NIPPY 3 with external humidifier

Risks

The NIV may cause a blocked, runny nose or you may experience throat or nose dryness. A humidifier can be added to your machine to assist with this.

If you experience any of these symptoms, mention this to the nurse or doctor looking after you when you are in hospital. If you are at home, contact the Respiratory Support and Sleep Centre (RSSC) team on **01223 638365**.

It is important that your mask is fitted correctly. If the straps are pulled too tightly you may experience soreness on your face particularly around the bridge of the nose.

If the skin on the bridge of your nose becomes broken you should contact the RSSC team as it may be necessary to have a different type of mask fitted.

The machine is designed to compensate for some leakage of air, however if air leaks in the eyes, it can cause them to become red and to water.

If you are wearing a nasal mask you might find that air leaks out through your mouth which may result in the NIV not working effectively. A chin strap can support the lower jaw and press your lips together to stop air leaking out. If air leakage still persists, speak to the RSSC team.

You may experience a bloated stomach when using NIV, but please contact RSSC team if you develop gastric distention.

Discharge advice and follow-up arrangements

Before you leave hospital make sure you know how to turn your NIV on and off and how to dismantle your mask and tubings, and if using oxygen how to connect this.

Caring for your machine and mask

The NIV unit should be disconnected from the mains electricity and a moist lint-free cloth used to clean the outside. Internal cleaning is the responsibility of the RSSC.

The mask should be washed in detergent (to remove the oil that comes from your skin) and left to air dry.

This should be done on a daily basis when you come off NIV. The head straps can be washed in soapy water, rinsed and left to air dry - we suggest once every two weeks or more frequently if necessary. They can be put in the washing machine but not in the tumble drier.

The NIV tubings can be washed in mild detergent and hung to air dry once in two weeks.

Most machines have a simple dust filter covering the air inlet to the machine. Take it off and flick it to remove the dust. This should be checked regularly. Please contact us if the filters needs replacing.

Using your machine

The NIV is designed to be worn at night whilst you sleep, however some patients may benefit from a ‘top-up’ during the day. If you are having problems with the treatment, please contact the helpline as we can provide help to improve the comfort of the mask and the machine.

If you require additional oxygen with your NIV, the oxygen supply must be switched off from the NIV when it is not in use as this is a fire risk.

NIPPY 4 with oxygen connector

NIPPY 3 with oxygen connector

Follow-up

After your discharge you will receive an appointment in six weeks to return to the RSSC so the benefit of your NIV can be assessed. Further reviews will be dependent on your medical condition.

It is important that you attend these appointments so your machine can be checked, serviced and any accessories that need changing are replaced.

You must bring along your machine and all accessories with you at each follow up.

When to contact the RSSC

- If you do not feel the machine is working effectively or you have symptoms such as morning headaches, dryness or bloating.
- If you are becoming more dependent on your NIV and are using it for more than 12 hours a day. You may need an early review or a second machine with an internal battery.

Mask replacement

Your mask should last 6-12 months. We can provide you with up to two masks per year. If you are using your NIV machine for more than 12 hours a day, we will provide you with an additional machine and mask, and in some instances provide a machine with an internal battery.

Frequently asked questions

What if I go away on holiday?

If you go away, you should take your machine with you. If you are going overseas, you will need a custom letter to explain the reason for your treatment - we can provide this for you. It is important to take the NIV as hand luggage on a plane.

The hospital is unable to replace your NIV if it breaks or is lost when taken out of the country, so please ensure that your travel insurance takes this into account, and your machine and accessories are all in good condition before travelling.

What if I were to be admitted to other hospitals?

If you are admitted to another hospital, it is important that you take the NIV with you. If the staff are not familiar with the machine, they should contact the RSSC for more information. It is still important to wear the machine every night when you are in hospital.

What if my NIV alarms?

Check that your mask is fitted securely and everything is connected. The alarm will automatically reset once the cause of the alarm has been corrected. The audio pause/mute button can be pressed to pause the alarm for 60 seconds whilst performing corrective actions.

If the machine continues to alarm, please call the RSSC and an available nurse will assist you. Have your NIV near you as we may need to ask you several questions about the machine.

What if my machine stops working

Ensure the power lead is securely inserted into the back of the machine. Try another socket and if it still does not work call RSSC.

What if I have a power cut?

If you experience a power cut or your machine stops working, the majority of patients will be safe to spend one or two nights sleeping without the machine. However, please call the RSSC if you are NIV-dependent - we will supply you with a machine with an internal battery which lasts approximately four hours when fully charged.

The NIPPY 4 has an internal battery and operation time can be dependent on its condition, capacity and NIPPY pressure. The internal battery can operate for around two hours.

If you are NIPPY 4 dependent, we will supply you with two NIV machines and a click-in battery. Each click-in battery can operate for around six hours. Please make sure batteries are kept charged by connecting the NIV to the mains supply.

You can inform your electricity supplier that you have a ventilator that you use overnight, and you will be placed on a priority list for re-connecting your electricity supply. If you live in an area where there are frequent power cuts, please discuss this

with us and we may be able to provide you with a machine that has an internal battery.

My NIV is showing a spanner symbol, should I be concerned?

No, you do not need to be concerned. On your next admission or appointment, we will arrange for the machine to be serviced.

How do I connect my oxygen to the NIV machine?

You will be supplied with a green oxygen connector and small length of green oxygen tubing on discharge home. The green oxygen connector should be attached directly to your NIV machine, and the green oxygen tubing connected to that. If you need a replacement of the green connector or green tubing, please call the replacement team on **01223 638890**.

How many hours per night should I wear my NIV?

You should try to use your NIV every night while you are asleep (ideally seven to eight hours per night).

Driving

Everyone is legally obliged to avoid driving when sleepy, regardless of whether this is due to an underlying medical condition. Please ask the RSSC doctor during your admission whether your condition requires you to inform the DVLA.

DVLA contact details
Drivers Medical Enquiries DVLA,
Swansea, SA99 1TU.
Tel: 0300 7906806
08:00 - 17:30, Monday to Friday
08:00 - 13:00, Saturday
Email: eftd@dvla.gsi.gov.uk
Website: dvla.gov.uk

Troubleshooting

The NIV machine is set to alarm if it detects any faults such as your mask leaking due to poor fitting. The NIV will display a warning message during the alarm. It is important to read this message and follow the instructions. If you need to contact the RSSC, you will be asked about this message so they can assist you with your problem.

If your machine has a red flashing spanner do not worry, this will not affect the way the machine operates but will require a service at your next appointment.

Some common faults and actions to remedy:

- **Mask leaks (high flow)**
  Make sure the mask is fitting well with no leaks.

- **Obstruction (low flow)**
  This could be positional - try to reposition yourself so your chin is not too close to your chest.

- **Disconnection (high flow)**
  Check that the circuit hose, filter and mask are all connected together.

If your machine displays 'machine faults' or error codes, please contact the RSSC team as soon as possible as this normally means your machine needs to be changed.

Contacts

NIV 24-hour helpline:
01223 638365

Mask/hose replacements:
01223 638890
(Monday to Friday, 09:00 -16:00)
Answerphone available.

*Royal Papworth Hospital will be unable to accept responsibility for the safety and efficacy of your NIV equipment, if your machine isn't brought in for regular servicing at your appointments.

The NIV machine remains the property of Royal Papworth Hospital and if it is not used it must be returned.

Tel **01223 638890** for details of returning equipment.

Royal Papworth Hospital NHS Foundation Trust
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01223 638000

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