

Non Invasive Ventilation (NIV) Trilogy Evo for Home Use



Liverpool University Hospitals NHS Foundation Trust

Liverpool Ventilation Service

Aintree Site

Lower Lane, L9 7AL Tel: 0151-525-5980

Royal Site

Prescot Street, L7 8XP

Broadgreen Site

Thomas Drive, L14 3LB

Royal & Broadgreen Tel: 0151-706-2000

What is Non-Invasive Ventilation (NIV)?

NIV is a treatment which may help with your breathing, using a machine and a mask.

The aim of this ventilation is to make sure that you get a good breath when your own breathing is not deep enough.

NIV is usually given through a mask over your nose. When you breathe in, the machine delivers a supported breath to make sure you get enough air and oxygen.

What is it used for?

There are many different reasons why NIV therapy may be needed, including:

- bone problems that make the chest small.
- muscle problems that make taking a deep breath difficult.
- being very overweight.
- brain conditions that affect your breathing.

It can also be used alongside other treatments to prevent breathlessness and shallow breathing when you are lying down. Without treatment this may lead to a strain on your heart or daytime sleepiness.

If you are unsure about the reason why you have been given the machine please ask the doctor or physiotherapist.

Will I be seen by a Doctor, Nurse or Physiotherapist?

The whole medical team is involved in your care. Following an assessment to determine your need for the machine, you will be invited to a clinic appointment in which you will have a full explanation about the machine and how to use it. A mask will also be chosen and fitted during this appointment.

Your Trilogy Evo ventilator records information on your use of the machine which may be reviewed by the physiotherapy team. Once you have been provided with your machine, a physiotherapist will check your progress. They will telephone you to discuss this before you are reviewed as an outpatient by a chest specialist doctor.

You will also receive a list of contact numbers so that you can call us.

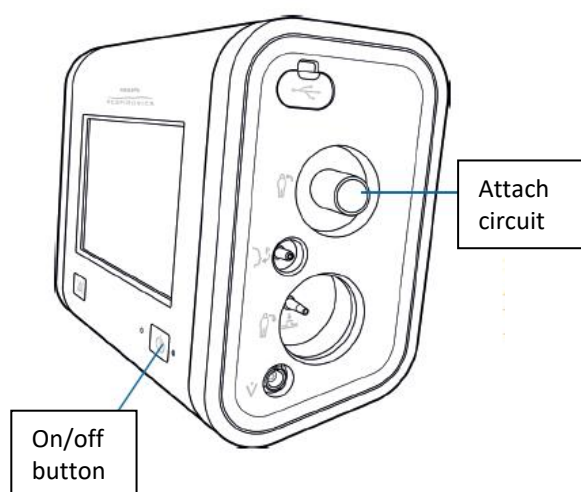
How do I use it?

The NIV machine you have been given operates from the mains electricity, so it must be plugged in when in use. It does have a battery in case of power failure.

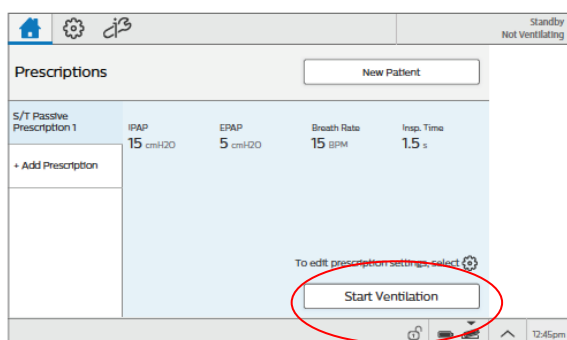
Before use check your mask and circuit are intact and attached to the machine.

Turning your machine on and off:

To turn the machine on, press the On/Off button on the bottom right of the machine.

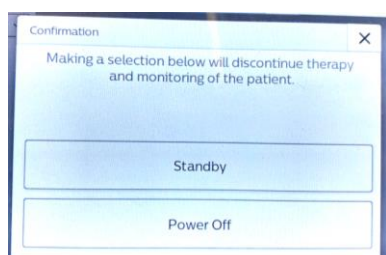


Once the machine is switched on press 'Start Ventilation' on the touch screen display to begin therapy.



To stop the ventilation, press the On/Off button on the bottom right of the machine and then press the 'Standby' panel on the touch screen.

To turn the machine off completely, press the On/Off button on the bottom right of the machine and then press the 'Power Off' panel on the touch screen.



During use of the machine:

Once the machine begins to deliver air, take your time to fit the mask securely. Ensure you are in a comfortable position to allow sleep.

If the machine is set with a 'ramp' function, the ventilator will slowly come up to your treatment pressures when you start the air flow.

Dual prescription

You may have more than one prescription in use, for example a day time and night time prescription. Your therapist will show you how to move between these prescriptions and how to check your settings.

When is it used?

Once established the machine must be worn each night for approximately six hours or more.

If you regularly have a daytime nap, the machine may be worn at this time.

Can I use oxygen with the machine?

Yes: This will be discussed with you at your assessment.

What equipment will I be given?

- Ventilator
- Mask
- Tubing
- Filters
- Exhalation valve (this gets rid of carbon dioxide as you breathe out, we will point this out to you)
- Oxygen connector (if required)
- Humidifier (if required)

Masks

There are many different types and sizes of masks available. During your first assessment for mask ventilation you will be measured for an appropriate mask.

Once at home with your equipment it is important to take care of your mask. It is best to wash your mask every 2-3 days in warm soapy water and hand wash the headgear weekly.

Below are some examples of types of masks you may try:

Nasal mask



Full face mask



Total face mask



Oro-nasal mask



My Mask is _____

Size _____

Information about my equipment

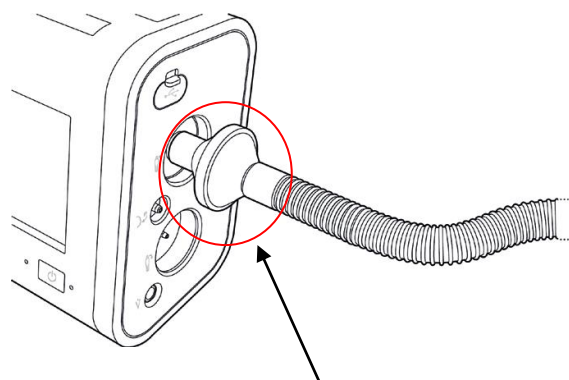
Ventilator:

It is important that your machine is placed on a firm, flat surface and it should be kept clean and dust-free.

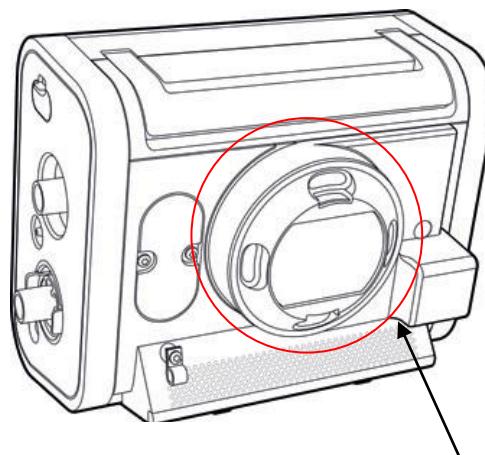
If you are using a humidifier alongside the ventilator it is important that it is kept lower than the ventilator to prevent water draining into the ventilator.

Filters:

Attached to the side of your **Trilogy Evo** machine is a round white bacterial filter. Please throw away and replace the bacterial filter every month.



At the back of the machine is a round black filter. This filter can be washed and replaced monthly. Ensure it is completely dry before replacing.

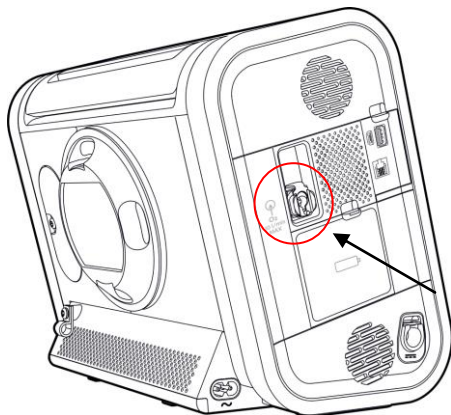


Oxygen

The ventilator delivers pressurised air. Oxygen can be added using an oxygen concentrator machine and oxygen tubing.

Oxygen Connections:

Oxygen can be connected to the Trilogy Evo machine by attaching the oxygen tubing to the white oxygen connector on the left hand side of your ventilator.



For all NIV and oxygen users:

1. Turn the ventilator on before turning the oxygen on.
2. Turn the oxygen off before turning the ventilator off.
3. Do not leave oxygen running when the ventilator is off.

If you are being discharged home with oxygen please ensure that you know how many hours per day you should be wearing your oxygen.

Tubing:

Please wash the grey tubing in warm soapy water every 2-3 days and ensure the tubing is dry before reconnecting to the ventilator.

Exhalation valve:

This is a vital part of the circuit set up. This will be pointed out to you when the machine is set up (often it is part of the mask). **Under NO circumstances must**

this exhalation valve be covered or blocked.

Headgear:

Please wash your headgear once a week. It is important that you do not over tighten the headgear. Just because the mask is tight doesn't mean it will work any better. If you are having problems, let us know and we will check your mask.

Preventing pressure sores:

If you need further pressure care advice please ask for our leaflet on preventing pressure sores with NIV.

Humidification

What is humidification and do I need it?

Some patients who use the NIV machine can develop a very dry sensation in their nose and mouth whilst using the machine.

If you develop any symptoms of dryness please contact the physiotherapist who can arrange for you to have an additional piece of equipment, called a humidifier, which will quickly help you to overcome any uncomfortable sensations.

Switch the humidifier on/off with the switch on the side of the humidifier. Ensure you turn it back off after use.

You can adjust the temperature of the humidifier by turning the dial on the front of the device. Turning counter-clockwise is the coolest temperature, increasing the dial increases the temperature and adds more moisture to the air you breathe.

How long will my accessories last?

- Air filter: replace every six months
- Bacterial filter (if used): replace monthly.

- Masks: most masks are designed to last a year. We may advise you to replace the cushion and head straps more frequently, where applicable.
- Tubing: replace if worn or split.
- Oxygen connector: replace if breaks.
- Humidifier chamber: replace if broken or if it becomes unable to be cleaned.

Machine Maintenance and repair

For a breakdown or fault with the machine, please contact an engineer at Deva Medical on:

24hr emergency number **0772 088 3276**
Office hours **01928 565 836**

Your ventilator should be serviced yearly by Deva Medical. They will contact you when the service is due, to arrange a convenient time to visit your home and carry out the service.

Contact information:

For any queries/advice about the machine e.g. if you are unsure about the use of your machine or masks please contact one of the physiotherapists at Aintree Hospital.

Physiotherapy Ventilation Team:
Telephone switchboard **0151 525 5980**
and ask for **BLEEP 3334**
Available: Mon – Fri, 9 am - 4 pm.
We will try to answer or return your call as soon as possible within working hours.

Please do not telephone for replacement equipment. This must be requested by letter or email as below.

For replacement equipment:

E.g. mask, filter etc. please write to or email the address shown below stating the exact equipment you require.

Email: sleep.lab@aintree.nhs.uk

Address: The Sleep Laboratory
6th Floor Aintree Hospital
Longmoor Lane
Liverpool
L9 7AL

Please ensure that you have a spare mask, filters and tubing at all times in case of accidental breakage or wear and tear.
Please also allow at least two weeks for the postal delivery of requested equipment.

For Out of Hours ADVICE ONLY

You may contact the Ventilation Inpatient Centre for urgent **advice only** on **0151 529 3602**

For non-urgent enquiries or to order accessories please do not call this number. Physiotherapists on this ward may be with unwell patients and may not be able to take your call. If you are feeling unwell, please see below.

Feeling Unwell?

If you are feeling unwell and need medical advice please contact your own G.P. who will be able to assess and advise you.

If you are taken acutely unwell and require admission to hospital please take your ventilator and this booklet with you.

Vomiting or Nausea/Sickness

If you use a mask which covers your mouth there is a risk of aspiration if you vomit (vomit going into your lungs). This risk is higher if you vomit regularly or without warning. In most cases we will try to reduce this risk by using a nose mask but this is not always possible.

If you use a mask which covers your mouth and are unable to remove the mask yourself, we will discuss having a second person in the room with you that can assist. You may prefer not to have someone that can immediately help and in

that case it is important that you understand and accept the risk that this poses. It is important to understand that there have been incidents where people have died due to this happening.

We will discuss this with you when the ventilator is issued and during outpatient clinics. Please contact us if you have any concerns at any time or if your health or your ability to remove the mask changes.

Power Failure

Your machine has a built in battery. The ventilator will continue to operate until the battery runs down. Please keep your ventilator plugged in and turned on at the plug to keep the battery fully charged whenever possible to do so.

Make sure you regularly check the battery runs the ventilator.

Travelling abroad with your Non-Invasive Ventilator

Most machines can be used abroad if using a plug adaptor. You must carry your machine as hand luggage.

If you are unsure about travelling please contact the physiotherapists for advice. A leaflet may be supplied for travelling with your ventilator if required.

Travel beyond an 80 mile radius of Liverpool is not covered by our breakdown service; you may need to obtain a spare ventilator from the team at Aintree in case of fault or failure of your machine. Please discuss this with the ventilation team and allow at least 8 weeks for us to arrange this.

Equipment and Machine settings

Ventilator

Model:

Serial no.

Humidifier: Yes / No

Model:

Serial no.

Machine settings:

DATE:		
IPAP		
EPAP		
BPM		
Mode		
TV		
Ti		
Rise time		
Oxygen		
Alarms		



If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

Tel No: 0151 529 2906

Email: interpretationandtranslation@liverpoolft.nhs.uk