

Patient information

Preventing Pressure Sores whilst using Non-Invasive Ventilation (NIV) Masks

Liverpool Sleep and Ventilation Service – Aintree Hospital

A certain amount of pressure is needed to ensure that NIV masks stay in place on the face. They also need to seal well against the skin so that air being delivered by the ventilator to the lungs does not escape from the mask. If large leaks are allowed the NIV treatment could become less effective.

Wearing a tight fitting mask each night does mean that your skin needs to be well looked after to prevent areas of redness or soreness from developing. This leaflet is to advise patients and/or carers of how to do this.

What is a Pressure Sore?

A pressure sore is an area of damaged skin. It is usually caused by sitting or lying in one position for too long without moving. In this case, wearing your NIV mask too tightly could cause a similar problem.

A pressure sore can develop in only a few hours. It usually starts with the skin changing colour; skin may appear slightly redder or darker.

If a pressure sore is not treated quickly it can develop in a few days into an open blister and, over a period of time, in to a deep hole in the flesh.

Where are pressure sores most likely to develop?

Most NIV masks sit directly on to the bony area at the bridge of your nose. This area has only a thin layer of skin to protect it and so is at risk of damage caused by excessive mask pressure.

Who is most likely to get a pressure sore?

You are more likely to get a pressure sore if:

- You have difficulty removing and replacing the mask by yourself.
- You have poor muscle strength or have poor skin integrity.
- You have a serious illness.
- Your body is not very sensitive, for example if you have diabetes.

- You have a heart problem or poor circulation
- You are not eating a balanced diet or having enough to drink

How can I prevent a pressure sore?

You can prevent a pressure sore by taking the following steps:

- Please clean the mask thoroughly and daily
- Please replace masks that are in poor condition – at least yearly.
- Fit the mask loosely when you first put it on and tighten the Velcro headgear just a small amount at a time until you achieve a good fit with a low leak. Avoid over tightening the headgear.
- Each night ensure your skin is clean and dry before putting your NIV mask on.
- If you have a condition that requires you to wear your NIV mask both at night and for many hours of the day it is a good idea to have an alternative mask for daytime to change the area of skin that the mask is pressing on.
- If you have been provided with equipment or creams to reduce pressure areas please use them every night with your mask.

If you think you are at risk of developing a pressure sore:

Do:

- ✓ Contact your physiotherapist and ask for advice.
- ✓ Check your skin every day. Look for areas that do not return to their normal colour after the NIV mask is removed.
- ✓ Keep your skin clean and dry.
- ✓ Eat a healthy diet and drink plenty of water; If your skin is healthy it is less likely to get damaged.
- ✓ Request a replacement when your mask is 12 months old.
- ✓ Alternate your mask type if you are a daytime NIV user
- ✓ Clean and thoroughly dry your mask daily.

Don't:

- × Over tighten the mask headgear.
- × Continue to wear old or poorly fitting masks.

What can I use to reduce the pressure from the mask?

If your physiotherapist thinks that you are at risk of developing a pressure area they will advise you of the following;

Cleaning and Replacing Masks:

Well maintained masks are less likely to cause skin irritation. Please thoroughly clean your mask daily and dry it completely before use. Masks should be replaced at least once a year and some models will need replacing more often.

Some masks have removable cushions (the part that has contact with your skin). These cushions need replacing every 3-4 months and spare cushions can be provided. Your physiotherapist will advise you as to how to care for your own mask.

Gel pad:

Some people benefit from using a gel pad. This pad sits on the bridge of the nose and underneath the mask to reduce direct pressure to the skin. Please wash this gel pad daily, dry thoroughly before use and replace it when signs of wear and tear start to show.



Picture shows gel pad in place

Barrier cream:

We may talk with your GP about prescribing a barrier cream that creates a thin film on top of the skin to protect it when the mask is in place.

When choosing a cream and also if using face creams to moisturise your skin, please choose a cream that **does not** contain petroleum. This advice is particularly important to patients using oxygen with their NIV device. If you are concerned or need advice about the creams you are using please speak to your pharmacist.

Alternative masks:

Some masks do not rest on the bridge of the nose such as the total face mask and the oro-nasal mask. The physiotherapist will need to ensure that the alternative mask fits you well and is able to deliver your NIV treatment properly.



Siltape®:

Siltape® is a soft silicone tape on a roll that is useful on fragile and sensitive skin to create a barrier between the interface or mask and the skin. The roll has perforations to make it easy to separate a section to be used.

To use, please ensure that the area of skin has been cleaned and gently dried. Tear the Siltape® at the perforations to create the desired length. Remove the plastic lines and place the tape with the sticky side touching the skin. Please use the tape just once for example, overnight for one night, and then throw it away.

Store Siltape® at room temperature and away from sunlight, and keep it dry.



Mask liners:

Mask liners are soft cotton fabric liners that create a barrier between a mask and the skin and absorb skin oil to reduce skin irritation, pressure marks and leaks. We have two types of mask liners available:

RemZzzs mask liner –

This mask liner, shown below, is single use and should be changed every day.



Silent Night mask liner –

This liner sticks to the mask using the sticky tabs around the edges. Please remove the liner when cleaning the mask and replace it once the mask is dry. It should be changed about once a week.



Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

Physiotherapy Ventilation Team

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.

Telephone Hospital Switchboard on 0151 525 5980 and ask for Bleep 3334

Available: Mon – Fri, 9 am - 4 pm.

Please be aware that we are working on the ward, and we will answer your call as soon we can. Please stay on the line until we respond.

Machine Maintenance and repair

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

Office hours: 01928 565 836

Out of Hours Emergency Number: 0772 088 3276

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.

For replacement equipment:

Please do not telephone for replacement equipment. This must be requested by letter or email sleep.lab@aintree.nhs.uk ensuring you state exactly the equipment you require.

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 at all times

Please also allow at least two weeks for the postal delivery of requested equipment.

For Out of Hours Advice Only

You may contact Ward 6 Ventilation Inpatient Centre for urgent advice only on Tel:0151 529 3602

Additional sources of information.

BDA

<https://www.bda.uk.com/resource/pressure-ulcers-pressure-sores-diet.html>

NHS Choices

For information on pressure ulcers

<http://www.nhs.uk/conditions/pressure-ulcers/Pages/Introduction.aspx>

British Nutrition Foundation for information on nutrition/healthy eating

<http://www.nutrition.org.uk>

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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