Patient guide

Your Oxygen Cylinder with a Low Flow Regulator

NHS National Services Scotland

Dolby VIVISOL® Home Respiratory Care

Oxygen cylinders with low flow regulators

You have been provided with a low flow regulator which attaches to your oxygen cylinder. This will enable a very low oxygen flow rate to be delivered, and is most commonly used for babies and children.

You need to use the low flow regulator to match the exact flow rate you have been prescribed.

This patient guide provides guidance as to how to use and look after this equipment. It should be read in conjunction with our patient guides dedicated to cylinders.

Basic health and safety for you

Your Dolby Vivisol technician will explain the precautions to be observed when storing, handling and using your oxygen equipment.

In addition to the risks associated with oxygen, it is vitally important to protect your cylinder and low flow regulator against contamination from external agents which may affect their performance.

These include everyday items such as hand creams, alcohol rubs, detergents, soaps etc.

For this reason it is advisable that you wash and dry your hands thoroughly wherever possible, prior to handling your oxygen equipment. You should never submerge the regulator in water as calcification can occur, which in turn can block the flow of oxygen.

Please ensure care is taken with the equipment to avoid dropping or damaging the low flow regulator.

If you are not the homeowner, please ensure that you have notified your landlord about the presence of oxygen in your home.

Remember: In case of fire, immediately vacate the premises. Only take your oxygen equipment with you if it does not hinder you. Stay out of the premises and call 999 and advise them you are using medical oxygen.

GET OUT, STAY OUT, CALL OUT!

Using your low flow regulator with oxygen cylinders

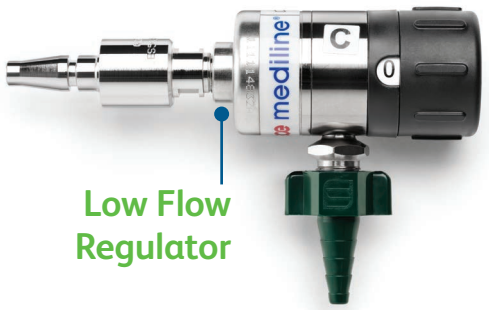
1. Making an initial inspection

Prior to use, you should inspect the low flow regulator (pictured right) and the oxygen cylinder (opposite) to ensure that they are clean, dry and free from damage.

You should also check the contents of the oxygen cylinder to ensure you have enough oxygen left for your intended activity.

In this example (see opposite page) the dial is in the dark green meaning it is full.

A cylinder is deemed full when the needle is pointing within the dark green area of the gauge.



Low Flow Regulator

Low Low Flow regulator

'Schrader' outlet

Open/close dial

Using your low flow regulator with oxygen cylinders

2. Attaching the low flow regulator to the cylinder

The cylinder has two different oxygen outlets.

The low flow regulator should be inserted into the ‘Schrader’ outlet. This is done by gently pushing or rotating the regulator into the outlet. A click will be heard, indicating that the regulator is correctly attached.

3. Turning on the cylinder

Adjacent to the contents gauge, is the open/close dial.

Turn on the oxygen flow by rotating the dial to the open position.

DO NOT use the flow rate selector on top of the cylinder at any time, this should always be set to zero.

Using your low flow regulator with oxygen cylinders (cont)

4. Setting the correct flow rate

The flow is set by rotating the dial on the low flow regulator until the correct flow is displayed in the window. You will feel and hear a click as the dial is rotated between the different settings.

Oxygen outlet:

Connect your nasal cannula to the outlet on the low flow regulator, place comfortably on your face, and you are now ready to use the equipment.

Flow rate indicator:

There is an additional flow rate indicator window on the circular top of the regulator.

Ensure that the numbers showing the flow rate are completely displayed in the window.

Flow rate indicator

5. Checking for Oxygen Flow

When the low flow regulator is in use, it may be difficult to hear or feel whether oxygen is being delivered due to the low flow rates.

A simple way to check is to connect a small length of oxygen tubing from your cylinder to the outlet of the low flow regulator, place the other end of the tube in a glass of cool clean water and check that bubbles are being produced.

Never submerge the nasal cannula in water.

6. Removing the low flow regulator

Close the cylinder via the open/close dial on the side. Turn the flow rate on the regulator to zero.

Gently rotate or push the Schrader outlet to release the regulator so that it can be removed.

7. When not in use

Be sure to store the equipment as advised by your Dolby Vivisol technician.

It is vitally important that these items are kept clean, dry and free from the risk of contamination.

Please ensure you store the regulator somewhere safe as they are easy to lose but hard to replace.

Low flow regulator

10 litre static cylinder with low flow regulator duration

Flow rate Litres per min	Max duration* Days, hours and minutes	Flow rate Litres per min	Max duration* Days, hours and minutes
0.01	166 days, 16 hrs, 0 mins	0.6	2 days, 18 hrs, 39 mins
0.02	83 days, 8 hrs, 0 mins	0.7	2 days, 9 hrs, 8 mins
0.03	55 days, 13 hrs, 19 mins	0.8	2 days, 2 hrs, 0 mins
0.04	41 days, 16 hrs, 0 mins	1	1 day, 16 hrs, 0 mins
0.05	33 days, 8 hrs, 0 mins	1.5	1 day, 2 hrs, 39 mins
0.06	27 days, 18 hrs, 39 mins	2	20 hrs, 0 mins
0.07	23 days, 19 hrs, 25 mins	3	13 hrs, 19 mins
0.08	20 days, 20 hrs, 0 mins	4	10 hrs, 0 mins
0.09	18 days, 12 hrs, 26 mins	5	8 hrs, 0 mins
0.1	16 days, 16 hrs, 0 mins	6	6 hrs, 39 mins
0.2	8 days, 8 hrs, 0 mins	8	5 hrs, 0 mins
0.3	5 days, 13 hrs, 19 mins	10	4 hrs, 0 mins
0.4	4 days, 4 hrs, 0 mins	12	3 hrs, 19 mins
0.5	3 days, 8 hrs, 0 mins	15	2 hrs, 39 mins

* Please note these are theoretical durations that will vary depending on temperature and filling capacity

2 litre portable cylinder with low flow regulator duration

Flow rate Litres per min	Max duration* Days, hours and minutes	Flow rate Litres per min	Max duration* Days, hours and minutes
0.01	33 days, 8 hrs, 0 mins	0.6	13 hrs, 19 mins
0.02	16 days, 16 hrs, 0 mins	0.7	11 hrs, 25 mins
0.03	11 days, 2 hrs, 39 mins	0.8	10 hrs, 0 mins
0.04	8 days, 8 hrs, 0 mins	1	8 hrs, 0 mins
0.05	6 days, 16 hrs, 0 mins	1.5	5 hrs, 19 mins
0.06	5 days, 13 hrs, 19 mins	2	4 hrs, 0 mins
0.07	4 days, 18 hrs, 16 mins	3	2 hrs, 39 mins
0.08	4 days, 4 hrs, 0 mins	4	2 hrs, 0 mins
0.09	3 days, 16 hrs, 52 mins	5	1 hr, 36 mins
0.1	3 days, 8 hrs, 0 mins	6	1 hr, 19 mins
0.2	1 day, 16 hrs, 0 mins	8	1 hr, 8 mins
0.3	1 day, 2 hrs, 39 mins	10	52 mins
0.4	20 hrs, 0 mins	12	39 mins
0.5	16 hrs, 0 mins	15	31 mins

* Please note these are theoretical durations that will vary depending on temperature and filling capacity

Low flow regulator (cont)

1 litre portable cylinder with low flow regulator duration

Flow rate Litres per min	Max duration* Days, hours and minutes	Flow rate Litres per min	Max duration* Days, hours and minutes
0.01	21 days, 9 hrs, 19 mins	0.6	8 hrs, 33 mins
0.02	10 days, 16 hrs, 39 mins	0.7	7 hrs, 19 mins
0.03	7 days, 3 hrs, 6 mins	0.8	6 hrs, 24 mins
0.04	5 days, 8 hrs, 19 mins	1	5 hrs, 7 mins
0.05	4 days, 6 hrs, 39 mins	1.5	3 hrs, 25 mins
0.06	3 days, 13 hrs, 32 mins	2	2 hrs, 33 mins
0.07	3 days, 1 hr, 19 mins	3	1 hr, 42 mins
0.08	2 days, 16 hrs, 9 mins	4	1 hr, 16 mins
0.09	2 days, 9 hrs, 1 min	5	1 hr, 1 min
0.1	2 days, 3 hrs, 19 mins	6	51 mins
0.2	1 day, 1 hr, 39 mins	8	43 mins
0.3	17 hrs, 6 mins	10	34 mins
0.4	12 hrs, 49 mins	12	25 mins
0.5	10 hrs, 15 mins	15	20 mins

* Please note these are theoretical durations that will vary depending on temperature and filling capacity

Troubleshooting for your oxygen cylinders

Problem: No flow of oxygen

Note: Please first check for flow as in '**Flow rate indicator**' in the '**using your low flow regulator with oxygen cylinders'** section on **page 8**.

Possible cause	Solution
Cylinder open/close dial not turned on	Turn cylinder open/close dial to the fully open position
Low flow regulator not set correctly	Turn flow rate selector to your prescribed setting
No oxygen in cylinder	Check contents gauge, replace cylinder if necessary
Tubing/mask/cannula not connected properly	Check connections of mask/tubing/cannula
Blockage in supply tubing	Check supply tubing is not trapped, blocked or kinked

Problem: Hissing sound from the valve when the cylinder is not in use

Possible cause	Solution
Cylinder not turned off after use	Check the flow is set to zero and the cylinder open/close dial is closed
Cylinder is leaking	Move to well ventilated area and call us on **0800 833 531**

If the fault persists: Please call our Patient Contact Centre for further advice.

Use of medical oxygen cylinders in the home

1

Read the **patient guide** carefully before operating your medical oxygen cylinder and equipment.

Pay special attention to information where the hazard symbol is shown.

2

Materials burn much more vigorously in oxygen than in air.

Never smoke (or let someone else smoke near you) whilst using your oxygen equipment. This includes E-Cigarettes. In addition, do not charge E-Cigarettes in the vicinity of oxygen.

DO NOT use your oxygen cylinders near open fires or naked flames.

3

Only use your medical oxygen cylinder and equipment in a **well ventilated area**.

Keep internal doors open whilst your oxygen cylinder is in use.

4

Never place your oxygen cylinders near curtains or cover them with clothing.

Materials become **oxygen enriched** if any leak occurs with no ventilation.

Never use or carry the portable oxygen cylinder under any clothing.

5

Follow the advice Dolby Vivisol has given you regarding where to safely store and use your cylinders.

When stored, cylinders must either be secured upright or lying down to prevent them falling or rolling.

6

DO NOT use oils or grease with your oxygen cylinders or equipment.

Ensure that your hands are **clean** when using the cylinder.

Only use water-based creams and moisturisers when using your oxygen.

7

Ensure that the length of the tubing does not exceed 15 metres.

8

Ensure the flowmeter is set to zero before the valve is opened.

Open the cylinder valve **slowly**.

Open the valve fully by turning the dial towards the '+' sign.

Use of medical oxygen cylinders in the home (cont)

9

Set the regulator to the flowrate **prescribed by your healthcare professional.**

Check for any leaks on the tubing connection after opening the cylinder valve.

10

Check for flow by placing the end of the **tubing from the cylinder** (not the cannula) in a glass of water and watch for bubbles.

If bubbles do not appear, check a flow has been selected and there are no leaks.

If a flow is still not evident, contact Dolby Vivisol.

11

Check how much oxygen is available for use by checking the gauge on the valve or the regulator.

12

Ensure the regulator is only connected as shown by your technician.

Never use excessive force.

13

Only use a clean damp cloth if it is necessary to clean your oxygen cylinder or any associated equipment.

Allow the cylinder to dry after wiping down.

14

Close the valve when the cylinder is not in use.

Never use excessive force.

15

If your oxygen cylinder fails for any reason call Dolby Vivisol immediately.

Never try and repair any fault yourself.

Useful contacts

Dolby Vivisol
North Suite
Lomond Court
Castle Business Park
Stirling
FK9 4TU
Tel: 0800 833 531 (Freephone)
Email: oxyadminSCO@dolbyvivisol.com
www.dolbyvivisol.com

Home Oxygen Service
Health Facilities Scotland
Gyle Square
1 South Gyle Crescent
Edinburgh
EH12 9EB
Tel: 0131 275 6860
Email: nss.oxycon@nhs.net

NHS 24
www.nhs24.com

National Fire Service
www.fireservice.co.uk

British Lung Foundation
www.blf.org.uk

Cystic Fibrosis Trust
www.cysticfibrosis.org.uk

Chest, Heart and Stroke
www.chss.org.uk

Pulmonary Hypertension Association
www.phassociation.uk.com

Organisation for the undertaking of Cluster Headache OUCH (UK)
www.ouchuk.org

NHS Smoke Free
www.nhs.uk/smokefree

Customer satisfaction & complaints

As a fundamental element of our quality management process, we undertake customer satisfaction surveys on a yearly basis and we always welcome your constructive feedback.
However, if you are unhappy about the service you have received from us, please contact us: **0800 833 531** (Freephone).

Removal of equipment

If the oxygen equipment needs to be removed for any reason, please contact us on **0800 833 531** and we will make the arrangements, if appropriate.

Contact us

To contact us at our Patient Contact Centre, please call us on **0800 833 531** (Freephone).

Our normal working hours are **Monday to Friday 0900 - 1700.**

We have a 24 hour Freephone helpline to address any of your urgent enquiries.

This number is free to call from landlines, however there may be a charge if you are calling from a mobile phone.

This information in this guide was believed to be correct at the time of going to print.

How will your personal information will be used?

The oxygen therapy service will use your personal information to deliver the service to you as prescribed. Your personal information will be kept in an approved secure environment. All NHS staff and suppliers must keep your personal health information confidential, which means it is only shared with other professionals involved in your care.

We may share your personal information with the electricity distributors and the fire service following your explicit informed consent.

If you do not consent to this then your information will not be shared with these bodies. You may withdraw or amend your consent at any time by contacting us on the above number.

You have a right to access your health information and to request changes if the information is inaccurate. You also have the right to request for us not to use the information for the purposes outlined above, or some restrictions on that use. The service is obliged to consider such requests and advise you of the outcome.

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