



LEAFLET 16

THE SAFE USE OF ELECTRONIC CIGARETTES AND OTHER ELECTRONIC DEVICES USED NEAR MEDICAL OXYGEN

This leaflet highlights key safety information for patients who are users of medical oxygen and who also use a variety of electronic devices, including electronic cigarettes. It is also applicable to those people using electronic devices and / or cigarettes who may be in the immediate area where medical oxygen is being used and / or transported.

Oxygen

Thousands of patients receive oxygen therapy, often due to respiratory diseases, in order to maintain their quality of life, to allow them to have mobility and to be able to spend time with their family and friends at home. As a consequence, the presence of medical oxygen is relatively common. Oxygen is safe provided it is handled and used correctly. Its significant hazard is that it is an oxidiser. Oxygen is necessary for anything to burn. If the amount of oxygen in the air is increased objects burn more readily and more fiercely. In confined spaces, such as a poorly ventilated room or a vehicle, if your clothing, the seats or the carpets become enriched with oxygen, they will catch fire more easily. It only needs an ignition source in an area enriched with oxygen, such as someone smoking, excessive radiated heat or an electrical fault, to start a fire.

When a patient is prescribed medical oxygen, their needs are assessed by the Homecare Service Provider to ensure that they understand how to correctly and safely operate their oxygen therapy equipment. This is achieved by providing them with clear operating instructions and giving them training on the safe handling and use of oxygen. This includes a warning not to smoke or to not use their oxygen near other ignition sources.

Electronic devices

In a domestic setting, the Homecare Service Provider will supply equipment which may include electronic devices, these are specifically designed and manufactured for use with oxygen. These devices are safe when used in accordance with the manufacturer's instructions.

Often, there are other electrical and electronic devices in use, some powered by batteries, which can help enhance patients lives, but their use should be carefully controlled and the risks of causing an ignition fully understood if they are to be used in close proximity to oxygen.

It is known that there is an increased fire risk when recharging the batteries fitted to some of these products, such as mobile phones, tablets, laptops, games consoles, etc. Patients are advised not to recharge the batteries for electronic devices in rooms where oxygen is being used or stored as the risk of a fire would be exacerbated in the presence of oxygen being used for respiratory therapy.

If in any doubt consult your Homecare Service Provider.

Electronic cigarettes

Electronic cigarettes are electrically powered devices which simulate traditional tobacco smoking by producing a vapour. They incorporate a battery and a heating element / atomizer that uses heat (up to 250 °C) to vaporise a liquid-based solution into an aerosol mist. Typically the battery is rechargeable, via an external charger, from either a USB power port or through domestic electrical sockets. NOTE: To 'vape' or 'vaping' is the act of inhaling vapour through an electronic cigarette.

Electronic cigarettes and medical oxygen

Electronic cigarettes are used as an alternative to traditional cigarettes, however whilst the effects of inhaling the vapour may be different, they are still a potential ignition source and, in the context of oxygen-rich environments, have the same fire risk as traditional cigarettes. This ignition source can be either from the heating element and / or the battery within the cigarette, or the charging device (patients often have charging devices close to the place where they 'vape'). In addition, the liquid based solution may burn fiercely in the presence of oxygen and contribute towards the fire hazard.

Do not use electronic cigarettes or smoke tobacco cigarettes where medical oxygen is in use.

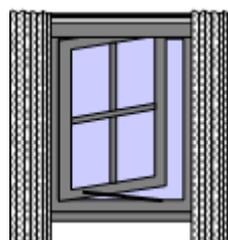
Those undergoing oxygen treatment who wish to use an electronic cigarette should ensure that they do not do so in a high oxygen environment, as the otherwise low and safe heat of an electronic cigarette does present a serious risk when oxygen levels are increased. If it is not possible to remove the patient from an environment with a high oxygen content consider alternatives, for example, non-heated nicotine sources such as nicotine replacement therapy (NRT).

Safety first



No smoking

Do not smoke, or use electronic cigarettes, when using oxygen. This also includes anyone in the vicinity.



Ventilation

Make sure you have good ventilation to avoid creating an oxygen enriched environment. Often the easiest way to improve ventilation is to open a window.



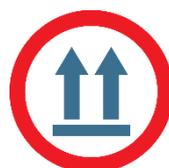
Turn it off when not in use

Keep the valves closed on any cylinder not in use.



No charging

Do not charge electronic devices in any space where oxygen is being used.



Liquid oxygen

Take extra care with liquid oxygen containers. They continually vent cold oxygen gas (even when not in use) and could leak liquid if not kept upright. Secure the container in the upright position and ensure there is good ventilation.

References

EIGA Safety Information 32, *Use of electronic cigarettes with homecare oxygen*.

Department of Health, Estate & Facilities Alert, EFA/2014/002, *E-cigarettes, batteries and chargers*.

For further information

British Compressed Gases Association (BCGA)

www.bcgaco.uk

European Industrial Gases Association (EIGA)

www.eiga.eu

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