ENVIRONMENTAL IMPACT OF POOR RESPIRATORY CARE

Your respiratory care, and your inhalers, can have a big impact on your carbon footprint. Your carbon footprint is a measure of the impact your activities have on the environment.

The most commonly used inhaler in the UK is the Ventolin Evohaler. This is used for short term relief from asthma symptoms such as wheeze, breathlessness or a cough.

The Ventolin Evohaler has a carbon footprint of 28kg per inhaler. This means one inhaler produces the same amount of carbon emissions as driving 175miles (or from Liverpool to Newcastle upon Tyne) in a small car. Dry powder inhalers are an alternative, and typically have a carbon footprint of less than 1kg.

This is because Pressurised metered dose inhalers (pMDI), like Ventolin Evohaler, and Breath Actuated Inhalers (BAIs) contain propellants that are powerful greenhouse gases and which contribute to global heating.

Dry powder inhalers (DPIs like the Salbutamol Easyhaler and Beclomethasone Easyhaler) and Soft mist inhalers (SMI) (like the Respimat device) do not use these propellants and so have substantially lower impact on climate change.

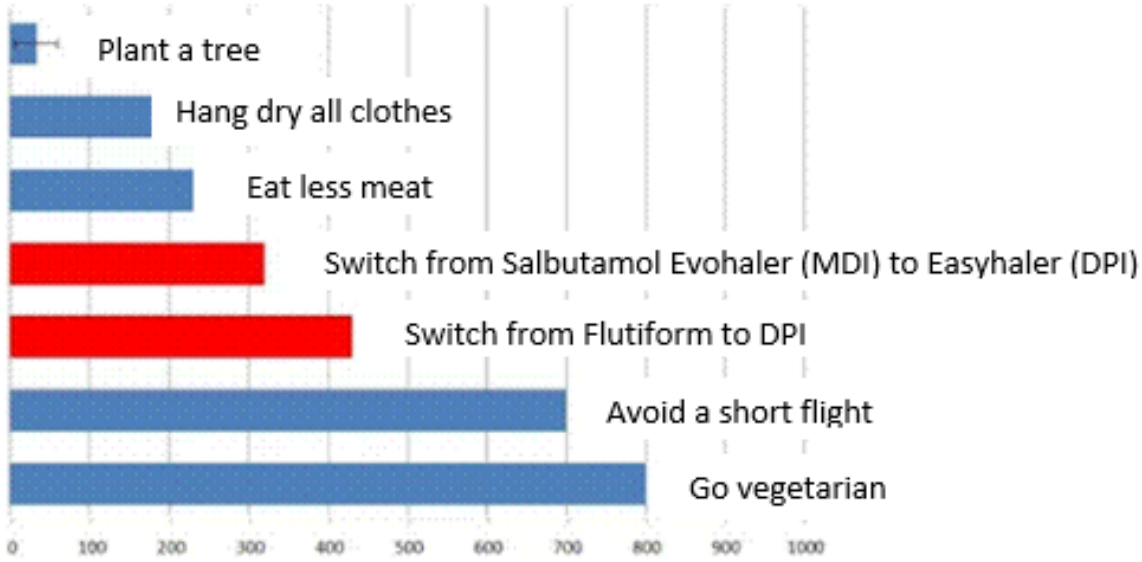
ASTHMA CONTROL

The best way of reducing the environmental impact of inhalers is for your asthma to be well controlled. If your asthma is well controlled, you should rarely need to use your reliever inhaler and you will only need one reliever a year. We also know that if people are using more than three reliever inhalers a year, they are more likely to have serious flare ups of their asthma that may require steroid tablets or admission to hospital to treat.

If you are using your inhaler more than three times a week due to asthma symptoms, or needing more than three reliever inhalers a year, then you should book an appointment with the practice nurse to review your asthma treatment.

SWITCHING YOUR INHALER

Changing the type of inhaler you use could reduce your carbon footprint a lot. Here are some examples of how switching can compare to other actions:



Is a dry powder inhaler suitable for me?

For the majority of patients dry powder inhalers are a very effective alternative to metered dose inhalers.

They rely on a hard, fast, deep breath to disperse tiny particles of the medicine through to your lungs so not everyone can use them effectively. Most people, once shown the correct technique, can master this type of inhaler. Some people - young children, some elderly patients and those who can't take strong breaths in - may struggle. If you do need to continue with a metered dose inhaler, make sure you use a spacer as this helps to get the medicine to your lungs more efficiently which means you often need to use fewer puffs.

The practice nurses or GPs will be able to advise you further on whether you can switch inhalers safely and will be able to show you how to use them. Asthma UK has produced some videos which can help you to check on technique for your inhaler: https://www.asthma.org.uk/advice/inhaler-videos/

This chart summarises some of the differences between MDIs and DPIs:

Type of inhaler	Metered Dose Inhaler	Dry Powder Inhaler
What is the climate change impact?	Very large – typically 20kg of CO2 per inhaler, but it can be more than twice this amount. 20kg of CO2 is similar to driving about 125 miles in a Ford fiesta	Small – typically equivalent to 1kg of CO2 per inhaler
Do I need to breath in and press button at the same time?	Usually yes, although some "breath-activated" devices don't require you to press a button	No, the dose can be prepared before breathing in through the inhaler
What sort of breath in should I do?	Slow and deep breath	Strong deep breath. Some patients may not be able to breathe in hard enough to use these inhalers
Can it be used with a spacer?	Yes nearly all can be used with a spacer	No
Does it have a dose counter?	Many do, but most reliever inhalers and steroid inhalers don't, so you need to keep track of how many doses you've used	All dry powder inhalers either come with a dose counter, or sometimes you put a capsule in each time you use it

WASTE AND RECYCLING

Used inhalers should not be placed in general waste.

- Approximately 73 million inhalers are used in the UK every year.
- Landfill disposal of inhalers is harmful to the environment both in material waste and in greenhouse gas emissions, as the residual gas from canisters is released into the atmosphere.
- If every inhaler-user in the UK returned all their inhalers for one year, this could save 512,330 tonnes of CO_2 – the same as VW Golf car being driven around the world 88,606 times.
- Some pharmacies recycle inhalers. Click here to see if there is a pharmacy near you that does this: https://tevascheme.tevauk.com/pharmacy/support/inhaler-recycling
- **Even if inhalers cannot be recycled at your pharmacy, it is better for the environment for them to be returned to the pharmacy to be sent for incineration rather than put into the general waste.**

For more information see: https://greeninhaler.org/ (the images in this leaflet have been edited from that source), https://www.nice.org.uk/guidance/ng80/resources/inhalers-for-asthma-patient-decision-aid-pdf-6727144573 and https://www.blf.org.uk/your-stories/which-inhalers-are-kindest-to-the-environment

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