# Why is it important to use a valved holding chamber or spacer with your inhaler?



#### Inhaler only

Medicine can end up in the mouth, throat and stomach which may cause side effects.



#### Inhaler with spacer

More medicine is delivered to the lungs where it can be most effective

#### Helps reduce the risk of inhaler side effects 5, 6, 7, 8, 9, 10, 11

Aerosol medicine comes out of the inhaler very quickly so it is often very difficult to use an inhaler correctly because the canister needs to be pressed at the same time as you breathe in <sup>12, 13</sup>

#### **Enhances your treatment**

Medicine often ends up in your mouth, throat and stomach when using an inhaler on its own. A valved holding chamber may improve drug delivery to the lungs where it is needed by as much as up to 4 times.<sup>14</sup>

### Find out more www.philips.com/asthma









Respironics Respiratory Drug Delivery (UK) Ltd. Chichester Business Park, City Fields Way, Tangmere Chichester, West Sussex, UK PO20 2FT

© 2020 Koninklijke Philips N.V. All rights reserved. Specifications are subject to change without notice. Respironics Inc. and Respironics Respiratory Drug Delivery (UK) Ltd are Philips companies.

www.philips.com/asthma

NP 09/14/20 MCI 4109575, PN 1145424, PN3757640

OptiChamber Diamond Consumer Brochure. Global English



## **Improve** medication delivery enhance delivery of commonly prescribed





medication

**Designed to enhance** 

delivery of your pMDI

The anti-static chamber suspends medication longer,2 giving you more time to inhale



**Shortens treatment times** The effective seal of the LiteTouch mask means that the chamber can be cleared in less than 3 pediatric breaths.3



One size works for all

The stepped mouthpiece makes the OptiChamber suitable for use by children\* and adults without any configuration.

\* Under adult supervision



Device feedback

A flow alert whistle let you know if you are breathing in too auickly.







#### References

- 1. Compared to MDI used alone and leading conventional VHC.
- 2. Compared to leading commercially available non anti-static VHC's.
- 3. Minh KT. Von Hollen D. von Konigslow AJ, Nikander K, Janssen HM. An Instrumented Valved Holding Chamber with Facemask to Measure Application Focus and Flow in Young Asthmatic Children. Aerosol Med Pulm Drug Deliv. 2014;27: S55-S62
- 4. Adapted from: Hirst, PH., et al. Deposition and pharmacokinetics of an HFA formulation of Triamcinolone Acetonide delivered by pressurized metered dose inhaler. Journal of Aerosol Medicine. 2001: Volume 14 (2):155-166.
- 5. Salzman G., Pyszynski D. Oropharyngeal candidiasis in patients treated with beclomethasone dipropionate delivered by metered-dose inhaler along and with Aerochamber Journal of Allergy and Clinical Immunology, 1988; Volume 81, Issue 2: 424-428.
- 6. Derendorf H., Nave R., Drollmann A., Cerasoli F., Wurst W. Relevance of pharmacokinetics and pharmacodynamics of inhaled corticosteroids to asthma. European Respiratory Journal, 2006: 28:1042-1050.
- 7. Roller M., Zhang G., Troedson R.G., Leach C.L., Le Souëf P.N., Devadason S.G. Spacer inhaler technique and deposition of extra fine aerosol in asthmatic children European Respiratory Journal, 2007; 29:299-306.

- 8. Von Hollen D., Slater L., Hatley RHM. Impact of flow rate on NGI throat deposition from 3 HFA Inhaler formulations with antistatic valved holding chambers. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2013; 26(2); A45-A46.
- 9. Oliveira R.F., et al. VHC performance evaluation at constant flow: 30L/ min. Proceedings of the ASME2015 International Mechanical **Engineering Congress and** Exposition, 2015 Houston Texas.
- 10. Leach C., Colice G. A Pilot Study to Assess Lung Deposition of HFA-Beclomethasone and CFC-Beclomethasone from a pressurized Metered Dose Inhaler with and without add-on spacers and using varying breath hold times. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2010: 23(6):355-361.
- 11. Dickens G., et al. Pharmacokinetics of flunisolide administered via metered dose inhaler with and without a spacer device and following oral administration. Annals of Allergy, Asthma & Immunology, 2000; Volume 84, 528-532.
- 12. Saunders K.B. Misuse of inhaled bronchodilator agents. Br Med J. 1965: 1:1037-1038.
- 13. Oprehek J., et al. Patient error in use of bronchodilator metered aerosols. Br Med J. 1976; 1:76.
- 14. Gardenhire D., Arzu A., Dean H., Myers T. A guide to aerosol delivery devices for respiratory therapists 3rd edition, American Association for Respiratory Care, 2013.