FeNO by NIOX®

A safe and easy way to instantly

transform your asthma care



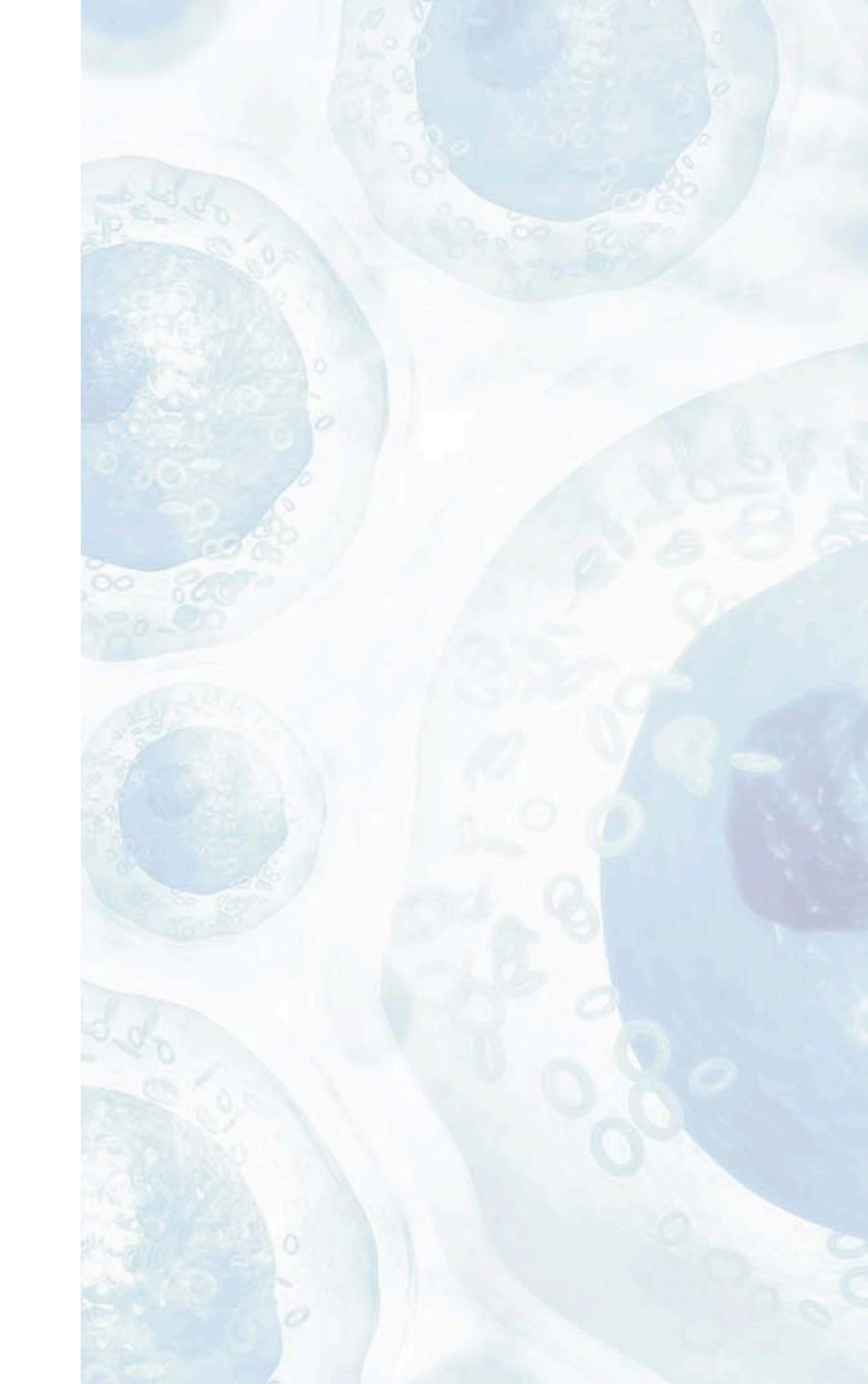




Airway inflammation is key in asthma¹

Asthma is usually characterised by airway inflammation, with symptoms such as wheeze, cough, breathlessness and chest tightness.¹

Unfortunately, current asthma assessments, such as spirometry, do not directly reflect the extent of airway inflammation.²



FeNO stands for fractional exhaled nitric oxide and correlates directly with the level of inflammation in patients' lungs.³ FeNO is the only biomarker of airway inflammation where results are available immediately at the point of care.^{2,4}

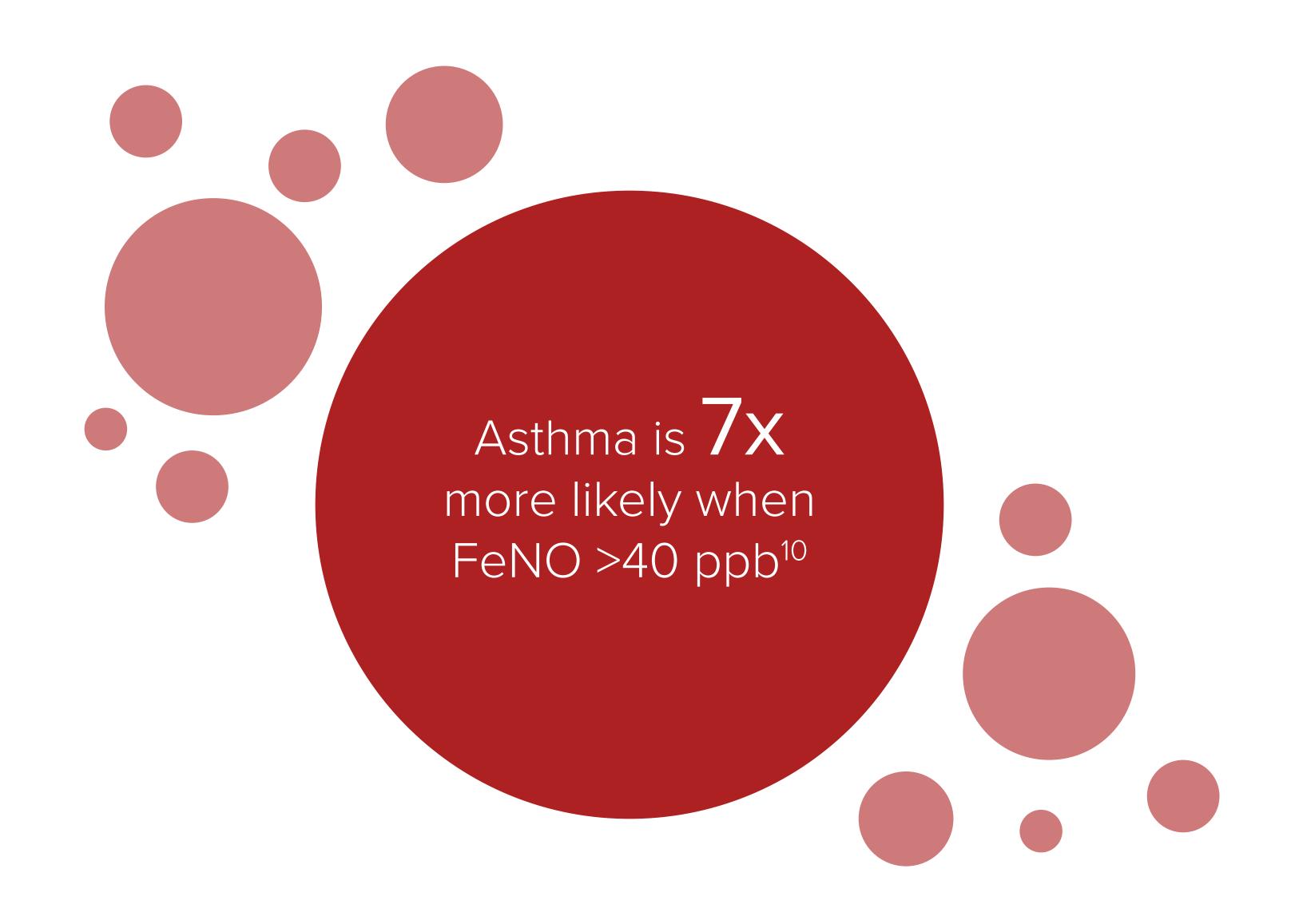
Recent research has shown that up to **93%**^{5,6} of severe asthma patients have Type 2 inflammation, which is particularly associated with exacerbations. When Type 2 inflammation is present, interleukins 4 and 13 upregulate the production of nitric oxide in the airways, increasing FeNO levels.⁷

the most convenient biomarker

FeNO testing is safe, non-invasive and easy to perform, even when lung function is severely reduced, in patients from the age of four.^{8,9}

Simply inhale and exhale to visualise airway inflammation in a single number in less than two minutes at the point-of-care.8

SIMPLE IMMEDIATE NON-INVASIVE



All asthma patients have underlying airway inflammation regardless of symptoms.^{11,12} Lung function tests are not enough to make a confident diagnosis.^{2,13}

Up to adults and children are incorrectly diagnosed with asthma and almost 70% of asthmatics remain undiagnosed.¹⁴⁻¹⁶

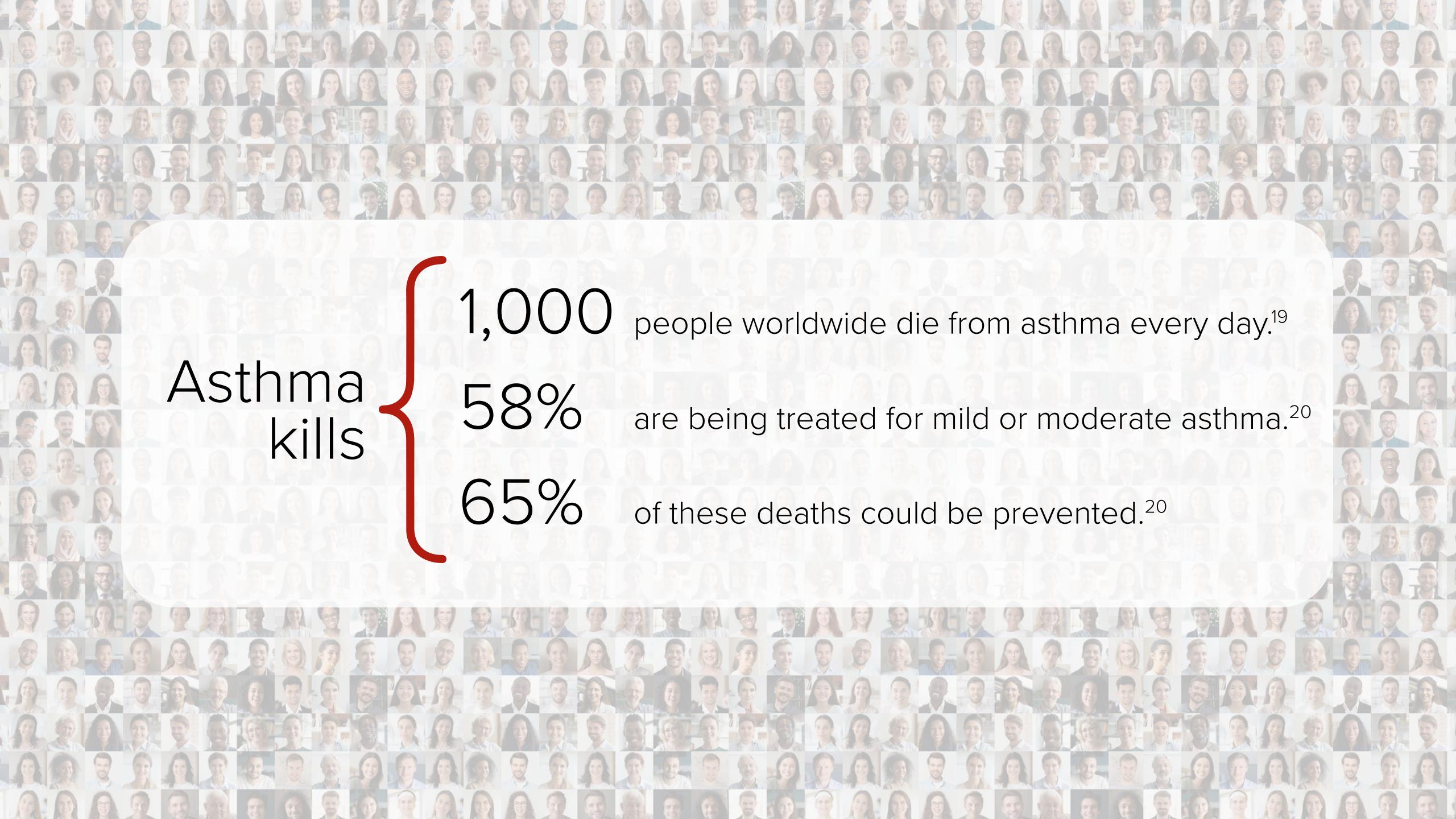
Incorporating FeNO testing into your clinical routine could help improve diagnostic accuracy, optimise patient care and ensure more effective treatment.^{3,17}





Sophie Toor
Clinical Director, Respiratory Matters

"It just gives you that extra bit of the puzzle, which makes you more confident that the diagnosis is correct." 18



Reducing exacerbations is a top priority

High levels of airway inflammation are an important risk factor for exacerbations.¹

Regular monitoring of inflammation is crucial to keep a close eye on the patient's future risk.⁷

High FeNO values are associated with more exacerbations and increased mortality.^{3,21}







Optimising treatment

FeNO testing can safely guide the step-wise approach to confidently titrate ICS dosage.^{2,24}

Monitoring adherence

FeNO testing can identify patients who are not taking their ICS medication as prescribed.^{25,26}

"What's my number today, doctor?" 27

Elevated levels of FeNO enhance your ability to diagnose asthma and are very predictive of response to inhaled corticosteroids.

If someone comes in with symptoms and they've got a high FeNO level, you can be fairly sure they have asthma. It's also really important for patients, giving them a high degree of confidence.



Dr Richard Russell

Consultant at Southern Health NHS Foundation Trust and Clinical Director of the West Hampshire Integrated Respiratory Service



Listen to Dr Richard Russell (UK), as he explains the value of FeNO for patient education.



Good for patients. Good for budgets.

FeNO testing has been proven to considerably reduce costs and improve quality of life when used in asthma patients.^{25,28}

Thousands of healthcare professionals around the world are utilising the economic and clinical benefits of FeNO by NIOX®.

Funding available for primary care

The Quality Outcome Framework (QOF) programme provides funding for asthma patients registered with a record of spirometry and one other objective test such as FeNO.

Scan the QR code to calculate the funds your practice could access by including FeNO testing in your asthma management algorithm.



FeNO testing with NIOX® is safe and easy8



The gold standard FeNO device

With millions of tests performed worldwide, NIOX® is trusted by thousands of healthcare professionals as the FeNO device of choice and gold standard for clinical use and global research.^{30,31}



ACCURATE RELIABLE STRAIGHTFORWARD

NIOX VERO® has been proven to be accurate and reliable.8,29

Inhale. Exhale.

The unique NIOX® breathing handle is designed with accuracy in mind.

Inhaling through the handle first is key.
As patients inhale, ambient NO and excess humidity are removed from the breath, ensuring the exhalation reflects their true FeNO level.



ACCURATE. RELIABLE. STRAIGHTFORWARD.

One test, one result

NIOX® protects your patients from failing a test.

Flow Rate Control™ guides patients to easily perform a steady exhalation throughout the test, leading to an accurate result each time, every time.



ACCURATE. RELIABLE. STRAIGHTFORWARD.

Never-ending performance

Our sensors just work, from the first test to the last test. NIOX® products are accurate throughout their lifetime and never need to be returned for calibration or servicing.

Whenever you need a new sensor, replace instantly and simply resume testing.

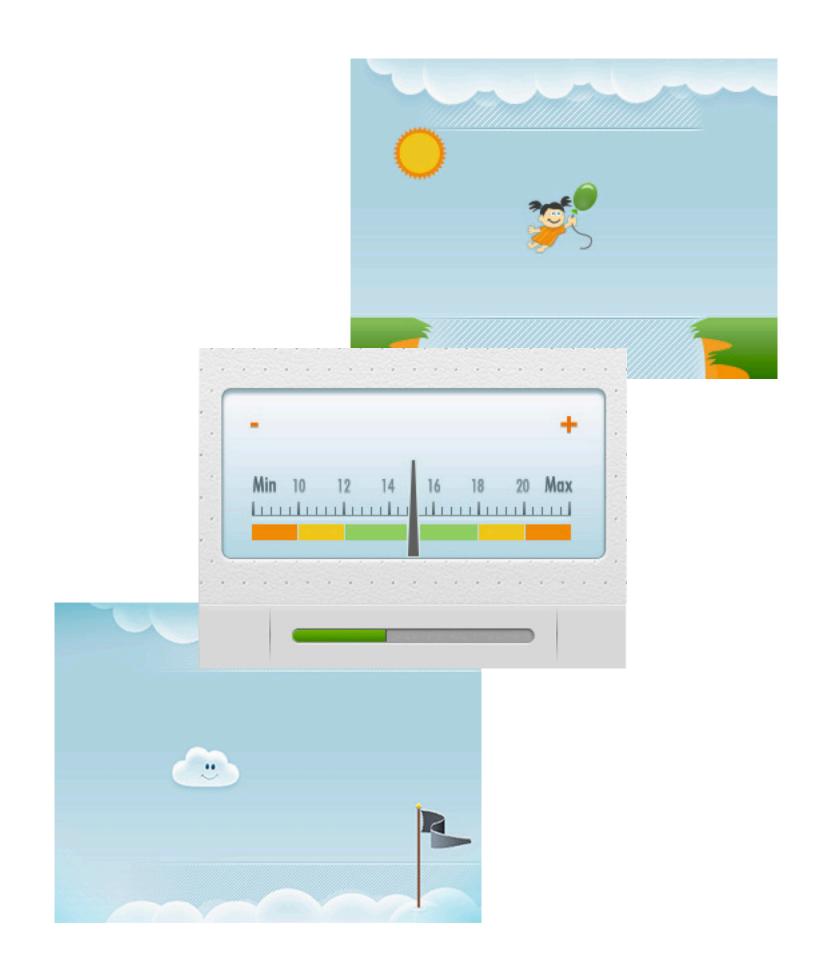


Everything you need

With two exhalation modes (six-second and 10-second), everyone can perform FeNO testing, from children aged four to patients with severely reduced lung function.^{8,9,32}

To maximise accessibility, three engaging animations with sound guide your patients to a successful test.

In approximately one minute, NIOX VERO® analyses the breath sample and displays the FeNO result as a single number.



ACCURATE. RELIABLE. STRAIGHTFORWARD.



References

1. Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention, 2023. Available at; https://ginasthma.org/2023-gina-main-report/ 2. Hanania NA et al. Measurement of fractional exhaled nitric oxide in real-world clinical practice alters asthma treatment decisions. Ann Allergy Asthma Immunol. 2018;120(4):414-418. 3. Busse WW et al. Baseline FeNO as a prognostic biomarker for subsequent severe asthma exacerbations in patients with uncontrolled, moderate-to-severe asthma receiving placebo in the LIBERTY ASTHMA QUEST study: a post-hoc analysis. Lancet Respir Med. 2021;9(10):1165-1173. 4. Asthma & lung UK. Spirometry and bronchodilator reversibility test. 2023. Available at; https://www.asthmaandlung.org.uk/symptoms-tests-treatments/tests/spirometry. Accessed; June 2023. 5. Heaney LG et al. Eosinophilic and noneosinophilic asthma: an expert consensus framework to characterize phenotypes in a global real-life severe asthma cohort. Chest. 2021;160(3):814-830. 6. Maspero J et al. Type 2 inflammation in asthma and other airway diseases. ERJ Open Research. 2022;8(3). 7. Menzies-Gow A et al. Clinical utility of fractional exhaled nitric oxide in severe asthma management. Eur Respir J. 2020;55(3):1901633. 8. Alving K et al. Validation of a new portable exhaled nitric oxide analyzer, NIOX VERO®: randomized studies in asthma. Pulm Ther. 2017;3:207-218. 9. Donohue JF et al. Characterization of airway inflammation in patients with COPD using fractional exhaled nitric oxide levels: a pilot study. International journal of chronic obstructive pulmonary disease. 2014:745-51. 10. Wang Z et al. Agency for Healthcare Research and Quality (AHRQ). The clinical utility of fractional exhaled nitric oxide (FeNO) in asthma management. Comparative Effectiveness Reviews, 197. 2017. 11. National Health Service (NHS). Asthma. Available at; https://www.nhs.uk/conditions/asthma/. Accessed; July 2023. 12. American College of Allergy, Asthma & Immunology (ACAAI). Asthma. 2023. Available at; https://acaai.org/asthma/. Accessed; July 2023. 13. Smith AD et al. Diagnosing asthma: comparisons between exhaled nitric oxide measurements and conventional tests. Am J Respir Crit Care Med. 2004;169(4):473-8. 14. Aaron SD et al. Reevaluation of diagnosis in adults with physician-diagnosis. nosed asthma. JAMA. 2017;317(3):269-279. 15. Kavanagh J et al. Over- and under-diagnosis in asthma. Breathe (Sheff). 2019;15(1):e20-e27. 16. Nolte H et al. Unawareness and undertreatment of asthma and allergic rhinitis in a general population. Respiratory medicine. 2006 Feb 1;100(2):354-62. allergic rhinitis in a general population 17. Price DB et al. Fractional exhaled nitric oxide as a predictor of response to inhaled corticosteroids in patients with non-specific respiratory symptoms and insignificant bronchodilator reversibility: a randomised controlled trial. Lancet Respir Med. 2017;6(1):29-39. 18. Sophie Toor. How is FeNO best used to support a diagnosis of Asthma? 2019. Available at; https:// youtu.be/YrWu1CaH9oU. 19. Global Asthma Network. The Global Asthma Report. 2018. 20. Royal College of Physicians (RCP). Why asthma still kills: the National Review of Asthma Deaths (NRAD). 2014. 21. Ikwu et al. Fractional Exhaled Nitric Oxide and Mortality in Asthma And/Or Chronic Obstructive Pulmonary Disease. Or Chronic Obstructive Pulmonary Disease. 22. Petsky HL et al. Exhaled nitric oxide levels to guide treatment for adults with asthma. Cochrane Database Syst Rev. 2016;9(9):CD011440. 23. Petsky HL et al. Tailoring asthma treatment on eosinophilic markers (exhaled nitric oxide or sputum eosinophils): a systematic review and meta-analysis. Thorax. 2018;73(12):1110-9. 24. Porsbjerg C et al. Asthma. The Lancet. 2023. 25. Barry LE et al. Cost-Effectiveness of Fractional Exhaled Nitric Oxide Suppression Testing as an Adherence Screening Tool Among Patients With Difficult-to-Control Asthma. The Journal of Allergy and Clinical Immunology: In Practice. 2023. 26. Heaney LG et al. Medical Research Council UK Refractory Asthma Stratification Programme (RASP-UK). Remotely monitored therapy and nitric oxide suppression identifies nonadherence in severe asthma. Am J Respir Crit Care Med. 2019;199(4):454-464. 27. Dr Richard Russell. A conversation with Dr Richard Russell, around the benefits of FeNO testing. 2021. Available at; https://youtu.be/0JMhqKFEOLA. 28. Sabatelli L et al. Cost-effectiveness and budget impact of routine use of fractional exhaled nitric oxide monitoring for the management of adult asthma patients in Spain. J Investig Allergol Clin Immunol. 2017;27(2):89-97. 29. Gao J et al. Association between fractional exhaled nitric oxide, sputum induction and peripheral blood eosinophil in uncontrolled asthma. Allergy, Asthma & Clinical Immunology. 2018;1 30. NIOX® Data on File; MKT-DOF-007. 2023. 31. NIOX® Data on File; MKT-DOF-007. 31. NIOX® Data on Fi DOF-006. 2023. 32. Circassia Ltd. Product Labelling Summary NIOX VERO®. 2020.

Important safety information

NIOX VERO® is a portable system for the non-invasive quantitative simple and safe measurement of Nitric Oxide (NO) in human breath (FeNO) and Nasal Nitric Oxide (nNO) in the aspirated air from the nasal cavity. For FeNO: Nitric Oxide is frequently increased in some inflammatory processes such as asthma and decreases in response to anti-inflammatory treatment. FeNO measurements should be used as part of a regular assessment and monitoring of patients with these conditions. NIOX VERO® FeNO is suitable for patients age 4 and above. As measurement requires patient cooperation, some children below the age of 7 may require additional coaching and encouragement. NIOX VERO® FeNO can be operated with 2 different exhalation times, 10 seconds and 6 seconds. The 10 second mode is the preferred mode. For children who are not able to perform the 10 second test, the 6 second is an alternative. The 6 second test should be used in caution with patients over the age of 10. It should not be used in adult patients. Incorrect use of the 6 second exhalation test may result in falsely low FeNO values, which can lead to incorrect clinical decisions. For nNO: nNO has been shown to decrease in patients with Primary Ciliary Dyskinesia (PCD) and measurement of nNO can assist in the identification of cases of PCD. Measurement of nNO is suitable for patients age 5 and above. Suspected cases of PCD following screening with nNO should be confirmed according to published recommendations for PCD diagnosis and management.

In case of an adverse event involving NIOX® products, please email product.safety@circassia.com.

NIOX VERO® and NIOX® are registered trademarks of Circassia AB. MKT-PRM-UK-0012. Copyright © 2023 NIOX Group plc. All rights reserved.

Learn more about NIOX®

The Love Medical team is here to help you!

Get a quote:



niox.com/lm/quote

Book a demo:



niox.com/lm/demo

Access support:



niox.com/lm/support