Measure breath nitric oxide for airway inflammation with the NObreath® FeNO Device

NObreath®
#knowyourFeNO
15
YEARS
Improving asthma management

Aids in the diagnosis and management of asthma, one breath at a time.

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MADE IN THE UK

CE 2797

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Contents

Fractional Exhaled Nitric Oxide (FeNO)

Fractional exhaled Nitric Oxide (FeNO) is a good marker for eosinophilic airway inflammation, and is considered to be a good indicator of corticosteroid response[1].

The production of nitric oxide is often found to be higher in inflammatory conditions such as asthma; therefore FeNO monitoring can be used for the detection and management of such conditions[2], but also to differentiate between COPD, ACOS and other interstitial lung diseases that are not assessed by other means, such as lung function[3].

Nitric oxide measurement is not intended as a stand-alone method for diagnosis and should be used in conjunction with other evaluation methods and tests[4].

FeNO measurement is a simple, rapid, highly reproducible, and non-invasive method of airway inflammation assessment, which until now, has been an expensive test to deliver in everyday practice[5].

Benefits of performing FeNO tests:

- Non-invasive, quick and easy to perform[5].
- Aids in asthma management, assisting with the correct prescription and making monitored adjustments.
- Shows patient adherence to treatment[6].
- Aids in identifying good and poor adherence to corticosteroid treatment[1] .
- Good indicator of corticosteroid response[1].
- Shown to be superior to the majority of conventional tests of lung function, such as peak flow recording and spirometry[5].
- Aids in differentiating between allergic (eosinophilic) and non-allergic asthma[7].

NObreath® features

An ergonomic design, fully-portable and incorporated with antimicrobial technology for optimum infection control.

*Subject to correct use, maintenance and service. Tested up to 29,000 tests.

Measuring FeNO with NObreath®

IT'S AS EASY AS:

Consumables

NObreath® Mouthpiece

The NObreath® uses a single-patient use mouthpiece, which contains an integrated infection control filter that removes and traps > 99% of airborne bacteria and > 98% of viruses[8].

Dimensions	Approx. 180 mm x 28 mm x 22 mm
Weight	Approx. 14 g
Material	Polypropylene
Shelf life	5 Years

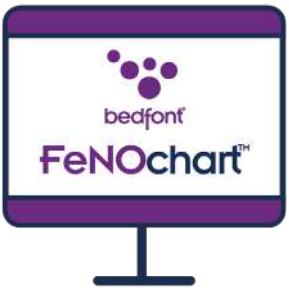
Technical specification

Concentration range		5 - 500 ppb
Display		Full colour touchscreen
Detection principle		Electrochemical sensor
Repeatability		± 5 ppb of measured value ≤ 50 ppb ± 10% of measured value > 50 ppb
Accuracy		± 5 ppb of measured value ≤ 50 ppb ± 10% of measured value > 50 ppb
Power	**NObreath® Device**	1 x main rechargeable Li-ion battery - Approx. 100 uses on fully charged battery 2 x Li-ion coin cell battery- Approx. 5 years Input: 5 V, 0.5 A
	NObreath® Dock	Mains powered Input: 5 V, 0.5 A Output: 5 V, 0.5 A
	Plug	Input: 100 - 240 V ~ 50/60 Hz., 0.2 A Output: 5.0 V, 1.0 A
T_{90} response time		≤ 10 seconds
Temperature	**Operating**	15 - 30°C
	Storage/transport	0 - 50°C
Humidity	**Operating**	20 - 80% RH (non-condensing)
	Storage/transport	5 - 95% RH (non-condensing)
Operating/storage/transport pressure		800 – 1080 mbar
Sensor operating life		5 years (Subject to servicing)
Sensor sensitivity		1 ppb
Sensor drift		< 5% per annum
Dimensions		Approx. 90 mm x 159 mm x 59 mm
Weight		Approx. 400 g
Materials	**NObreath® Device**	Case: polycarbonate/ABS blend with antimicrobial technology
	NObreath® Dock	
Breath test time		Adult: 12 seconds Child: 10 seconds Ambient: 30 seconds
Warm-up time		≤ 60 seconds
Maximum ambient operating level		350 ppb NO
CO cross interference		45 ppm ≤ 17.6 ppb

NOTE: Exhaled flow during FeNO measurement at 50 ml / sec ± 10% at 10 cm H_2O

FeNOchart™

FeNOchart™ is a free patient management software, available with every NObreath®. FeNOchart™ enables you to track patients' progress, view live readings, download results plus much more.



FREE FeNOchart™ patient management software.

NObreath® Forum

Purchasing a NObreath® entitles you to free membership of the NObreath® forum.
The NObreath® forum is an international, invitation-only platform where professionals using the Bedfont® NObreath® FeNO device can communicate, share experiences and knowledge, and ask for other professional opinions.
There is no cost or obligation to participate and membership is free when you purchase a NObreath®.

Using FeNO to assist diagnosis

Measuring airway inflammation with NObreath® can help monitor the effectiveness

Aid in diagnosis using the NObreath® FeNO device

FeNO (ppb) Levels	LOW < 25 ppb (< 20 ppb in children)	INTERMEDIATE 25 - 50 ppb (20 - 35 ppb in children)	HIGH > 50 ppb (> 35 ppb in children) or rise in FeNO of > 40% from previously stable levels
Symptomatic (chronic cough and/or wheeze and/or shortness of breath during past 6 wk)	**Eosinophilic airway inflammation unlikely Alternative diagnosis Unlikely to benefit from ICS	Be cautious Evaluate clinical context Monitor change in FeNO over time	**Eosinophilic airway inflammation present Likely to benefit from ICS

Alternative considerations (if Allergic Asthma has been dismissed)[2]

- **Non-Allergic Asthma**
- **Chronic cough**
- **Vocal Chord Disfunction**
- **GERD**

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Monitoring (in patients with diagnosed asthma) using the NObreath® FeNO device

FeNO (ppb) Levels	LOW < 25 ppb (< 20 ppb in children)	INTERMEDIATE 25 - 50 ppb (20 - 35 ppb in children)	HIGH > 50 ppb (> 35 ppb in children) or rise in FeNO of > 40% from previously stable levels
Symptomatic (chronic cough and/or wheeze and/or shortness of breath during past 6 wk)	Possible alternative diagnosis Unlikely to benefit from increase in ICS	Persistent allergen exposure Inadequate ICS dose Poor adherence Steroid resistance	Persistent allergen exposure Poor adherence or inhaler technique Inadequate ICS dose Risk of Exacerbation Steroid resistance ICS withdrawal or dose reduction may result in relapse Poor adherence or inhaler technique
Symptoms Absent	Adequate ICS dose Good adherence ICS taper	Adequate ICS dosing Good adherence Monitor Change in FeNO	

References

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* FeNO is not a definitive indication of asthma and should be used in conjunction with (but not limited to) spirometry, patient history, symptoms.
** Allergic = Eosinophilic / Non- Allergic = Non-Eosinophilic.

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Contact Bedfont® or one of our worldwide NObreath® distributors for a free demonstration.

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World leaders in breath analysis.

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