Interpreting FeNO Readings[2] using NObreath® FeNO Monitor

Using FeNO to assist diagnosis & management of Asthma

Measuring airway inflammation with NObreath® can help monitor the effectiveness of medication and can be used to predict the risk of Asthma attacks[1]*.

Aid in diagnosis using the NObreath® FeNO monitor

FeNO (ppb) Levels	LOW <25ppb (<20ppb in children)	INTERMEDIATE 25-50ppb (20-35ppb in children)	HIGH >50ppb (>35ppb 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)	**Allergic airway inflammation unlikely Unlikely to benefit from ICS	Be cautious Evaluate clinical context Monitor change in FeNO over time	Allergic airway inflammation present Likely to benefit from ICS
Possible Diagnosis	• Non-allergic asthma • Rhinosinusitis • Reactive airways dysfunction syndrome • Bronchiectasis • Cystic fibrosis, primary ciliary dyskinesia • Extended post-viral bronchial hyperresponsiveness syndrome • Vocal cord dysfunction • Non-pulmonary/airway causes: • Anxiety-hyperventilation • Gastroesophageal reflux disease • Cardiac disease/pulmonary hypertension/pulmonary embolism **Confounding factors:** • Smoking • Obesity	Evaluate clinical context	• Allergic asthma • Atopic asthma • Allergic bronchitis • COPD with mixed inflammatory phenotype

Improving asthma management, one breath at a time.

www.bedfont.com/nobreath

Interpreting FeNO Readings[2] using NObreath® FeNO Monitor

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

FeNO (ppb) Levels	LOW <25ppb (<20ppb in children)	INTERMEDIATE 25-50ppb (20-35ppb in children)	HIGH >50ppb (>35ppb 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 (see below) 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 for exacerbation Steroid resistance
Possible Diagnosis	• **Non-allergic asthma (probably steroid unresponsive) • Vocal cord dysfunction • Anxiety-hyperventilation • Bronchiectasis • Cardiac disease • Rhinosinusitis • Gastroesophageal reflux disease	Evaluate clinical context	• Allergic asthma • Atopic asthma • Allergic bronchitis • COPD with mixed inflammatory phenotype
Asymptomatic	Implies adequate dosing and good adherence to anti-inflammatory therapy ICS dose may possibly be reduced (repeat FeNO 4 week later to confirm this judgment; if it remains low then relapse is unlikely).	Adequate ICS dosing Good adherence Monitor change in FENO	ICS withdrawal or dose reduction may result in relapse Poor adherence or inhaler technique

References:

1. J. Saito et al, European Respiratory Journal; Domiciliary diurnal variation of fractional exhaled nitric oxide for asthma control. August 15 2013, v.43, iss.4, pp 474-484.
2. R Dweik et al, Respiratory and Critical Care Medicine; An Official ATS Clinical Practice Guideline: Interpretation of Exhaled Nitric Oxide Levels (FENO) for Clinical Applications. September 1 2011, v.184, iss.5, pp 602-615.

*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

Bedfont Scientific Ltd
Station Road, Harrietsham, Maidstone, Kent,
ME17 1JA, England
Tel: +44 (0)1622 851122, Fax: +44 (0)1622 854860
Email: ask@bedfont.com, Web: www.bedfont.com

Issue 1-August 2016. Part No: LAB725
Bedfont Scientific Limited reserve the right to change or update this literature without prior notice.
Registered in: England and Wales. Registered No:1289798

bsi. ISO 13485 Medical Devices Quality Management

bedfont®