

**Hoverbox 1a**

dizziness, light-headedness or peripheral tingling (paresthesia)

**Hoverbox 1b**

viral infections, exercise, pollens and pollution

**Hoverbox 3****Alternative diagnoses [not exclusive]:**

Rhinitis (without asthma)  
Upper airways infection  
COPD  
Vocal cord dysfunction  
Exercise induced laryngeal obstruction  
Dysfunctional breathing  
Symptoms due to overweight  
Gastro Oesophageal Reflux Disease  
Panic attacks  
Laryngitis  
Cardiac disease  
Cystic fibrosis  
Bronchiectasis

**Hoverbox 4****Interpretation biomarkers:**

FeNo positive when:  
> 50ppb in adults (FeNo >35ppb in children)

High levels specific IgE (>0,35 ku/l) may support the diagnosis of asthma

Higher levels of blood eosinophils increase the likelihood of asthma and ICS response.  
medium, high >350  $10^9/\text{mm}^3$ ;  
very high (>600  $10^9/\text{mm}^3$ )--> referral.

**Hoverbox 2a****Positive reversibility or variability test if:**

Increase in FEV1 of >12% and FVC>200 mL from baseline, 15minutes after  $\geq 400$  mcg albuterol or equivalent<sup>2</sup> (greater confidence if increase is  $\geq 15\%$  and  $\geq 400$  mL)

OR

Average daily diurnal PEF variability  $\geq 10\%^{**}$  (over 2 weeks)

OR

Increase in FEV1 by

$\geq 12\%$  and FVC $\geq 200$  mL (or PEF $\uparrow$  by  $\geq 20\%$ ) from baseline after 4 weeks of anti-inflammatory treatment, outside respiratory infections

OR

Fall in FEV1 of

$\geq 10\%$  from baseline during exercise test

OR

Fall in FEV1 from baseline of  $\geq 20\%$  with standard doses of methacholine or histamine  $\geq 15\%$  with mannitol

**Hoverbox 2b****PEF or microspirometry if available during the first visit:**

PEF measurement >15% from baseline after  $\geq 400$  mcg albuterol or equivalent

OR

Increase in FEV1 of  $\geq 12\%$  and FVC $\geq 200$  mL from baseline, 15 minutes after  $\geq 400$  mcg albuterol or equivalent<sup>2</sup> (greater confidence if increase is  $\geq 15\%$  and  $\geq 400$  mL)

**Hoverbox 5****Review management effect**

Review after 2-4 weeks

Structured review (for example SIMPLES<sup>3</sup>) of the patient with asthma until control is achieved

If control is not achieved having covered all items:  
review diagnosis

Be prepared to change diagnosis

Refer to therapy resistant asthma clinic

1. Gina 2020: [https://ginasthma.org/gina-reports/gina-2020-full-report\\_final\\_-\\_wms/](https://ginasthma.org/gina-reports/gina-2020-full-report_final_-_wms/)

2. Graham, B.L., Steenbruggen, I., Miller, M.R., Barjaktarevic, I.Z., Cooper, B.G., Hall, G.L., Hallstrand, T.S., Kaminsky, D.A., McCarthy, K., McCormack, M.C. and Oropez, C.E., 2019. Standardization of spirometry 2019 update. An official American thoracic Society and European respiratory Society technical statement. American journal of respiratory and critical care medicine, 200(8), pp.e70-e88.

3. Ryan D, Murphy A, Stallberg B, Baxter N, Heaney LG. 'SIMPLES': a structured primary care approach to adults with difficult asthma. Primary Care Respiratory Journal. 2013 Sep;22(3):365-73.