

Presentation with respiratory symptoms: wheeze, cough, breathlessness, chest tightness

Structured clinical assessment (from history and examination and review of previous medical records)

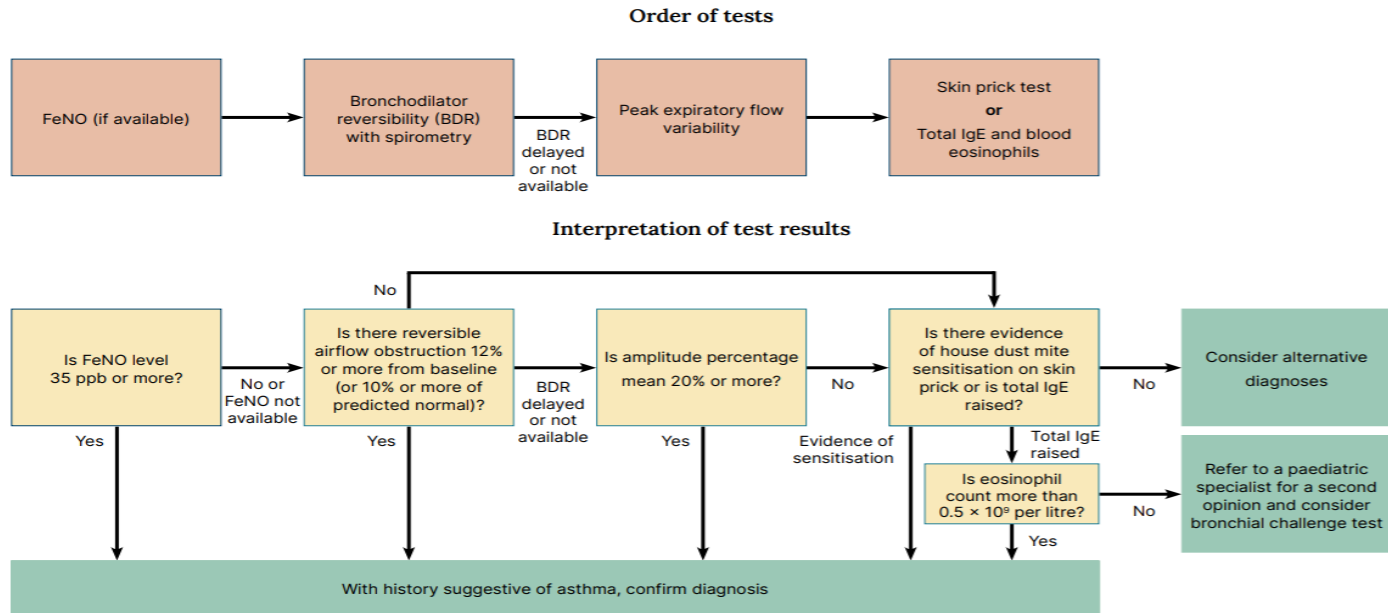
Look for:

- recurrent episodes of symptoms
- absence of symptoms of alternative diagnosis
- personal / family history of atopy
- symptom variability and triggers
- recorded observation of wheeze
- PEFR variability/ FEV₁ reversibility / raised FeNO

Consider co-morbidities

- Obesity
- Allergies
- Gastro-esophageal reflux
- Mental illness
- Environmental pollution

Algorithm B: Objective tests for diagnosing asthma in children aged 5 to 16 with a history suggesting asthma
BTS, NICE and SIGN guideline on asthma



ASTHMA	ALTERNATIVE DIAGNOSIS?
FeNO ≥ 35PPB	FeNO < 35PPB
Spirometry Positive Reversibility Testing FEV ₁ ≥12% or 10% or more from predicted normal	Normal Spirometry
Peak Flow Variability https://www.asthmaandlung.org.uk/healthcare-professionals/adult-asthma/diagnosis-testing/perf-calc	Negative Peak Flow Variability
<ul style="list-style-type: none"> • FeNO approx 1:5 people with a negative result will have asthma • FeNO approx 1:5 people with a positive result will not have asthma 	
<p>FeNO influenced by air pollution exposure, ingestion of nitrate/nitrite rich foods, chemical exposure, active infection, exercising, smoking, co-existing rhinitis, ICS/OCS use, age, male/female differences, BMI, time of day, BMI. <i>Carroll W Pulm Ther (2016) 2: 171-188</i></p>	

RED FLAGS

- Symptoms since birth
- Failure to thrive
- Perinatal lung disease
- Excessive vomiting
- Inspiratory Stridor
- Severe URTI
- Persistent productive wet cough
- Family history of unusual chest disease
- Nasal Polyps
- Finger clubbing
- Failure to respond to treatment trial

Referral to secondary care

- Any red flags
- Diagnosis uncertain
- Poor response to treatment
- Significant care giver anxiety
- Severe/life threatening attack
- Abnormal clinical findings (stridor, focal chest signs, dysphagia)

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In children under 5 years and others unable to undertake PEFR / spirometry or FeNO in whom there is a high suspicion of asthma initiate treatment and regularly review . Once ≥5 years attempt PEFR/spirometry/FeNO

Asthma Assessment	YES	NO
Is there a history of recurrent episodes of cough, wheeze, chest tightness, shortness of breath?		
Is there a history of symptom variation?		
Is there an absence of symptoms suggesting alternative diagnosis?		
Is there any recorded clinical observation of wheeze?		
Is there any personal or family history of atopy?		
Is there any evidence of variation in airway reversibility PEFR / spirometry reversibility or raised FeNO in children 5 years or above ?		
Asthma Score	YES	NO
Score 6/6 Asthma		
Score 1-5/6 Suspected Asthma		
Score 0/6 Consider alternative diagnosis		

	Baseline	Treatment	Teach	Information Resources	Review
< 5 years	CACT (4yrs onwards)	Initiate treatment appropriate to severity Under 5 years guidelines	Inhaler technique	<ul style="list-style-type: none"> • Respiratory symptom diary • Personal Asthma Action Plan • Count it out 	8-12 weeks Repeat • CACT Check • Symptom diary • Inhaler technique • Prescription update
> 5 years	CACT (4 to 11 years) or ACT (12 years and above) Lung function tests • Peak FLOW • Spirometry • FeNO • Reversibility Testing NICE algorithm	Initiate treatment appropriate to severity 5-11 years guidelines 12-17 years guidelines	Inhaler technique Peak flow	<ul style="list-style-type: none"> • Respiratory symptom diary • Personal Asthma Action Plan • Peak flow diary (monitor over period of treatment trial) • Count it out 	8-12 weeks Repeat • CACT or ACT • Lung Function tests Check • Symptom diary • Inhaler technique • Prescription update