

Features and diagnosis of asthma



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Asthma is a long-term condition characterised for the vast majority by trigger-induced eosinophilic airway inflammation resulting in wheeze, breathlessness, cough, and chest tightness.

In 2022, using the available Quality and Outcomes Framework (QOF) data from UK general practice registers, 6.5%, or 3,745,077 people over the age of six, were diagnosed with asthma.¹ The vast majority of asthma care occurs in general practice.

Before embarking on any treatment for asthma, it is essential to ensure that you, as the prescriber, can describe to the person with asthma:

- the criteria by which they have been given the diagnosis of asthma.
- what can be done about it?
- what might happen if nothing is done about it.



Supporting people to be adherent to asthma medicines is a key part of asthma management. Providing understanding about why the diagnosis has been made by showing how they have fulfilled the diagnostic criteria set out in Figure 1 and why any recommended treatment might help, provides a firm foundation with which to explore choices about medicinal therapies. Even if you are not the person making the diagnosis, for any change in asthma therapy, it is important to look back and check how the asthma diagnosis was justified and that the evidence still stacks up.

The PCRS consensus on Asthma Guidelines in Practice ([scan QR code to view](#)) includes a practical and pragmatic guide that helps primary care navigate the differing and sometimes contentious approaches to diagnosing asthma.² It looks to the last updated national guidelines from BTS/SIGN³ 2019 and NICE in 2020⁴ and offers a structured way forward for now. In 2024, we anticipate a new pathway agreed upon by all three parties (BTS/SIGN/NICE).



Structured history taking and gathering of information over time in response to possible triggers and trials of treatment is critical. With this process comes an important message to give at the outset to someone suspected of having asthma, which is that the diagnosis can take time to confirm. Firstly, it is important to rule out other causes of asthma symptoms. Table 1 reminds us of the alternative diagnoses to consider.

If the features of asthma are not strongly featuring after initial assessment or there is a possibility of an alternative diagnosis, then a 'Low Probability' of asthma should be concluded and further tests or referral should take place.

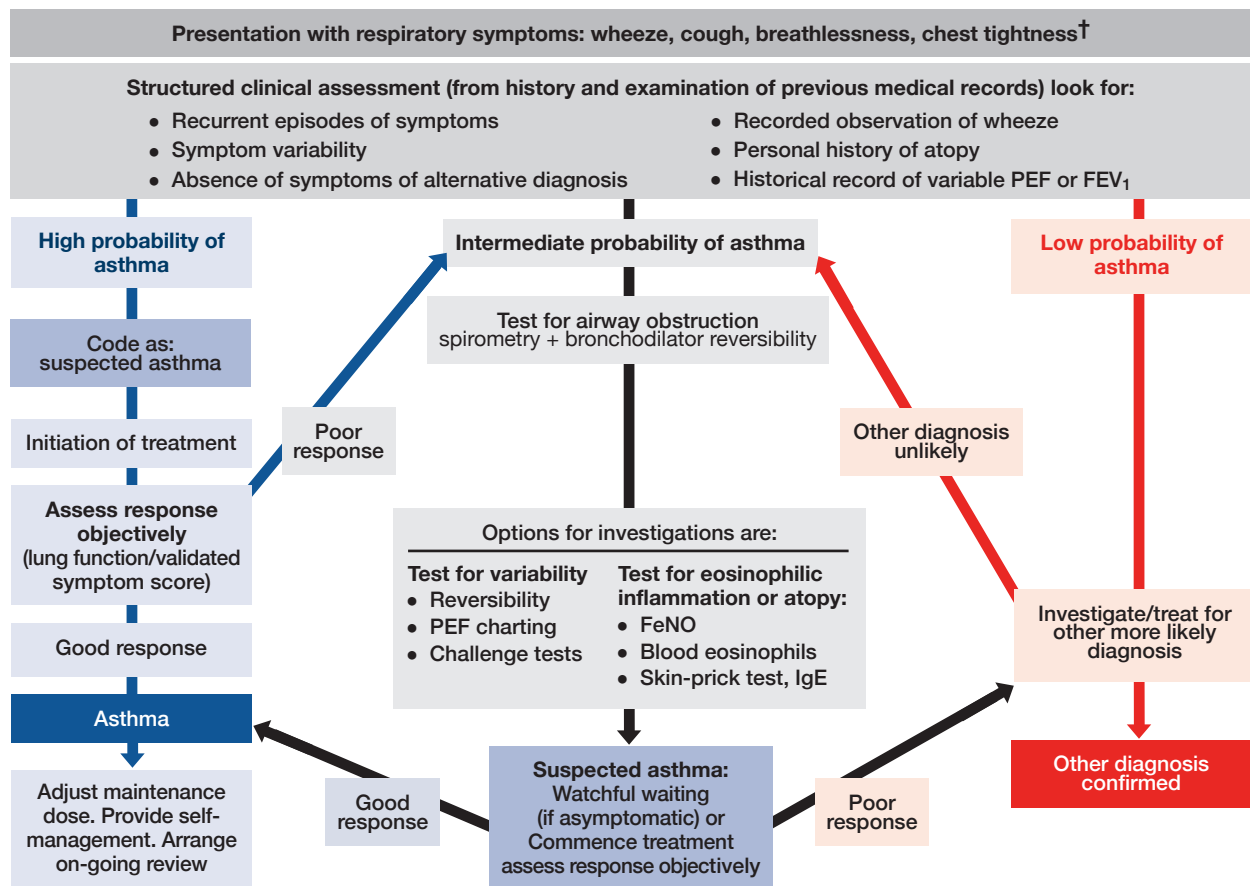
If the presenting features of asthma are confirmed and the process to exclude other conditions is completed, then objective measures to increase the confidence in a correct diagnosis of asthma should be performed. These tests mainly include recording objective airflow measurements, ranging from peak expiratory flow readings, microspirometry, full spirometry, and Fractional Exhaled NO (FeNO). The PCRS consensus has considered the guidance from both national guidelines and suggests an

Table 1: Clinical features to suggest an alternative diagnosis to asthma in adults

Clinical clue	Possible diagnosis
No airflow obstruction	
Predominant cough with no lung function abnormality	Chronic cough syndromes; pertussis
Prominent dizziness, light-headedness or peripheral tingling	Dysfunctional breathing
Recurrent severe 'asthma attacks' without objective evidence to confirm	Vocal cord dysfunction
Predominant nasal symptoms without lung function abnormality	Rhinitis
Postural and food-related symptoms, predominant cough	Gastro-oesophageal reflux disease
Orthopnoea, paroxysmal nocturnal dyspnoea, peripheral oedema, pre-existing cardiac disease	Cardiac failure
Crackles on auscultation	Pulmonary fibrosis
With airflow obstruction	
Significant smoking history (ie, over 30 pack-years), age of onset over 35 years	COPD
Chronic productive cough in the absence of wheeze or breathlessness	Bronchiectasis*, inhaled foreign body*, obliterative bronchiolitis, large airway stenosis
New onset in smoker, systemic symptoms, weight loss, haemoptysis	Lung cancer*, sarcoidosis*

*May also be associated with non-obstructive spirometry.
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Figure 1. Diagnostic algorithm for individuals presenting with symptoms suggestive of asthma



[†] In children under 5 years and others unable to undertake spirometry in whom there is a high or intermediate probability of asthma, the options are monitored initiation of treatment or watchful waiting according to the assessed probability of asthma

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approach based on availability and access to these tests as well as whether the clinical suspicion falls into a high or intermediate probability.

Choosing to follow the PCRS consensus to diagnose asthma is also a greener choice. Whilst selecting the greenest inhaler device is important, if the diagnosis is wrong or the patient remains underconfident about their diagnosis, then any

prescribed inhaler will be a loss for the environment if it doesn't relieve symptoms or get used.

References

1. NHS UK GP QOF Contract Database. 2022 <http://www.gpcontract.co.uk>.
2. Keeley, D. & Baxter, N. Conflicting asthma guidelines cause confusion in primary care. *BMJ* k29 (2018) doi:10.1136/bmj.k29.
3. BTS_SIGN Guideline for the management of asthma 2019 <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/>.
4. NICE. NICE guideline [NG80] Asthma: diagnosis, monitoring and chronic asthma management. Published date: 29 November 2017 Last updated: 12 February 2020 <https://www.nice.org.uk/guidance/ng80>.

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