



Asthma diagnosis

Patient assessment

> Patient history ¹

Is there any family history of asthma or allergies (atopic disorders)? If yes, what triggers make symptoms worse — colds, exercise, allergens (from dust, animal fur, mould, pollen from plants, etc), smoke, air pollution, etc?

Does the patient smoke?

Does the patient work in an environment that might affect the lungs? Are his/her symptoms the same/worse on work days; do they resolve when on holiday?

Remember: document all findings and patient responses, as asthma is different for everyone — not only can it be seasonal but, in some, symptoms can come and go.

> Signs and symptoms

Physically examine patient to check if he/she has any, or all of the following:

- Wheeze
- Cough
- Breathlessness
- Chest tightness.

Does occurrence vary throughout the day/night, or during certain seasons?

Remember: patient may still have asthma even if none of these signs are present on examination.

Symptoms and history tell me that this person has asthma, but I should now do reversibility testing to try and confirm the diagnosis.

Attempt to confirm diagnosis with objective clinical (lung function) tests

Spirometry

- > Quick, simple first-line investigation for adults and those over 16 years of age

Bronchodilator reversibility

- > If spirometry shows an airways obstruction, it is necessary to test

Peak flow meter

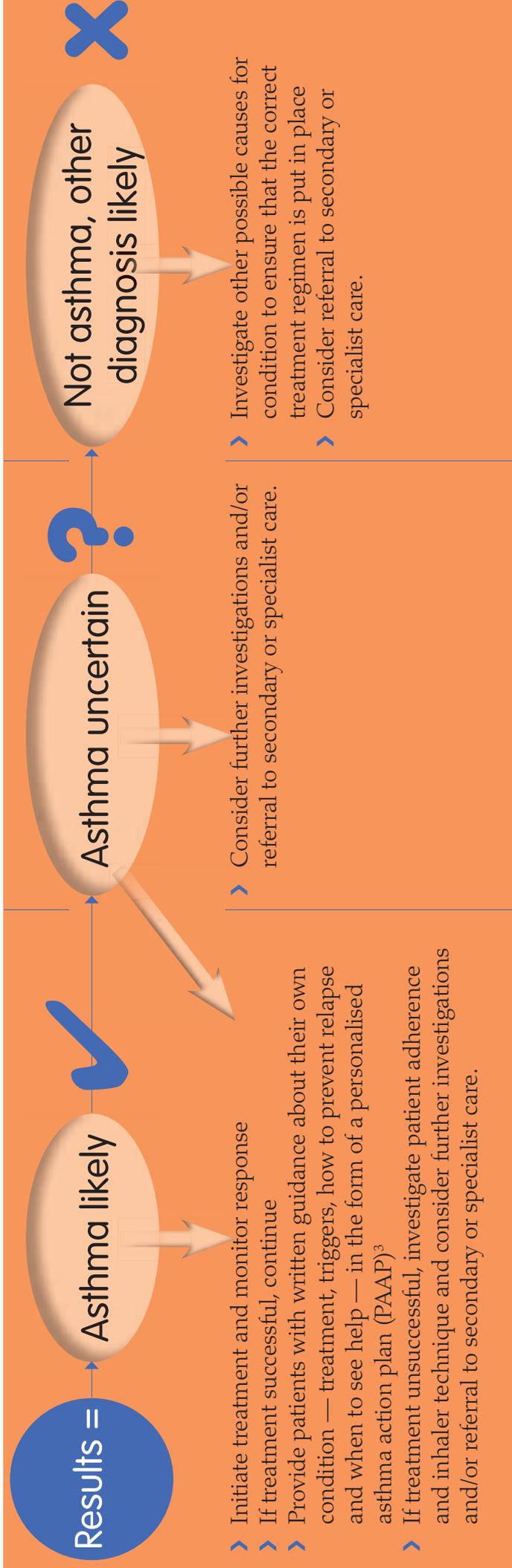
- > This test measures how well you exhale (peak expiratory flow, PEF) by breathing



- ▶ Blowing into spirometer records how much air you exhale (force vital capacity, FVC) and at what speed (forced expiratory volume, FEV)
- ▶ If asthma is present, the score may be lower (i.e. FEV₁/FVC ratio of less than 70%) due to airways being swollen or constricted. Remember: if the patient's asthma is well-controlled, their lung function may be normal
- ▶ Tests can also be performed during exercise, and before/after taking medication to see how it is working.

- for reversibility with short-acting bronchodilators
- ▶ Improvement in FEV₁ of 400ml, or a peak expiratory flow rate (PEFR) increase of 15–20% is highly indicative of asthma²
- ▶ Remember: if the patient's asthma is well-controlled, they may have no reversibility at all.

- into a mouthpiece at the end of a tube
- ▶ Although not as accurate as spirometry, this test can easily be done at home by patients to keep track of their asthma, assess how well medication is working, and alert them to a potential medical emergency.



1. British Thoracic Society, Scottish Intercollegiate Guidelines Network (2014) *British Guidelines on the Management of Asthma*. Quick reference guide. BTS/SIGN, London/Edinburgh. Available online: <http://bit.ly/1HytKt6>

2. British Thoracic Society (1997) BTS guidelines for the management of chronic obstructive pulmonary disease. *Thorax* 53(Suppl 5): S1–S28

3. Royal College of Physicians (2014) *Why asthma still kills. The National Review of Asthma Deaths* (NRAD). RCP, London