

European Respiratory Society Guidelines for the Diagnosis of Asthma in Adults

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Background

Asthma is very common chronic inflammatory airway disease occurring in 5-10% of the worldwide population.[1] Accuracy of diagnosis has historically been poor, a situation related to the insufficient use of spirometry. Clinicians often try to diagnose asthma based on clinical presentation alone.[2]

A 2018 task force (TF) established by the European Respiratory Society (ERS) met to review the literature on the accuracy of diagnostic tests used in the diagnosis of asthma in adult patients and provide recommendations for clinicians.

In adults with episodic/chronic suggestive symptoms, the guidelines suggest the following:

Can airway obstruction measured by forced spirometry help diagnose asthma?

Forced spirometry should be performed to detect airway obstruction as part of the diagnostic work-up of adults aged 18 years in whom asthma is suspected. An FEV1/FVC below the lower limit of normal or <75% (higher than the commonly utilized 70% threshold) should support the diagnosis of asthma. Normal spirometry is not sufficient to exclude asthma.

Can peak flow (PEF) two weeks variability help diagnose asthma?

PEF variability is insufficient for making a diagnosis of asthma diagnosis although it may be considered if other lung function tests are not available such as spirometry at rest and bronchial challenge testing.

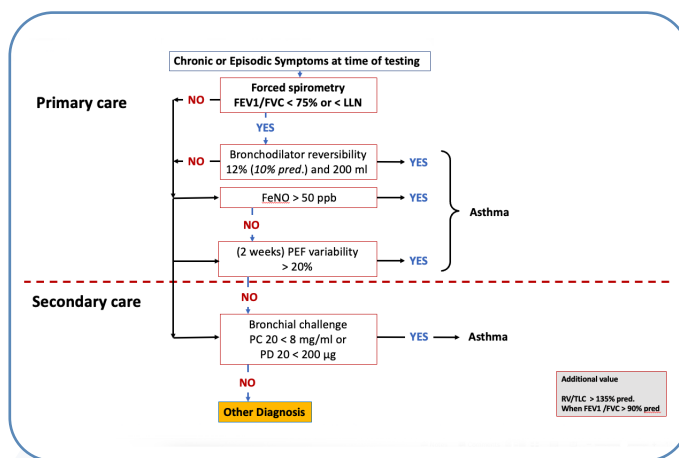


Figure 1. Algorithm for asthma diagnosis in adults with symptoms.

Can measuring fractional exhaled nitric oxide (FeNO) help diagnose asthma?

In patients suspected of asthma, the TF suggests measuring the fraction of exhaled nitric oxide (FeNO) when evaluating adults aged >18 years with suspected asthma.

Can measuring blood eosinophil count help diagnose asthma?

The TF suggests measuring blood eosinophil counts are not indicated to make a diagnosis of asthma.

Can measuring total serum IgE help diagnose asthma?

Similarly, measurement of total serum IgE is not indicated to make a diagnosis of asthma.

Can combining FeNO, blood eosinophils and IgE help diagnose asthma?

The combination of FeNO, blood eosinophils, and serum IgE are not helpful in making a diagnosis of asthma.

Can bronchial challenge testing help diagnose asthma?

Bronchial challenge testing is indicated to confirm the diagnosis of asthma in adults when the diagnosis previously was not clear.

Can measuring of specific airway conductance (sGaw) and RV/TLC help in the diagnosis of asthma?

Measurement of sGaw and RV/TLC by whole body plethysmography are not indicated to make a diagnosis of asthma.

Conclusions based on the ERS guideline from 2018

- The TF emphasizes the importance of accurate diagnosis and aggressive use of spirometry in primary care.
- Whether measuring FeNO or monitoring PEF should be used depends on the availability of equipment and access to a bronchial challenge test.
- Both direct and indirect bronchial challenges are ideal tests for accurate diagnosis of asthma.

References

1. Bloom CI, Saglani S, Feary J, Jarvis D, Quint JK. Changing prevalence of current asthma and inhaled corticosteroid treatment in the UK: population-based cohort 2006-2016. *Eur Respir J*. 2019;53(4). <http://dx.doi.org/10.1183/13993003.02130-2018>.
2. Aaron SD, Boulet LP, Reddel HK, Gershon AS. Underdiagnosis and Overdiagnosis of Asthma. *Am J Respir Crit Care Med*. 2018;198(8):1012-1020. <http://dx.doi.org/10.1164/rccm.201804-0682CI>.

For more details on the content of the study, please refer to the original article here.

Reference: Louis R, Satia I, Ojanguren I, Schleich F, Bonini M, Tonia T, Rigau D, Ten Brinke A, Buhl R, Loukides S, Kocks JW. European Respiratory Society guidelines for the diagnosis of asthma in adults. *European Respiratory Journal*. 2022 Sep 1;60(3).

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