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European Respiratory Society clinical practice guidelines for the diagnosis of asthma in children aged 5–16 years

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International ERS clinical practice guidelines recommend a combination of objective tests including spirometry, bronchodilator reversibility, fraction of exhaled nitric oxide and bronchial challenge testing to diagnose asthma in children aged 5–16 years <https://bit.ly/32cRjsy>

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Abstract

Background Diagnosing asthma in children represents an important clinical challenge. There is no single gold-standard test to confirm the diagnosis. Consequently, over- and under-diagnosis of asthma is frequent in children.

Methods A task force supported by the European Respiratory Society has developed these evidence-based clinical practice guidelines for the diagnosis of asthma in children aged 5–16 years using nine Population, Intervention, Comparator and Outcome (PICO) questions. The task force conducted systematic literature searches for all PICO questions and screened the outputs from these, including relevant full-text articles. All task force members approved the final decision for inclusion of research papers. The task force assessed the quality of the evidence using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach.

Results The task force then developed a diagnostic algorithm based on the critical appraisal of the PICO questions, preferences expressed by lay members and test availability. Proposed cut-offs were determined based on the best available evidence. The task force formulated recommendations using the GRADE Evidence to Decision framework.

Conclusion Based on the critical appraisal of the evidence and the Evidence to Decision framework, the task force recommends spirometry, bronchodilator reversibility testing and exhaled nitric oxide fraction as first-line diagnostic tests in children under investigation for asthma. The task force recommends against diagnosing asthma in children based on clinical history alone or following a single abnormal objective test. Finally, this guideline also proposes a set of research priorities to improve asthma diagnosis in children in the future.