

# Ambulatory Asthma Management

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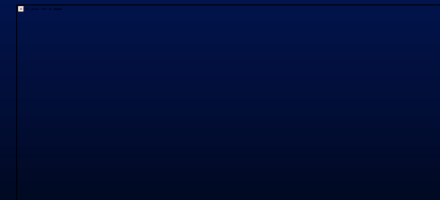
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Pulmonary and Critical Care Division

The Lung Center

Brigham and Women's Hospital



# Conflicts of Interest

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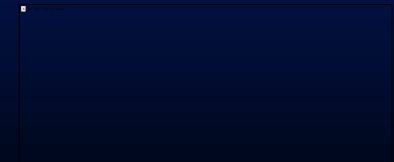
None.



# Case Discussions

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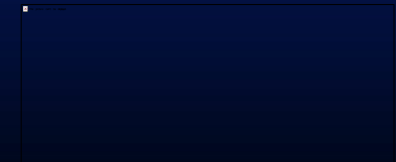
1. Diagnosing asthma
2. Treatment of mild-moderate asthma
3. Approach to severe persistent asthma



# Case 1

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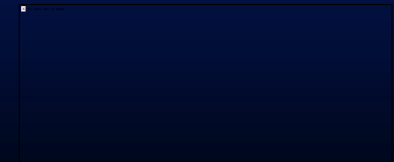
A 27-year-old woman, mother of two, finds that every “cold” settles into her chest, with paroxysmal coughing, a “wheezy cough,” and cough that lingers for weeks. She reports a history of eczema as a child and mild symptoms of seasonal allergic rhinitis. She feels well now but wishes to avoid another 2-month “respiratory catastrophe.”



# Diagnosis of asthma

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- 1) Spirometry
- 2) Bronchodilator responsiveness
- 3) Exhaled NO
- 4) Methacholine challenge
- 5) Peak flow monitoring
- 6) Pitfalls of “empiric therapy”
- 7) Not “reactive airways disease”



JAMA | **Original Investigation**

## Reevaluation of Diagnosis in Adults With Physician-Diagnosed Asthma

Shawn D. Aaron, MD; Katherine L. Vandemheen, MScN; J. Mark FitzGerald, MD; Martha Ainslie, MD; Samir Gupta, MD; Catherine Lemière, MD; Stephen K. Field, MD; R. Andrew McIvor, MD; Paul Hernandez, MD; Irvin Mayers, MD; Sunita Mulpuru, MD; Gonzalo G. Alvarez, MD; Smita Pakhale, MD; Ranjeeta Mallick, PhD; Louis-Philippe Boulet, MD; for the Canadian Respiratory Research Network

*JAMA 2017; 317:269-9.*

- 467 adults with physician diagnosis of asthma within last 5 years.
- 33% had diagnosis of current asthma excluded by thorough evaluation.
- More than half with erroneous diagnosis of asthma had not undergone testing for airflow limitation at time of diagnosis.

# Case 2

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A 30-year-old nurse presents for follow-up of her long-standing asthma.

She had asthma as a child, seemed to “outgrow it” in her late teens, but over the last 2 years has again had intermittent symptoms of cough, chest tightness, and occasional nighttime awakenings.

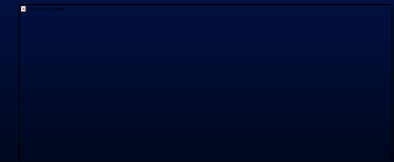
She has been using inhaled fluticasone (Flovent) “most days” and her albuterol inhaler several times/week, with temporary relief. On exam, her chest is clear, and her peak flow excellent at 430 L/min.

What would you recommend?

# Treatment of Mild-Moderate Asthma

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- 1) Review of inhaler technique and adherence
- 2) Change controller medicine to ICS/LABA
- 3) SMART therapy (ICS/formoterol daily and as needed; no albuterol)
  - a) Safety of LABAs
- 4) ? ICS/SABA prn






## Case 3

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A 34-year-old man complains that his asthma is “out of control.”

He had the onset of asthma 3 years ago. His therapy has escalated from fluticasone to low-dose fluticasone/salmeterol combination to high-dose F/S combination. He has needed multiple courses of oral prednisone, which he describes as “the devil’s drug,” sometimes to treat asthma flares and sometimes for his recurrent sinusitis.



# Approach to Severe Persistent Asthma

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- 1) Systematic approach
- 2) Inhaled LAMA
- 3) Ultra high-dose inhaled steroids
- 4) Biologics (check IgE and eos; sputum eos via cytology;  $FE_{NO}$ )
- 5) Bronchial thermoplasty
- 6) Severe Asthma Program/Asthma Research Center