



Clinical Practice Guideline for the Management of Asthma in Children and Adults

Key Element of Assessment and Diagnosis		Differential Diagnosis	Referral to a Specialist
<p>SYMPTOMS</p> <ul style="list-style-type: none"> - Episodic/variable recurrent <ul style="list-style-type: none"> • Cough • Wheeze • Shortness of breath • Chest tightness - May occur or increase in presence of individual triggers 	<p>SIGNS</p> <ul style="list-style-type: none"> - None (common) - Wheeze: diffuse, bilateral, expiratory - Tachypnea 	<p>(Mimics of asthma)</p> <p><i>In children:</i></p> <ul style="list-style-type: none"> - CF - Aspirated foreign body - Bronchiolitis (RSV) <p><i>In older children & adults:</i></p> <ul style="list-style-type: none"> - Exercise induced bronchospasm - Vocal cord dysfunction - COPD - Heart disease (CHF, angina) - Chronic cough (due to seasonal allergic rhinitis, GERD or medications) - Chronic aspiration - Pulmonary embolism - Mechanical airway obstructions (stenosis, tumor, foreign body) <p><i>Less common:</i></p> <ul style="list-style-type: none"> - Laryngotracheomalacia, tracheal stenosis, bronchostenosis - Bronchopulmonary dysplasia - Sarcoidosis - Eosinophilic lung disease - Bronchiectasis 	<ul style="list-style-type: none"> - Diagnosis unclear or in doubt - Unexpected clinical findings (clubbing, cyanosis, heart failure, unilateral wheeze, etc.) - Spirometry does not fit the clinical picture (“restrictive” pattern or fixed obstruction) - Suspected occupational asthma - Weight loss - Persistent cough and/or sputum production - Non-resolving pneumonia - Additional diagnostic testing is indicated (bronchoscopy, allergy skin testing, complete pulmonary function testing) - No or minimal response to trial of appropriate level asthma medication - Inpatient admission or Emergency Room visit for asthma exacerbation and/or 2 or more bursts of oral steroids per year
<p>ADDITIONAL HISTORY</p> <ul style="list-style-type: none"> - Identified triggers (precipitating/aggravating factors) e.g., pollens, dust, animals, exercise, viral infections, chemicals, irritants, smoking exposure - Personal or family history: asthma or atopy - Pattern and severity of symptoms and exacerbations - Response/adherence to prior interventions 	<p>PHYSICAL EXAM</p> <ul style="list-style-type: none"> - Upper airway (increased nasal secretion, turbinate edema, and/or nasal polyp) - Chest (wheezing, prolonged expiratory phase, hyperexpansion of the thorax; use of accessory muscles; appearance of hunched shoulders, chest deformity) - Skin (atopic dermatitis, eczema) 	<p>Exercise-Induced Bronchospasm (EIB)</p>	
<p>OBJECTIVE MEASUREMENTS</p> <ul style="list-style-type: none"> - Spirometry (pre- and post-bronchodilator with >12% percent and/or 200 ml increase in FEV1 post-bronchodilator) - Bronchoprovocation or exercise testing if available - Chest X-ray may be needed to exclude other diagnoses 	<p>COMORBIDITY/ PSYCHOSOCIAL FACTORS</p> <ul style="list-style-type: none"> - GERD - Chronic sinusitis - Allergic rhinitis - Obstructive Sleep Apnea - Obesity - ABPA - Anxiety, Depression - Substance abuse 	<p>EIB is a common cause of exertional dyspnea in active duty military and other persons involved in competitive sports is defined by the following:</p> <ol style="list-style-type: none"> 1) Symptoms (dyspnea, cough, or wheezing) only associated with exercise 2) Normal resting spirometry with no evidence of airway obstruction 3) Presence of airway hyperreactivity with bronchoprovocation testing (exercise, methacholine, mannitol or eucapnic hyperventilation). 4) Response to treatment with beta-agonists prior to exercise. 	<p>Other considerations for exertional dyspnea in the active duty military may include:</p> <ol style="list-style-type: none"> 1) Exercise-induced asthma (Underlying mild asthma with increased symptoms during exercise) 2) Vocal cord dysfunction 3) Upper airways disorders 4) Post-viral airway hyperreactivity 5) Sarcoidosis with airway hyperreactivity 6) COPD (underlying smoking history)