

Management of Asthma in Children 0 to 4 Years

Key Components		Recommendation and Level of Evidence					
First, assess severity to decide initial therapy		Assess Asthma Severity					
		Components of Severity		<i>Intermittent</i>	<i>Persistent (Mild)</i>	<i>Persistent (Moderate)</i>	<i>Persistent (Severe)</i>
		Impairment	Symptoms	≤ 2 days/week	> 2 days/week, not daily	Daily	Throughout day
			Nighttime awakenings	0	1-2x/month	3 - 4x/month	> 1x/wk
			Short-acting beta ₂ -agonist use for symptoms	≤ 2 days/week	> 2 days/week, not daily	Daily	Several times daily
			Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
Risk	Exacerbations requiring oral steroids	0-1/year	≥ 2 in 6 months requiring oral steroids, or ≥ 4 in 1 year lasting > 1 day and have risk factors for persistent asthma				
Recommended step for initiating treatment		Step 1	Step 2	Step 3			
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.					
On follow-up, assess control and step therapy up or down		Assess Asthma Control					
		Components of Control		<i>Well-Controlled</i>	<i>Not Well-Controlled</i>		<i>Very Poorly Controlled</i>
		Impairment	Symptoms	≤ 2 days/week, but not > 1/day	> 2 days/week or many times on ≤ 2 days/week		Throughout day
			Nighttime awakenings	≤ 1x/month	> 1x/month		> 1x/week
			Short-acting beta ₂ -agonist use for symptoms	≤ 2 days/week	> 2 days/week		Several times/day
			Interference with normal activity	None	Some limitation		Extremely limited
Risk	Exacerbations requiring oral steroids	0-1x/year	2-3x/year		> 3x/year		
	Treatment-related adverse effects	Intensity of medication-related side effects does not correlate to specific levels of control, but should be considered in overall assessment of risk.					
Recommended treatment and follow-up		<ul style="list-style-type: none"> ♦ Maintain current step ♦ Regular follow-up every 1-6 months ♦ Consider step down if well-controlled ≥ 3 months 		Step up 1 step	<ul style="list-style-type: none"> ♦ Consider oral steroids ♦ Step up 1-2 steps 		
				<ul style="list-style-type: none"> ♦ Re-evaluate in 2-6 weeks ♦ If no clear benefit in 4-6 weeks, consider alternative diagnosis or adjust therapy [D] 			
Step approach for asthma management (Use lowest treatment level required to maintain control.)		♦ Quick relief medication for all patients: Inhaled short-acting beta ₂ -agonist (SABA) as needed for symptoms. Intensity of treatment depends on severity of symptoms; up to 3 treatments at 20-minute intervals as needed. Short course of systemic oral corticosteroids may be needed. Use of SABA > 2 days a week for symptom control (not prevention of exercise-induced bronchospasm) indicates inadequate control and the need to step up treatment.					
		♦ Patient education and environmental control at each step					
		♦ Persistent asthma: Daily long-term control therapy [A]; consult with asthma specialist step 4 or higher [D]; consider consultation at step 3 [D]					
		Intermittent	Mild Persistent	Moderate Persistent		Severe Persistent	
		Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Preferred Short-acting beta ₂ -agonist as required	Preferred Low-dose inhaled corticosteroid [A] Alternative Cromolyn or Montelukast [B]	Preferred Medium-dose inhaled corticosteroid [D]	Preferred Medium-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	Preferred High-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	Step 6 Preferred High-dose inhaled corticosteroid + oral systemic corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]		

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on the 2007 National Asthma Education and Prevention Program Expert Panel Report 3, Guidelines for the Diagnosis and Management of Asthma, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.