

Stepwise Approach for Managing Asthma in Adults and Children Older Than 5 Years of Age: Treatment

Classify Severity: Clinical Features Before Treatment or Adequate Control		Medications Required To Maintain Long-Term Control	
	Symptoms/Day Symptoms/Night	PEF OR FEV ₁ PEF Variability	Daily Medications
Step 4 Severe Persistent	<u>Continual</u> Frequent	= <u>60%</u> > 30%	<ul style="list-style-type: none"> ▪ Preferred treatment: – High-dose inhaled corticosteroids AND – Long-acting inhaled beta 2 -agonists AND, if needed, –Corticosteroid tablets or syrup long term (2 mg/kg/day, generally do not exceed 60 mg per day). (Make repeat attempts to reduce systemic corticosteroids and maintain control with high-dose inhaled corticosteroids.)
Step 3 Moderate Persistent	<u>Daily</u> > 1 night/week	≥ <u>60%</u> - < <u>80%</u> > 30%	<ul style="list-style-type: none"> ▪ Preferred treatment: – Low-to-medium dose inhaled corticosteroids and long-acting inhaled beta 2 -agonists. ▪ Alternative treatment (listed alphabetically): – Increase inhaled corticosteroids within medium-dose range OR – Low-to-medium dose inhaled corticosteroids and either leukotriene modifier or theophylline. <p>If needed (particularly in patients with recurring severe exacerbations):</p> <ul style="list-style-type: none"> ▪ Preferred treatment: – Increase inhaled corticosteroids within medium-dose range and add long-acting inhaled beta 2 -agonists. ▪ Alternative treatment: – Increase inhaled corticosteroids within medium-dose range and add either leukotriene modifier or theophylline.
Step 2 Mild Persistent	> <u>2/week</u> but < 1x/day > 2 nights/month	= <u>80%</u> 20-30%	<ul style="list-style-type: none"> ▪ Preferred treatment: – Low-dose inhaled corticosteroids. ▪ Alternative treatment (listed alphabetically): cromolyn, leukotriene modifier, nedocromil, OR sustained release theophylline to serum concentration of 5–15 mcg/mL.
Step 1 Mild Intermittent	= <u>2 days/week</u> = 2 nights/month	= <u>80%</u> < 20%	<ul style="list-style-type: none"> ▪ No daily medication needed Severe exacerbations may occur, separated by long periods of normal lung function and no symptoms. A course of systemic corticosteroids is recommended.

Quick Relief

? Short-acting bronchodilator: 2–4 puffs **short-acting inhaled beta 2 -agonists** as needed for symptoms.

All Patients

? Intensity of treatment will depend on severity of exacerbation; up to 3 treatments at 20-minute intervals or a single nebulizer treatment as needed. Course of systemic corticosteroids may be needed.

? Use of short-acting beta 2 -agonists >2 times a week in intermittent asthma (daily, or increasing use in persistent asthma) may indicate the need to initiate (increase) long-term control therapy.

? Step down

Review treatment every 1 to 6 months; a gradual stepwise reduction in treatment may be possible.

? Step up

If control is not maintained, consider step up. First, review patient medication technique, adherence, and environmental control.

Note

- The stepwise approach is meant to assist, not replace, the clinical decision making required to meet individual patient needs.
- Classify severity: assign patient to most severe step in which any feature occurs (PEF is % of personal best; FEV₁ is % predicted).
- Gain control as quickly as possible (consider a short course of systemic corticosteroids); then step down to the least medication necessary to maintain control.
- Provide education on self-management and controlling environmental factors that make asthma worse (e.g., allergens and irritants).
- Refer to an asthma specialist if there are difficulties controlling asthma or if step 4 care is required. Referral may be considered if step 3 care is required

Goals of Therapy: Asthma Control

- Minimal or no chronic symptoms day or night
- Minimal or no exacerbations
- No limitations on activities; no school/work missed
- Maintain (near) normal pulmonary function
- Minimal use of short-acting inhaled beta 2 -agonist (< 1x per day, < 1 canister/month)
- Minimal or no adverse effects from medications