

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

Clinical Guidelines

CLASSIFY SEVERITY: CLINICAL FEATURES BEFORE TREATMENT OR ADEQUATE CONTROL		MEDICATIONS REQUIRED TO MAINTAIN LONG-TERM CONTROL
	Symptoms/Day PEF or FEV ₁ Variability Symptoms/Night PEF Variability	Daily Medications
Step 1 Mild Intermittent	< 2 days/week, > 80% < 2 nights/month < 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.
Step 2 Mild Persistent	> 2/week but < 1x/day, > 80% > 2 nights/month, 20-30%	<p>Preferred treatment</p> <ul style="list-style-type: none"> Low dose inhaled corticosteroids <p>Alternated treatment (listed alphabetically) cromolyn, leukotriene modifier, nedocromil, OR sustained-release theophylline to serum concentration of 5-15 mcg/ml</p>
Step 3 Moderate Persistent	Daily, > 60% - < 80% > 1 night/week, > 30%	<p>Preferred treatment</p> <ul style="list-style-type: none"> Low to medium dose inhaled corticosteroids and long acting inhaled beta2-agonists <p>Alternated treatment (listed alphabetically)</p> <ul style="list-style-type: none"> Increase inhaled corticosteroids within medium-dose range <p>OR</p> <ul style="list-style-type: none"> Low to medium dose inhaled corticosteroids and either leukotriene modifier or theophylline <p>If needed (particularly in patients with recurring severe exacerbations):</p> <p>Preferred treatment</p> <ul style="list-style-type: none"> Increase inhaled corticosteroids within medium-dose range and add long-acting inhaled beta2-agonists <p>Alternated treatment (listed alphabetically)</p> <ul style="list-style-type: none"> Increase inhaled corticosteroids within medium-dose range and add either leukotriene modifier or theophylline.
Step 4 Severe Persistent	Continual, < 60% Frequent > 30%	<p>Preferred treatment</p> <ul style="list-style-type: none"> High dose inhaled corticosteroids AND Long acting inhaled beta2-agonist <p>And, if needed,</p> <ul style="list-style-type: none"> Corticosteroid tablets or syrup long term (2mcg/kg/day, generally do not exceed 60 mg per day). (Make repeat attempts to reduce system corticosteroids and maintain control with high-dose inhaled corticosteroids).

QUICK RELIEF: ALL PATIENTS

- Short acting bronchodilator: 2-4 puffs short-acting inhaled beta₂-agonists as needed for symptoms
- 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 beta₂-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.

GOALS OF THERAPY: ASTHMA MANAGEMENT GOALS

- Minimal or no chronic symptoms day or night
- Minimal or no exacerbations
- No limitations on activities; no school/work/missed days
- Maintain (near) normal pulmonary function
- Minimal use of inhaled short-acting beta₂agonists
- Minimal or no adverse effects from medications.

NHLB Guidelines for the Diagnosis and Management of Asthma-Update 2002

Basic Guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. Individuals may require additional services or more frequent interventions from those specified.

Patients and providers should confirm with individual health care plans whether the specific medical services described in the Basic Guidelines are covered benefits.