Stepwise Approach For Managing Asthma In Adults And Children Over 5 Years Old

Goals of Asthma Treatment

- ⟹ Prevent chronic and troublesome symptoms (e.g., coughing or breathlessness in the night, in the early morning, or after exertion)
- ⟹ Maintain (near) "normal" pulmonary function
- ⟹ Maintain normal activity levels (including exercise and other physical activity)
- ⟹ Prevent recurrent exacerbations of asthma and minimize the need for emergency department visits or hospitalizations
- ⟹ Provide optimal pharmacothrapy w/minimal or no adverse effects
- ⟹ Meet patients and families expectation of and satisfaction with asthma care

Classification of Severity: Clinical Features Before Treatment*

	Symptoms**	Nighttime Symptoms	Lung Function	Long-Term Control	Quick Relief	Education
Step 4 Severe Persistent	Continual Symptoms Limited physical activity Frequent Exacerbation's	Frequent Exacerbation's	FEV1 or PEF < or = to 60% predicted PEF variability > 30%	Daily medication: Anti-Inflammatory: Inhaled corticosteroid (high dose) **and** Long-acting bronchodilator; either long-acting inhaled beta2-agonist, sustained release theophylline, or long-acting beta2-agonist tablets **and** Corticosteroid tablets or syrup long term (2 mg/kg/day, generally do not exceed 60 mg per day).	Short-acting bronchodilator: Inhaled beta2-agonists as needed for symptoms. Intensity of treatment will depend on severity of exacerbation; see "Managing Exacerbation's of Asthma." Use of short-acting inhaled beta2-agonist on a daily basis, or increasing use, indicates the need for additional long- term- control therapy	Steps 2 and 3 actions plus: Refer to individual education/counseling
Step 3 Moderate Persistent	Daily symptoms Daily use of inhaled short-acting beta2-agonist Exacerbation's affect activity Exacerbation's > or = 2 times a week; may last days	>1 time a week	FEV1 or PEF <60%< or =80% predicted PEF variability > 30%	**Daily medication: Either** Anti-inflammatory: Inhaled corticosteroid (medium dose) **OR** Inhaled corticosteroid (low-dose) and add a long-acting bronchodilator, esp. for nighttime symptoms: either long-acting inhaled beta2-agonist, sustained-release theophylline, or long-acting beta2-agonist tablets **If needed**: Anti-inflammatory: inhaled corticosteroids (medium-high dose) **AND** Long-acting bronchodilator, esp. for nighttime symptoms; either long acting inhaled beta2-agonist, sustained release theophylline, or long-acting beta2-agonist tablets.	Short-acting bronchodilaotr; inhaled beta2-agonists as needed for symptoms. Intensity of treatment will depend on severity of exacerbations; see "Managing Exacerbations of Asthma." Use of short-acting inhaled beta2-agonists on a daily basis or increasing use, indicates the need for additional long-term-control therapy.	Step 1 action plus: Teach self-monitoring Refer to group education if available. Review and update self-management plan.
Step 2 Mild Persistent	Symptoms >2 times a week but < 1 time a day Exacerbation's may affect activity	> 2 times a month	FEV1 or PEF > or = 80% predicted PEF variability <20%	Daily medication: Anti-Inflammatory: either inhaled corticosteroid (low doses) or cromolyn or nedocromil(children usually begin with a trial of cromolyn or nedocromil). Sustained-release theophylline to serum concentration of 5-15 mcg/ml is an alternative. Zafirlukast or zileuton may also be considered for patients > or = 12 years of age, although their position in therapy is not fully established.	Short-acting bronchodilator; inhaled beta2-agonist as needed for symptoms. Intensity of treatment will depend on severity of exacerbation; see "Managing Exacerbations of Asthma."	Step 1 actions plus: teach self-monitoring Refer to group education if available Review and update self-management plan
Step 1 Mild Intermittent	Symptoms < or = 2 times a week Asymptomatic and normal PEF between exacerbations Exacerbations brief (from a few hours to a few days); intensity may vary	< or = 2 times a month	FEV1 or PEF > or = 80% predicted PEF variability < 20%	No daily medication needed.	Short-acting bronchodilator; inhaled beta2-agonist as needed for symptoms. Intensity of treatment will depend on severity of exacerbation; see "Managing Exacerbations of Asthma." Use of short-acting inhaled beta2-agonist more than 2 times a week may indicate the need to initiate long-term-control therapy.	Teach basic facts about asthma. Teach inhaler/spacer/holding chamber technique. Discuss roles of medications. Develop self-management plan. Develop action plan for when and how to take rescue actions. Discuss appropriate environmental control measures to avoid exposure to known allergens and irritants.

* The presence of one of the features of severity is sufficient to place a patient in that category.
An indivdual should be assigned to the most severe grade in which any feature occurs.
The characteristics noted in this figure are general and may overlap because asthma is highly variable.
Furthermore, an individual's classification may change over time.

** Patients at any level of severity can have mild, moderate, or severe exacerbations.
Some patients with intermittent asthma experience severe and life threatening exacerbations separated by long periods of normal lung function and no symptoms.