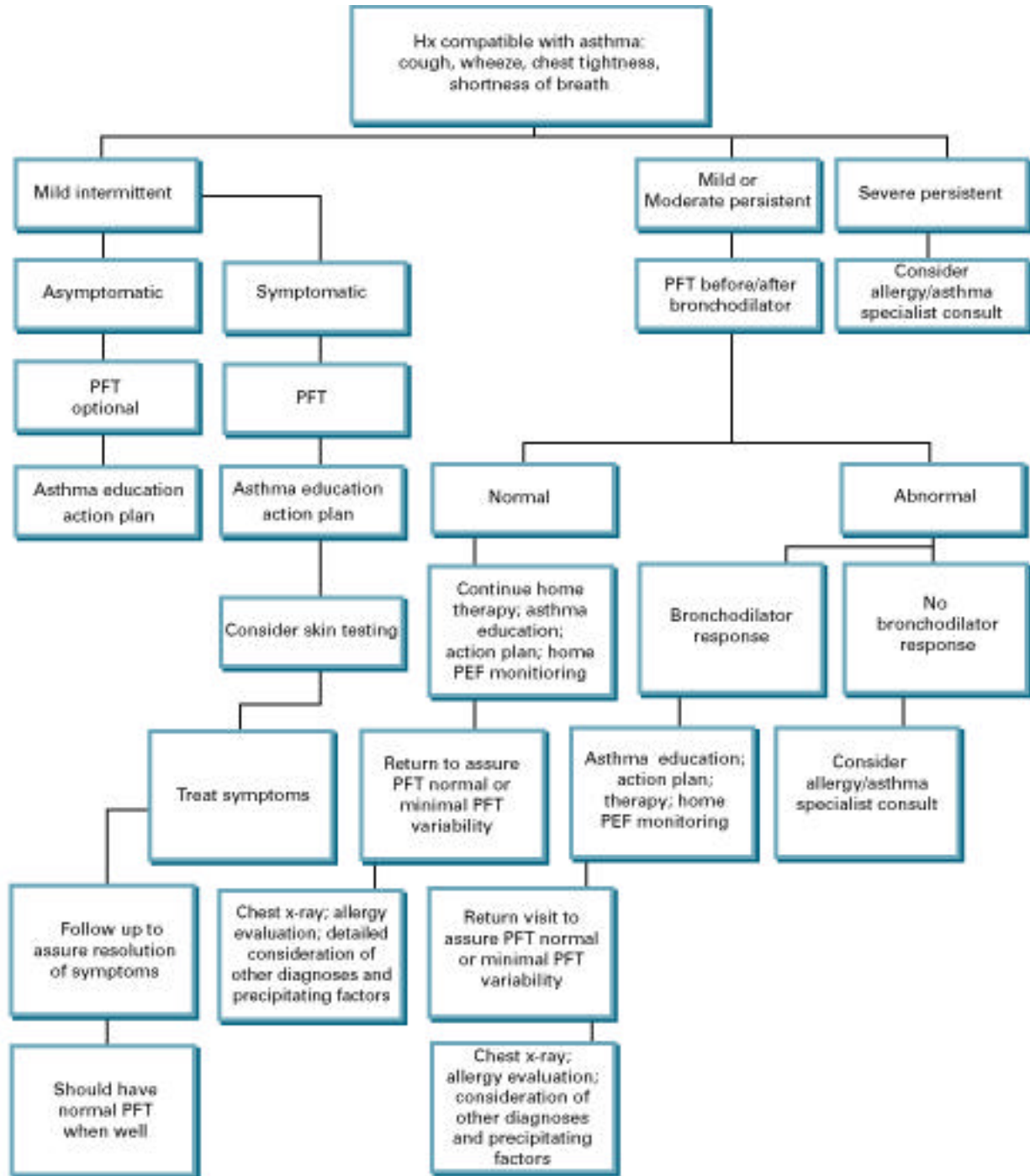


The foundation of care for all asthma patients can be summarized in nine key points.

1. Conduct detailed medical history, physical examination and pulmonary function tests (and possibly additional tests) to ensure a correct diagnosis of asthma.
2. Tailor asthma treatment plan to the needs of individual patients.
3. Provide written self-management plan and tools for self-management.
4. Gain control as quickly as possible; then decrease treatment to the least medication necessary.
5. Provide asthma education to patient and caregiver.
6. Teach patient proper inhaler technique.
7. Control environmental and other factors contributing to asthma severity.
8. Review treatment every 1-6 months.
 - If control is sustained for at least 3 months, a gradual reduction in treatment may be possible.
 - If control is not achieved, consider step-up. But first: review patient medication use technique, adherence to treatment plan and control allergens/triggers factors.
9. Consult with an asthma specialist is recommended for certain patients.



Severity-Based Asthma Management

Asthma Management: Pharmacologic Approach for Adults and Children > 5

MILD INTERMITTENT

Long-Term Control Medication

- None needed

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist as needed for symptoms; use of inhaled beta₂-agonist >2 times per week may indicate need for additional long-term control therapy
- Intensity of treatment will depend on severity of exacerbation

MILD PERSISTENT

Long-Term Control Medication

- **Anti-inflammatory:** either inhaled corticosteroid (low dose) or cromolyn or nedocromil or leukotriene modifiers (age 12)
- Sustained-release theophylline to serum concentration of 5-15 mcg/mL is an alternative, but not preferred, therapy

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist as needed for symptoms
- Use of short-acting inhaled beta₂-agonist on a daily basis or increasing use indicates the need for additional long-term control therapy

MODERATE PERSISTENT

Long-Term Control Medication

- **Anti-inflammatory:** inhaled corticosteroid (medium dose)
- OR
- Inhaled corticosteroid (low-medium dose) and add a long-acting bronchodilator, especially 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
 - Consider use of Leukotriene modifiers AND
 - **Long-acting bronchodilator:** either long-acting inhaled beta₂-agonist, sustained-release theophylline or long acting beta₂-agonist tablets

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist as needed for symptoms
- Use of short-acting inhaled beta₂-agonist on a daily basis or increasing use indicates the need for additional long-term control therapy

SEVERE PERSISTENT

Long-Term Control Medication

Daily medications:

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 (2mg/kg/day, generally do not exceed 60 mg per day)

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonists as needed for symptoms, not to exceed 3-4 times in 1 day
- Use of short-acting inhaled beta₂-agonists on a daily basis or increasing use indicates the need for additional long-term control therapy

MILD INTERMITTENT

Long-Term Control Medication

- None needed

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist by nebulizer or face mask and spacer OR oral beta₂-agonist
- Use of inhaled beta₂-agonist (greater than) 2 times per week may indicate need for additional long-term control therapy
- Intensity of treatment will depend on severity of exacerbation

MILD PERSISTENT

Long-Term Control Medication

- **Anti-inflammatory:** either cromolyn by nebulizer (preferred) or MDI or nedocromil (MDI only) tid-qid

OR

- Low dose inhaled corticosteroid with spacer/holding chamber and face mask

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist by nebulizer or face mask and spacer/holding chamber as needed for symptoms
- Use of short-acting inhaled beta₂-agonist on a daily basis or increasing use may indicate the need for additional long-term control therapy

MODERATE PERSISTENT

Long-Term Control Medication

- **Anti-inflammatory:** inhaled corticosteroid (medium dose) with spacer/holding chamber and face mask

Once control is established:

- Inhaled corticosteroid (medium dose) and nedocromil

OR

- Inhaled corticosteroid (medium dose) and add a long-acting bronchodilator (theophylline)

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist by nebulizer or face mask as needed for symptoms
- Use of short-acting inhaled beta₂-agonist on a daily basis or increasing use may indicate the need for additional long-term control therapy
- Consider anticholinergic. Ipratropium (Atrovent) should not be used as first-line therapy; should be added to beta₂-agonist therapy

SEVERE PERSISTENT

Long-Term Control Medication

Daily medications:

- **Anti-inflammatory:** inhaled corticosteroid (high dose) with spacer/holding chamber and face mask

If needed:

- Systemic corticosteroid 2mg/kg/day and reduce to lowest daily or alternate day dose that stabilizes symptoms

Quick Relief Medication

- **Short-acting bronchodilator:** inhaled beta₂-agonist by nebulizer or face mask and spacer/holding chamber as needed for symptoms, not to exceed 3 times in 1 day
- Use of short-acting inhaled beta₂-agonist on a daily basis or increasing use may indicate the need for additional long-term control therapy
- Consider anticholinergic. Ipratropium (Atrovent) should not be used as first-line therapy; should be added to beta₂-agonist therapy

Note: A rescue course of systemic corticosteroid (prednisolone) may be needed at any time regardless of classification.

Adapted from: NAEPP "Guidelines for the Diagnosis and Management of Asthma"