



Clinical Care Guidelines for: Asthma

OBJECTIVE

Guide the appropriate diagnosis and management of Asthma.

GUIDELINE

Asthma management to be provided in accordance with the current recommendations from The NHLBI: National Asthma Education and Prevention Program Guidelines which stress the assessment of asthma severity and control as a means of selecting and titrating treatment.

NHLBI: [Summary of Recommendations](#)

These guidelines have been adopted by the Indiana State Asthma Plan (A Strategic Plan for Addressing Asthma in Indiana).

Guidelines are included in the MDwise Provider Manual and posted on the MDwise Web site. They are available individually as requested.

ASTHMA DEFINITION AND PATHOPHYSIOLOGY

Asthma is a chronic inflammatory process affecting the airways.

Inflammatory cell infiltration contributes to airway hyperresponsiveness, airflow limitation, respiratory symptoms, and sometimes persistent changes in airway structure.

Onset usually occurs at an early age, and is often associated with risk factors such as atopic disease, recurrent wheezing, and family history of asthma.

MEDICATION OPTIONS

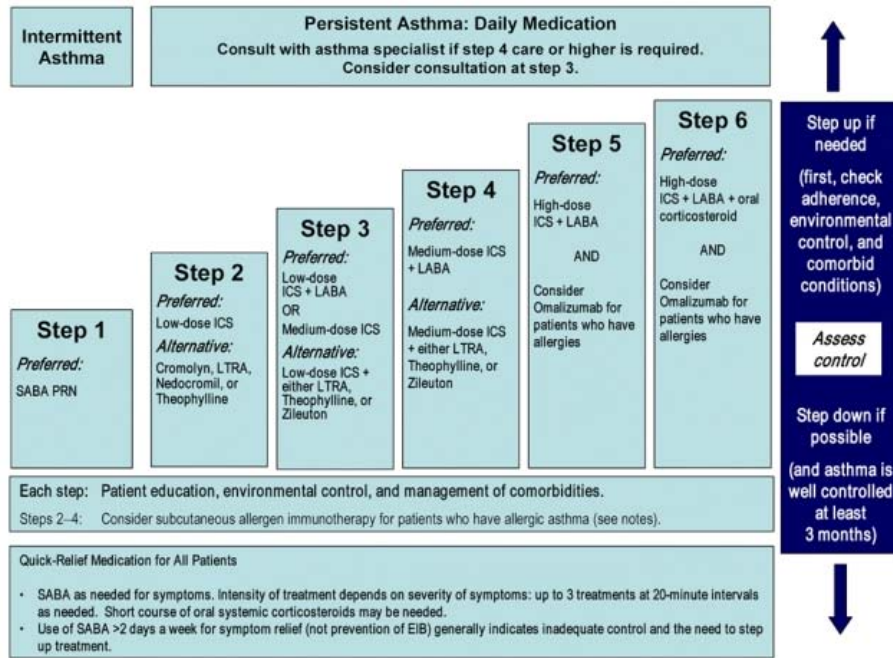
Long-term control medications are taken daily to achieve and maintain control of persistent asthma. The best options control inflammation.

- **Inhaled corticosteroids (ICS):** fluticasone, budesonide, beclomethasone, etc. Most potent and effective anti-inflammatory for long term control.
- **Leukotriene modifiers/leukotriene receptor antagonists (LTRA):** montelukast, zafirlukast, etc. Reduces bronchoconstriction caused by leukotriene pathway. Alternative therapy for long term control of mild asthma.
- **Long-Acting Beta-Agonists (LABA):** salmeterol, formoterol. Bronchodilators that relax smooth muscle. Used for long term control of asthma in combination with ICS; treatment of choice for combination with ICS in adults and children over age 12. Never to be used as monotherapy or rescue therapy.
- **Mast cell stabilizers:** cromolyn, nedocromil. Prevent release of inflammatory materials. Alternative medication for mild asthma. Used for long term control or preventative treatment before exercise or allergen exposure.
- **Omalizumab:** antibody drug that prevents binding of IgE. Adjunct therapy for long term control in patients age 12 or older who have allergy-induced asthma. Caution: risk of anaphylaxis with administration.
- **Theophylline:** a methylxanthine drug used for bronchodilation. Alternative adjunctive therapy with ICS for long term control. Blood monitoring necessary.

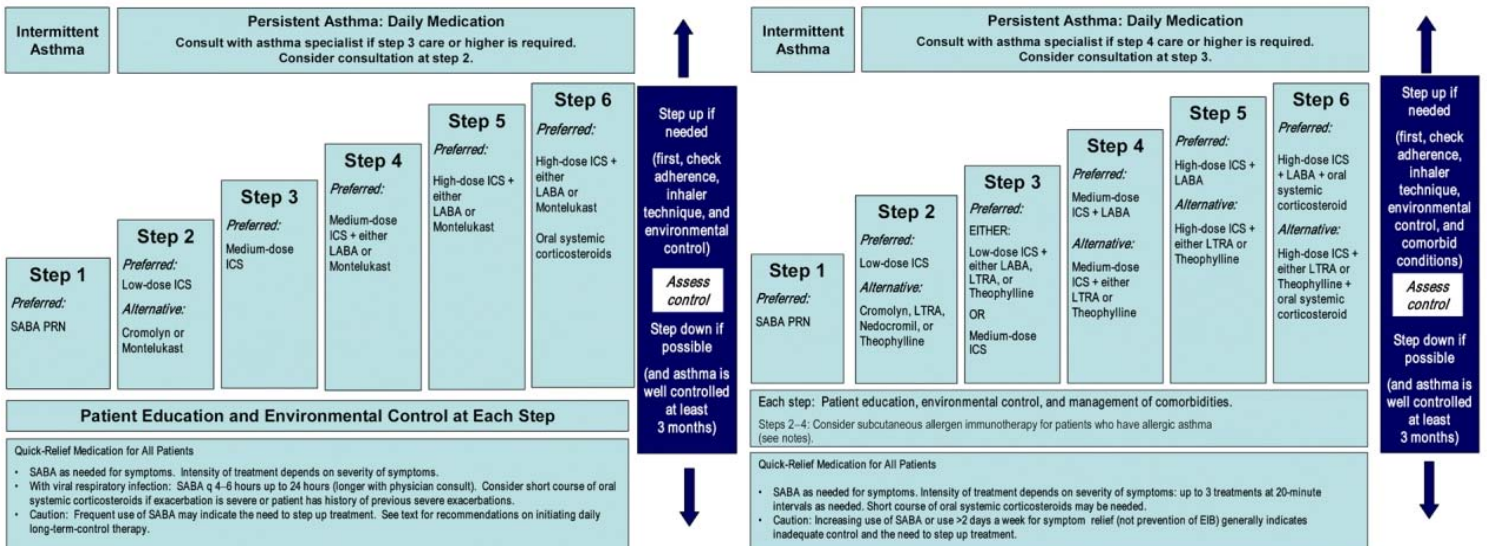
Quick-rescue medications are used to provide immediate relief of bronchoconstriction and asthma symptoms, or help relieve exacerbations.

- **Ipratropium:** short acting anti-cholinergic, decreases vagal tone of the airway. Used for short term relief/rescue therapy as alternative to SABA.
- **Short-Acting Beta-Agonists (SABA):** albuterol, levalbuterol, etc. Bronchodilators that relax smooth muscle. Treatment of choice for rescue therapy and prevention of exercise-induced bronchospasm.
- **Systemic corticosteroids:** prednisone, etc. Anti-inflammatory. Onset of action is >4 hours. Used for moderate to severe exacerbations in conjunction with SABAs.

TREATMENT ALGORITHM FOR ADULTS AND CHILDREN OVER 12 YEARS OLD



TREATMENT ALGORITHMS FOR CHILDREN



CHILDREN AGE 0-4

CHILDREN AGE 5-11

REFERENCES

- [NIH NAEPP: Expert Panel Report](#)
- [NIH NAEPP Expert Panel Summary Report](#)
- [NIH NAEPP Expert Panel Report 3 Guidelines for Diagnosis and Management of Asthma, Partners Putting Guidelines Into Action December 2008](#)
- [A Strategic Plan for Addressing Asthma in Indiana \(Indiana State Asthma Plan\)](#)
- [The Burden of Asthma in Indiana 2008](#)
- [Asthma Resource Guide, August 2008](#)
- [Global Initiative for Asthma \(GINA\)](#)
- [Key Clinical Activities for Quality Asthma Care, MMWR, March 28, 2003](#)