

evidence based guidelines

ASTHMA DIAGNOSIS & MANAGEMENT

DIAGNOSIS

- History of intermittent or chronic symptoms: coughing (including dry or nocturnal cough), wheezing, breathlessness, chest tightness/pressure/pain, poor performance/fatigue may indicate sleep deprivation from nocturnal symptoms.
- Exam: wheezing (present in association with symptoms and absent when symptoms resolve) or normal exam
- Demonstration of variable expiratory airflow limitation – spirometry when possible or peak expiratory flow (PEF) tests
- Documentation of reversible obstruction
- Consider other diagnoses: GERD, vocal cord dysfunction, allergic rhinitis

TESTING

- **PFT Screen Before & After Bronchodilator (PFS B&A)**
- **PFT Complete Before & After Bronchodilator (PFC B&A)** *required for adult referrals to Pulmonology*
- **Trial of Asthma Medication**
 - Symptoms suggestive of asthma who have normal or near-normal spirometry
 - Patients unable to perform spirometry due to age or other factors
- **PFT Screen Methacholine (PFS Meth)** –helpful if medication trial fails to improve other symptoms (must meet criteria)
- FeNO testing (exhaled nitrous oxide) – complementary assessment tool to determine whether patients who are on high-dose inhaled corticosteroids (ICS) or low-dose oral corticosteroids (OCS) have residual inflammation. Predictor of lung function decline and compliance of inhaled steroids. For Peds >5 years with uncertain diagnosis after history consider FeNO, available at [HDVCH Pulmonology](#). For adult patients FeNO testing is available at Corewell Lakewood Blvd. campus, fax order to 616-267-7272.
- Eosinophils - Elevated blood eosinophil levels can be a prognostic marker, suggesting a higher likelihood of therapeutic responsiveness to certain treatments, particularly inhaled corticosteroids (ICS) and type 2 inflammation.
- Environmental allergy testing - identify potential allergens that may trigger asthma symptoms.

TREATMENT CONSIDERATIONS

Start with “Step1” for infrequent (1-2 days/week) symptoms. Move to a higher step if symptoms become more frequent (especially nocturnal wakening). Attempt moving down a step if stable over 3 months.

Age Group	Step 1	Step 2	Step 3	Step 4	Step 5
0-5 years	SABA as needed Low-dose ICS for flares	Daily low-dose ICS	Daily med-dose ICS or low-dose ICS/LABA	Med-dose ICS + Montelukast Or Med-dose ICS/LABA	High-dose ICS + Mont. Or High-dose ICS/LABA
6 years - adult	ICS/LABA as needed	Daily low-dose ICS/LABA	Daily med-dose ICS/LABA	Daily high-dose ICS/LABA	Add Montelukast and/or LAMA

If having trouble with control – be sure to observe inhaler technique

Refer if: Unable to control symptoms with “Step 5”, OCS use $\geq 2x$ annually, other allergic conditions.

- [Chart of Medications by Device/Type](#), [Comparative Doses Chart](#) (ALA)
- **Recommend vaccine completion:** [Peds](#), [Adults](#) ([PneumoRecs Advisor](#))
- **Spacers** improve delivery of medication and reduce side effects for MDIs.
- Provide **Individualized AAP** (Asthma Action Plans) for [Peds*](#) & [Adults*](#) [Asthma Action Plan for SMART therapy](#)
*new **Orange Zone** added for Asthma to aim in predicting & preventing exacerbations before patient hits Red Zone