



VA/DoD Clinical Practice Guideline for the Management of Asthma in Children and Adults. - 2010

Diagnosis

The Diagnosis of ASTHMA should be considered if:

- RECURRENT symptoms of cough, wheeze, shortness of breath, or chest tightness.
- Symptoms occur or worsen at night, awakening from sleep.
- Symptoms occur or worsen due to factors/triggers commonly known to precipitate asthma.
- Alternative diagnoses have been considered such as Exercise Induced Bronchospasm (EIB), Gastroesophageal reflux disease (GERD), airway anomaly, foreign body, cystic fibrosis, vocal cord dysfunction, tuberculosis (TB), or COPD.

The Diagnosis of ASTHMA may be confirmed if:

- Spirometry demonstrates obstruction and/or reversibility by an increase in FEV1 of $\geq 12\%$ after bronchodilator (in all adults and children 5 years of age or older).
- Spirometry demonstrates variability on repeat testing at different times. If diagnosis is in doubt, consider specialist consultation.

IMPORTANT NOTE: Normal spirometry does not rule out asthma.

Spirometry should be readily available, to include appropriately trained personnel to perform and interpret testing properly

Assess Asthma Severity: Any of the following indicate PERSISTENT ASTHMA

- Daytime symptoms >2 days per week **OR**
- Awakens at night from asthma $>2X$ per month **OR**
- Limitation of activities, despite pretreatment for Exercise Induced Bronchospasm (EIB) **OR**
- Short-acting beta2-agonist (SABA) use for symptom control >2 days per week (not prevention of EIB) **OR**
- Oral corticosteroids: ≥ 2 bursts in 1 year (older than 5 years) or in 6 months (0-4 years*) **OR**
- Abnormal spirometry: FEV1 $<80\%$ predicted **OR** FEV1/FVC ratio $<$ normal range for age

FEV1/FVC Normal Range	
5-19 yrs	= 85%
20-39 yrs	= 80%
40-59 yrs	= 75%
60-80 yrs	= 70%

***NOTE:** For children age 0-4 years who had 4 or more episodes of wheezing during the previous year lasting >1 day, check risk factors for persistent asthma. Risk factors include either (1) one of the following: parental history of asthma, a physician diagnosis of atopic dermatitis, or evidence of sensitization to aeroallergens, or (2) two of the following: evidence of sensitization to foods, $>4\%$ peripheral blood eosinophilia, or wheezing apart from colds.

**Initiate treatment for Persistent Asthma:
Daily Inhaled Corticosteroids (Step 2 or higher)**

Assess response within 2-6 weeks
Following ED visit and/or admission reassess within 72 hr

Is Asthma Well Controlled?

1. Daytime symptoms ≤ 2 days per week **AND**
2. Awakens at night from asthma $\leq 2X$ per month **AND**
3. No limitation of activities **AND**
4. SABA use for symptom control (not prevention of EIB) ≤ 2 treatments per week **AND**
5. ≤ 1 burst oral corticosteroids per year **AND**
6. FEV1 $\geq 80\%$ predicted and FEV1/FVC normal for age **AND**
7. Asthma Control Test ≥ 20

FEV1/FVC:	
5-19 yrs	/ 85%
20-39 yrs	/ 80%
40-59 yrs	/ 75%
60-80 yrs	/ 70%

First, review adherence to medication, inhaler technique, environmental control, and co-morbid conditions.
If an alternative treatment option was used in a step, discontinue and use the preferred treatment.
If no issues identified, then:
Step up therapy.
Reassess in 2-6 weeks.
Continue to step up until well controlled.

Consider **step down** if **well controlled** for 3 consecutive months.
Reassess every 3 to 6 months.

Indications for **asthma specialist consultation** include:
Asthma is unresponsive to therapy; asthma is not well controlled within 3-6 months of treatment; life-threatening asthma exacerbation; hospitalization for asthma; required >2 bursts oral corticosteroids in 1 year; requires higher level step care; immunotherapy is being considered; other conditions complicate asthma or its diagnosis; need for additional education and guidance problems with adherence, or allergen avoidance; patient/parent requests consultation.

For All Patients with Asthma
Asthma Action Plan: At diagnosis; review and update at each visit
Medications

- **Short-Acting Beta2-Agonist (SABA):** (e.g., inhaled albuterol): 1) for quick relief every 4-6 hours as needed (see step 1), 2) pretreat with 2 puffs for exercise-induced bronchospasm (EIB) 5 minutes before exercise
- **Inhaled Corticosteroids (ICS):** Preferred therapy for all patients with persistent asthma
- **Oral Corticosteroids:** Consider burst for acute exacerbation
- **Correct** Inhaled Medication Device technique at every visit

Environmental Control Identify and avoid exposures such as tobacco smoke, pollens, molds, animal dander, cockroaches, and dust mites (Allergy testing recommended for anyone with persistent asthma who is exposed to perennial indoor allergens)
Follow-up Visit: Every 1-6 months
Asthma Control: Use tools such as ACT™ © to assess asthma control

Spirometry (Not During Exacerbation) At diagnosis and at least every 1-2 years starting at age 5 years

Preventive Health

- **Flu Vaccine:** Recommend annually
- **Smoking Cessation**
- **Coping with chronic disease counseling**