Asthma Management in Ages ≥12 Years

Based on the 2025 Global Initiative for Asthma (GINA) Report

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Asthma management is an individualized, continuous cycle of assessment, treatment/adjustment, and review

Assess
- Confirmation/evaluation of diagnosis, if necessary
- Symptom control & modifiable risk factors
- Comorbidities
- Patient goals & inhaler technique/adherence

Adjust
- Treat comorbidities & modifiable risk factors
- Utilize non-pharmacotherapy, if possible
- Add/adjust asthma medications
- Educate and train skills and proper use

Review
- Symptoms, exacerbations, side effects
- Comorbidities
- Lung function
- Patient satisfaction, quality of life
- Consider biomarkers

Repeat
- Assess
- Adjust
- Review

TRACK 1 Preferred Approach

- **Controller:** Follow steps
- **Reliever:** As-needed low-dose ICS-formoterol

	START HERE IF: Symptoms <3-5 days/week with normal/mildly reduced lung function	START HERE IF: Symptoms most days, **or** waking with asthma ≥1 time/week, **or** low lung function	START HERE IF: Daily symptoms or waking with asthma ≥1 time/week **and** low lung function or recent exacerbation	← A short course of OCS may be needed if initial asthma presentation is during an exacerbation
Controller →	**Steps 1 and 2** **As-needed only: low-dose ICS-formoterol (AIR)**	**Step 3** **Low-dose maintenance ICS-formoterol (MART)**	**Step 4** **Medium-dose maintenance ICS-formoterol (MART)**	**Step 5** **Refer for expert assessment** **Add-on LAMA** **Consider 3-6 months of high-dose maintenance ICS-formoterol (MART)** **Consider add-on anti-IgE, anti-IL5/5R, anti-IL4Rα, anti-TSLP therapy**
Reliever →	**Reliever:** As-needed low-dose ICS-formoterol (AIR)			

The alternative approach (Track 2) is reasonable when: preferred approach (Track 1) is not possible, patient is stable on their current therapy (e.g., no exacerbation within the past year), or alternate approach is preferred by the patient

TRACK 2 Alternative Approach

- **Controller:** Follow steps
- **Reliever:** As-needed ICS-SABA or as-needed SABA

	START HERE IF: Infrequent symptoms (e.g., ≤1-2 days/week)	START HERE IF: Symptoms <3-5 days/week with normal/mildly reduced lung function	START HERE IF: Symptoms most days, **or** waking with asthma ≥1 time/week, **or** low lung function	START HERE IF: Daily symptoms or waking with asthma ≥1 time/week **and** low lung function or recent exacerbation	← A short course of OCS may be needed if initial asthma presentation is during an exacerbation
Controller →	**Step 1** **Low-dose ICS whenever SABA is taken**	**Step 2** **Low-dose maintenance ICS**	**Step 3** **Low-dose maintenance ICS-LABA**	**Step 4** **Medium-dose maintenance ICS-LABA**	**Step 5** **Refer for expert assessment** **Add-on LAMA** **Consider 3-6 months of high-dose maintenance ICS-LABA** **Consider add-on anti-IgE, anti-IL5/5R, anti-IL4Rα, anti-TSLP therapy**
Reliever →	**Reliever:** As-needed ICS-SABA or as-needed SABA*				

**If considering SABA reliever, confirm that the patient is likely to be adherent to daily controller treatment*

Other Pharmacotherapy Options for either track

Note: Limited indications with less evidence for safety/efficacy; expert referral of patients with difficult-to-treat asthma should not be delayed by multiple different add-on trials

	Step 1 or 2	Step 3	Step 4	Step 5
Other Options →	• **Add HDM SLIT*** • **LTRA^** • **Daily low-dose ICS-LABA** as the initial maintenance controller • **Seasonal ICS** if seasonal allergic asthma only; start at symptom onset & continue for 4 weeks after season ends	• **Add HDM SLIT*** • **Medium-dose ICS** (i.e., ↑ from low-dose ICS; less effective than adding LABA) • **Add LTRA or SR theophylline** to low-dose ICS-containing regimen	• **Add LAMA** to low-dose ICS-LABA, if uncontrolled symptoms w/medium-/high-dose ICS-LABA • **Add HDM SLIT*** • **Add LTRA or SR theophylline** to medium-/high-dose ICS	• **Add azithromycin** to high-dose ICS-LABA, for adults • **Add low-dose OCS** (≤7.5 mg/day prednisone or equivalent; last-line for adults)

**SLIT may be considered if: sensitized to house dust mite, suboptimal asthma control with ICS, and FEV1 >70% predicted*
^When considering LTRA, advise patients/caregivers regarding the potential risk of neuropsychiatric adverse events

AIR: Anti-inflammatory reliever; **HDM SLIT:** house dust mite sublingual immunotherapy; **ICS:** inhaled corticosteroid; **IgE:** immunoglobulin E; **IL:** interleukin; **LABA:** long-acting beta-2 agonist; **LAMA:** long-acting muscarinic antagonist; **LTRA:** leukotriene receptor antagonist; **MART:** maintenance and reliever therapy; **OCS:** oral corticosteroids; **SABA:** short-acting beta-2 agonist; **SR:** sustained-release; **TSLP:** thymic stromal lymphopoietin

Last Updated 5/2025

Asthma Management in Ages ≤11 Years

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Asthma management is an individualized, continuous cycle of assessment, treatment/adjustment, and review

Assess
- Confirmation/evaluation of diagnosis, if necessary
- Symptom control & modifiable risk factors
- Comorbidities
- Patient goals & inhaler technique/adherence

Adjust
- Treat comorbidities & modifiable risk factors
- Utilize non-pharmacotherapy, if possible
- Add/adjust asthma medications
- Educate and train skills and proper use

Review
- Symptoms, exacerbations, side effects
- Comorbidities
- Lung function
- Patient satisfaction, quality of life

Repeat
- Assess
- Adjust
- Review

Children ages 6 to 11 years

- **Controller:** Follow steps
- **Reliever:** As-needed SABA or low-dose ICS-formoterol for MART (Steps 3 & 4)

	Step 1	Step 2	Step 3	Step 4	Step 5
START HERE IF:	Symptoms <2 days/week	Symptoms 2-5 days/week	Symptoms most days, **or** waking with asthma ≥1 time/week	Symptoms most days, waking with asthma ≥1 time/week, **and** low lung function	
Preferred Controller →	**Low-dose ICS whenever SABA is taken**	**Daily low-dose ICS** (use child dose ranges)	**Low-dose ICS-LABA, or medium-dose ICS, or very low-dose ICS-formoterol (MART)**	**Consider referral for expert advice** **Medium-dose ICS-LABA, or low-dose ICS-formoterol (MART)**	**Refer for expert assessment** **Consider higher-dose ICS-LABA or add-on therapy (e.g., LAMA, anti-IgE, anti-IL5, anti-IL4Rα)**
Other Controller → Options		Daily LTRA* or low-dose ICS whenever SABA is taken	Low-dose ICS + LTRA*	Add tiotropium or add LTRA*	Consider add-on low-dose OCS (**last resort**)
Reliever →	**Reliever:** As-needed SABA or ICS-formoterol for MART as above in Steps **3 & 4**				

← A short course of OCS may be needed if initial asthma presentation is during an exacerbation

*When considering LTRA, advise patients/caregivers regarding the potential risk of neuropsychiatric adverse events

Children ages ≤5 years

- **Controller:** Follow steps
- **Reliever:** As-needed SABA

Note on inhaler choice:
Young children can have limited dexterity and coordination. Because of this, spacers are especially important for patients in this age group who are prescribed pMDIs.

	Step 1	Step 2	Step 3	Step 4
CONSIDER THIS STEP IF:	Infrequent acute wheezing (e.g., viral) and no or few interval symptoms	Asthma symptoms are not well-controlled (≥1 of the following): • Daytime asthma symptoms ≥2 times/week • Asthma-related night waking or night coughing • SABA reliever needed ≥2 times/week • Activity limitations due to asthma **OR** ≥1 severe exacerbation in the past year	Before stepping up, check for alternate diagnosis, confirm proper inhaler use, review adherence & exposures Asthma symptoms not well controlled on low-dose ICS	Before stepping up, check for alternate diagnosis, confirm proper inhaler use, review adherence & exposures Asthma not well controlled on doubled dose of initial low-dose ICS
Preferred Controller →	*Not enough evidence for daily controller*	**Daily low-dose ICS** (use low ICS dose range approximations for children 5 years and younger)	**Double low-dose ICS**	**Refer for specialist assessment** **Continue controller**
Other Controller → Options	Consider intermittent short ICS course at onset of viral illness	Daily LTRA* or intermittent short course of ICS at onset of respiratory illness	Consider specialist referral	Best treatment not established; options **specialist** may consider include add-on LAMA, add-on LTRA, or ICS-LABA
Reliever →	**Reliever:** As-needed SABA			

*When considering LTRA, advise patients/caregivers regarding the potential risk of neuropsychiatric adverse events

ICS: inhaled corticosteroid; **LABA:** long-acting beta-2 agonist; **LAMA:** long-acting muscarinic antagonist; **LTRA:** leukotriene receptor antagonist; **MART:** maintenance and reliever therapy; **OCS:** oral corticosteroids; **pMDI:** pressurized metered-dose inhaler; **SABA:** short-acting beta-2 agonist

Last Updated 5/2025