Asthma Stepwise Formulary FOR DAILY CONTROL MEDICATION

**abbreviations:**
- **ICS:** inhaled corticosteroid
- **LABA:** long-acting beta₂-agonist
- **LTRA:** leukotriene receptor antagonist
- **SABA:** short-acting beta₂-agonist

**Consult with asthma specialist for steps 3 and above**

**step 1**
- **NO DAILY CONTROL MEDICATION.**

**step 2**
- **0-4 YRS**
  - **LOW-DOSE ICS** (mark choice):
    - Fluticasone (Flovent) MDI: 44 mcg: 1-2 puffs twice daily
    - Budesonide (Pulmicort) DPI: 90 mcg: 1 inhalation twice daily
    - Budesonide (Pulmicort) respules: 0.25 mg: 1 respule twice daily

**step 3**
- **0-4 YRS**
  - **MEDIUM-DOSE ICS** (mark choice):
    - Fluticasone (Flovent) MDI: 110 mcg: 1 puff twice daily
    - Budesonide (Pulmicort) respules: 0.50 mg: 1 respule twice daily

**step 4**
  - **MEDIUM-DOSE ICS** (per step 3; mark a choice there):
    - Fluticasone (Flovent) MDI: 110 mcg: 1 puff twice daily
    - Budesonide (Pulmicort) respules: 0.50 mg: 1 respule twice daily

**step 5**
- **0-4 YRS**
  - **MEDIUM-DOSE ICS** (per step 3; mark a choice there):
    - Fluticasone (Flovent) MDI: 110 mcg: 2 puffs twice daily
    - Budesonide (Pulmicort) respules: 1.0 mg: 1 respule twice daily

- **5-11 YRS**
  - **LABA** (per step 3)
    - MEDIUM-DOSE ICS (mark choice):
      - Fluticasone (Flovent) MDI: 110 mcg: 1 puff twice daily
      - Beclomethasone (Qvar) MDI: 80 mcg: 1-2 puffs twice daily
      - Budesonide (Pulmicort) DPI: 180 mcg: 1-2 inhalations twice daily
      - Budesonide (Pulmicort) respules: 0.50 mg: 1 respule twice daily
      - Mometasone (Asmanex) DPI: 220 mcg: 1 inhalation once daily

- **12 YRS to ADULT**
  - **LOW-DOSE ICS** (mark choice):
    - Fluticasone (Flovent) MDI: 44 mcg: 1-2 puffs twice daily
    - Budesonide (Pulmicort) DPI: 180 mcg: 1 inhalation twice daily
    - Mometasone (Asmanex) DPI: 220 mcg: 1 inhalation once daily

**step 6**
- **0-4 YRS**
  - **HIGH-DOSE ICS** (per step 5)
    - Fluticasone (Flovent) MDI: 110 mcg: 2 puffs twice daily
    - Budesonide (Pulmicort) respules: 1.0 mg: 1 respule twice daily

- **5-11 YRS**
  - **LABA** (per step 3)
    - MEDIUM-DOSE ICS (per step 4; mark a choice there):
      - Fluticasone (Flovent) MDI: 110 mcg: 2 puffs twice daily
      - Beclomethasone (Qvar) MDI: 80 mcg: 2-3 puffs twice daily
      - Budesonide (Pulmicort) DPI: 180 mcg: 3 inhalations twice daily
      - Budesonide (Pulmicort) respules: 1.0 mg: 1 respule twice daily
      - Mometasone (Asmanex) DPI: 220 mcg: 2 inhalations once daily

- **12 YRS to ADULT**
  - **LABA** (per step 4)
    - MEDIUM-DOSE ICS (per step 5; mark a choice there):
      - Fluticasone (Flovent) MDI: 110 mcg: 1 puff twice daily
      - Beclomethasone (Qvar) MDI: 80 mcg: 2-3 puffs twice daily
      - Budesonide (Pulmicort) DPI: 180 mcg: 3-4 inhalations twice daily
      - Mometasone (Asmanex) DPI: 220 mcg: 2-3 inhalations once daily

**Check ICE before stepping up therapy; also, if alternative medication therapy is used and response is inadequate, switch to preferred treatment** before stepping up.

**For a comprehensive summary of evidence-based guidelines for asthma diagnosis and treatment, see Intermountain’s Asthma Care Process Model (CPM) online at intermountainhealthcare.org/clinicalprograms**
### Asthma Control tables.

The level of asthma control is based on the most severe impairment or risk category. ALL components — including spirometry — are important for assessing control. See the Asthma Care Process Model (CPM) for a full summary of evidence-based guidelines: intermountainhealthcare.org/clinicalprograms

#### Patients age 0 to 4 years

<table>
<thead>
<tr>
<th>Control components</th>
<th>Well controlled</th>
<th>Not well controlled</th>
<th>Very poorly controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>2 days/week</td>
<td>&gt;2 days/week</td>
<td>Throughout the day</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>2 times/month</td>
<td>&gt;3 times/month</td>
<td>&gt;3 times/month</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
<td>Some limitation</td>
<td>Extremely limited</td>
</tr>
<tr>
<td>SABA use for ICS (NOT ICS prevention)</td>
<td>2 days/week</td>
<td>&gt;2 days/week</td>
<td>Several times/day</td>
</tr>
</tbody>
</table>

### Risk

- **Recommended actions based on level of control**
  - Maintain current medication.
  - Reinforce education and trigger management.
  - Follow-up every 1 to 6 months.
  - Consider stepping down medication therapy at conclusion of winter viral season if well controlled for at least 3 months.

- **Stepwise medication therapy for asthma**
  - **Step 1** No oral controller medication
    - Consider consultation with asthma specialist at step 3 and above.
  - **Step 2** Low-dose ICS: Alternatives: LABA, LTRA, nedocromil, or zileuton
    - SABA p.r.n for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - Consult with asthma specialist at step 3 and above.
  - **Step 3** Medium-dose ICS: Alternatives: High-dose ICS + either LTRA or LABA
    - SABA mm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - Consult with asthma specialist at step 3 and above.
  - **Step 4** High-dose ICS: Alternatives: High-dose ICS + either LTRA or LABA
    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - Consult with asthma specialist at step 3 and above.

- **Step 5** High-dose ICS: **LTRA** or **LABA** or oral systemic steroids
  - SABA pm for quick relief
  - SABA pm for quick relief
  - SABA pm for quick relief
  - SABA pm for quick relief
  - Consult with asthma specialist at step 3 and above.

- **Step 6** Consult with asthma specialist for step 3 and above.

### Patients age 5 to 11 years

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<thead>
<tr>
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<th>Not well controlled</th>
<th>Very poorly controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>2 days/week but not more than once each day</td>
<td>&gt;2 days/week or multiple times on &gt;2 days/week</td>
<td>Throughout the day</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>1 time/month</td>
<td>&gt;2 times/month</td>
<td>&gt;3 times/month</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
<td>Some limitation</td>
<td>Extremely limited</td>
</tr>
<tr>
<td>SABA use for ICS (NOT ICS prevention)</td>
<td>&gt;2 days/week</td>
<td>&gt;2 days/week</td>
<td>Several times/day</td>
</tr>
<tr>
<td>Lung function/spirometry</td>
<td>FEV1/FVC &lt;60% predicted/personal best</td>
<td>FEV1/FVC &lt;60% predicted/personal best</td>
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- **Stepwise medication therapy for asthma**
  - **Step 1** No oral controller medication
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  - **Step 2** Low-dose ICS: Alternatives: LABA, LTRA, nedocromil, or zileuton
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    - SABA pm for quick relief
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    - Consult with asthma specialist at step 3 and above.

- **Step 5** Consult with asthma specialist for step 3 and above.

### Patients age 12 years to adult

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<tr>
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<td>2 days/week</td>
<td>&gt;2 days/week</td>
<td>Throughout the day</td>
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### Risk

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    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - SABA pm for quick relief
    - Consult with asthma specialist at step 3 and above.

- **Step 5** Consult with asthma specialist for step 3 and above.

### Step for daily doses of ICS for each age group, see the back of this QuickGuide.

### Abbreviations:
- ICS: inhaled corticosteroid
- LABA: long-acting beta-agonist
- LTRA: leukotriene receptor antagonist
- SABA: short-acting beta-agonist

### Medication side effects

The level of intensity does not correlate to specific levels of control but should be considered in the overall assessment of risk.

- **Some limitation**
  - FEV1 <80% predicted
  - FEV1/FVC <75%
  - 2 days/week but not more than once each day
  - Interference with normal activity
  - Consider consultation with asthma specialist.

- **Extremely limited**
  - FEV1 <60% predicted
  - FEV1/FVC <60%
  - 2 days/week
  - Interference with normal activity
  - Consider consultation with asthma specialist.

- **Very poorly controlled**
  - FEV1 <40% predicted
  - FEV1/FVC <40%
  - 2 days/week
  - Interference with normal activity
  - Consider consultation with asthma specialist.