Below is a list of inhalers that are commonly used for the treatment of ambulatory asthma (Table). The class of topical inhaled corticosteroids are anti-inflammatory agents and are considered first-line therapy. β₂-Selective agonists are bronchodilating agents and are the most effective agents for acute bronchospasm and exercise-induced asthma. β₂-Agonists have no anti-inflammatory properties. Cromolyn sodium and nedocromil sodium are effective inhaled agents that have anti-inflammatory activity but no bronchodilating effects. Ipratropium bromide is a weak bronchodilator that may be used as a supplement to a β-agonist.

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Bowman Gray School of Medicine
Winston-Salem, NC


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**Metered Dose Inhalers for Asthma**

<table>
<thead>
<tr>
<th>Asthma Drug*</th>
<th>Adult Regimen and Average Dosing</th>
<th>Cost per Unit,$† (Metered Dose per Canister, U)</th>
<th>Cost per Day, $† (Regimen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhaled corticosteroid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beclomethasone dipropionate (Beclovent and Vanceril)</td>
<td>2 inhalations, 3 or 4 times daily, every 6-8 h</td>
<td>30.01 (200)</td>
<td>0.90 (6 inhalations per day)</td>
</tr>
<tr>
<td>Triamcinolone acetonide (Azmacort)</td>
<td>2 inhalations, 3 or 4 times daily, every 6-8 h</td>
<td>41.63 (240)</td>
<td>1.04 (6 inhalations per day)</td>
</tr>
<tr>
<td>Flunisolide (Aerobid)</td>
<td>2 inhalations, every 12 h</td>
<td>47.59 (100)</td>
<td>1.90 (4 inhalations per day)</td>
</tr>
<tr>
<td>β₂-Agonists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albuterol sulfate (Ventolin and Proventil)</td>
<td>1-2 inhalations, every 4-6 h</td>
<td>23.05 (200)</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27.44 (200)</td>
<td>(8 inhalations per day)</td>
</tr>
<tr>
<td>Terbutaline sulfate (Brethaire)</td>
<td>2 inhalations, every 4-6 h</td>
<td>20.75 (300)</td>
<td>0.55 (8 inhalations per day)</td>
</tr>
<tr>
<td>Metaproterenol sulfate (Alupent)</td>
<td>2-3 inhalations, every 3-4 h</td>
<td>20.02 (100)</td>
<td>1.20 (12 inhalations per day)</td>
</tr>
<tr>
<td>Pirbuterol acetate (Maxair)</td>
<td>2 inhalations, every 4-6 h</td>
<td>23.04 (300)</td>
<td>0.61 (8 inhalations per day)</td>
</tr>
<tr>
<td>Biloferol mesylate (Toralate)</td>
<td>2 inhalations, every 8 h</td>
<td>34.28 (300)</td>
<td>0.69 (6 inhalations per day)</td>
</tr>
<tr>
<td>Salmeterol (Serevent)‡</td>
<td>2 inhalations, every 12 h</td>
<td>47.95 (120)</td>
<td>1.60 (4 inhalations per day)</td>
</tr>
<tr>
<td>Other agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cromolyn sodium (intal aerosol spray)</td>
<td>2 inhalations, every 6 h</td>
<td>50.43 (200)</td>
<td>2.42 (8 inhalations per day)</td>
</tr>
<tr>
<td>Nedocromil sodium (Tilade)</td>
<td>2 inhalations, every 6 h</td>
<td>25.28 (112)</td>
<td>1.80 (8 inhalations per day)</td>
</tr>
<tr>
<td>Ipratropium bromide (Atrovent)</td>
<td>2 inhalations, every 6 h</td>
<td>28.14 (200)</td>
<td>1.13 (8 inhalations per day)</td>
</tr>
</tbody>
</table>

*Brand names are given in parentheses.
†Prices are based on wholesale prices from 1995 Red Book.
‡Not for short-term use.

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**Clinical Pearl**

Eliciting Achilles tendon reflex is more reproducible in the elderly when plantar strike rather than traditional tendon strike is used. (Lancet. 1994;344:1619-1620.)
Accepted for publication April 24, 1995.

Reprint requests to EPN/240, National Cancer Institute, 9000 Rockville Pike, Bethesda, MD 20892 (Dr Chu).

REFERENCES


Clinical Pearl

Two aspirin in 15 mL of chloroform applied topically as needed controls pain in patients with herpes zoster or postherpetic neuralgia when used an average of four times a day. (Arch Neurol. 1993;50:10-46.)
IN HYPERTENSION OR ANGINA

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FOR EFFECTIVE
24-HOUR CONTROL

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- A side-effect discontinuation rate comparable to placebo in both hypertension and angina trials.
- Most commonly reported side effects are headache (5.4%), bradycardia (3.3%), first-degree AV block (3.3%), dizziness (3.0%), edema (2.6%), ECG abnormality (1.6%), and asthenia (1.8%).

Please see brief summary of prescribing information on adjacent page.