4.13: Beta-2 Agonists

Albuterol is a Beta-2 agonist.

**Mechanism of Action:** Albuterol is a selective Beta-2 agonist primarily used to cause bronchodilation in the lungs. However, Beta-2 receptors in the heart can also be stimulated, causing cardiovascular side effects.

**Indications:** Albuterol is commonly used to treat asthma and chronic obstructive pulmonary disease (COPD).

**Nursing Considerations:** Monitor respiratory rate, oxygen saturation, and lungs sounds before and after administration. If more than one inhalation is ordered, wait at least 2 minutes between inhalations. Use a spacer device to improve drug delivery, if appropriate.

**Adverse Effects:** Albuterol can cause hypersensitivity or paradoxical bronchospasm. It can also produce a clinically significant cardiovascular effect in some patients by causing increased heart rate and blood pressure, which may require the drug to be discontinued.

**Patient Teaching & Education:** Patients should remain compliant with the medication dosing regimen. Individuals should contact their healthcare provider if they experience ongoing shortness of breath unrelieved with medication therapy. If using an inhaler, the patient should be sure to prime the inhaler prior to administering the dose of medication. The medication can cause an unusual taste in the mouth, so patients should rinse their mouth with water after each use.\[1\]

Now let’s take a closer look at the medication grid on albuterol in Table 4.13.\[2\]
## Table 4:13 Albuterol Medication Grid

<table>
<thead>
<tr>
<th>Class/Subclass</th>
<th>Prototype/Generic</th>
<th>Administration Considerations</th>
<th>Therapeutic Effects</th>
<th>Side/Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta-2 agonist</td>
<td>albuterol</td>
<td>If more than 1 inhalation is ordered, wait at least 2 minutes between inhalations</td>
<td>Bronchodilation in asthma or COPD</td>
<td>Hypersensitivity Can cause paradoxical bronchospasm Report significantly increased heart rate and blood pressure, which may require the drug to be discontinued</td>
</tr>
</tbody>
</table>

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