

## Transition from CFC to HFA Albuterol Inhalers: Getting Ready for January, 2009

In response to the Montreal Protocol on Substances that Deplete the Ozone Layer, a 1987 treaty, the FDA has ruled that the sale of single ingredient albuterol inhalers containing chlorofluorocarbons (CFCs) must end on December 31, 2008. Beginning January 1, 2009, pharmacists may only dispense albuterol inhalers using hydrofluoroalkanes (HFAs) as the propellant. To date, four such inhalers have been approved and marketed in the United States (see table below). There are a number of important differences between CFC and HFA inhalers which pharmacists must understand in order to properly counsel their patients as they switch products over the next six months. HFA inhalers have a softer and warmer spray than CFC products, and patients may notice this difference and fear their inhaler is not working. Pharmacists should prepare patients for this difference when counseling them on their new inhalers. HFA inhalers are more likely to clog, due to the chemical nature of the propellant, and therefore the plastic




mouthpiece must be washed in warm water at least once a week (see cleaning instructions below). Priming the inhaler is more important to proper functioning than with CFC inhalers, and different HFA products vary in their recommendations (see table below). Finally, all HFA albuterol inhalers are rated **BX** by the FDA, and therefore have no generic substitutes, meaning the cost for patients will be higher than with their generic CFC inhalers. All four manufacturers of HFA albuterol inhalers offer patient assistance programs to help those who cannot afford the higher cost. Pharmacists should direct these patients to call the specific program for their inhaler or the Partnership for Prescription Assistance ([www.pparx.org](http://www.pparx.org) or 1-866-4PPA-NOW):

- Proventil HFA patients call..... 1-800-656-9485**
- Ventolin HFA patients call..... 1-866-475-3678**
- ProAir HFA patients call..... 1-877-254-1039**
- Xopenex HFA patients call..... 1-888-878-6266**

### INSTRUCTIONS FOR WEEKLY CLEANING OF HFA ALBUTEROL INHALERS

- 1. Remove the canister and mouthpiece cap from the mouthpiece**
- 2. Wash the mouthpiece through the top and bottom with warm running water for at least 30 seconds**
- 3. Shake off excess water and allow the mouthpiece to air dry (this can be done overnight, for example)**
- 4. If you need to use the inhaler before the mouthpiece is completely dry, shake off excess water, replace the canister, shake well, test spray twice into the air to remove most of the remaining water, and then take dose as prescribed**

A.W.P. = Average Wholesale Price. Source: Redbook; May, 2008 Edition

PRODUCT (Active Ingredient)	FDA INDICATION	AGE RANGE	WHEN TO PRIME	NUMBER OF SPRAYS TO PRIME	A.W.P.	PRODUCT PHOTO
<b>PROVENTIL HFA</b> (Albuterol Sulfate 90 mcg/spray)	1. Treatment or prevention of bronchospasm in reversible obstructive airway disease 2. Prevention of exercise-induced bronchospasm	Adults & children 4 years of age and older	1. Before initial use 2. When not used for more than 2 weeks	<b>4</b>	<b>\$42.20</b>	
<b>VENTOLIN HFA</b> (Albuterol Sulfate 90 mcg/spray)	1. Treatment or prevention of bronchospasm in reversible obstructive airway disease 2. Prevention of exercise-induced bronchospasm	Adults & children 4 years of age and older	1. Before initial use 2. When not used for more than 2 weeks 3. If dropped	<b>4</b>	<b>\$36.12</b>	
<b>PROAIR HFA</b> (Albuterol Sulfate 90 mcg/spray)	1. Treatment or prevention of bronchospasm in reversible obstructive airway disease 2. Prevention of exercise-induced bronchospasm	Adults & children 4 years of age and older	1. Before initial use 2. When not used for more than 2 weeks	<b>3</b>	<b>\$36.72</b>	
<b>XOPENEX HFA</b> (Levalbuterol Tartrate 45mcg/spray)	Treatment or prevention of bronchospasm in reversible obstructive airway disease	Adults & children 4 years of age and older	1. Before initial use 2. When not used for more than 3 days	<b>4</b>	<b>\$52.49</b>	