

Old CFC inhalers vs. New HFA inhalers

New Albuterol HFA metered-dose inhalers (MDIs)

Brand Name	Active Ingredient
Ventolin	<i>albuterol</i>
ProAir	<i>albuterol</i>
Proventil	<i>albuterol</i>

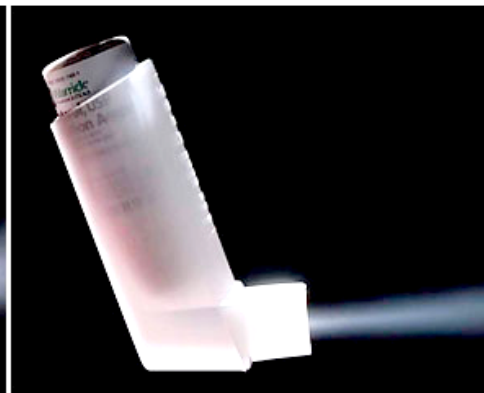
The albuterol HFA inhaler is not a new drug, but a new formulation of the previously existing product. The new formulation does not contain the chlorofluorocarbon (CFC) propellant like the older albuterol inhalers, which can be harmful to the ozone layer. This is in accordance with the treaty to protect the earth's ozone layer mandated in 2005 that was put into effect by the U.S. Federal Government in the 1987. The new propellant used is called hydrofluoroalkane (HFA).

With the new HFA formula, you may notice a slight difference in taste and lower spray force with a softer, mist-like spray. Since the spray force is less intense (not as quick), the sensation feels warmer with a distinct taste.

new HFA-MDI



old CFC-MDI



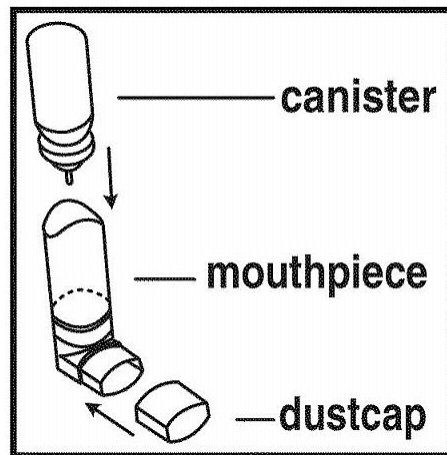
A slower inhale is needed with the HFA inhalers. So remember to take slow-deep breaths while you activate the inhaler to release the medication. It is necessary to allow 30 seconds between puffs (if directed by the doctor for multiple puffs) and hold your breath for 10 seconds, if possible, after each puff.

The HFA inhalers are affected by moisture (ex- humid air &/or breath) and therefore will need cleaning more often & may clog easier. Appropriate storage is also required. It is best to store your inhaler in a clean, dry space where the temperature is not likely to fluctuate (not in a bathroom or a vehicle).

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How to use & care for you new HFA inhaler:

- *Shake well for 2-3 seconds before each use
 - * Be sure to prime the inhaler before the first use and also if it has not been used for more that 2 weeks. In order to prime the inhaler, you simply spray 2-4 doses into the air to ensure the inhaler is working properly and is ready for use.
 - * Clean the inhaler each week for maximum efficacy:
 - remove metal canister & cap
 - rinse only the mouthpiece with warm water
 - shake-off excess water
 - air dry, completely
 - replace metal canister into mouthpiece
- **After cleaning, be sure to prime the inhaler before using.*



If you feel the new formulation of albuterol, the short-acting “emergency” inhaler, is not working as well as your previous inhaler:

1. Review proper technique. The appropriate technique is key to getting the adequate amount of medication in order for it to work properly.
2. A peak flow meter may be needed to evaluate the effectiveness of the inhaler to treat your asthma.
3. Also, long-acting “controller” medications may be necessary to better control your asthma and can result in a decreased need of your “emergency” inhaler.

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There are differences among the three current albuterol “emergency” HFA inhalers that may affect why a patient prefers one over another.

Two of the three HFA inhalers, ProAir & Proventil, contain very small amounts of ethanol (a.k.a. alcohol). This may be an issue for patients who wish to abstain from alcohol.

Ventolin HFA has a dose counter letting patients know how many doses are remaining. It is also packaged in an airtight pouch within the dispensing box. Once the pouch is opened it is only good for 2 months. The other two inhalers do not have this short expiration date.

Another major difference between the old CFC inhalers and the new HFA inhalers that patients will notice immediately is the cost. The HFA inhalers are not currently available generically and therefore cost more than the old CFC inhalers. A generic for the newer HFA inhalers will become available after 2012. Some of the manufacturers offer discounts and coupons, ask your pharmacist for more information.

Casey Jones, PharmD Candidate 2009

References

1. *Asthma & Allergy Foundation of America:*
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<http://www.fda.gov/cder/consumerinfo/metered-dose-inhaler-2pge.htm>
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