

Table 1. Selected Variables Affecting pMDI Performance

| Product (n) ^a | Active Agent | Formulation | Priming | Manufacturer Exhaling Instruction | Wait Time Between Doses | Cleaning ^b | End-of-Life Number of Doses ^c |
|--------------------------------|---|------------------------------|---|-----------------------------------|-------------------------|------------------------------------|--|
| ProAir HFA (8) ^d | Albuterol sulfate | pMDI suspension | Initial or >14 days: 3× | As much as possible | 1 min | 30 s/warm water/weekly | 200 dc (±) |
| Proventil HFA (4) ^d | Albuterol sulfate | pMDI suspension | Initial or >14 days: 4× | As much as possible | 1 min | 30 s/warm water/weekly | 200 |
| Ventolin HFA (14) ^d | Albuterol sulfate | pMDI suspension | Initial, dropped, or >14 days: 4× | As much as you can | 1 min | 30 s/warm water/weekly | 60/200 dc (+) |
| Albuterol [Rebel, Armstrong] | Albuterol | pMDI suspension | Test spray initially and after a prolonged period: 1× | As much as possible | 1 min | 30 s/warm water/daily | 200 |
| Albuterol [Warrick] | Albuterol | pMDI suspension | Initial: 4×; ≥4 days: 2× | As much as possible | 1 min | 30 s/warm water/daily | 80/200 |
| Xopenex HFA (2) | Levalbuterol tartrate | pMDI suspension | Initial or >3 days: 4× | As much as you can | 1 min | 30 s/warm water/weekly | 80/200 |
| Qvar (5) | Beclomethasone dipropionate | pMDI solution | Initial or >10 days: 2× | As fully as is comfortable | No delay | Dry cloth/weekly | 50/100/120 dc (±) |
| Alvesco (2) | Ciclesonide | pMDI solution | Initial or >10 days: 3× | As fully as is comfortable | No delay | Dry cloth/weekly | 60 dc (+) |
| Aerospan (2) | Flunisolide | pMDI solution | Initial or >14 days: 2× | Breathe out normally | 20 s | No cleaning required | 60/120 |
| Flovent (4) | Fluticasone propionate | pMDI suspension | Initial, dropped, or > 7 days: 1× | As much as you can | 30 s | Damp tissue weekly + swab atomizer | 120 dc (+) |
| Asmanex HFA (1) | Mometasone furoate | pMDI suspension | Initial or >5 days: 4× | As fully as is comfortable | 30 s | Dry cloth/weekly | 120 dc (+) |
| Advair HFA (1) | Fluticasone propionate/salmeterol xinafoate | pMDI suspension | Initial: 4×; dropped or >28 days: 2× | As much as you can | 30 s | Damp tissue weekly + swab atomizer | 60/120 dc (+) |
| Dulera (1) | Mometasone furoate/formoterol fumarate | pMDI suspension | Initial or >5 days: 4× | As fully as is comfortable | 30 s | Dry cloth/weekly | 60/120 dc (+) |
| Symbicort (1) | Budesonide/formoterol fumarate | pMDI solution and suspension | Initial, dropped, or >7 days: 2× | Breathe out fully | No delay | Dry cloth/weekly | 60/120 dc (+) |

^a(n) indicates the number of products identified. ^bCleaning schedules reported as duration in s/recommended conditions/frequency. ^cThe abbreviation "dc" signifies that some (±) or all (+) actuators supplied with the product have a dose counter. ^d The package insert identifies this brand-name formulation as the delivered medication.

HFA: hydrofluoroalkane; min: minute; pMDI: pressurized metered-dose inhaler; s: seconds.

Source: Reference 14.