

Ins and Outs of Holding Chambers

Many medical care professionals and patients confuse spacers and valved holding chambers. What's the difference? Plenty!

A spacer is any tube that attaches to your MDI to direct the medication spray toward your mouth. However, when you use an open tube, you still need to coordinate spraying the dose and inhaling; there is no mechanism for holding the aerosol in the tube.

A valved holding chamber (VHC) takes inhalation technology a few steps further:

- A specially designed chamber enables fine particles of medication to remain suspended in the chamber for several seconds – up to 8 or 9 if it's an anti-static chamber – so you can inhale when you're ready.

- A one-way valve prevents you from exhaling into the chamber.
- The valve helps reduce the amount of medication that lands in your mouth or throat by pulling out particles that are too big to go into your lungs.
- Optional mask attachments allow young children and others to breathe naturally and inhale the medication gradually.

In addition to letting you breathe at your own pace, a valved holding chamber may also help more medication get deep into your lungs by reducing the size of the droplets. According to Professor Myrna Dolovich, head of the Firestone Research Aerosol Laboratory at McMaster University in Hamilton, Ontario, Canada, "As the propellant partially evaporates in the chamber, the aerosol

droplets get smaller, potentially increasing the percentage of fine particles that can be inhaled by the patient. This change, however, varies according to the VHC being used and the drug in the MDI. The overall effect could be an increase in the amount of medication that gets into your lungs. Studies done in the laboratory using models have shown increases up to 25 percent."

National asthma treatment guidelines recommend valved holding chambers over spacers because research has proven that they work and help patients take their medication more easily. They are essential for very young children, handicapped and elderly people – and beneficial for anyone whose timing and inhalation reflexes are a split second too slow when activating the inhaler (and that includes most of us!).

Understanding the Parts

Valved holding chambers are available by prescription only. Your healthcare provider may recommend a specific brand; if so, make certain you leave the pharmacy with the right device. Look and Learn: www.aanma.org/2009/03/holding-chambers-and-spacers

