

Asthma: Using a metered-dose inhaler (MDI) with a spacer

Reviewed by SickKids Hospital Staff | Last updated: January 29th 2009

Inhalers are most effective when used in with a spacer, or aerosol-holding chamber. Learn how to use and administer a metered dose inhaler with a spacer.

Key points

- A metered-dose inhaler (MDI) should be used with a spacer to get a dose of medicine into your child's lungs.
- Young children will need help using an MDI properly.
- Younger children may need to use a spacer with a mask. When they are old enough to use a spacer with a mouthpiece, they should switch. Spacers with mouthpieces deliver medicine more effectively.

If your child has asthma, it is important you make sure they are receiving the dosage of their medicine effectively. Learn how to deliver your child's asthma medicine using a metered-dose inhaler (MDI) with a spacer, which attaches to a mouthpiece or a mask.

What is a metered-dose inhaler?

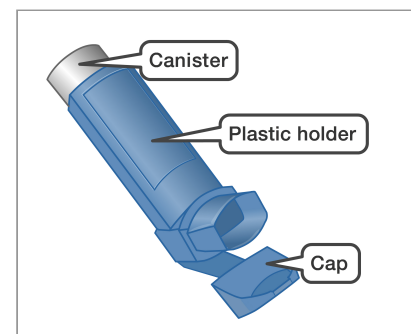
Many asthma medicines are given using a metered-dose inhaler (MDI). An MDI is made up of a metal canister inserted into a plastic holder. The metal canister contains the asthma medicine. When the canister is pushed down, it sprays a puff of medicine out. An MDI should be used with a spacer in order to get the dose of medicine into the lungs.

Young children cannot use an MDI properly by themselves. You will need to help your child.

Young children under the age of nine usually cannot use an MDI properly by themselves. You will need to help your child.

What is a spacer?

Metered-dose inhaler



A spacer slows down the medicine delivered from a metered-dose inhaler. This way the medicine stays in the spacer and your child can breathe it into her lungs. Without a spacer, the medicine sprays directly into your child's mouth and throat, and less of it reaches the lungs. A spacer is also called an aerosol-holding chamber.

AeroChamber® and OptiChamber® are examples of a spacer.

You should try to give your child her inhaled medicine with a spacer whenever possible. This is the most effective way to deliver the medicine.

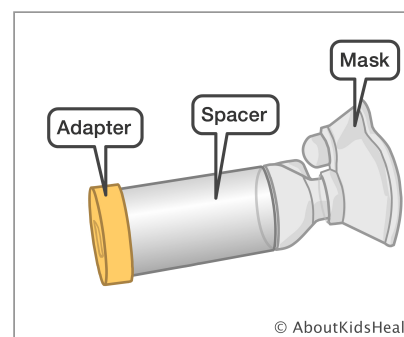
A spacer should always be used when your child is taking corticosteroid inhaler. When corticosteroid medicine is sprayed directly into the mouth, the medicine deposits in the mouth and throat. This can lead to irritation and sometimes infection (thrush) in the mouth.

Each child should have her own spacer. Do not share spacers with other children.

Spacers can be used with a mouthpiece or a mask

Depending on your child, you may give your child asthma medicine using a spacer with a mouthpiece or one with a mask. Younger children (under 5 years old) may need to use a spacer with a mask, because they may not follow instructions to seal their lips together when using a mouthpiece.

When your child is old enough to use a spacer with a mouthpiece, your child should switch over. A spacer with a mouthpiece delivers the medicine more effectively. Medicine can be deposited into the nose when your child uses a spacer with a mask. Using a spacer with a mouthpiece can prevent this from happening.



How to use a spacer with a mask

Follow the 5 steps below to give your child asthma medicine using a spacer with a mask.

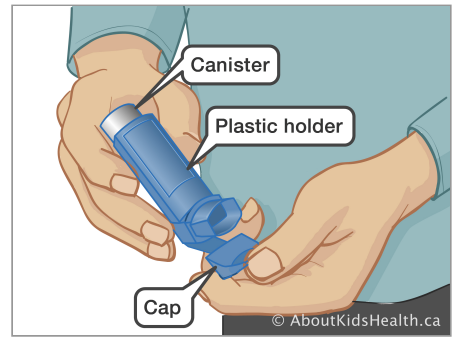
Step 1

Collect the MDIs and spacer

Gather up the spacer and the metered-dose inhalers.

Insert the canister into the plastic holder if they are not already put together.

Take the plastic cap off the MDI.

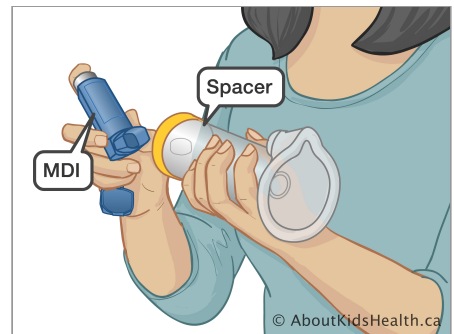


Step 2

Get ready

Put the MDI upright into the rubber hole of the spacer. The MDI should fit tightly into the hole.

Prepare your child by having them sit up or stand in a comfortable position.

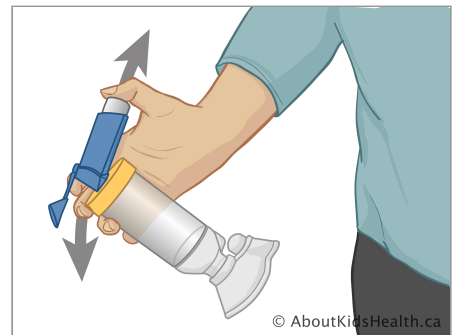


Step 3

Hold the mask to your child's face

Hold the MDI and spacer together. Shake it five times.

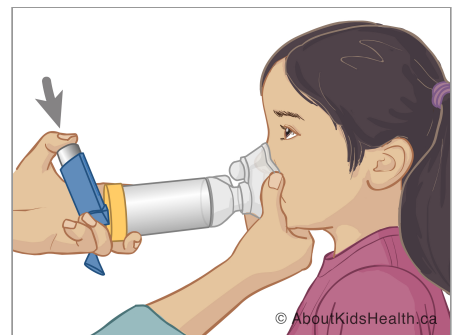
Put the mask firmly onto your child's face. Be sure to cover the mouth and nose.



Step 4

Give the medicine

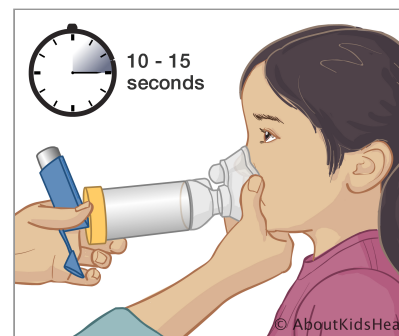
Hold the mask over your child's face with one hand. Hold the spacer with the other hand and press the MDI down firmly with your thumb. This will release one puff into the spacer.



Hold the mask over your child's nose and mouth for 10 to 15 seconds. This should allow your child to take six breaths. You can also watch a valve move inside the spacer to count the breaths. Make sure you

child takes deep breaths.

If your child needs to take more than one puff of the medicine, repeat steps 3 and 4.



Step 5

Make sure your child rinses their mouth with water

Take the mask off your child's face.

Wipe your child's face. Let your child drink or rinse their mouth with water afterwards. This will remove the medicine left in the mouth to prevent thrush.



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