

# Intranasal spray technique for people with allergic rhinitis

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## KEY MESSAGES FOR PATIENTS



If you don't know how to use your nasal spray correctly you may not get the best results and could cause nosebleeds.

Corticosteroid nasal sprays are the most effective treatment for allergic rhinitis and are recommended for most people with symptoms that are persistent or moderate to severe. These medicines:

- **are effective medicines for managing allergic rhinitis.** People with allergic rhinitis often put up with symptoms and don't realise they can feel better if symptoms are properly controlled.
- **have a good safety profile and can be used every day long-term.** Patients need to understand that these medicines are not anabolic steroids, and also that each dose is very small – much less than for asthma preventers.
- **are intended for everyday use.** These medications work best when taken regularly and long-term, just like preventers for asthma.

Antihistamine nasal sprays are also commonly used to treat allergic rhinitis, either in combination with a corticosteroid spray (for people with severe symptoms), or on their own (for people with mild intermittent symptoms).

This information paper provides an overview of current evidence for optimal technique when administering intranasal sprays used in the long-term management of allergic rhinitis.

## Overview of allergic rhinitis medicines

Common intranasal sprays are listed in Table 1.

Intranasal corticosteroids:

- **are first-choice treatment for patients with allergic rhinitis.**<sup>1,2</sup> They are more effective than oral antihistamines or intranasal antihistamines in controlling rhinitis symptoms.<sup>1-3</sup>
- **have a good long-term safety profile.** They do not have a clinically significant effect on the hypothalamic–pituitary–adrenal axis or cause mucosal atrophy when taken continuously at recommended doses.<sup>3,4</sup> Nosebleed is usually due to poor spray technique or crusting.

Intranasal H<sub>1</sub>-antihistamines are an add-on treatment option if symptoms are not adequately controlled by an intranasal corticosteroid alone, or can be used as monotherapy for people with mild intermittent allergic rhinitis.

## Correct technique for using intranasal sprays for allergic rhinitis

The aim is to deliver the dose throughout the lining of the nasal cavity, including the lateral wall. The medicine must reach the ciliated nasal mucosa before it can be transported further into the nose, instead of dripping out of the anterior part of the nose. In practice, less than 50% of spray reaches the ciliated interior, and most of the dose is lost to the anterior part of the nose and to the nasopharynx.<sup>5-8</sup>

Current evidence suggests that the best spray technique (Table 2) involves:<sup>5,8-10</sup>

- tilting the head forward about 45 degrees. Tilting the head back allows the medicine to flow through the nose to the throat, and therefore to be swallowed and absorbed into the gastrointestinal tract.
- directing the nozzle slightly away from the midline to avoid contact with the septum.

There are several reasons for aiming the spray laterally:<sup>5,9</sup>

- It may result in a higher concentration on the areas likely to be most inflamed (the middle and inferior turbinates or the middle meatus).
- It may promote wider distribution within the nose, because the concentration of ciliated cells is higher in the lateral nasal wall.
- Avoiding the septum might reduce the risk of nosebleed.

Using the opposite hand to spray each nostril is recommended given that nosebleed appears to be more common on the same side as the hand used to spray.<sup>9</sup>

Breathing in gently while spraying may improve the distribution of the spray.<sup>7</sup> Vigorously inhaling while spraying does not improve distribution<sup>6</sup> and could increase oropharyngeal deposition.

Where saline irrigation is used as an adjunctive treatment, it should be used before spraying.<sup>11</sup>

# INFORMATION PAPER FOR HEALTH PROFESSIONALS

## INTRANASAL SPRAY TECHNIQUE

**Table 1. Intranasal sprays for allergic rhinitis**

<b>Intranasal corticosteroids</b>
Beclometasone dipropionate ( <i>Beconase Allergy &amp; Hayfever 12 Hour Nasal Spray</i> )
Budesonide ( <i>APOHealth Budesonide Hayfever Nasal inhalation, Budamax Nasal Spray, Rhinocort Hayfever Nasal Spray, Rhinocort Nasal Spray</i> )
Ciclesonide ( <i>Omnaris Nasal Spray</i> )
Fluticasone furoate ( <i>Avamys Nasal Spray</i> )
Fluticasone propionate ( <i>Beconase Allergy &amp; Hayfever 24 Hour Nasal spray, Flixonase Nasule drops, Flixonase Allergy and Hayfever 24 Hour Nasal Spray</i> )
Mometasone furoate ( <i>Azonaire Hayfever Nasal Spray, Nasonex Allergy Aqueous Nasal Spray, Sensease Nasal Allergy Relief Nasal Spray</i> )
Triamcinolone acetonide ( <i>Telnase Nasal Spray</i> )
<b>Intranasal H<sub>1</sub>-antihistamines</b>
Azelastine hydrochloride ( <i>Azep Nasal Spray</i> )
Levocabastine ( <i>Livostin Nasal Spray, Zyrtec Levocabastine Nasal Spray</i> )
<b>Other classes</b>
Ipratropium bromide ( <i>Atrovent Nasal, Atrovent Nasal Forte</i> )
Sodium cromoglycate ( <i>Rynacrom Metered Dose Nasal Spray</i> )
<b>Combinations</b>
Azelastine plus fluticasone propionate ( <i>Dymista 125/50 Nasal spray</i> )

**Table 2. Spray technique step by step for patients**

<b>Priming</b>	Before you use the spray for the first time, you will need to prime it by spraying several times into the air – follow the manufacturer’s instructions.  You will need to prime your spray again if you have not used it for more than a few days.
<b>Getting ready</b>	1. Shake the bottle before each use. 2. If your nose is blocked by mucus, blow your nose gently (or use a saline spray or rinse, then wait 10 minutes before using the spray medication).
<b>Before spraying</b>	3. Tilt your head slightly forward. 4. Gently put the nozzle into one nostril, using your opposite hand. Avoid pushing it in hard to avoid damaging the barrier that divides your two nostrils (the septum). 5. Aim the nozzle towards the hole inside your nose: <ul style="list-style-type: none"> <li>• slightly to the outside, not towards the septum</li> <li>• inwards towards the middle of your head (parallel to the roof of your mouth), not towards the top of your nose.</li> </ul>
<b>Spraying</b>	6. Breathe in gently and press to spray at the same time. Avoid sniffing hard during or after spraying. Sniffing could force the spray into the back of the throat instead of inside the nose where it needs to work. 7. Repeat for the other nostril.
<b>After spraying</b>	8. Wipe the tip of the spray device with a dry handkerchief or tissue, and put the cap back on.  If you have been advised to use two different nasal sprays, use one, wait 10 minutes, then use the other.

General instructions for using nasal sprays. Patients should follow the manufacturer’s directions for the specific product.

### More information

National Asthma Council Australia resources, including clinical recommendations for asthma and allergies, treatment charts, how-to videos, and patient advice, factsheets and brochures, available at [www.nationalasthma.org.au](http://www.nationalasthma.org.au)



### COMMON ERRORS TO AVOID

- Forgetting to prime the spray device
- Skipping doses
- Wrong head position (should be tilted forward, not back)
- Pushing the nozzle too hard or far into the nose
- Blowing nose hard after spraying (the medicine is lost)
- Sniffing hard after spraying (the medicine is deposited in the throat instead of the nose)
- Using saline sprays or irrigations after using corticosteroid spray instead of before

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