

Overview of intranasal products

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Introduction

There is an array of intranasal products available, for example, drops, sprays, gels and irrigations (rinsing the nose with a warmed saline solution). One of the benefits of using intranasal preparations is that topically applied products are less likely to cause unwanted effects compared to medication taken orally.

This article focuses on intranasal therapies used locally to treat or prevent nasal symptoms such as:

- Dryness
- Congestion (vasodilation of the blood vessels in the nose results in swelling of the surfaces lining the nose, which narrows the nasal passage)
- Sneezing (occurs due to irritation of the nasal passages and congestion)
- Itching
- Runny nose (rhinorrhoea)
- Postnasal drip

Intranasal therapeutic options

Saline

Nasal irrigation can help to clean the nasal lining, wash out irritants and allergens (small airborne particles that are able to provoke an allergic reaction in some people) from the nose. Nasal irrigation may help to ease symptoms such as congestion, sneezing, nasal dryness and postnasal drip. Using larger amounts of water for irrigation appears to be more effective than using saline nasal sprays. Depending on the severity of symptoms, nasal irrigation can be performed once or twice a day.

Mucus or crusts in the nose may prevent nasal sprays that contain medication from coating the nasal mucosa. For this reason, saline (spray, drops or nasal irrigation) should be used prior to other nasal medications. Saline adds moisture to the nasal mucosa which makes it easier to clear out mucous and crusts from the nasal passages.

People experiencing mild rhinitis may find that using saline sprays or irrigation alone is sufficient to alleviate their symptoms. Saline is also a useful option for pregnant women, babies and young children.

Decongestants

Nasal decongestants, such as xylometazoline, oxymetazoline and phenylephrine work by constricting (narrowing) the dilated blood vessels in the nasal mucosa. By reducing swelling in the nose, air circulation and drainage of mucous are improved and the feeling of a stuffy or blocked nose is relieved.

Due to the risk of rebound swelling and congestion (also known as rhinitis medicamentosa), topically applied nasal decongestants should not be used for more than two to three days at a time. Other common side effects of intranasal decongestants include transient dryness or burning of the mucosa.

Corticosteroids

Intranasal corticosteroids, such as beclomethasone, fluticasone, budesonide and mometasone are considered the first-line treatment option for the management of symptoms of allergic rhinitis. These products are especially useful as maintenance therapy for people with intermittent allergic rhinitis and for those with moderate-to-severe nasal symptoms that are persistent. They can also be used for acute and chronic rhinosinusitis.

Corticosteroids work by suppressing the allergic inflammatory reaction. Studies have found intranasal corticosteroids to be more effective than oral antihistamines for relief of sneezing, nasal itch, congestion and blockage, nasal discharge and postnasal drip.

Intranasal corticosteroids usually start working within a few hours, and although some people may experience symptom relief on the first day of treatment, it may take several days or weeks before

the full effect is obtained. For intranasal corticosteroids to be most effective, it is essential that they are used regularly and throughout the allergy season.

People with severe nasal symptoms may benefit from using a nasal decongestant about 10 minutes before a corticosteroid nasal spray. Nasal decongestants reduce nasal swelling, thus allowing the corticosteroid nasal spray to reach more areas within the nasal passage. However, it is important to remind patients that nasal decongestants should only be used for a few days.

Corticosteroid nasal sprays may cause transient stinging or burning, dryness of the nose and throat, unpleasant smell or taste and occasionally nose bleeds. These problems may be reduced or minimised by:

- using the correct administration technique,
- reducing the dose of the nasal steroid (to lowest effective dose),
- switching to an aqueous (water-based) spray, or
- applying a moisturising spray or gel to the septum before using the corticosteroid nasal spray.

Antihistamines

Intranasal antihistamines, such as azelastine and levocabastine, usually start working within a few minutes after being administered. Intranasal antihistamines have been found to be more effective than oral antihistamines in reducing symptoms such as itching, sneezing and runny nose. However, they are less effective in reducing concurrent ocular symptoms and have variable effects on nasal congestion.

Azelastine may cause an unpleasant taste, which could be minimised, to a degree, by using the correct administration technique.

Table I: Before using a nasal spray or nose drop

- Gently blow the nose; this is to ensure that the nostrils are as clear as possible.
- Use a saline nasal spray or irrigation to remove mucus or crusts (if present).
- Wait 10 minutes after using saline before using other intranasal products.

Table II: General instruction on how to use a nasal spray

Position head correctly	• Tilt head slightly forward or keep head straight (normal position). Keeping the head in the correct position will prevent the product from draining down the throat, being swallowed and absorbed into the gastrointestinal tract.
Before spraying	• Place the nozzle of the spray gently into one nostril. For ease of administration, the nasal spray may be kept in the opposite hand to the nostril into which the spray is going to be sprayed in, for example, using the right hand when spraying into the left nostril.
Aiming the spray	• Direct the spray slightly outwards, away from the centre of the nose (nasal septum).
Spraying	• Breathe in gently and steadily through the nose while the spray is pressed to release the dose. Some may find it works better if they close the opposite nostril with a finger. • It is important not to sniff too hard as this may cause the medicine to drain down the throat. • Repeat steps for the other nostril, if indicated.
After spraying	• Bend the head forward to the knees and hold the position for 20 seconds.

Table III: General instruction on how to use a nose drop

Position head correctly	• Tilt head back as far as possible; alternatively, the patient should lie on his/her back on a bed or flat surface with the head hanging over the edge.
Instilling drop(s)	• Instil drop(s).
After instilling drops	• Bend head forward to the knees and gently move the head from right to left.

Focus on how to use nasal sprays or nose drops

In some cases, using drops may be more suitable, for example, the nostrils of young children may not be sufficiently wide enough to allow for the effective use of nasal sprays. For older children and adults, nasal sprays are preferred since the small droplets in the spray mist reach a large surface area.

To ensure optimal results and to minimise the risk of side effects, it is essential to explain to the patient how to correctly use a nasal spray (Table II) or nose drops (Table III).

Remember to always:

- Recommend an age-appropriate product for an infant or a child
- Follow the manufacturer's instructions on how to use the product

In a nutshell

There are various intranasal products available; to ensure optimal efficacy and to reduce the risk for side effects, it is essential to recommend the most suitable product and to explain to the patient how to correctly administer the product.

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