

Management of allergic rhinitis

Key messages

- Medications should be started before allergen exposure if possible.
- Severity, frequency and site of symptoms should guide product choice.
- Individual patient response varies to oral antihistamines.
- All intra-nasal corticosteroids (INCS) are equally effective.
- Advise patients of the delayed onset of action of INCS and encourage regular use.



What is rhinitis?

Rhinitis is inflammation of the lining of the nose causing congestion, rhinorrhoea (runny nose), sneezing and itching. It can be classified as infectious, allergic or other (including drug-induced, irritant or occupational).

Allergic rhinitis is divided into seasonal and perennial. Ensure that symptoms are not due to excessive use of nasal decongestants, which can cause rebound congestion.

Infectious rhinitis

- Usually viral and no specific treatment has been proven to be effective.
- Steam inhalations, saline nose drops and nasal decongestants may be helpful in controlling symptoms.
- Antihistamines and INCS are not indicated.

Allergic rhinitis

- The second most frequently self-reported condition in Australia,¹ with up to two million people experiencing symptoms of seasonal hay fever.
- Characterised by sneezing, clear rhinorrhoea, nasal obstruction (blocked nose), conjunctival itching (itchy eyes), pharyngeal itching (itchy throat), lacrimation (watery eyes) and lethargy (lack of energy).
- Additional symptoms of headache and impaired sense of smell may occur.
- Individuals who have allergic rhinitis usually have a personal and family history of allergy (which may include asthma and eczema).
- Symptoms depend on exposure to the allergen.² Exposure to cigarette smoke may increase sensitivity to allergens. Smoking cessation and avoidance of smoky environments is advised.

Seasonal allergic rhinitis

- Usually caused by the pollens of grasses, trees and weeds.
- Symptoms classically occur in spring and summer, i.e. August until March.

Perennial allergic rhinitis

- Occurs throughout the year due to constant contact with the inhaled allergen.
- Major perennial allergens include dust mites, mould and animal dander.
- Allergy to pollens may add seasonal exacerbations of allergic rhinitis in patients with perennial symptoms.³

When to refer a patient with allergic rhinitis

Refer the patient to their general practitioner if symptoms are severe, recur frequently, are perennial or not responsive to over-the-counter (OTC) management.

Accurate diagnosis is important as diseases such as nasal polyps, chronic sinusitis, cystic fibrosis, Wegener's granulomatosis and benign or malignant tumours can cause similar symptoms.²

All children less than 12 years of age should be referred if you suspect a first episode of allergic rhinitis.

Outcomes of referral may include:

- confirmation of diagnosis
- identification of allergens
- review of current therapy and adjustment where appropriate
- prescribed therapy: higher dosage INCS products are available on private prescription; severe cases may require oral corticosteroids
- immunotherapy (desensitisation)
- surgical intervention: rare, but indicated in severe obstruction.

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Table 1. Recommended management of allergic rhinitis in adults²

Disease severity	Definition of terms	Recommended treatment
Mild disease or occasional symptoms	Mild: symptoms not interfering with daily activities and/or sleep. Occasional: less than 14 days (for seasonal allergic rhinitis) or less than one month (perennial allergic rhinitis).	Oral/intra-nasal/ocular antihistamine
Moderate disease or long duration/frequent symptoms*	Moderate: symptoms interfering with daily activities and/or sleep. Long duration: seasonal allergic rhinitis for more than two months. Frequent symptoms: perennial allergic rhinitis for at least two days of the week for at least three months of the year.	Intra-nasal corticosteroids (INCS)
Severe symptoms*	Severe: symptoms are so pronounced that the patient cannot function properly during the day and/or sleep at night.	INCS; plus oral/intra-nasal/ocular antihistamine

*Consider referral to a doctor (see page 1)

Note: INCS are scheduled *Pharmacist Only* medicine for the treatment of seasonal allergic rhinitis.

Table 2. Pharmacological treatment options for allergic rhinitis^{1, 2, 4}

Therapeutic class	Active ingredients* (pregnancy category)	Brand names [†]	Schedule		
Oral antihistamines					
<ul style="list-style-type: none"> Reduce nasal itching, sneezing and rhinorrhoea but are less effective in controlling nasal obstruction than INCS. Individual response to a specific antihistamine varies widely. It may be necessary to try a number of agents to determine which is best tolerated and most effective. Response to one member of a class does not predict response to another member of that class. <p>Sedating antihistamines</p> <ul style="list-style-type: none"> Limited by their sedative and anticholinergic effects. <p>Less sedating antihistamines</p> <ul style="list-style-type: none"> Effective and safe, once daily dosing makes them a convenient first-line agent for mild and/or infrequent symptoms. Less effective at reducing nasal obstruction than sedating antihistamines. To reduce the risk of serious cardiac arrhythmia, avoid use in the presence of renal and hepatic impairment and medications that affect renal and hepatic function. <p>Antihistamine and decongestant combinations</p> <ul style="list-style-type: none"> Available but may cause insomnia and nervousness (sympathomimetic side-effects). They are not recommended. 	Sedating antihistamines				
	azatadine (B2)			Zadine [®] , Zadine [®] (syrup)	S3W
	chlorpheniramine (A)			Only available in combination products	
	cyproheptadine (A)			Periactin [®]	S3W
	dexchlorpheniramine (A)			Polaramine [®] , Polaramine Repetabs [®] , Polaramine Syrup [®]	S3W
	hydroxyzine (A)			Atarax [®] (discontinued Oct 1999)	S4W
	methdilazine (B2)			Dilosyn [®]	S3W
	pheniramine (A)			Avil [®] , Avil Retard [®] , Avil [®] (syrup), Fenamine [®] (syrup)	S3W
	promethazine hydrochloride (C)			Insomn-eze [®] , Nyal plus allergy relief elixir [®] , Phenergan [®] , Phenergan Elixir Sugar Free [®]	S3W
	trimeprazine (C)			Vallergan [®] , Vallergan [®] (syrup)	S3W
Less sedating antihistamines					
cetirizine (B2)			Zyrtec [®] , Zyrtec [®] (oral drops), Zyrtec [®] (syrup)	S2W	
fexofenadine (B2)			Telfast [®]	S2	
loratadine (B1)			Claratyne [®] , Claratyne Effervescent [®] , Claratyne [®] (syrup), Lorastyne [®] , Lorastyne [®] (syrup)	S2	
Intra-nasal/ocular antihistamines					
<ul style="list-style-type: none"> Similar efficacy to oral antihistamines with the advantage of significantly faster onset of action. Topical treatment is specific to the site of administration and is useful for localised symptoms or as an 'on-demand' treatment in addition to a continuous medication. 	Intra-nasal antihistamine levocabastine (B3)		Livostin nasal spray [®]	S2	
	Ocular antihistamine levocabastine (B3)		Livostin eye drops [®]	S2	
Intra-nasal corticosteroids (INCS)					
<ul style="list-style-type: none"> INCS are first-line therapy for moderate to severe or persistent allergic rhinitis. Effective in reducing nasal blockage, rhinorrhoea, sneezing and itching. They are more effective than oral/intra-nasal/ocular antihistamines and intra-nasal mast cell stabilisers. All INCS have similar effectiveness but a relatively slow onset of action; effect increases over days to weeks. For maximal effect INCS should be used regularly and commenced one week before allergen exposure. For symptom relief INCS may initially be combined with a fast acting medication, i.e. oral/intra-nasal decongestant, oral/intra-nasal antihistamine or intra-nasal anticholinergic. INCS may cause nasal irritation and bleeding. If significant bleeding occurs stop the INCS and refer for examination and advice. 	beclomethasone (B3)				
	Aldecin Aqueous Nasal Spray [®] 50mcg/dose, 200 doses			S3	
	Aldecin Aqueous Nasal Spray [®] 50mcg/dose, 2x200 doses			S4	
	Aldecin Aqueous Nasal Refill [®] 50mcg/dose, 200 doses			S3	
	Aldecin Hayfever [®] 50mcg/dose, 200 doses			S3	
	Beconase AQ twin pack [®] 50mcg/dose, 2x200 doses			S4	
	Beconase Hayfever [®] 50mcg/dose, 200 doses			S3	
	budesonide (A)				
	Budamax Aqueous [®] 64mcg/dose, 120 doses			S4	
	Rhincort Aqueous [®] 64mcg/dose, 120 doses			S4	
Rhincort Hayfever [™] 32mcg/dose, 60 doses			S3		
mometasone (B3)					
Allermax [™] 50mcg/dose, 65 doses			S3		
Nasonex Aqueous Nasal Spray [®] 50mcg/dose, 140 doses			S4		
Oral decongestants					
<ul style="list-style-type: none"> Not recommended in children <1 year of age, adults over 60 years, patients with hypertension, cardiomyopathy, hyperthyroidism, prostatic hyperplasia, glaucoma, psychiatric disorders and patients taking beta-blockers or MAO inhibitors. Oral decongestants have less effect on obstruction than the intra-nasal decongestants, but they do not cause rebound vasodilatation. 	phenylephrine (B2)		Nyal Decongestant Elixir [®]	S2	
	phenylpropanolamine (B2)		Only available as a combination product OTC		
	pseudoephedrine (B2)		Demazin Sinus [®] , Demazin Sinus 12 hour [®] , Logicin Sinus [®] , Nyal plus decongestant [®] , Sudafed [®] , Sudafed 12 hour [®] , Sudafed [®] (liquid)	S2	
Intra-nasal decongestants					
<ul style="list-style-type: none"> Very effective in the treatment of nasal obstruction. Intra-nasal decongestants should only be used to reduce severe nasal blockage while co-administering other drugs and then discontinued. Prolonged use (>4 days) of topical vasoconstrictors may lead to tachyphylaxis, rebound swelling of the nasal mucosa and 'drug-induced rhinitis' (rhinitis medicamentosa). 	ephedrine (A)		Nose drop, APF extemporaneous	S4X+	
	oxymetazoline		Dimetapp 12 Hour Decongestant Spray [®] , Drixine Nasal [®] (nasal drops), Drixine Nasal [®] (nasal spray), Drixine Nasal Metered Pump [®] , Drixine Nasal Metered Pump Refill [®] , Drixine Paediatric [®] (nasal drops), Logicin Rapid Relief [®]	S2	
	phenylephrine (B2)		Nyal Decongestant Nasal Spray [®]	Ex	
	tramazoline		Spray-Tish Nasal Mist [®]	S2	
	xylometazoline		Otrivin MD Nasal Mist Adult [®] , Otrivin MD Nasal Mist Junior [®] , Otrivin Nasal Drops Adult [®] , Otrivin Nasal Drops Junior [®] , Otrivin Nasal Spray Adult [®]	S2	
Intra-nasal anticholinergics					
<ul style="list-style-type: none"> Effective in controlling watery nasal discharge but not sneezing or nasal obstruction. Other medications are preferable in the vast majority of allergic rhinitis cases. 	ipratropium bromide (B1)		Atrovent Nasal [®] , Atrovent Nasal Forte [®]	S2	
	Intra-nasal mast cell stabilisers				
<ul style="list-style-type: none"> Not considered a major therapeutic option in the treatment of allergic rhinitis. They have a role in the prophylactic treatment of mild, early rhinitis and may be preferred to INCS in children. They require frequent application which may result in low compliance. 	cromoglycate (A)		Rynacrom Metered Dose Nasal Spray [®]	S2	

Key to table:
* Only products containing a single active compound are listed
All products are tablets or capsules unless otherwise stated. Generic products may be available. Ensure that all staff are aware of the generic products in your pharmacy.
S2 *Pharmacy* medicine
S3 *Pharmacist Only* medicine
W Warning statement about impairment of driving ability required on label of dispensed medicine
+ Appendix D
Ex Exempt from the Poisons Schedule
X Other warning statement required on label of dispensed medicine

What management options are available?

The mainstays of treatment are allergen avoidance, oral/intra-nasal/ocular antihistamines and INCS. Decongestants, intra-nasal anticholinergics or mast cell stabilisers are rarely recommended. Information about individual classes of drugs is given in table 2 (inside). A comparison of the different therapeutic options is given in table 3 (below).

Table 3. Comparative information of different therapeutic options²

Characteristic	Oral antihistamines	Intra-nasal antihistamines	Intra-nasal corticosteroids	Intra-nasal decongestants	Intra-nasal anticholinergics	Intra-nasal mast cell stabilisers
Rhinorrhoea	++	++	+++	0	++	+
Sneezing	++	++	+++	0	0	+
Itching	++	++	+++	0	0	+
Blockage	+	+	+++	++++	0	+
Eye symptoms	++	0	++	0	0	0
Onset of action	1 hour	15 minutes	12 hours	5–15 minutes	15–30 minutes	variable
Duration of action	12–24 hours	6–12 hours	12–48 hours	3–6 hours	4–12 hours	2–6 hours

Key to table: 0 No effect + Marginal effect ++++ Substantial effect

Which product should you recommend?

Management is essentially the same for perennial and seasonal allergic rhinitis and should be based on symptom severity as outlined in table 1 (inside). Choose oral/intra-nasal/ocular antihistamine depending on the site of symptoms.

Using INCS

When initiating INCS, concurrent use of a fast-acting medication (oral/intra-nasal decongestant, oral/intra-nasal antihistamine or intra-nasal anticholinergic) may be needed for immediate symptom relief in the first 3–5 days.

INCS start to work within 12 hours but there may not be a noticeable effect. The patient should be counselled on the need to continue using INCS daily for maximal effect during periods of exposure. If no relief is seen within a few weeks, check ability to use the nasal spray and compliance. If correct technique is being used the patient should be referred for medical assessment.

There are a number of different corticosteroids and strengths available for intra-nasal use. There has not been any demonstrated difference in efficacy of different INCS.

The dose of INCS should be tailored to each individual's response. Usually a high dose is commenced and then reduced once symptoms are controlled. Refer to individual product information for recommended starting doses.

The poisons schedule listing for INCS provided OTC

Aqueous nasal spray delivering 50 micrograms or less of beclomethasone/budesonide/mometasone per actuation for short-term prophylaxis or treatment of seasonal allergic rhinitis in adults and children 12 years and over, in packs containing 200 actuations or less. Maximum recommended daily dose 400 micrograms.

Counselling on avoiding allergens

Removing allergens results in decreased severity of allergic disease. However effective allergen removal/avoidance is very difficult and involved. It is usually only recommended when an allergen has been proven.

Start medications before exposure to known allergens. The medication needed for prophylactic treatment will depend on the nature of the allergen exposure. For long-term exposure to an allergen (e.g. hay fever season) INCS should ideally be started a week before exposure. For short-term exposure (e.g. visiting a friend with a cat) oral antihistamines should be taken before exposure.

References:

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- van Cauwenberge P, et al. Consensus statement on the treatment of allergic rhinitis. *Allergy* 2000;55:116–134.
- Swanson KA. Counselling patients about allergic rhinitis. *Journal of the American Pharmaceutical Association*. 1996;NS36:5:301–307.
- Rossi S, ed. Australian Medicines Handbook 2000. Australian Medicines Handbook Pty Ltd, Adelaide 2000.

The information contained in this material is derived from a critical analysis of a wide range of authoritative evidence. Any treatment decisions based on this information should be made in the context of the individual clinical circumstances of each patient.



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ACN 082 034 393 | Level 1 / 31 Buckingham Street, Surry Hills NSW 2010
 Phone: 02 9699 4499 | Fax: 02 9699 5155 | email: info@nps.org.au | web: http://www.nps.org.au