



# ALLERGIC RHINITIS AND HAYFEVER

## Top tips for MURs

- Check patient's understanding of why medication has been prescribed
- Check compliance with prescribed regime. For persistent rhinitis, advise that continual use of intranasal corticosteroids and oral antihistamines is more effective than using medicines when required
- Advise patient that intranasal corticosteroids should be used several weeks before allergens are likely to present as they take a few weeks to show maximal effect
- Advise that rebound congestion can occur when nasal decongestants are stopped and therefore they should not be used for more than 7 days
- If patient is asthmatic advise that treatment of allergic rhinitis may improve asthma symptoms<sup>1</sup>
- Explain the importance of good nasal spray technique and nasal drop as incorrect administration technique can lead to adverse effects
- Give advice on the identification and avoidance of the most likely allergens (see lifestyle advice section)
- Advise patient to use an allergen barrier balm or gel around the outside of nostrils (or try petroleum jelly)
- Advise patient to regularly use nasal saline solution to wash away allergens using either a homemade solution or commercially available drops or sprays
- Homemade salt water solution can be made by adding half a tea spoon of salt and half a teaspoon of bicarbonate of soda into a pint of boiled water that's been left to cool to body temperature<sup>2</sup>. To rinse the nose, stand over a sink, cup the palm of one hand and pour a small amount of the solution into it. Sniff the water into one nostril at a time<sup>2</sup>.
- Consider drug-induced rhinitis when symptoms follow the start of treatment with: ACE inhibitors, beta-blockers, chlorpromazine, aspirin, non-steroidal anti-inflammatory drugs and cocaine<sup>1</sup>.
- Counsel patient on signs / symptoms that need referral and common side effects (see overleaf)
- Report any relevant adverse drug reactions to the Yellow Card Scheme

## Pathophysiology of allergic rhinitis

Allergic rhinitis is an inflammatory disorder of the nose and sinuses in response to allergens. Allergic rhinitis may be classified as seasonal (hay fever) or perennial, typically caused by house dust mites and animals<sup>2</sup>. In response to an allergen, inflammatory mediators such as histamine are released, causing symptoms such as sneezing, itching, nasal obstruction and discharge. Allergic rhinitis is closely associated with allergic conjunctivitis.

## How do drugs used for allergic rhinitis work?

Antihistamines (oral/intranasal)	Antagonise histamine H1-receptors which reduces histamine release and thus reduces inflammatory response.
Corticosteroids (oral/intranasal)	Reduce inflammation by exerting an inhibitory effect on leukocyte recruitment into the nasal cavities.
Ipratropium (nasal)	Activate muscarinic receptors on submucosal glands in nasal cavities leading to a reduction in nasal discharge.
Sodium cromoglycate (nasal)	The exact method of action is unclear; sodium cromoglycate has an anti-inflammatory effect and prevents the release of mediators involved in the inflammatory pathway from sensitised mast cells.
Leukotriene receptor antagonists (montelukast)	Block the effect of cysteinyl leukotrienes in the airways <sup>3</sup> . May be used for asthma with concomitant seasonal allergic rhinitis.

## Lifestyle issues<sup>1,2,4</sup>

- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 or more days)
- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m<sup>2</sup>) and advise adequate dietary calcium to counteract osteoporosis
- Advise patients who smoke the benefits of stopping smoking and how to access pharmacy smoking cessation services or 'Help Me Quit' resources
- Advise patient to limit exposure to causative allergens (see table overleaf)





### Causative allergens

Hayfever (pollen/grass)	Perennial allergic rhinitis – house dust mites	Perennial allergic rhinitis - pets
Monitor pollen forecasts daily, avoid walking in grassy open spaces when the pollen count is high <sup>1,2</sup>	Use allergy-proof covers on bedding and synthetic pillows and acrylic duvets instead of woollen or feathered sets. <sup>2,4</sup>	Restrict pets to outdoors or to limited areas in the house (not in the bedroom).
Avoid line-drying clothes	Wash bedding at 60°C.	Wash dogs and cats regularly.
Shower and wash hair after arriving home on high pollen days	If possible remove all carpeting in the bedroom and replace with wood /hard vinyl floors.	Remove carpets from rooms where pets are kept.
Keep windows closed in cars or buildings	Vacuum hard floors regularly with a high-filtration vacuum cleaner or a high-temperature steam-cleaner. Vacuum all surfaces of upholstered furniture at least twice a week. <sup>2</sup>	Vacuum hard floors regularly with a high-filtration vacuum cleaner or a high-temperature steam-cleaner. Vacuum all surfaces of upholstered furniture at least twice a week. <sup>2</sup>
Change car pollen filters at each service	Damp-wipe all surfaces each week.	Wash pet bedding and baskets regularly.
Avoid mowing lawns or raking leaves	Use light washable cotton curtains and wash them frequently or use fitted blinds that can be wiped clean <sup>2,4</sup>	Consider using a good air filter or ventilate rooms well.
Wear wrap around sunglasses when outdoors	Keep furry toys off beds. Wash them weekly at 60° or place in a plastic bag in the freezer for 12 hours at least once a month. <sup>2</sup>	Wash your hands thoroughly after handling pets.
	If necessary use a dehumidifier to keep indoor humidity under 50% (but over 30%). <sup>2</sup>	Groom dogs outside.

### What are the common side effects to look out for?

Drug	Common side effects	Recommendation
<b>Antihistamines oral</b>	Sedation (uncommon in second generation antihistamines e.g. loratadine, fexofenadine and cetirizine).	Counsel patient to avoid driving if affected and to avoid alcohol.
<b>Intranasal: antihistamines, corticosteroids, decongestants, ipratropium</b>	Local irritation, dryness, irritation and nose bleeds, bitter after taste.  Rebound congestion (seen on withdrawal with intranasal decongestants).	Check nasal spray technique, refer to prescriber if troublesome.  Do not use intranasal decongestants for more than 7 days.
<b>Corticosteroids (oral)</b>	Insomnia, gastrointestinal discomfort (other side effects rare in short term use).	Take as a single dose in the morning after food.
<b>Leukotriene receptor antagonists (montelukast)</b>	Abdominal pain, thirst, headache, insomnia.  Eosinophilia (wheezing and breathlessness), vasculitic rash, worsening pulmonary symptoms or peripheral neuropathy.	Refer to prescriber if troublesome.  Advise to stop taking medication and refer to prescriber urgently.

### Potential serious drug interactions?

Oral antihistamines, particularly sedating antihistamines can interact with other medicines, including opioid analgesics, antibacterials, antidepressants and antivirals. **See BNF Appendix 1 for more details**

### Red flags that need urgent referral

- Persistent symptoms despite using treatment for more than 4 weeks
- Unilateral symptoms
- Bloody purulent discharge, pain and nasal blockage, nose bleeds and nasal deformity<sup>5</sup>
- Systemic side effects e.g. fever, ear-ache
- Nasal polyps (inflammatory swellings inside the nose)<sup>4</sup>
- Sleep apnoea (snoring and difficulty breathing at night)<sup>4</sup>

### Where can you find more information? (references)

1. NICE Clinical knowledge Summaries: Allergic Rhinitis <http://cks.nice.org.uk/allergic-rhinitis>
2. NHS Choices: Allergic rhinitis [www.nhs.uk](http://www.nhs.uk)
3. The British National Formulary [www.bnf.org](http://www.bnf.org)
4. Allergy UK [www.allergyuk.org](http://www.allergyuk.org)
5. E. Angier *et al* Management of allergic and non-allergic rhinitis: a primary care summary of the BSACI guideline *Primary Care Respiratory Journal* 2010
6. Scadding, G.K., Kariyawasam, H.H., Scadding, G *et al*. 2017. BSACI guideline for the diagnosis and management of allergic and non-allergic rhinitis (Revised Edition 2017; First edition 2007). *Clinical and Experimental Allergy* 47, 856–889. <http://www.bsaci.org>

