



Allergic Rhinitis



Changi
General Hospital

SingHealth

Sneezing, living with runny nose, suffering from a blocked nose every morning? Wondering why it seems like you keep getting the flu? The chances are that you probably have allergic rhinitis. Fortunately, there are effective treatment options for your condition.

What is allergic rhinitis?

Allergic rhinitis (AR) is a condition where initial allergic sensitisation leads to production of specific antibodies that can then trigger an allergic response on subsequent exposure to the same allergen (antigen) (*Fig 1*). The antigen-antibody interaction leads to release of inflammatory molecules like histamines. It is these inflammatory molecules which lead to symptoms of allergy by causing nerve irritation (itching & sneezing), swelling in the nose (nasal congestion & obstruction), increased mucous secretions (runny nose & postnasal drip).

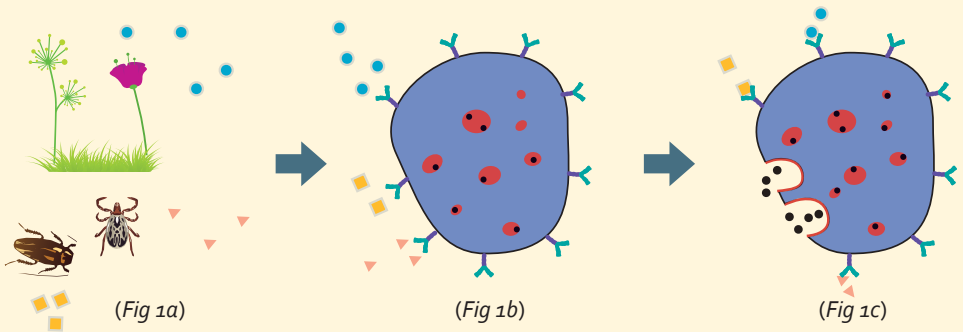


Fig 1 Antigens from common allergens e.g. pollens, house dust mite (*Fig 1a*) join with specific antibodies on the surface of cells of the immune system (*Fig 1b*) leading to the release of inflammatory molecules like histamine (*Fig 1c*).

How is this different from sinusitis?

Perhaps the biggest confusion about AR is that it is too often labeled as sinusitis, which is inflammation of the nose and the sinuses, and often persists from an unresolved upper respiratory tract infection (flu).

Symptoms of sinusitis tend to last for weeks to months rather than fluctuate within the day. Furthermore, sinusitis patients tend to have discoloured nasal discharge or phlegm rather than clear runny nose. They may even experience facial discomfort, headaches and loss of smell, which are not typical of AR.

What causes AR?

This is not completely understood. It is partly inherited; thus patients with family history of AR are more likely to have it than those who do not. On the other hand, it also depends on how our immune system interacts with the environment; it is not uncommon to hear of symptoms disappearing completely when someone with AR first moves to another country; yet the symptoms of AR may slowly develop again over a period of months or longer.

Patients with a strong allergic tendency are at higher risk of developing more serious conditions such as asthma and atopic dermatitis. This phenomenon is particularly relevant in children during their developmental years such that the term “allergic march” has been coined to describe it.

What are patients with AR allergic to?

The most common inhaled allergens are the various types of house dust mites (HDM). Other common inhaled allergens include cockroach droppings and pollens. Occasionally, patients do have food allergies e.g to shellfish and egg. Allergy testing is usually done via a skin prick test (SPT) (*Fig 2*) involving the introduction of a standardised allergen into the epidermis (top layer of the skin) using a plastic lancet.

This may cause mild discomfort but no bleeding is encountered. After 15 - 20 minutes, the test area is assessed for development of an allergic response (swelling, redness & itch) much like the reaction to a mosquito bite.



Fig 2

How is AR treated?

Usually, if your symptoms and medical history are very typical, your general practitioner (GP) will usually be happy to offer treatment and to evaluate your response to this.

Allergens

Allergen “avoidance” should always be part of the strategy. In the case of HDM allergy, it is worth considering regular change of bedding, removing carpets and anti-dust mite products. Nevertheless, it is almost impossible to remove all allergens from the environment. Thus allergen avoidance alone does not usually result in adequate control of AR.

Medications

Medications. If your symptoms occur only occasionally and / or are mild, all that may be required is a non-sedating anti-histamine to block these symptoms. However, if you experience symptoms frequently and if it affects your sleep, work or limits your participation in sport / leisure activities, long term control using an intranasal steroid spray (Fig 3) usually gives better results.

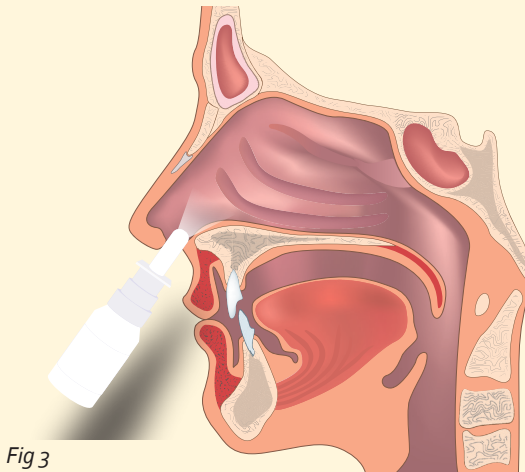


Fig 3

While many people have concerns about the side effects of corticosteroids, modern intranasal preparations have targeted effects in the nose with minimal systemic absorption and negligible effects outside the nose. Some intranasal steroids may be used in children as young as 2 years old.

Surgery

Many patients may experience dramatic relief of symptoms with medications alone. However, when nasal obstruction has been present for a long time the inferior turbinates may be so enlarged that medications may not be sufficient. Surgical reduction of the inferior turbinates can be performed in these cases.

Specific immunotherapy

As in many diseases, medications for AR, while effective in controlling symptoms, do not necessarily treat the underlying cause. Immunotherapy offers the closest we can get to a cure. This method of treatment involves long term administration of minute quantities of allergen so as to desensitise the immune system and eventually eliminate the inappropriate responses to the allergen. When used in an appropriately-selected patient, 3 - 4 years of immunotherapy offers a very good chance of being symptom free for at least 7 years. Other benefits include limiting the “allergic march”, reducing the rate of development of new allergies and improving quality of life. The majority of patients in Singapore with AR have HDM allergy; sublingual immunotherapy (SLIT) represents a painless, effective and safe treatment strategy that offers a chance of a permanent solution.

When do you need to see an ENT specialist?

If your symptoms are typical of AR, you have responded well to medical treatment and you do not have any unusual features, your GP is well-equipped to help you manage your condition. ENT evaluation is advised when there are unusual symptoms (e.g headaches, nasal bleeding, one-sided blockage, persistent loss of smell), when symptoms persist (e.g purulent nasal discharge for more than 4 weeks or when medical treatment is not working), in which case surgery may be needed. Specialist consultation is advised for those considering immunotherapy.

Management of allergic rhinitis at CGH

CGH ENT Department offers comprehensive evaluation and management of allergic rhinitis. Nasal endoscopy, allergy testing, allergy counseling, medications and sublingual immunotherapy are available for patients 6 years and above; surgery for nasal obstruction is available for patients who are 16 years and above.



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