

ALLERGIC RHINITIS



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INTRODUCTION

- ❖ Although allergic rhinitis (AR) is a common disease, the impact on daily life cannot be underestimated.
- ❖ Allergic rhinitis in children is most often caused by sensitization to animal dander, house dust, pollens, and molds.
- ❖ Pollen allergy seldom appears before 4 or 5 years of age.
- ❖ Sensitization to outdoor allergens can occur in allergic rhinitis in children older than 2 years; however, sensitization to outdoor allergens is more common in children older than 4-6 years.

CAUSES

- ❖ AR is caused by an immunoglobulin E (IgE)–mediated reaction to various allergens in the nasal mucosa.
- ❖ Allergens: The most common allergens include
 - Dust mites
 - Pet danders
 - Cockroaches
 - Molds
 - Pollens.



Surroundings or irritants
Dust mites, pet dander, dust, secondhand smoke, mold

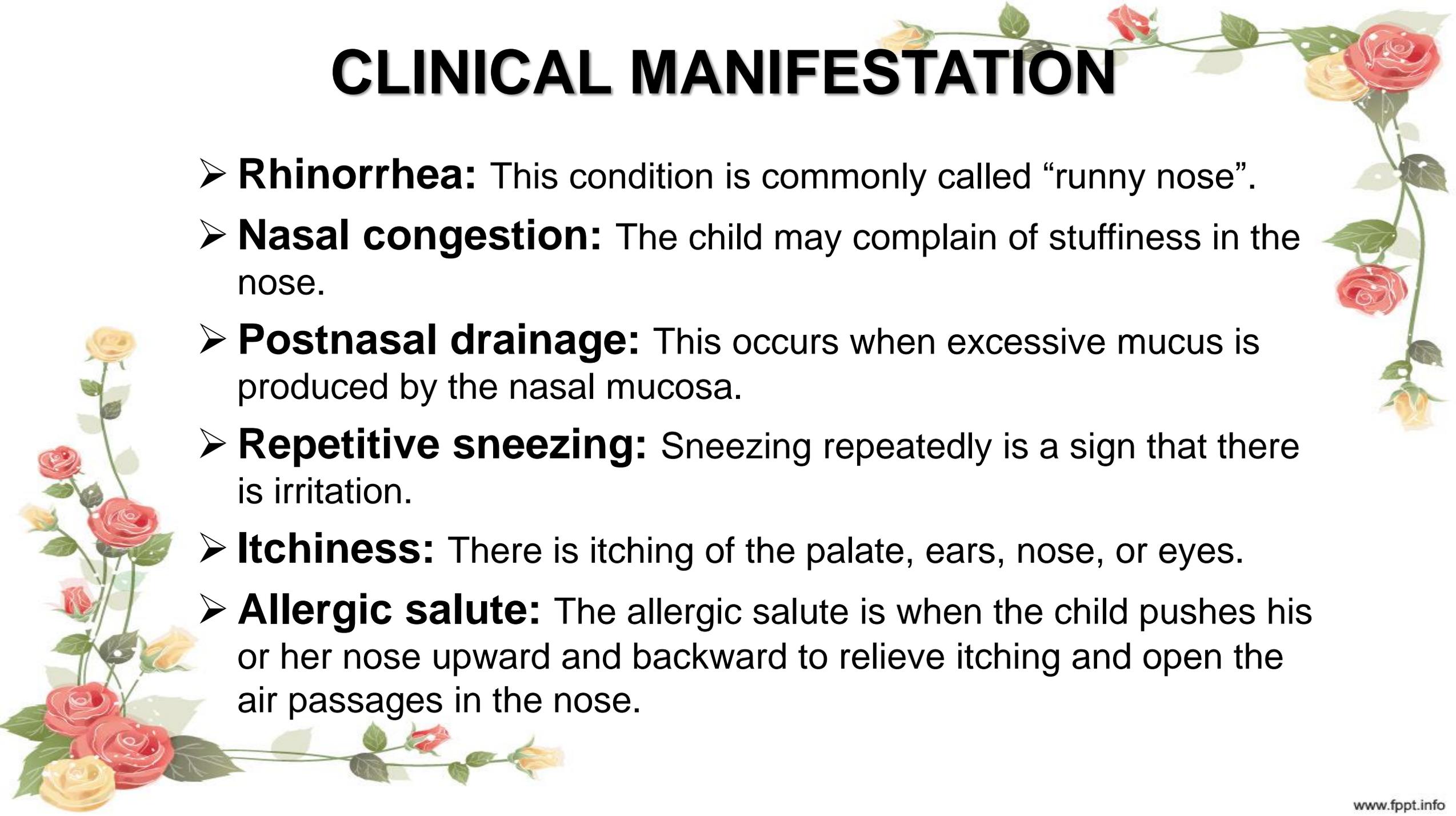


Seasonal factors
Hay fever, usually occur in spring and fall, temperature variation



Food
Milk, eggs, wheat, peanuts...

CLINICAL MANIFESTATION



- **Rhinorrhea:** This condition is commonly called “runny nose”.
- **Nasal congestion:** The child may complain of stuffiness in the nose.
- **Postnasal drainage:** This occurs when excessive mucus is produced by the nasal mucosa.
- **Repetitive sneezing:** Sneezing repeatedly is a sign that there is irritation.
- **Itchiness:** There is itching of the palate, ears, nose, or eyes.
- **Allergic salute:** The allergic salute is when the child pushes his or her nose upward and backward to relieve itching and open the air passages in the nose.

sneezing
rhinorrhea
congestion
nasal drip



itchy eyes
conjunctivitis



Rhinitis symptoms

headache
congestion



sore throat
itching



snoring
mouth breathing



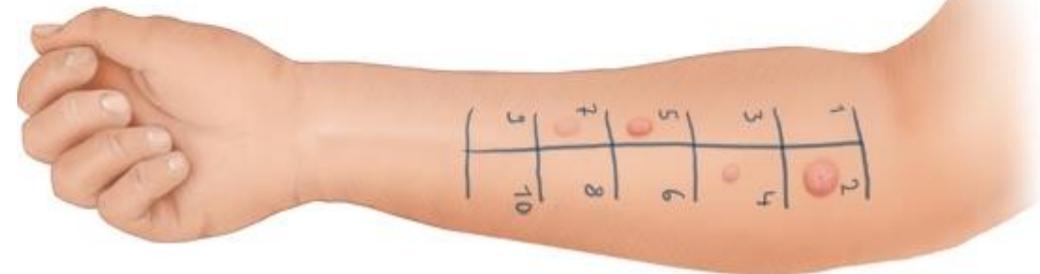
ear pain
hearing loss
itching



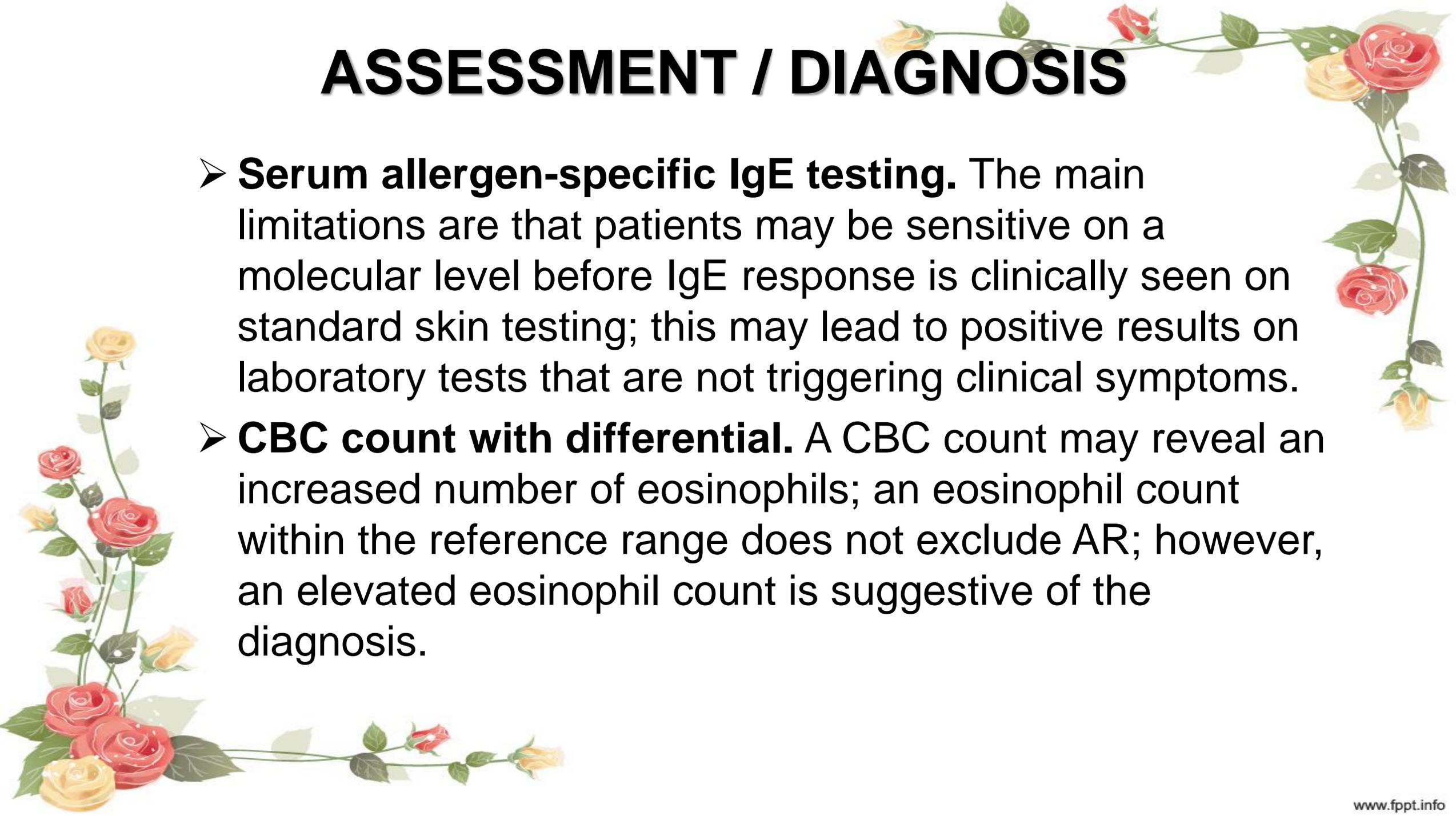
ASSESSMENT / DIAGNOSIS

No studies are needed in allergic rhinitis (AR) if the patient has a straightforward history. When the history is confusing, various studies are helpful, including the following:

- **Skin-prick testing:** This test is highly sensitive and specific for aeroallergens; however, a false positive reaction can occur without corresponding clinical features, especially when skin mast cells are easily activated by pressure or other physical stimuli.
- **Nasal smear:** Eosinophils usually indicate allergy.

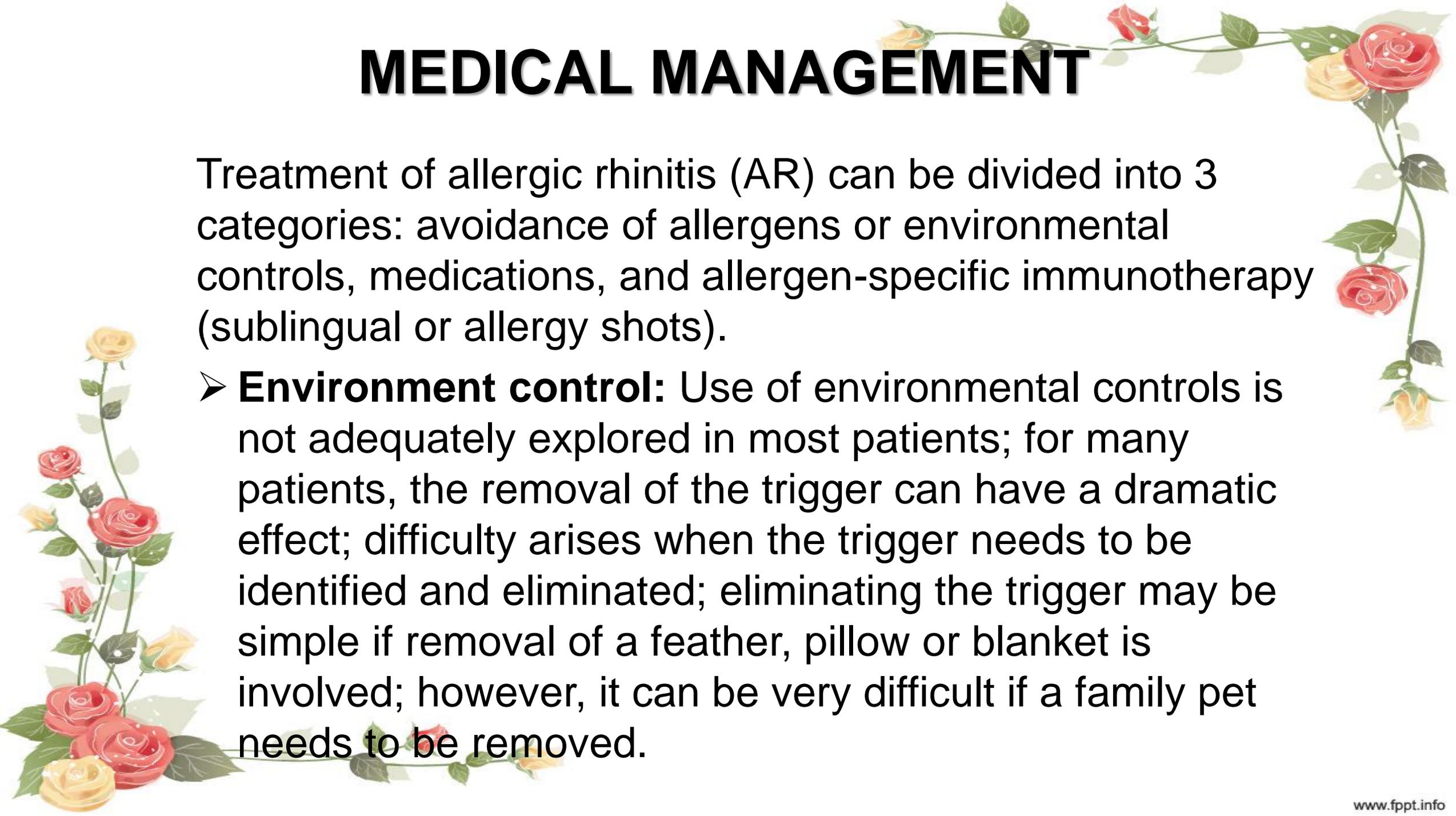


ASSESSMENT / DIAGNOSIS



- **Serum allergen-specific IgE testing.** The main limitations are that patients may be sensitive on a molecular level before IgE response is clinically seen on standard skin testing; this may lead to positive results on laboratory tests that are not triggering clinical symptoms.
- **CBC count with differential.** A CBC count may reveal an increased number of eosinophils; an eosinophil count within the reference range does not exclude AR; however, an elevated eosinophil count is suggestive of the diagnosis.

MEDICAL MANAGEMENT



Treatment of allergic rhinitis (AR) can be divided into 3 categories: avoidance of allergens or environmental controls, medications, and allergen-specific immunotherapy (sublingual or allergy shots).

- **Environment control:** Use of environmental controls is not adequately explored in most patients; for many patients, the removal of the trigger can have a dramatic effect; difficulty arises when the trigger needs to be identified and eliminated; eliminating the trigger may be simple if removal of a feather, pillow or blanket is involved; however, it can be very difficult if a family pet needs to be removed.

MEDICAL MANAGEMENT

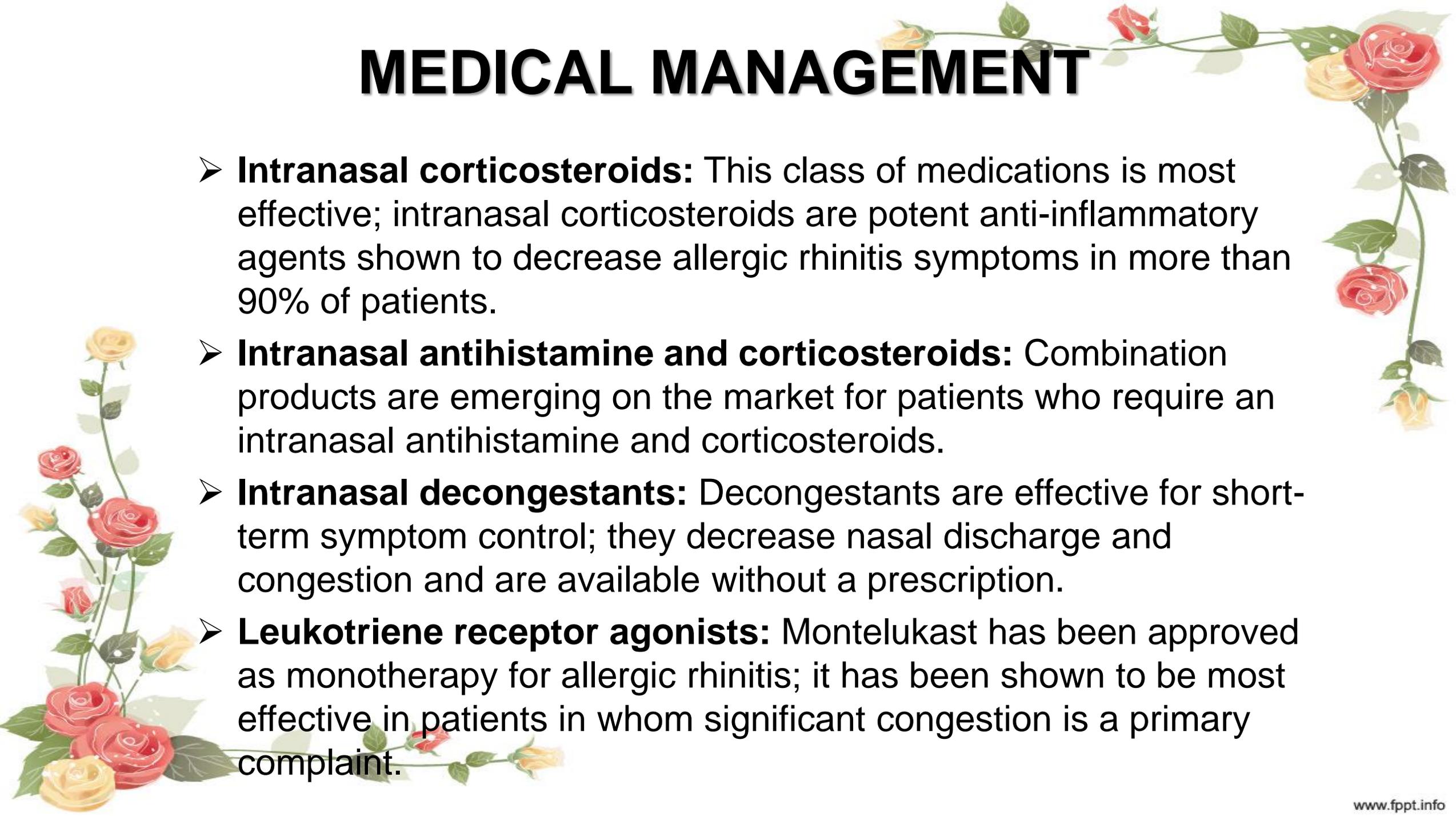


Pharmacologic Management

Many groups of medications are used for allergic rhinitis (AR), including antihistamines, corticosteroids, decongestants, saline, sodium cromolyn, and leukotriene receptor antagonists.

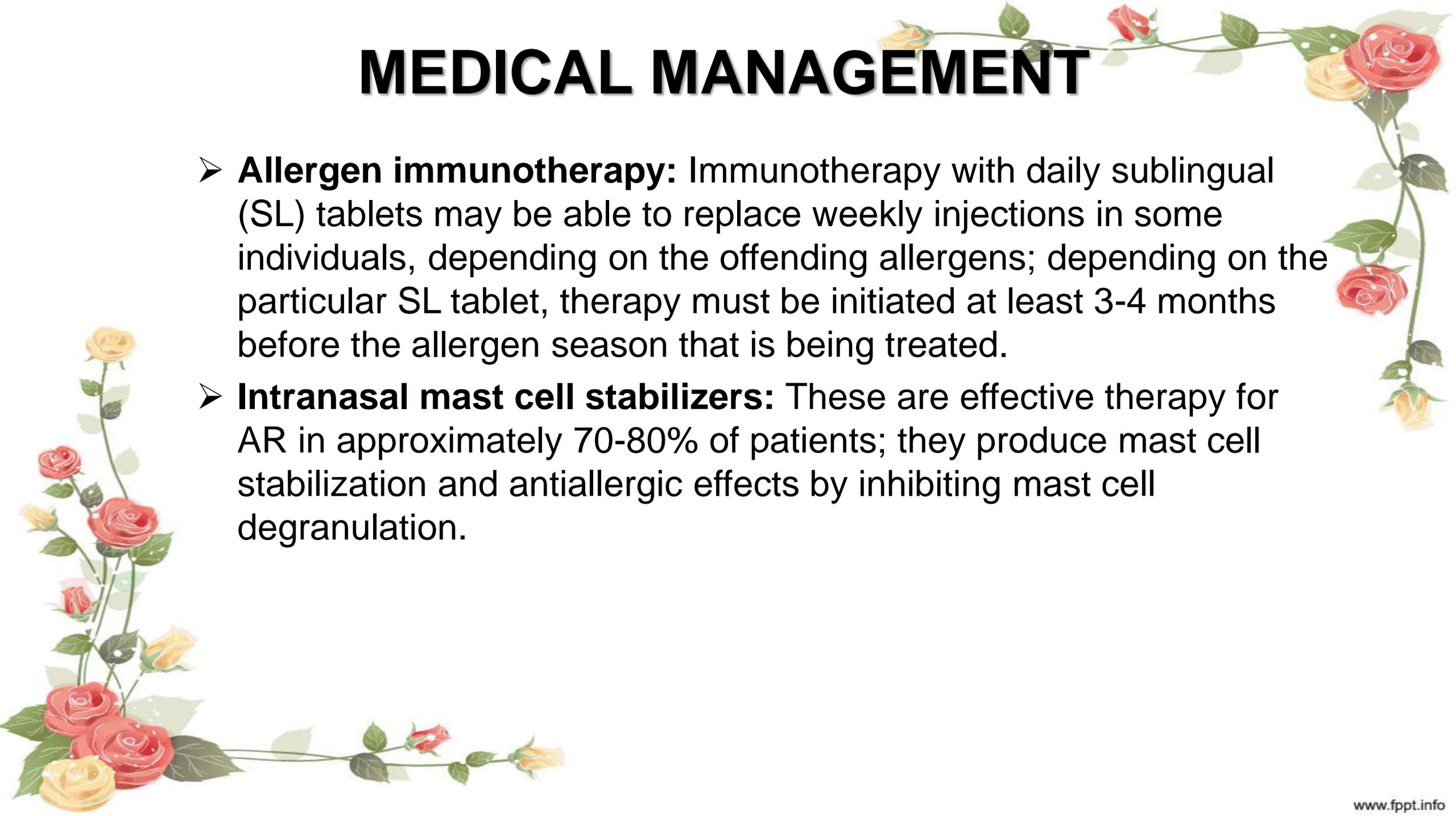
- **2nd generation antihistamines:** Antihistamines are classified in several ways, including sedating and nonsedating, newer and older, and first- and second-generation antihistamines (most widely accepted classification); first-generation antihistamines are primarily over-the-counter (OTC) and are included in many combination products for cough, colds, and allergies.
- **Intranasal antihistamines:** These agents are an alternative to oral antihistamines to treat allergic rhinitis; currently, azelastine and olopatadine are the only agents available in the United States.

MEDICAL MANAGEMENT



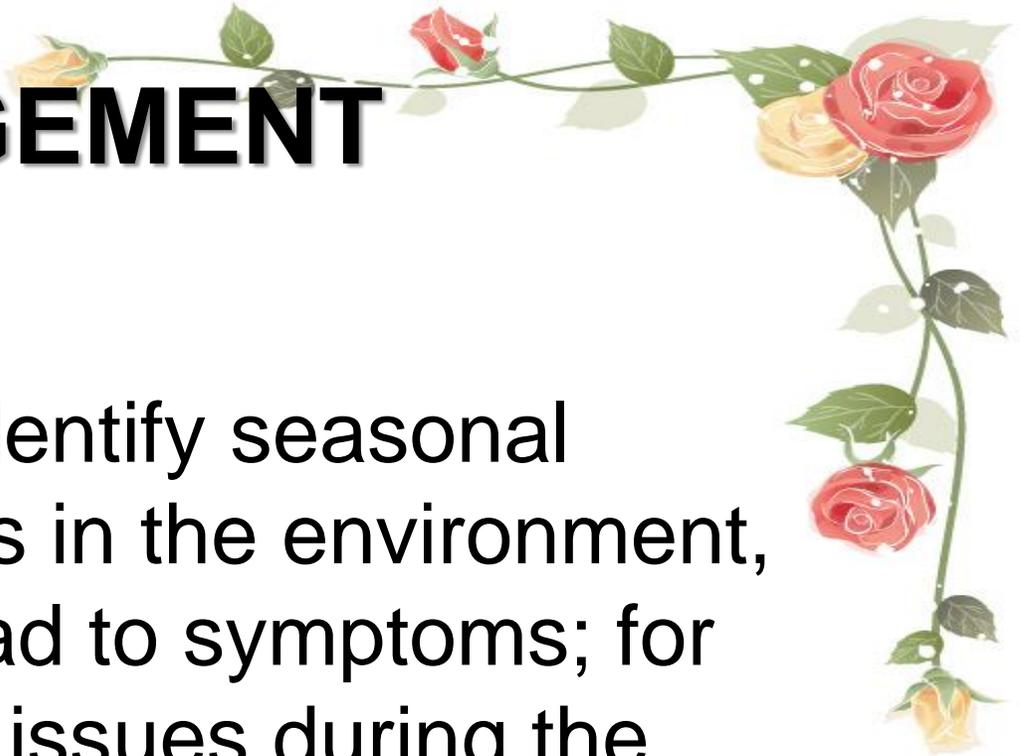
- **Intranasal corticosteroids:** This class of medications is most effective; intranasal corticosteroids are potent anti-inflammatory agents shown to decrease allergic rhinitis symptoms in more than 90% of patients.
- **Intranasal antihistamine and corticosteroids:** Combination products are emerging on the market for patients who require an intranasal antihistamine and corticosteroids.
- **Intranasal decongestants:** Decongestants are effective for short-term symptom control; they decrease nasal discharge and congestion and are available without a prescription.
- **Leukotriene receptor agonists:** Montelukast has been approved as monotherapy for allergic rhinitis; it has been shown to be most effective in patients in whom significant congestion is a primary complaint.

MEDICAL MANAGEMENT



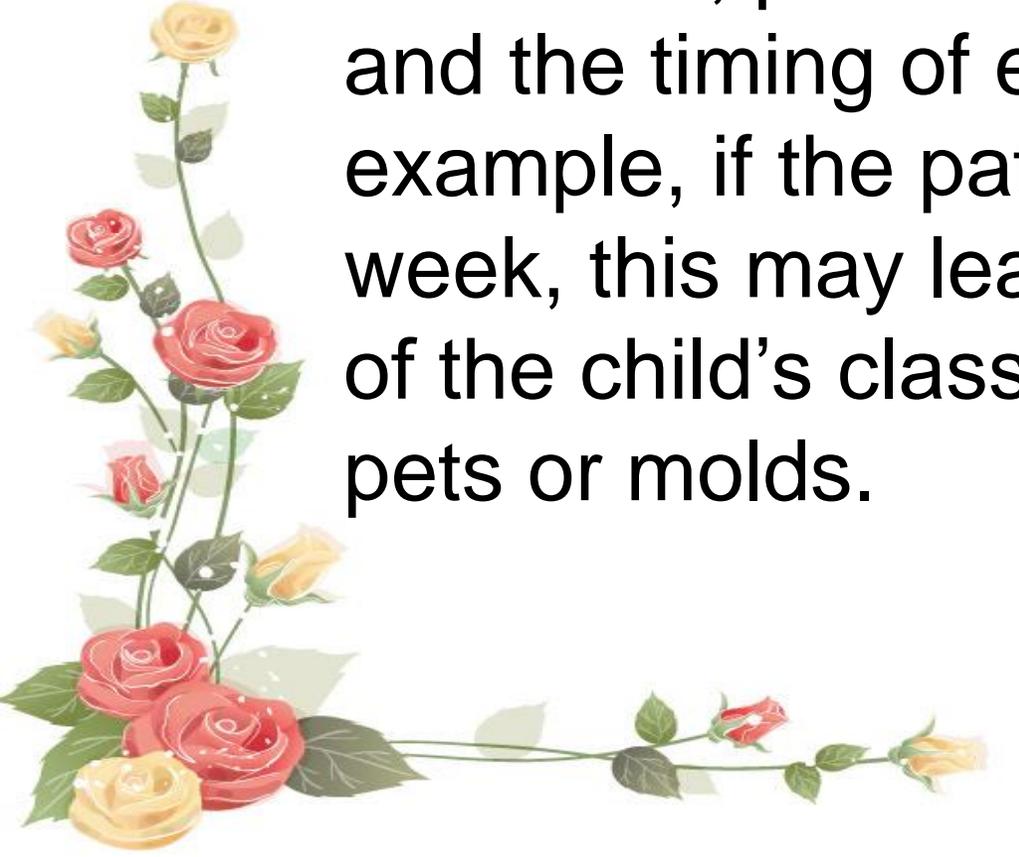
- **Allergen immunotherapy:** Immunotherapy with daily sublingual (SL) tablets may be able to replace weekly injections in some individuals, depending on the offending allergens; depending on the particular SL tablet, therapy must be initiated at least 3-4 months before the allergen season that is being treated.
- **Intranasal mast cell stabilizers:** These are effective therapy for AR in approximately 70-80% of patients; they produce mast cell stabilization and antiallergic effects by inhibiting mast cell degranulation.

NURSING MANAGEMENT

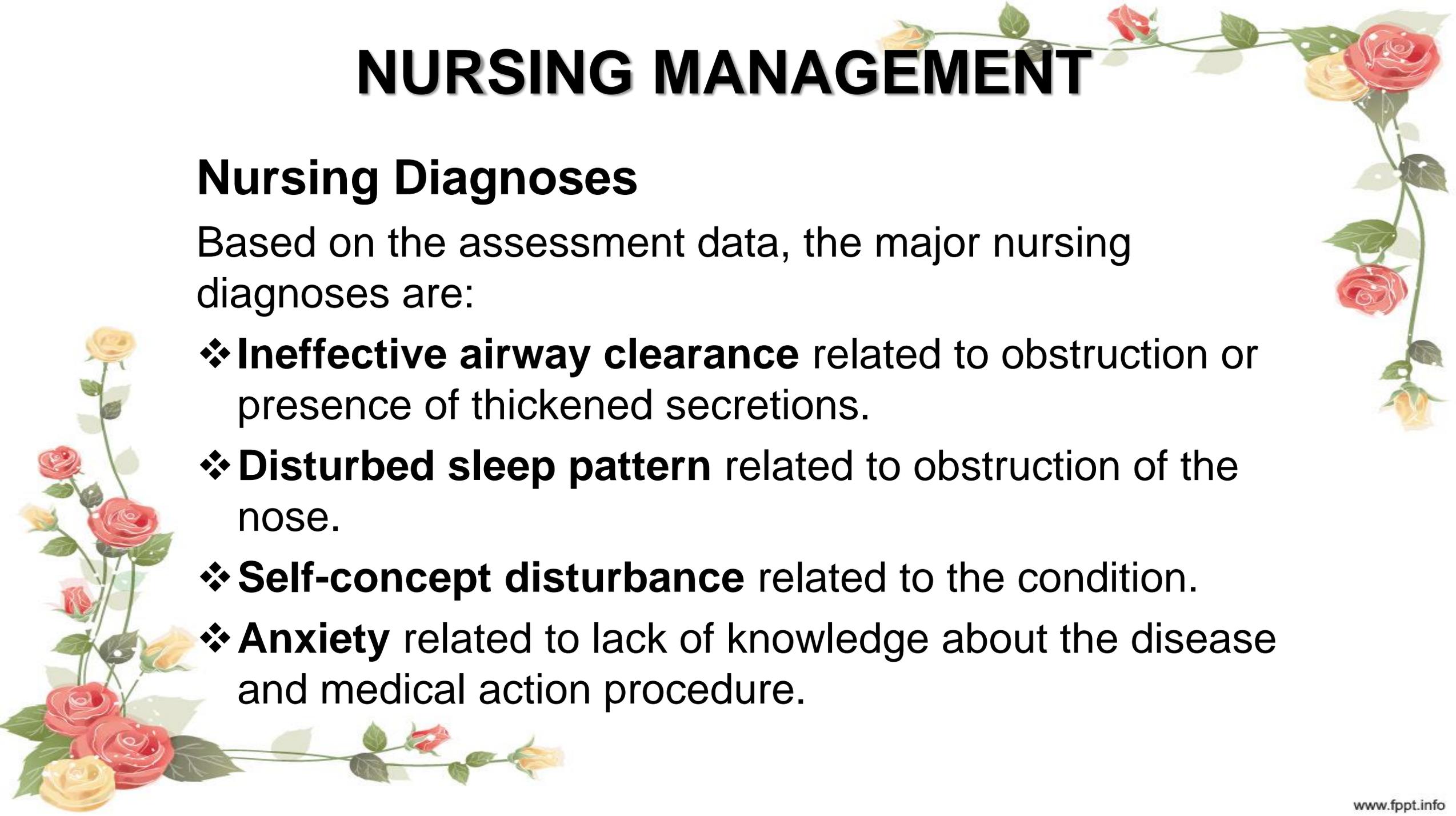


Nursing Assessment

History: Nurses should try to identify seasonal variations, provocative elements in the environment, and the timing of events that lead to symptoms; for example, if the patient only has issues during the week, this may lead to investigating the environment of the child's classroom or daycare for allergens like pets or molds.



NURSING MANAGEMENT

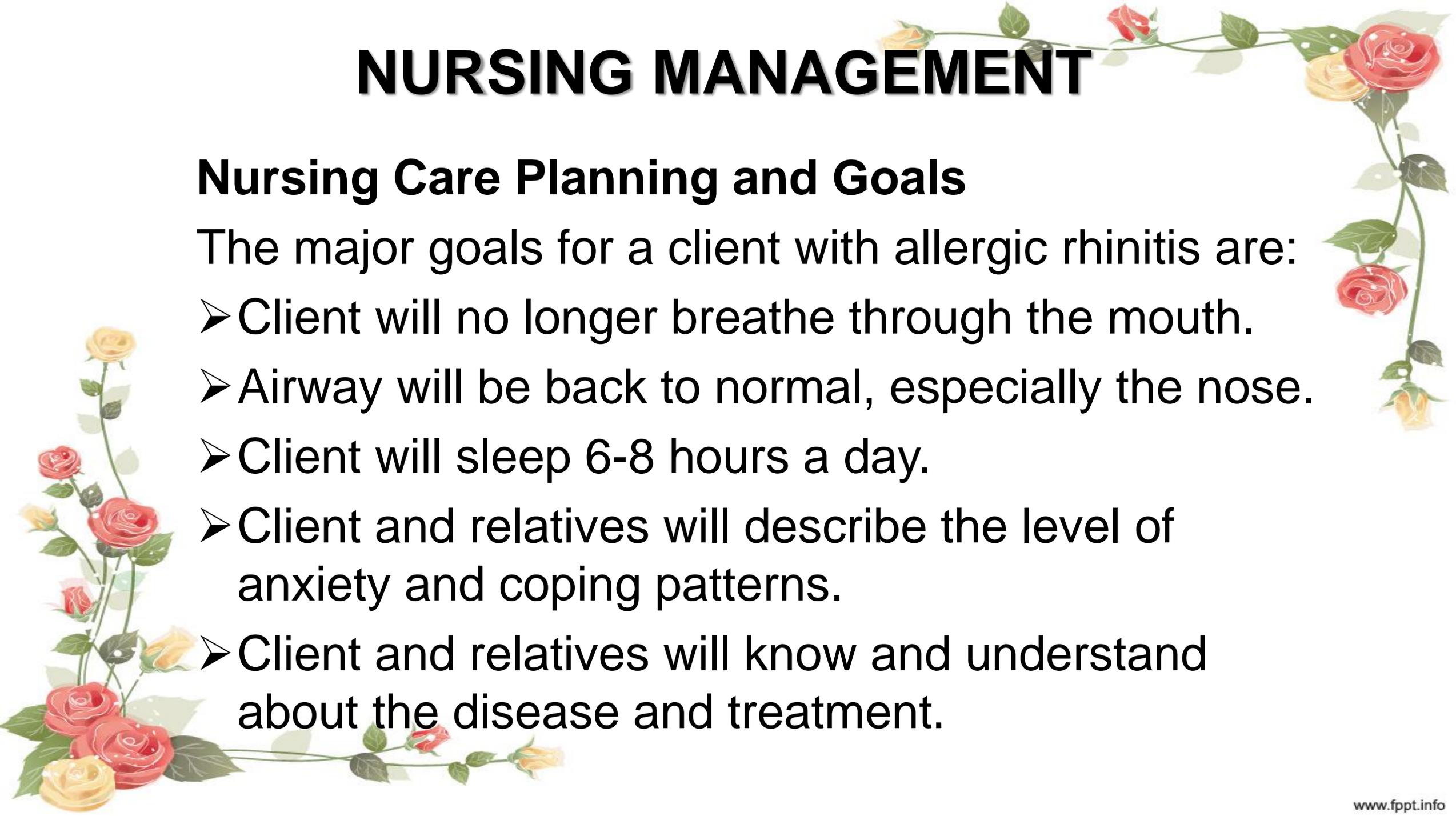


Nursing Diagnoses

Based on the assessment data, the major nursing diagnoses are:

- ❖ **Ineffective airway clearance** related to obstruction or presence of thickened secretions.
- ❖ **Disturbed sleep pattern** related to obstruction of the nose.
- ❖ **Self-concept disturbance** related to the condition.
- ❖ **Anxiety** related to lack of knowledge about the disease and medical action procedure.

NURSING MANAGEMENT

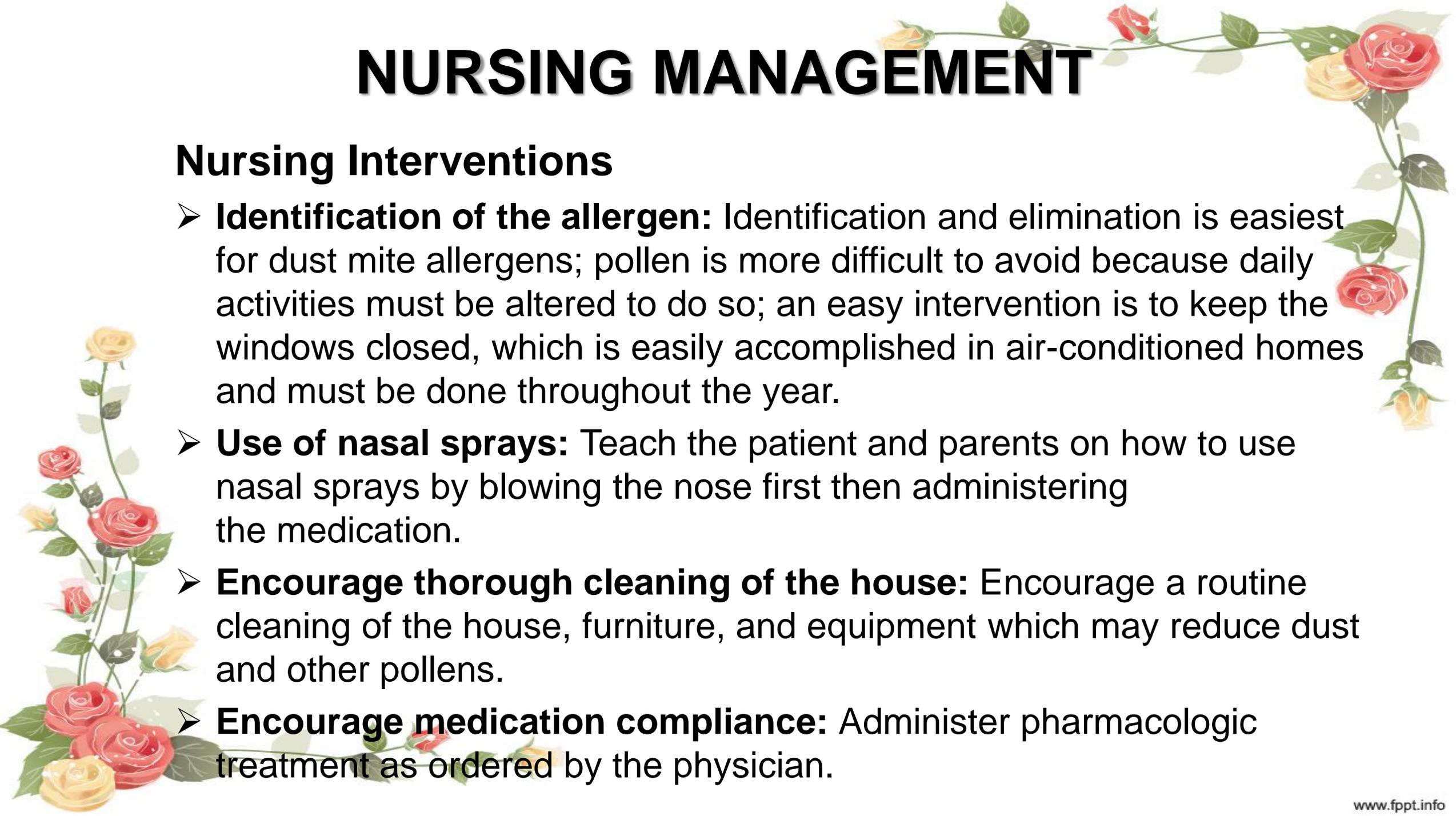


Nursing Care Planning and Goals

The major goals for a client with allergic rhinitis are:

- Client will no longer breathe through the mouth.
- Airway will be back to normal, especially the nose.
- Client will sleep 6-8 hours a day.
- Client and relatives will describe the level of anxiety and coping patterns.
- Client and relatives will know and understand about the disease and treatment.

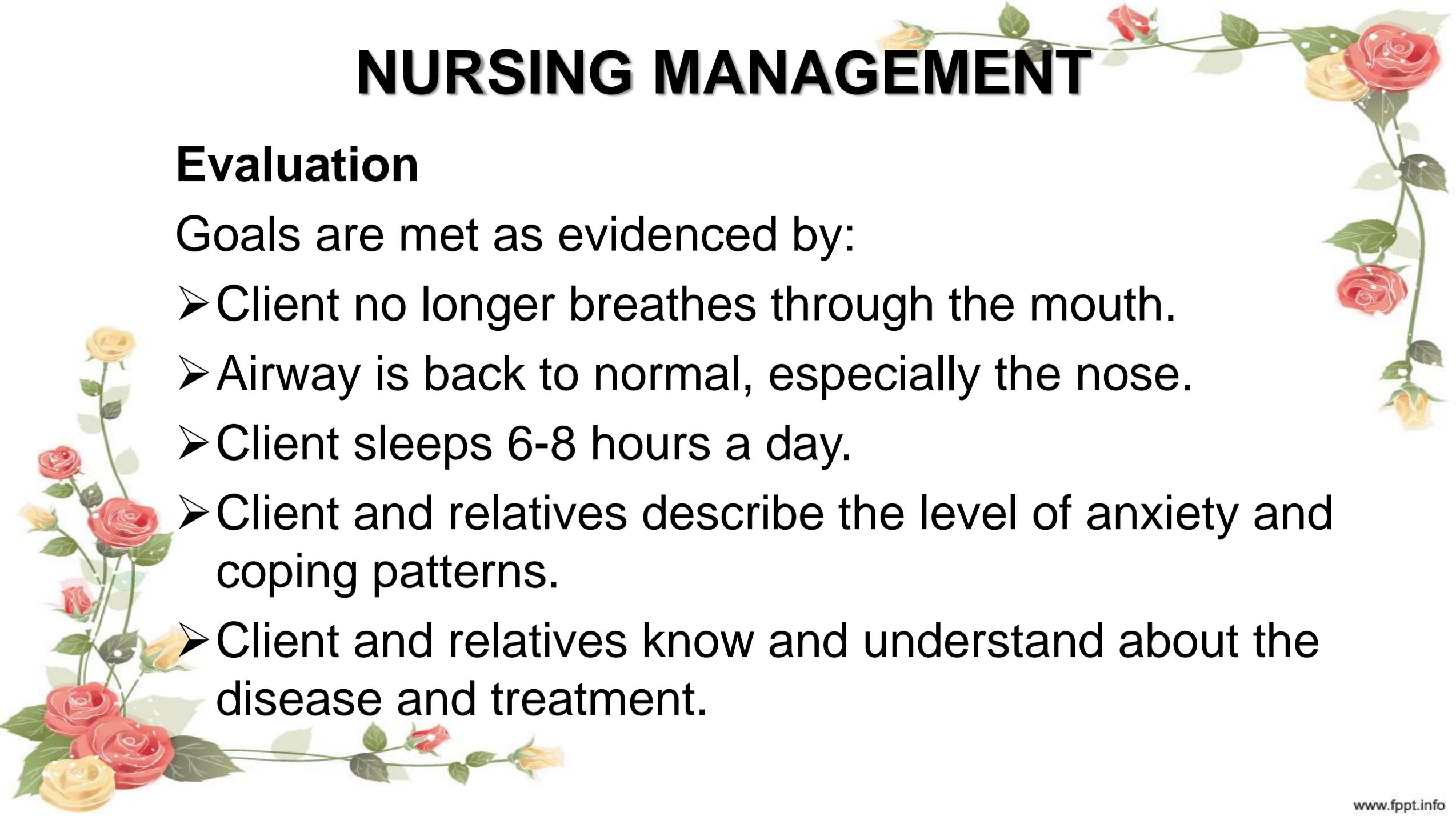
NURSING MANAGEMENT



Nursing Interventions

- **Identification of the allergen:** Identification and elimination is easiest for dust mite allergens; pollen is more difficult to avoid because daily activities must be altered to do so; an easy intervention is to keep the windows closed, which is easily accomplished in air-conditioned homes and must be done throughout the year.
- **Use of nasal sprays:** Teach the patient and parents on how to use nasal sprays by blowing the nose first then administering the medication.
- **Encourage thorough cleaning of the house:** Encourage a routine cleaning of the house, furniture, and equipment which may reduce dust and other pollens.
- **Encourage medication compliance:** Administer pharmacologic treatment as ordered by the physician.

NURSING MANAGEMENT



Evaluation

Goals are met as evidenced by:

- Client no longer breathes through the mouth.
- Airway is back to normal, especially the nose.
- Client sleeps 6-8 hours a day.
- Client and relatives describe the level of anxiety and coping patterns.
- Client and relatives know and understand about the disease and treatment.

NURSING MANAGEMENT



Documentation Guidelines

Documentation of a patient with allergic rhinitis includes the following:

- Environmental assessment.
 - Cultural and religious beliefs, and expectations.
 - Plan of care.
 - Teaching plan.
 - Responses to interventions, teaching, and actions performed.
 - Long-term care.
 - Modifications to the plan of care.
 - Attainment or progress toward desired outcomes.
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