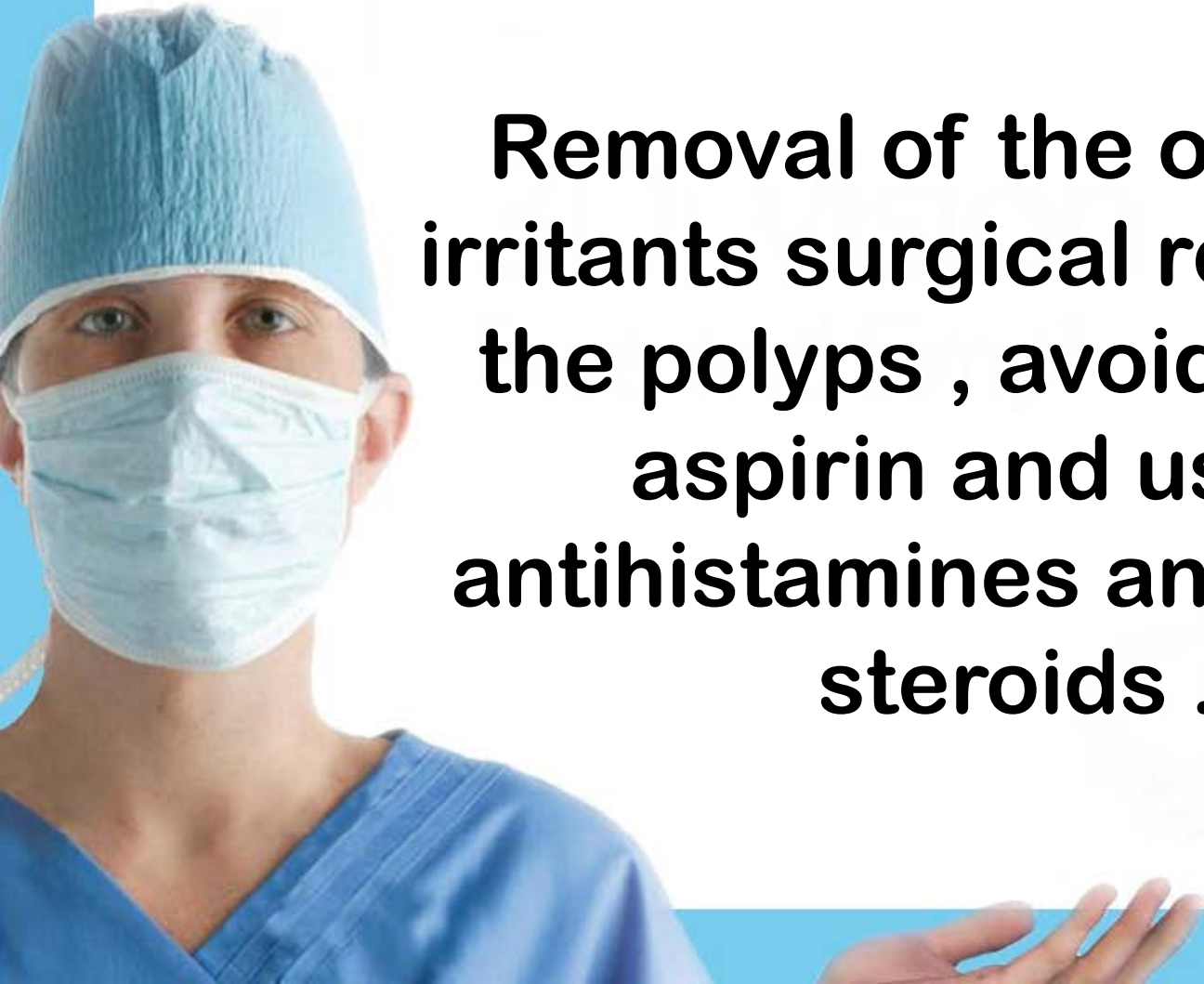


Treatment of eosinophilic rhinitis :

Removal of the offending irritants surgical removal of the polyps , avoidance of aspirin and use of antihistamines and topical steroids .



Mixed cellular rhinitis

This represents up to 50% of chronic types of rhinitis .

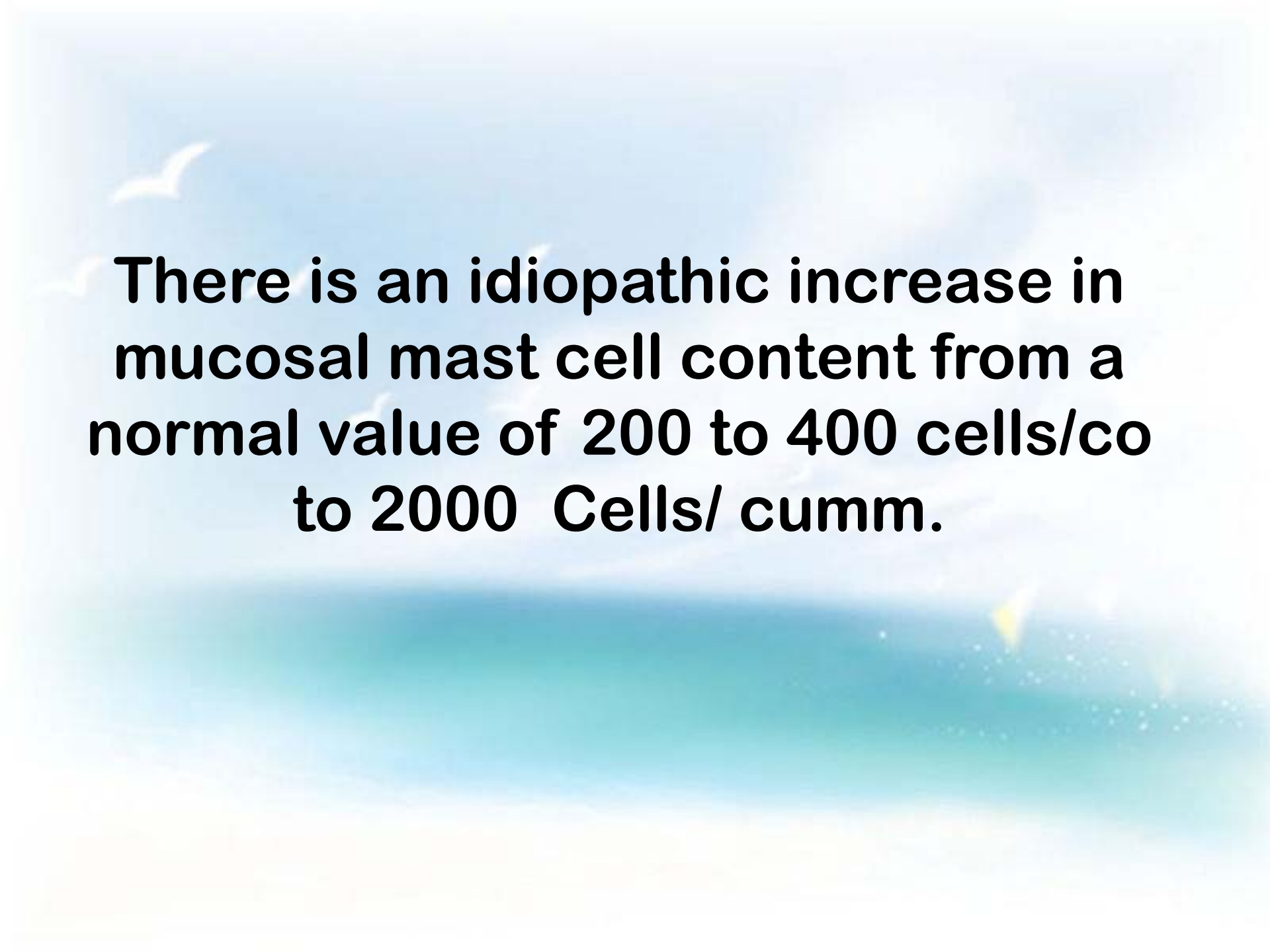
M.C.R is characterized by rhinorrhea , congestion and ared inflamed mucosa .

The nasal smears contain mixed lymphocytes , plasma cells and eosinophils .

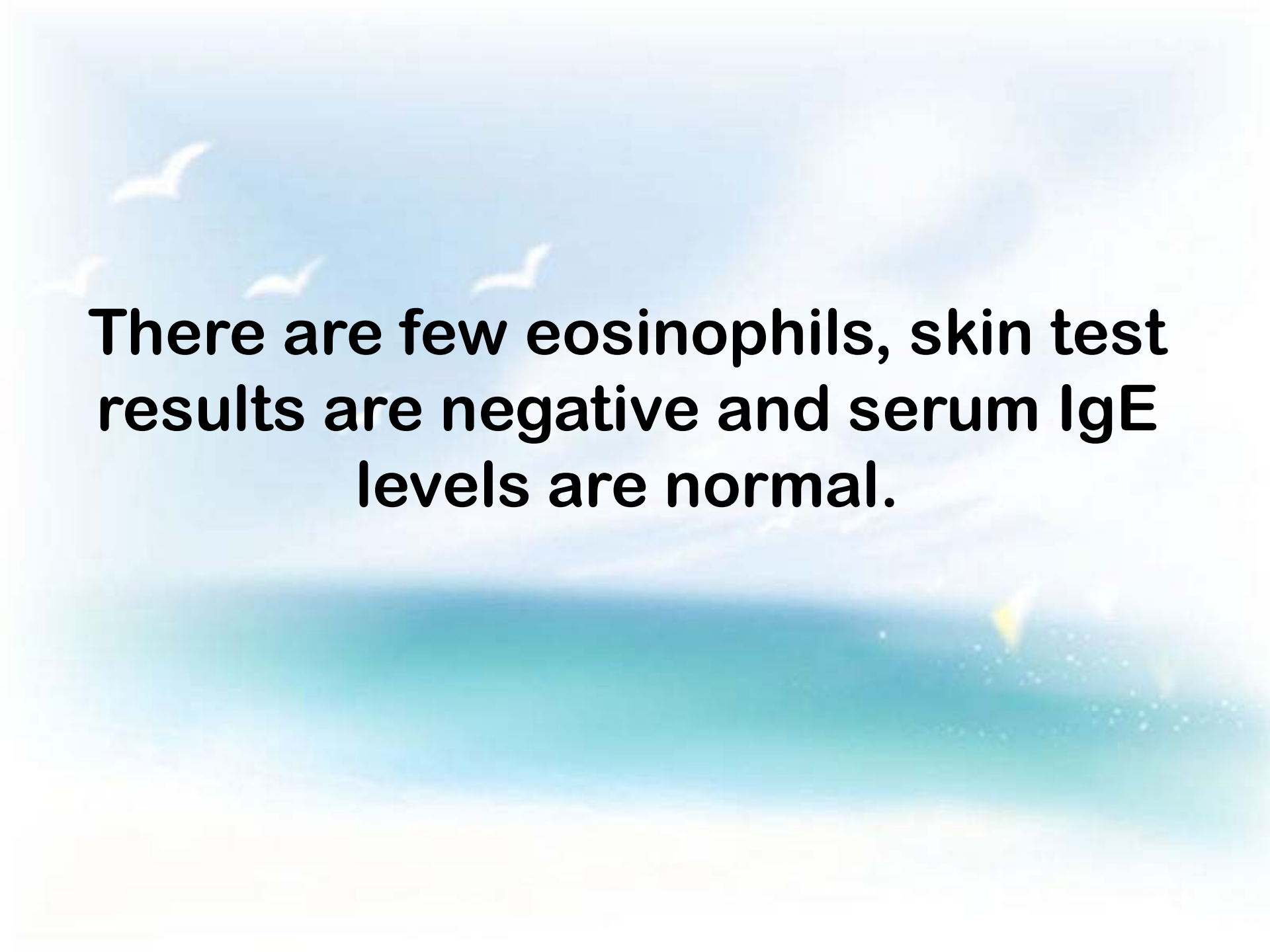
There is normal serum IgE level and skin test results are negative .

Nasal mastocytosis

There is a rare condition found mostly in adult's characterized by rhinorrhea and congestion without Pruritus .



There is an idiopathic increase in mucosal mast cell content from a normal value of 200 to 400 cells/co to 2000 Cells/ cumm.



There are few eosinophils, skin test results are negative and serum IgE levels are normal.

Approximately 15% of patients afflicted with nasal mastocytosis have a medical history of cluster Headaches and a 15% have associated rhinitis with alcohol ingestion .



Recumbency Rhinitis

**Post laryngectomy or tracheostomy
rhinitis .**



Patient Evaluation

History : The history should include the onset , frequency , duration , character and severity of symptoms.



Any precipitating factors such as allergens, irritants , weather changes and medications be identified .



Associated symptoms

Hyposmia , anosmia , disturbed sleep , mouth breathing with dry mouth , snoring , fatigue and Irritability



The efficacy or failure of previous treatment modalities .



Medical history :



**Specific injury as to hypertension ,
diabetes , thyroid dysfunction ,
pregnancy , estrogen therapy ,
endocrine abnormalities ,
autonomic nervous system
abnormalities**

The background is a soft, light pink gradient. Two pink hibiscus flowers are featured: one larger, semi-transparent flower on the left and one smaller, more vibrant flower at the bottom center. Both flowers have several water droplets on their petals. The text is centered in a bold, black, sans-serif font.

**A detailed family history of
asthma , rhinitis , hayfever , atopic
dermatitis**



Physical examination :

Complete otolaryngologic head and neck examination

Conjunctiva inspection – chest auscultation - skin inspection – external nose inspection – rhinoscopy



**The characteristics of the mucosa
are noted:**

**Pale, boggy, gray mucosa is seen in
nonallergic rhinitis and
hypothyroidism**



**Engorged , reddened mucosa
may be seen in rhinitis.**



Thin, crusted mucosa is characteristic of atrophic rhinitis medicamentosa and may be associated with a foul odor (ozena)



Size of turbinates:

**One must not forget that
sarcoidosis may mimic
chronic hyperplastic rhinitis**



Paranasal sinus radiography

Fiberoptic nasopharyngoscopy



Laboratory evaluation:

Nasal smears: eosinophils – mast cells – neutrophils.

A nasal mucosa biopsy and electron microscopy will be necessary for the diagnosis of immotile cilia syndrome or sarcoidosis

Serum IgE levels – estrogen levels – a total eosinophil count – thyroid hormone level – ESR – skin test

The treatment of non allergic rhinitis:

Avoidance of the offending irritants, hormone medications



**includes symptomatic
treatment
use of antihistamines oral
vasoconstrictors
cromolyn sodium
anticholinergic agents
corticosteroid nasal spray**



Antihistamines:

**Selectively block H1
receptors and suppress
those symptoms
mediated by histamine**



Antihistamines also exert an anticholinergic like effect orrhinorrhea.



Side effects :

drowsiness , dry mouth , irritability ,
dizziness

In larger doses:

delirium , hallucination , ataxia , muscle
twitching , fever , convulsions , death



Sympathomimetic agents:

**stimulate alpha ,
adrenergic receptors,
constrict vessels,
decongest mucous
membranes and provide
an overall decrease in
nasal airway resistance**



They are also felt to increase (CAMP) and inhibit release of mediators.



**Pseudophefrine
phenylpropanolamine
oxymethazoline**
**are the first line drugs
used for symptoms of nasal
congestion.**



Side effects:


**nervousness , insomnia
,irritability , difficulty**

**Urinating in elderly men an
increase in diastolic blood
pressure in patients with labile or
overt hypertension or in
individuals taking (MAO)
inhibitors may be noted.**



These agents have a marked short term effect followed by rebound congestion and rhinitis medicamentosa after prolonged use.





Anticholinergic agents:
proprantheline and belladonna may
be effective in reducing the
rhinorrhea of vasomotor rhinitis.

These drugs should be avoided in patients with tachy arrhythmias obstructive uropathy and narrow-angle glaucoma.




As noted secretions are controlled by other mediators in addition to acetylcholine hence anticholinergic Agents should not be expected to be as effective in controlling the symptoms of rhinitis .

A large, mature tree with a thick, gnarled trunk and a dense canopy of white blossoms stands on a grassy hill. The sky is a clear, bright blue. The tree's branches spread out, filling much of the upper left and center of the frame. The ground is covered in green grass with small yellow flowers scattered throughout.

Topical steroids :

1- suppress the local inflammatory response caused by the release of vasoactive mediators .


A large, mature tree with a thick, gnarled trunk and a wide, spreading canopy of white blossoms stands on a grassy hill. The sky is a clear, bright blue. The tree's branches are covered in small, delicate white flowers, likely cherry blossoms. The ground is covered in green grass with some yellow wildflowers. The overall scene is bright and clear, suggesting a sunny day in spring.

2- T.S reduce the sensitivity of irritant receptors (thus diminishing the sneeze response)

3- reduce the reactivity of acetylcholine receptors with some decrease in rhinorrhea and decrease the total basophil and eosinophil count.



The topical steroid preparations in common use are **beclomethasone dipropionate** and **flunisolide** .
there are effective in allergic as well as in nonallergic rhinitis including vasomotor rhinitis and nasal polyposis.

A large, mature tree with a thick, gnarled trunk and a wide, spreading canopy of white blossoms stands on a grassy hill. The sky is a clear, bright blue. The tree's branches are covered in small, delicate white flowers, likely cherry blossoms. The ground is covered in green grass with some yellow wildflowers. The overall scene is bright and clear, suggesting a sunny day in spring.

Side effects of topical steroids include mucosal edema , mild eryhtema, burning , drying , epistaxis , Occasionally stinging sensation candidiasis .

A large, mature tree with a thick, dark trunk and a wide, spreading canopy of white blossoms stands on a grassy hill. The sky is a clear, bright blue. The foreground shows a field of green grass with small yellow flowers.


Cromolyn sodium :


Prevents mast cell degranulation and inhibits the release of histamine. This medication may be of some benefit in IgE – mediated allergic rhinitis .



Surgical management of nonallergic rhinitis :

**Anatomic abnormalities
including the removal of
tumors and polyps and
surgical debulking of chronic
turbinate hypertrophy .**





This end stage chronic hypertrophic rhinitis may be managed by a number of surgical techniques including intra turbinate steroid injection .

Turbinate out fracture , cauterization , cryosurgery , laser vaporization, submucous resection of conchal bone, patial inferior turbinate resection and total inferior turbinectomy .

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Thank you

