

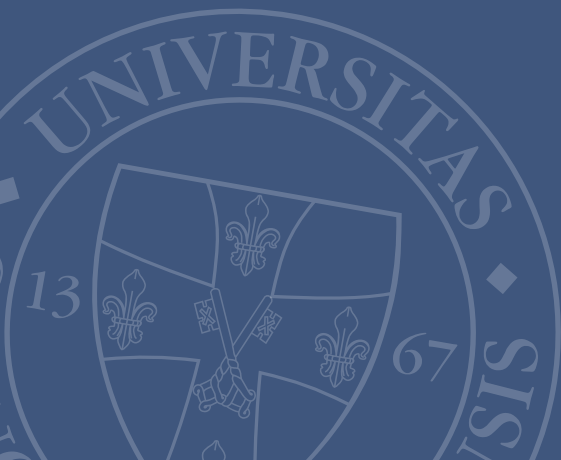


PÉCSI TUDOMÁNYEGYETEM  
ÁLTALÁNOS ORVOSTUDOMÁNYI KAR

[www.aok.pte.hu](http://www.aok.pte.hu)

# Allergic rhinitis

Zalán Piski MD



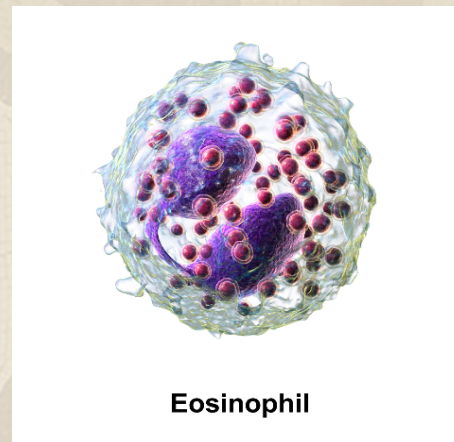
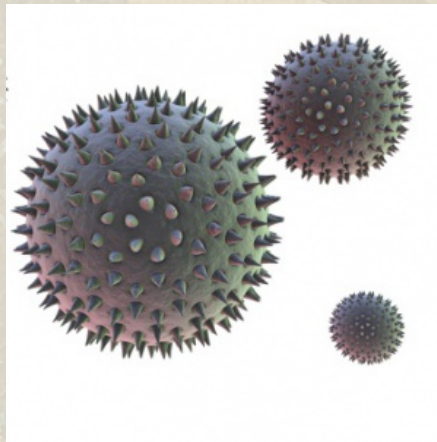


# The allergy

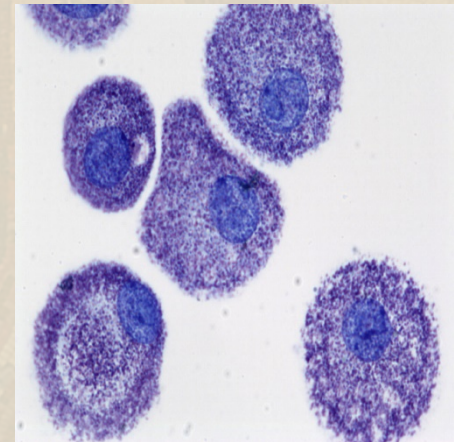


# The allergy

IgE mediated immun response  
against inert antigens.



**Eosinophil**



# The allergy - pathophysiology

Allergen exposition

Sensibilization

Th2 immun respons

IL-4 production

specific IgE, basophils and mast cell binding

Secunder exposition to the allergen

Mast cell degranulation

HISTAMIN, prostaglandins,  
leukotriens, tripase...



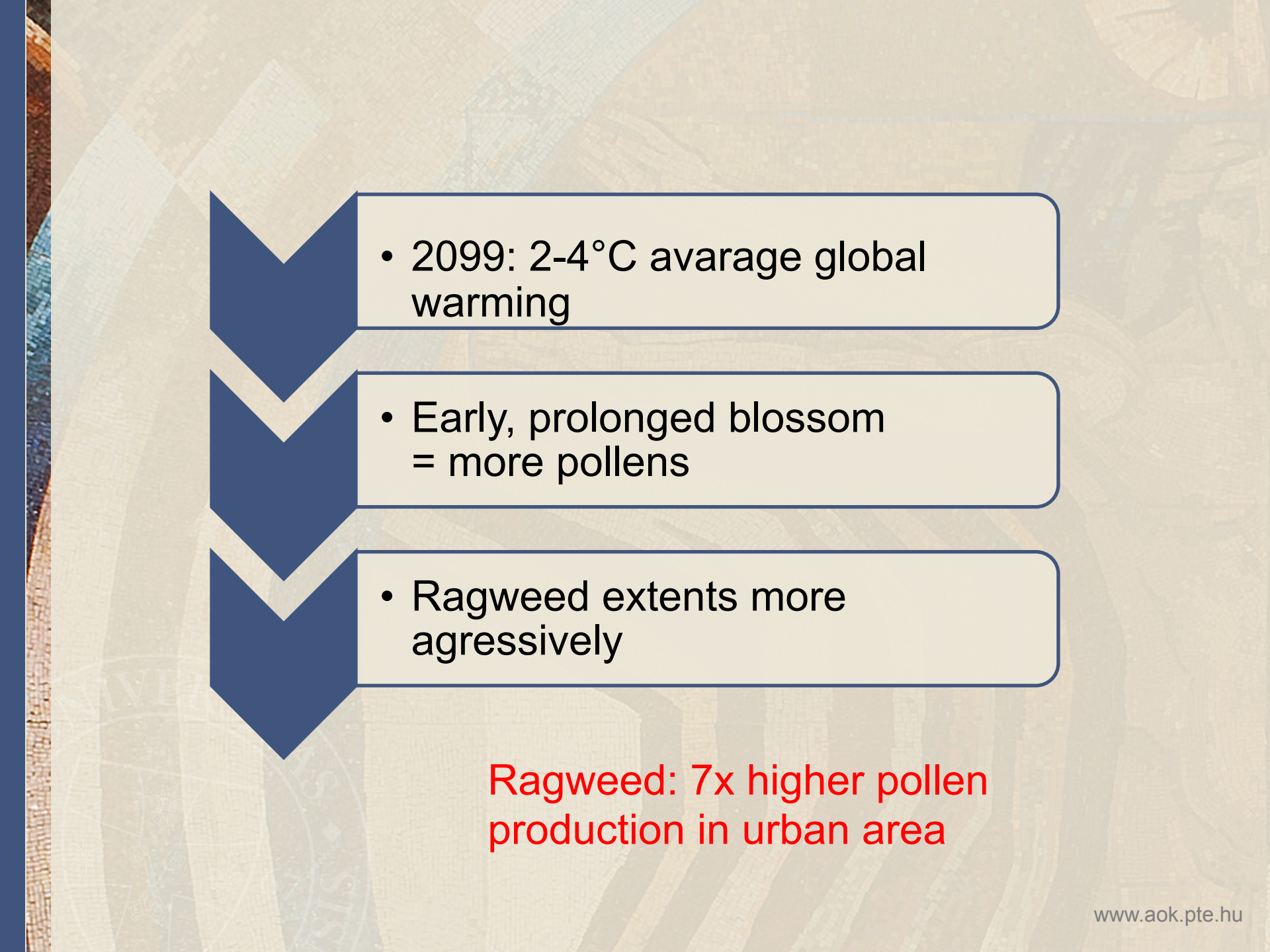
# The allergy - Epidemiology

- ◆ Prevalence: EU: 5-25%  
Hungary 10-16%
- ◆ 400 million patient
- ◆ USA: costs for AR doubled in the last 5 year (11 billion)

15. Pawankar R, Canonica G, Holgate S, Lockey R. WAO White Book on Allergy 2011-2012. In Edition Milwaukee, Wisconsin, USA: WAO 2011.

16. Global Initiative for Asthma. Pocket Guide for Asthma Management and Prevention. 2010.





- 2099: 2-4°C average global warming

- Early, prolonged blossom = more pollens

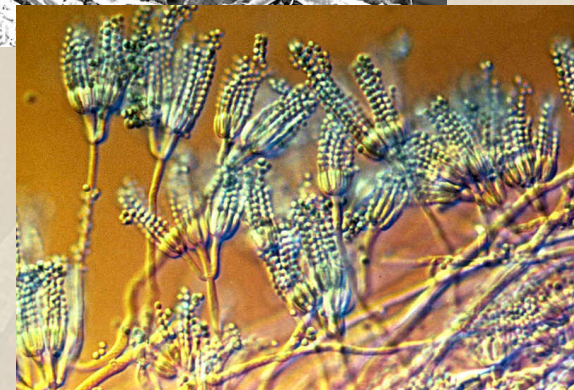
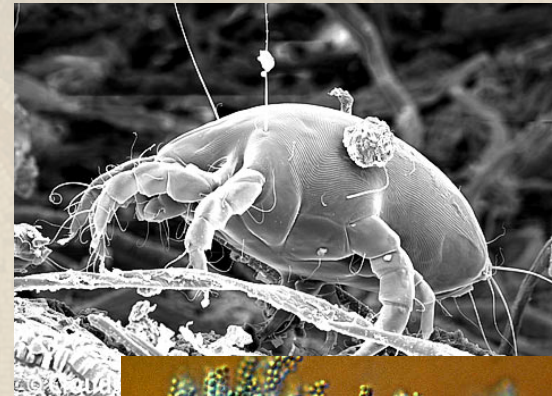
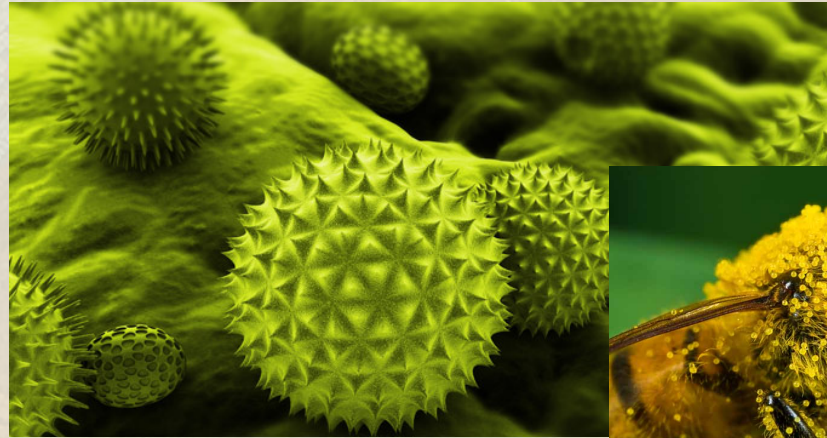
- Ragweed extends more aggressively

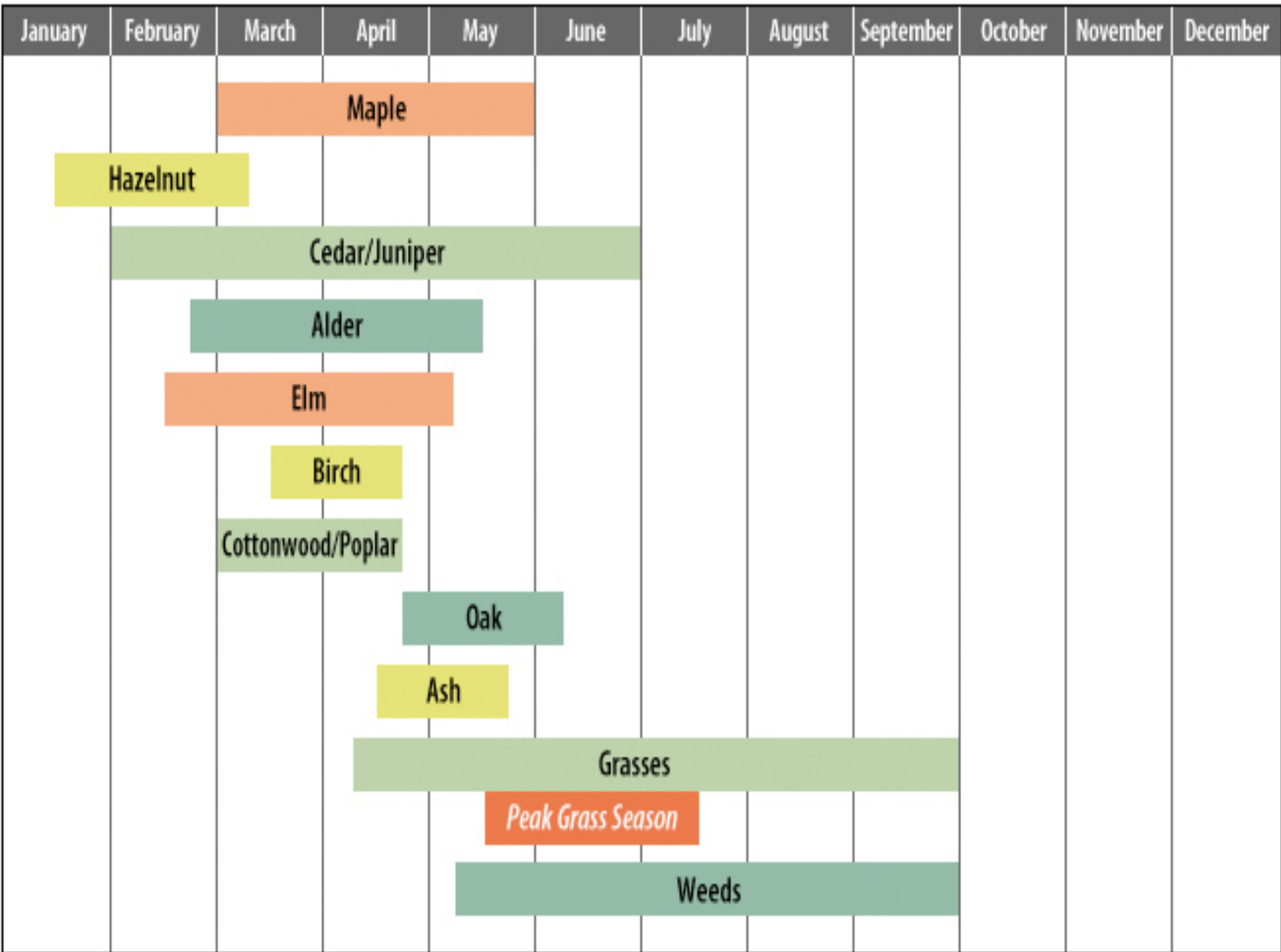
**Ragweed: 7x higher pollen production in urban area**



# The allergy - Allergens

- ◆ Pollens
- ◆ Funghi
- ◆ Mites (*Dermatophagoides pteronyssimus*, *D. farinae* ürüléke)
- ◆ Pets (epithel, fur, body fluids)
- ◆ Insect poisons
- ◆ Food
- ◆ Medicines
- ◆ Occupational allergens
- ◆ Pigments, stains, coatings



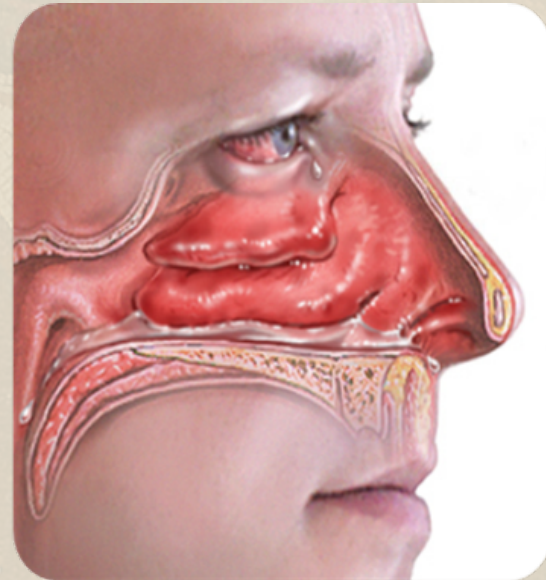




# The allergy - symptoms

- ◆ Runny nose
- ◆ Blockage
- ◆ Itching
- ◆ Conjunctivitis
- ◆ Sneezing
  
- ◆ Itching
- ◆ Dry cough
- ◆ Soar throat
- ◆ Skin symptoms

Runny nose + 1  
or more symptom



# The allergy - Diagnosis

## Physical examination

- Nasal, eye symptoms
- Nasal voice
- Horizontal grooves on the nose
- Edematous eyelids



## Rhinologic symptoms

- Aspecific rhinoscopy
- Rule out other disorders!



## Treatment attempts

- Nasal steroid or oral antihistamin works

## Allergy tests

- Skintest
- Specific IgE test





# The allergy - classification

- ◆ course
- ◆ severity

# The allergy - classification

## Intermittent

- complaints last 4 or less days a week
- for 4 or less weeks

## Persistent

- complaints last 4 or more days a week
- for 4 or more weeks



# The allergy - classification

## Mild rhinitis:

- Normal sleeping
- Normal daily activity, sport
- Normal working
- The complaints are tolerable

## Moderate/severe rhinitis:

- Disturbed sleeping
- Disturbed daily activity, sport
- Disturbed working
- The complaints are not tolerable

# The allergy – differential diagnosis

- ◆ Septal deviation
- ◆ Rhinosinusitis
- ◆ Other nasal, anatomical deformities
- ◆ Occupational, hormonal rhinitis
- ◆ **Sinonasal tumor**
  - One sided symptoms
  - Nasal bleeding
  - Nasal blockage
  - Purulent discharge
- ◆ Foreign body...



# The allergy - differential diagnosis

## Allergic Rhinitis Questionnaire

### Question

1. Do you have any of the following symptoms?

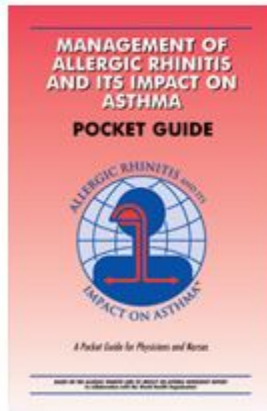
- Symptoms on only one side of your nose
- Thick, green or yellow discharge from your nose
- Postnasal drip (down the back of your throat) or runny nose (see NOTE)
- Facial pain (see NOTE)
- Recurrent nosebleeds
- Loss of smell (see NOTE)

2. Do you have any of the following symptoms for at least one hour on most days (or on most days during the season if your symptoms are seasonal)?

- **Watery runny nose**
- Sneezing, especially violent and in bouts
- Nasal obstruction
- Nasal itching
- Conjunctivitis (red, itchy eyes)

**NOT ALLERGIC  
RHINITIS**

- ◆ [http://www.whiar.org/  
Documents&Resources.php](http://www.whiar.org/Documents&Resources.php)



### ARIA Pocket Guide

The ARIA Pocket Guide summarizes the information in the 2008 ARIA Report in a convenient, easy-to-use pocket-size format.

One copy of the ARIA Pocket Guide may be downloaded for personal clinical or academic use by [clicking here](#).

One copy of the ARIA Pocket Guide may be downloaded for commercial use for a fee by [clicking here](#).



### ARIA One Airway Questionnaire Guide

One copy of the 2010 ARIA One Airway Questionnaire Guide may be downloaded for personal clinical or academic use by [clicking here](#).

One copy of the 2010 ARIA Patient Sheet may be downloaded for personal clinical or academic use by [clicking here](#).



# Treatment possibilities

# Treatment

## Allergen elimination

Nasal steroid

Oral anti-histamin

Nasal chromons

Nasal antikolinerg agents

decongestants

LT antagonists

Specific immunotherapy

A-IgE



# ◆ Treatment - Allergen elimination

- ◆ Pollen filters
- ◆ Funghi elimination
- ◆ Proper cleaning
- ◆ Hypoallergen materials
- ◆ Feather pillow change
- ◆ Pets...
- ◆ Avoid food allergens





# Treatment - Nasal steroids

- ◆ Mometason furoat
- ◆ Fluticason propionat
- ◆ Triamcinolon
- ◆ Budesonid



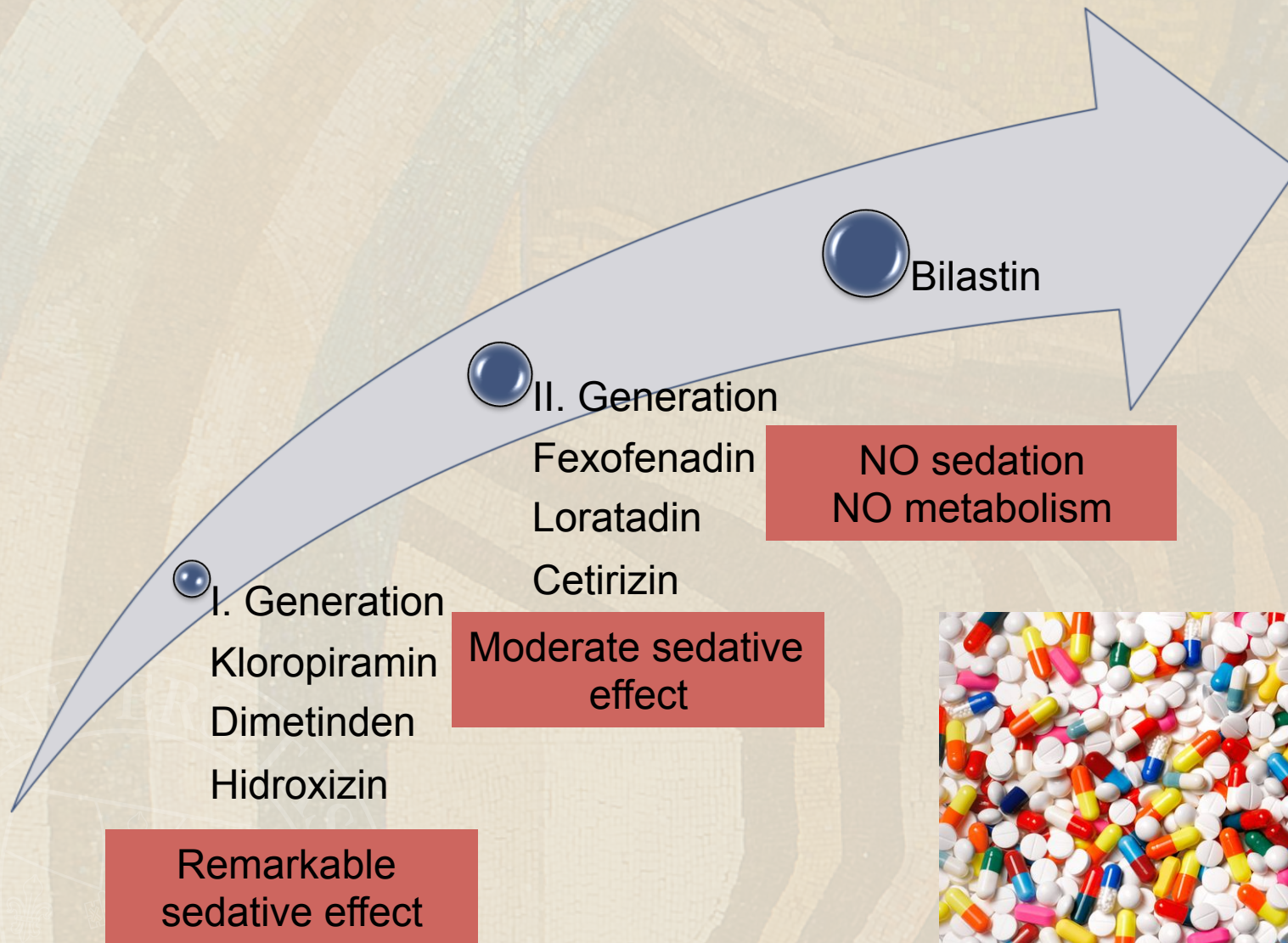


# Treatment - Oral antihistamins

- ◆ In every stage
- ◆ Intermittent and persistent forms
- ◆ Effective for very symptoms (nose, eye, skin)



# Treatment - Oral antihistamins





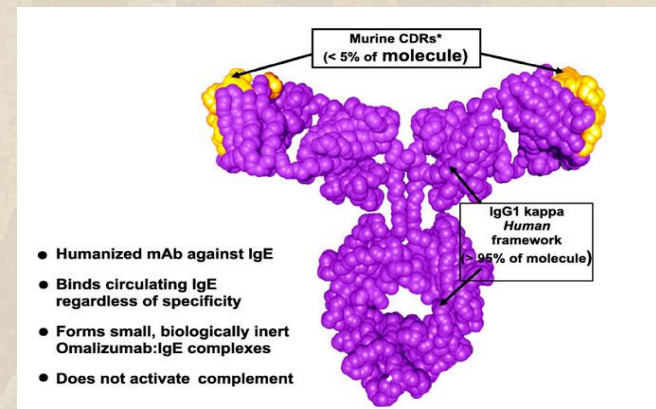
# Treatment – Other nasal agents

- ◆ Anti-kolinergics – only for rhinitis
- ◆ Chromons – safe but short, moderata effect
- ◆ Decongestants – only for blockage, frequent **abuse**
- ◆ Topical antihistamin



## Treatment – Other agents

- ◆ Leukotrien antagonists (Montelukast, Pranlukast, Zafirlukast) – effect also the asthmatic symptoms
- ◆ Anti- IgE – Omalizumab, high costs





# Treatment – Specific Immunotherapy

- ◆ Sublingual, oral or subcutaneous treatment with low dose, purified allergen.

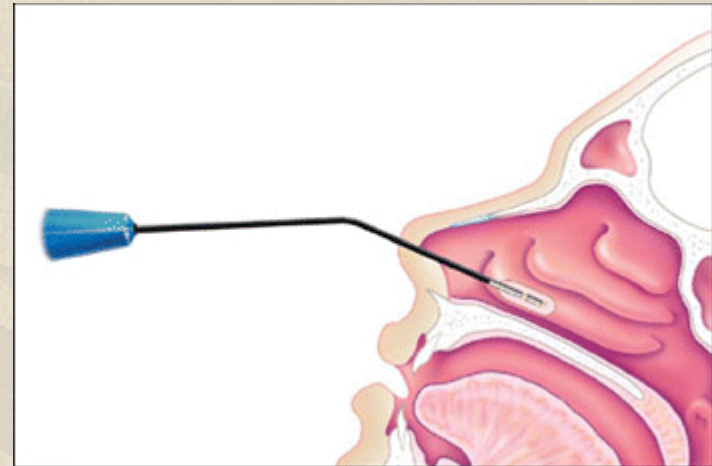


- ◆ 3 years treatment results in significant improvement



# Treatment – Surgery

- ◆ Lower turbinate surgery (radio frequency, laser, turbinoplasty)

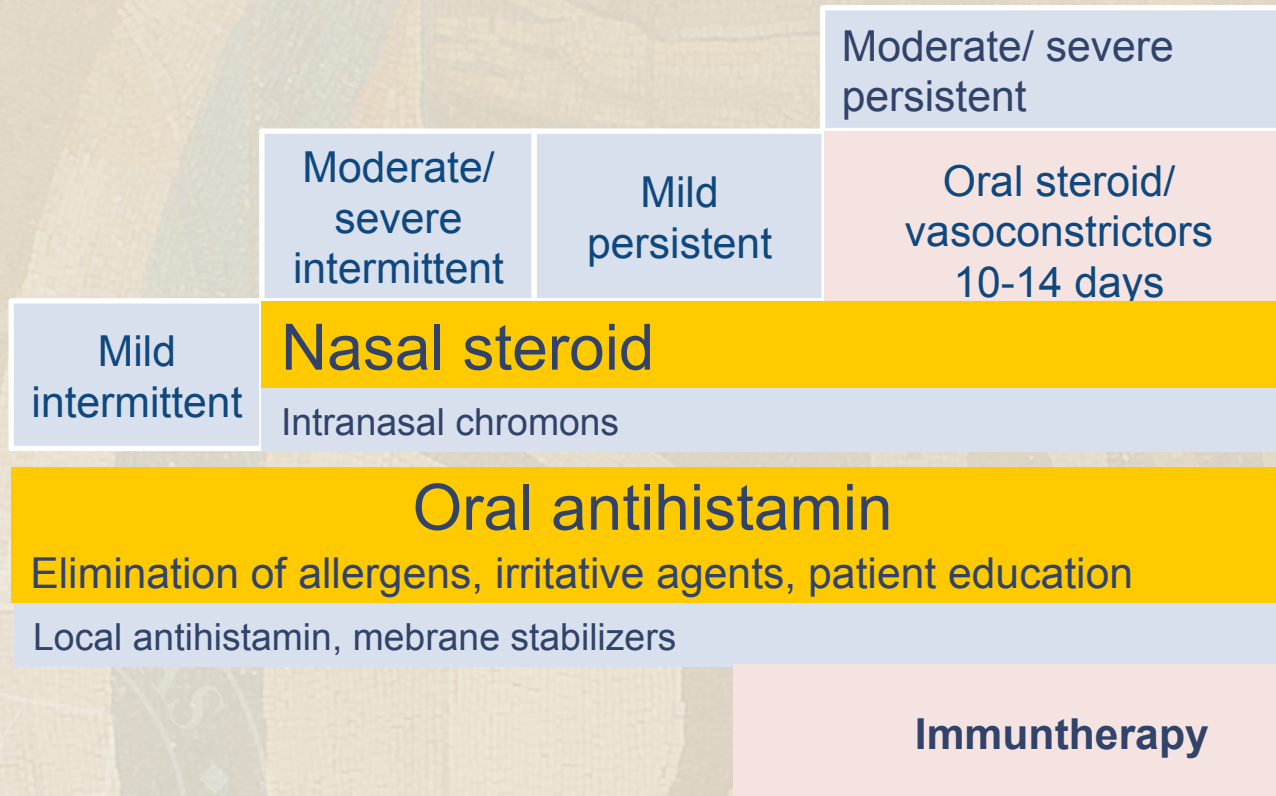


## WHEN:

- Blockage is the primary complaint
- The lower turbinate is swollen
- Conservative therapy failed



# Treatment – Staged therapy





Thank you for your attention!

