



ALLERGIES

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BACKGROUND

- ~20% of population has allergic rhinitis
 - Up to 40% of children
- Cause
 - Complex gene-environment interaction
 - Tend to cluster in individuals and families
- Risk factors
 - Smoking
 - Family history
 - Higher socio-economic class
 - First born or only child



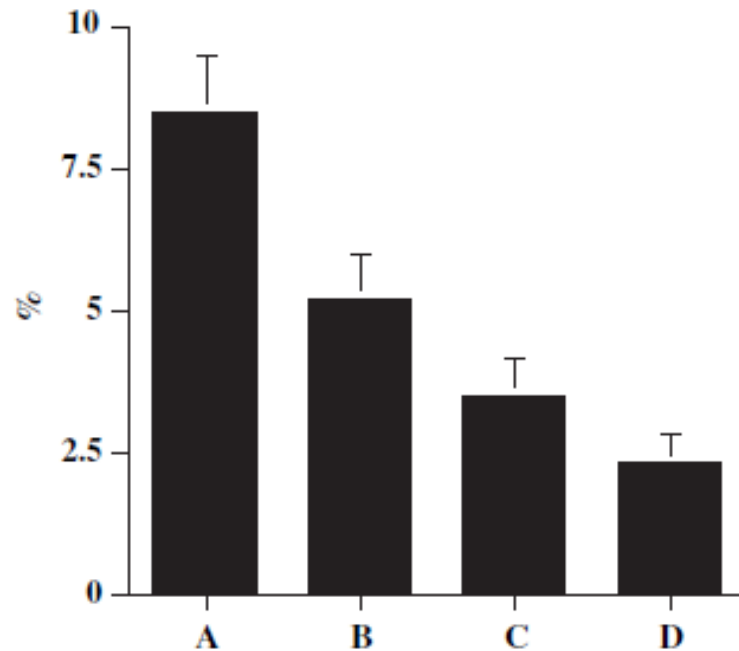
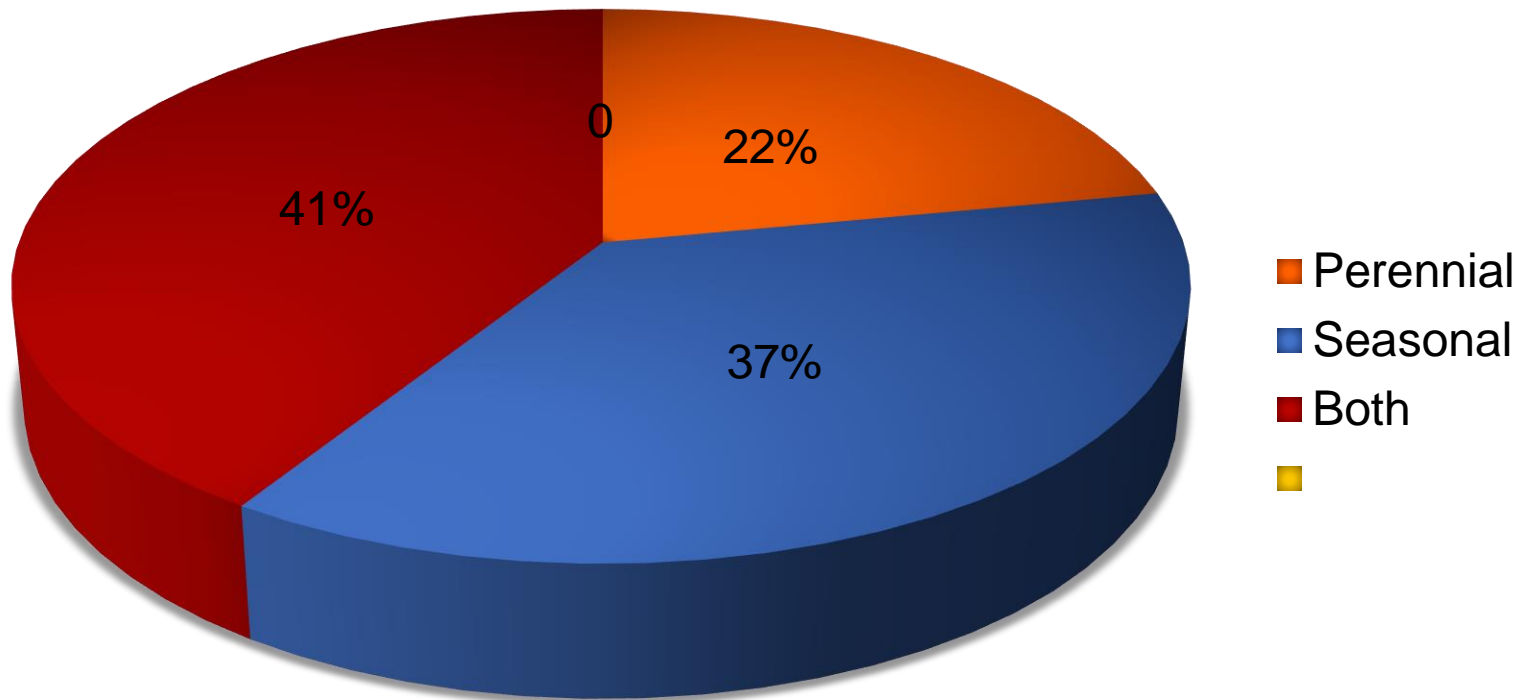


Figure 1. The cumulative incidence of self-reported allergic rhinitis symptoms between 1992 and 2000 depicted as percentage of the population in 1992 for each age group. There is a trend for higher incidence in younger age groups (ages in 1992). (A) 20–29 years; (B) 30–39 years; (C) 40–49 years; (D) 50–59 years.

- Nihlen et al, *Allergy* 2006;61:1299-1304



SEASONAL VS. PERENNIAL



Courtesy of Pfizer Inc. 2002

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" Would you like your child be in the gluten-free class, the lactose-free class, or the peanut-allergic class ? "



FOOD ALLERGY

- In addition to immediate type, delayed and gut specific reactions
 - Testing difficult
- More likely the culprit in children under 2
- Reactions can be fixed or cyclic
 - Fixed is immediate and consistent regardless of quantity
 - Cyclic is immediate or delayed and can be frequency or dose dependent



ORAL ALLERGY SYNDROME

- Many people with environmental allergies will develop their typical symptoms after eating certain foods that have similar chemical nature to the allergen in question
 - Example: trees and apples; weeds and melons



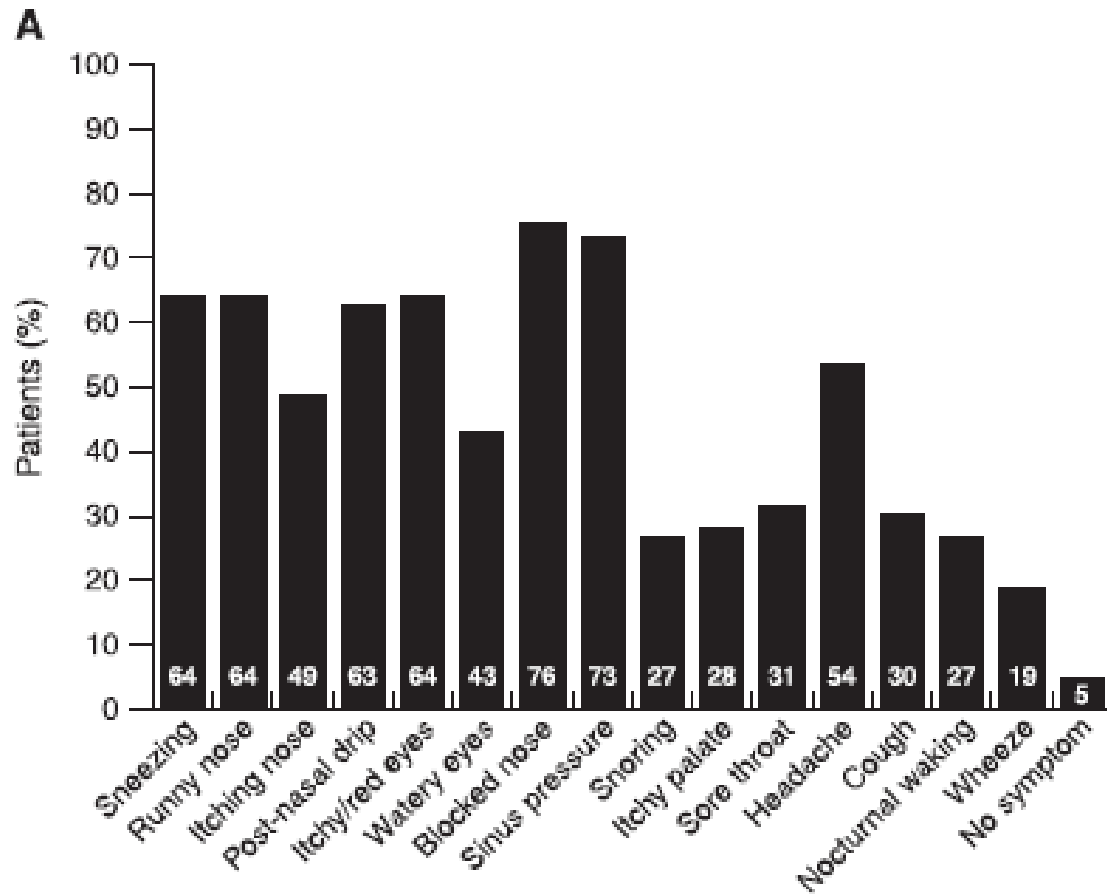
Pollen, Fruits, Veggies Help Trigger Oral Allergy Syndrome

Mar. 23

By Robert Preidt

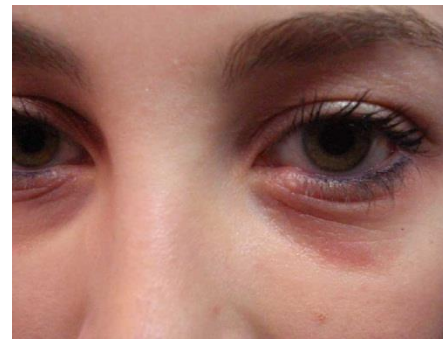


CLINICAL MANIFESTATIONS





○ http://allergydiagnosis.in/common_manifestations



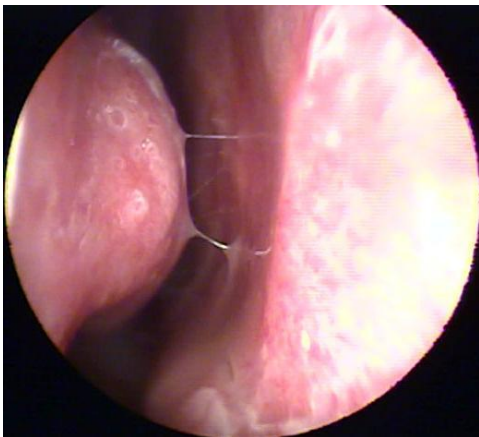
http://www.honoluluclueyeclinic.com/blog/?attachment_id=438



<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/dermatology/atopic-dermatitis/>

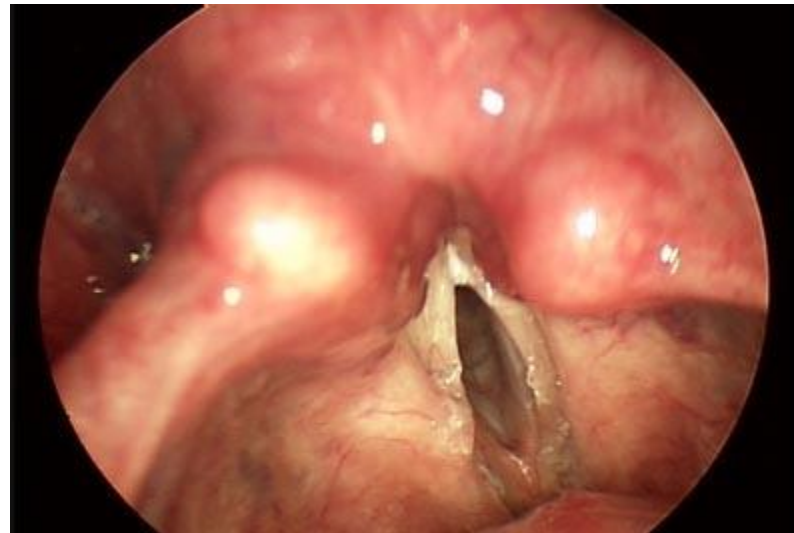


<http://www.studyblue.com/notes/note/n/01-oropharynx/deck/7164489>



http://www.entusa.com/nasal_pictures_html/allergic_rhinitis_3.htm





<http://www.nyee.edu/cfv-spotlight.html>



https://www.healthtap.com/user_questions/653284-red-pea-sized-blister-like-spot-in-throat-not-painful-dr-said-it-s-probably-a-virus-and-will-go-away-in-3-weeks-it-has-been-over-a-month-now



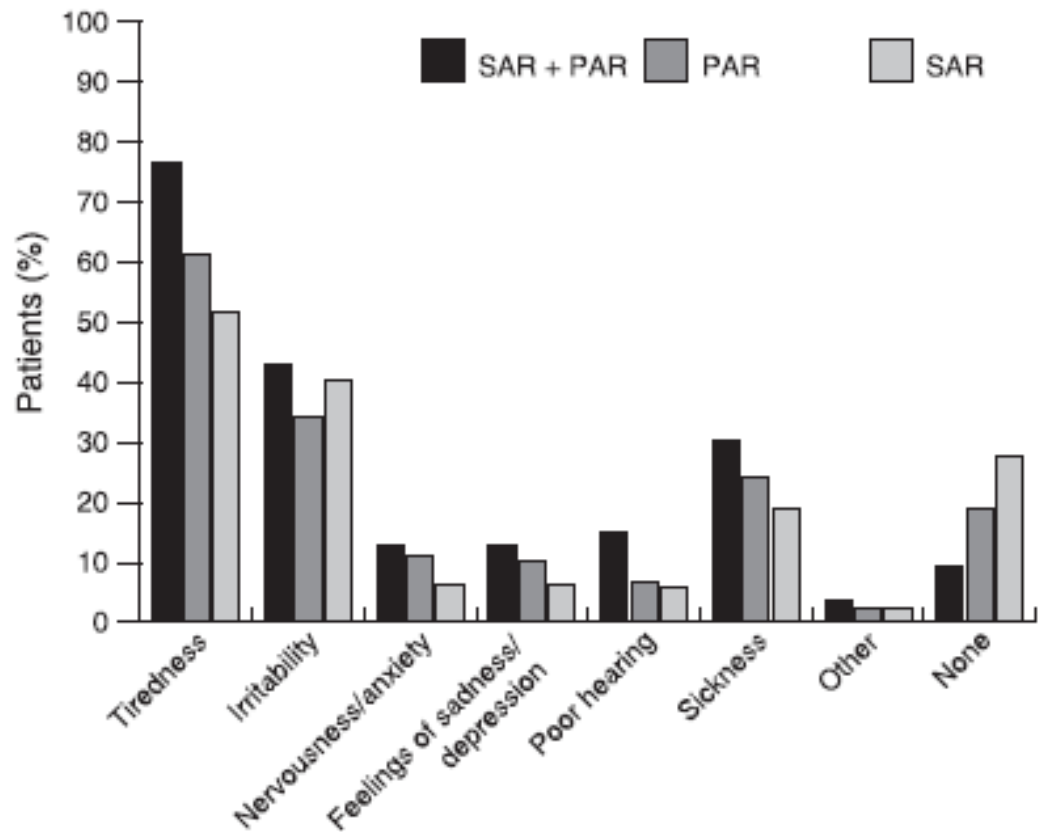


Figure 3. The impact of allergic rhinitis on how American patients felt.

- Schatz M, *Allergy* 2007; 62 (suppl. 85): 9-16



TESTING

- Prick
- Blood Work
- Patch
 - Nonspecific response
- Intradermal (shots into skin)



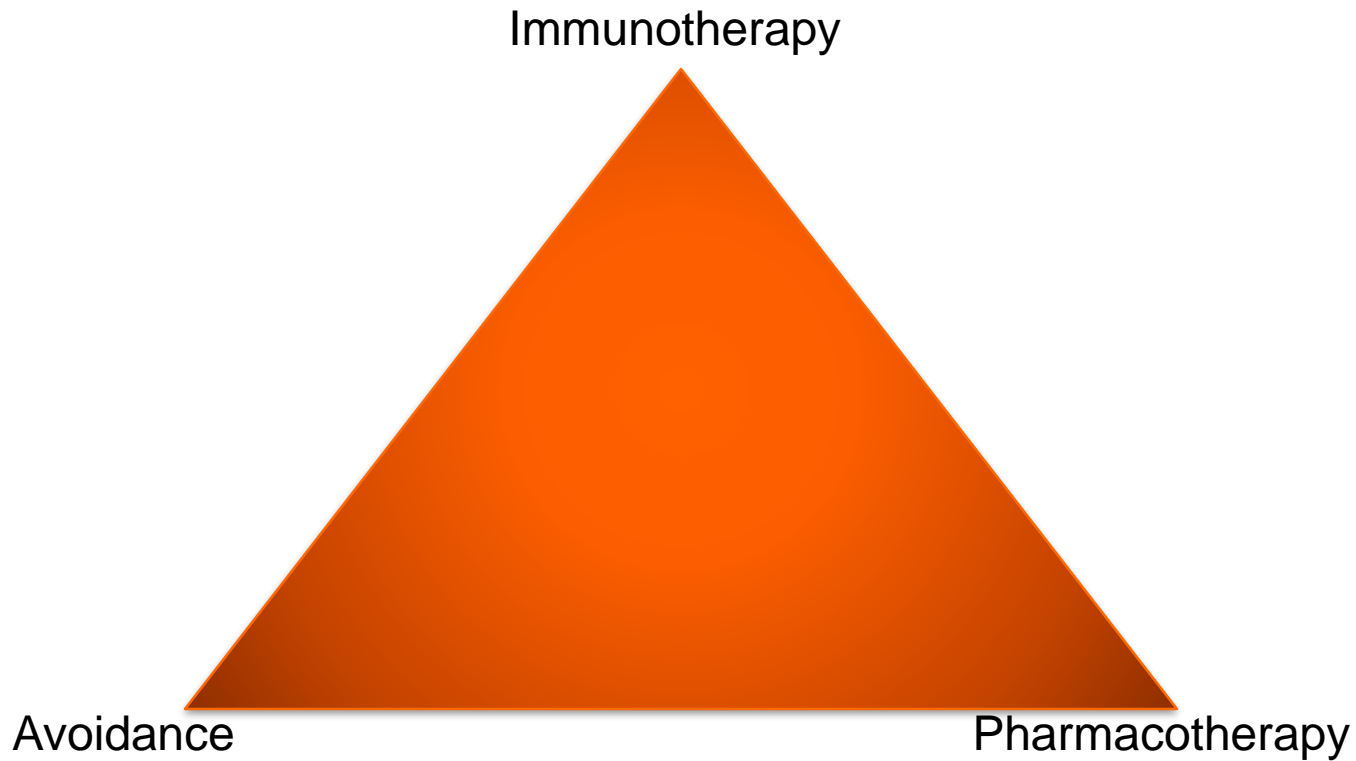


PRICK TESTING

- Start to respond after 5 minutes
- Immediate maximal response at 10-20 minutes and last for up to an hour



ALLERGY TREATMENT



AVOIDANCE STRATEGIES

- The average American adult spends the vast majority of their time indoors.
- Indoor allergens associated with PAR and asthma
- Dust mites is the most ubiquitous
 - Rare if <50% humidity or at high altitude
- Animals
 - Cat is extremely potent
 - Dog less potent



DUST MITES- REDUCING ALLERGEN



- High altitude -Yes
- Pillow and Mattress Liners -Yes but only short term
- Washing bedding weekly at 131F - Yes
- Dehumidifiers -Yes
- Vacuuming -No
 - HEPA vacuum may lower allergen counts
- Acaricides - Temporarily
- Removing Carpets, stuffed sofas, etc -Yes



PETS

- Most people would rather get rid of their doctor than the pet
- HEPA Filters
 - HEPA vs. placebo – no change in asthma or rhinitis symptoms
- Wash the cat weekly
 - Works for a few days or doesn't work at all
- Allerpet doesn't work



*'When did you first notice
this cat allergy?'*



MOLD

- Sources – fridge, laundry rooms, basements, shower curtains, stuffed furniture
- Humidity <50%
- Clean damp areas with fungicide
 - Bleach or commercial mold remover
- Mold retardant paint, wallpaper glue, grout, fiberboard



OUTDOOR ALLERGENS

- Trees – February-April
- Grass – April – August
- Weeds – August-October

- Pollen highest release 7-10am

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"You've developed a seasonal allergy. Go get this prescription filled and **DO NOT** stop to smell the flowers!"

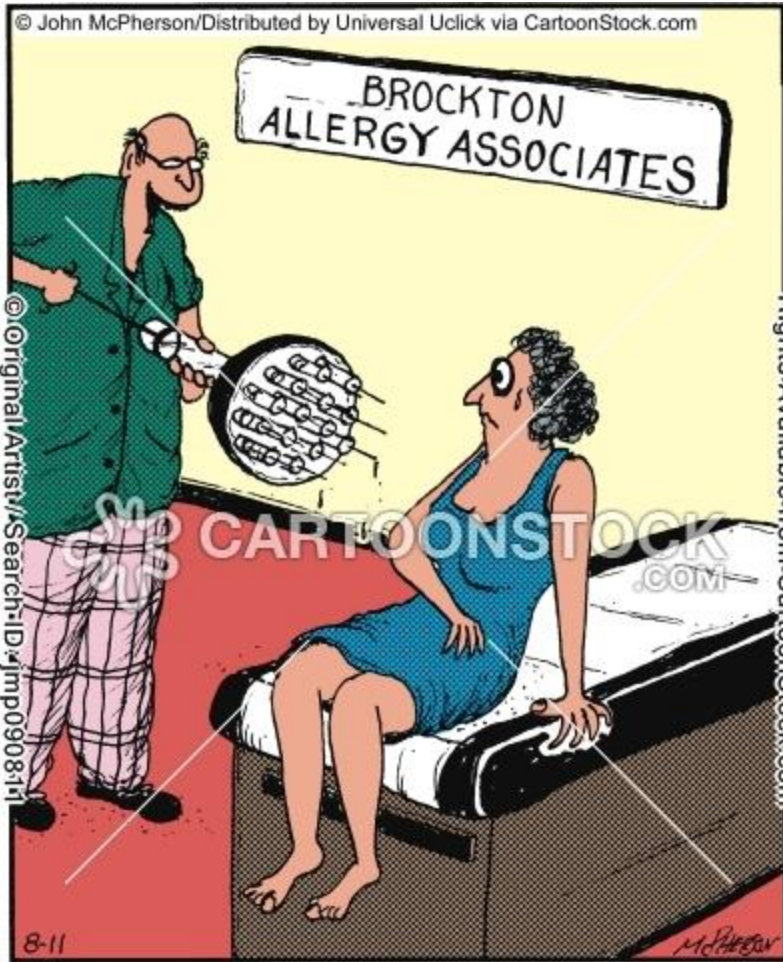


PHARMACOTHERAPY FOR ALLERGIC RHINITIS

- Antihistamines
- Decongestants
- Leukotriene receptor agonists
- Anticholinergic medication
- Mast Cell Stabilizers
- Steroids (topical and systemic)

- No response with medical management and avoidance → consider immunotherapy





“Our new multi-syringe will take care of all your allergies in one fell swoop.”



IMMUNOTHERAPY

- Treats allergy by intentional, regular exposure and titration
- Effective in 90% of patients
 - Improved QOL
 - Reduces symptoms
 - Long term benefit
 - Decrease risk in developing asthma
 - Prevents new sensitizations



INTRODUCTION TO IMMUNOTHERAPY

○ Allergy shots

- Total treatment 3-5 years
- Escalation first 6-9 months
 - Weekly injections
- Maintenance
 - Every 2 weeks in the second year
 - Every 3-4 weeks for the remainder

○ Risks

- Local reactions
 - Mild to severe
- Systemic reactions
- Anaphylaxis
- Pts observed for 25 minutes in the office



INTRODUCTION TO IMMUNOTHERAPY

- Drops under the tongue (SLIT)
 - Total treatment 3-5 years
 - Escalation first 10 days
 - **Done at home**
 - **Needle Free**
 - **\$\$**
- Risks
 - Local reactions
 - Systemic reactions – more rare than with shots
 - No reported deaths with SLIT
- Commercially available grass, weed, and dust
- Customs vials --- off label



SUMMARY

- Allergic disorders affects a significant percentage of the population and can manifest themselves into many areas
- Various methods of testing are key to diagnosis and guiding treatment strategies
- Relief is possible with comprehensive treatment plans and strategies





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THANKS!!