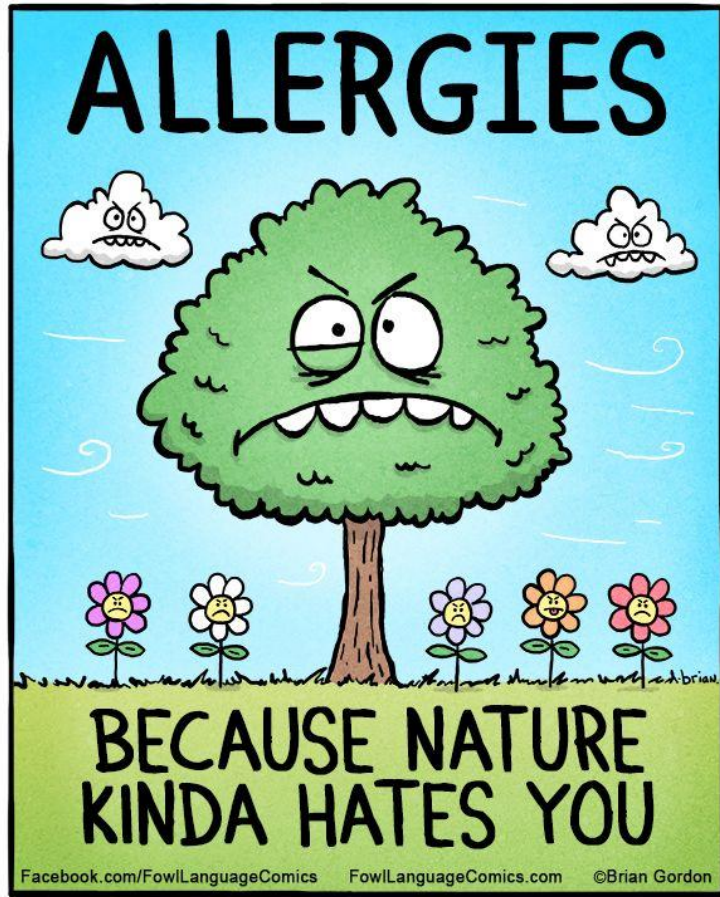


Understanding Allergies

AAPA 2024



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Financial Disclosure

Current Relationships:

- Speaker/Consultant – Boehringer Ingelheim
- Speaker – Grifols Pharmaceuticals
- Advisory Board - Regeneron
- Advisory Board - AstraZeneca

Allergy

What to cover???

- Some allergy basics (not too much but important)
Build a foundation
- What we are doing in the allergy office, refer
- A look at food allergy and what is new
- Some Tips and Tricks, let walk through allergy treatment options
- Questions

ALLERGIC REACTIONS

Skin Contact



poison plants



animal scratches



pollen



latex

Injection



bee sting



medication



nuts & shellfish

Ingestion



pollen



dust



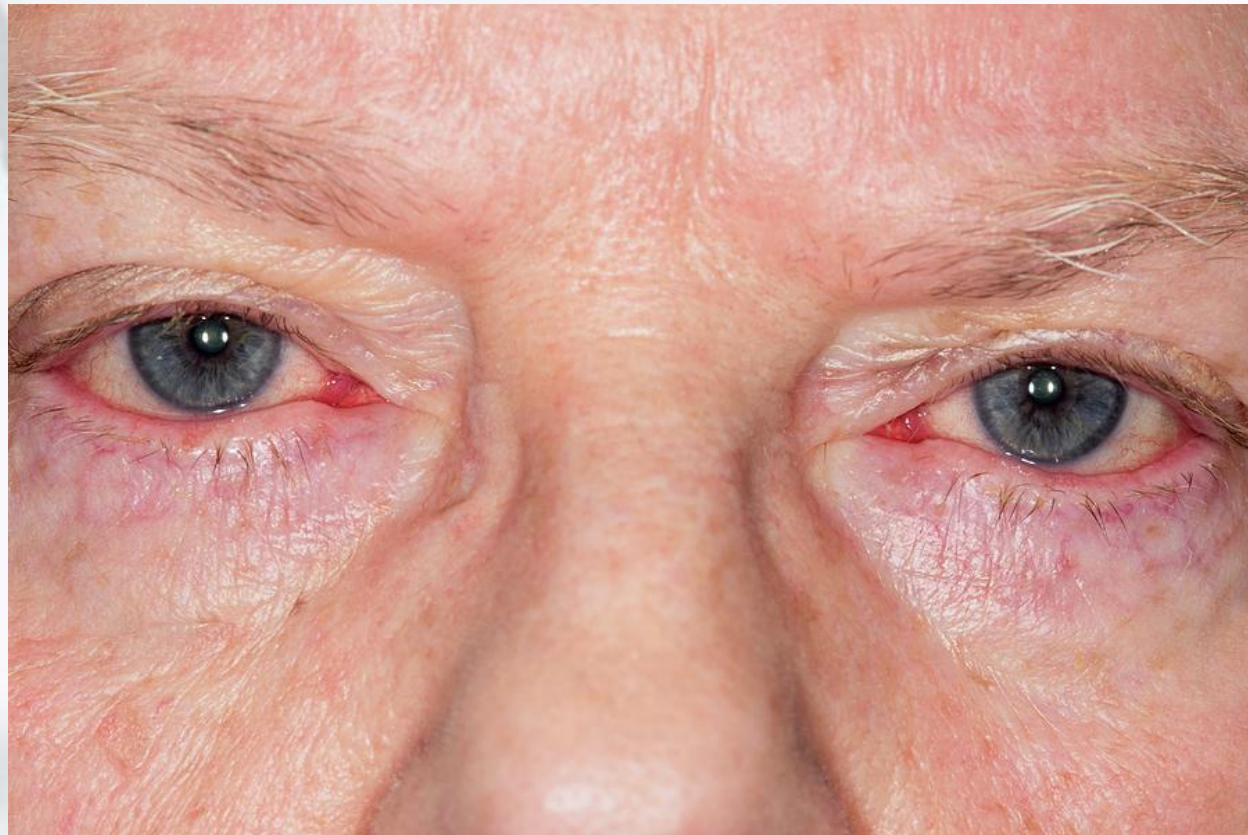
mold & mildew



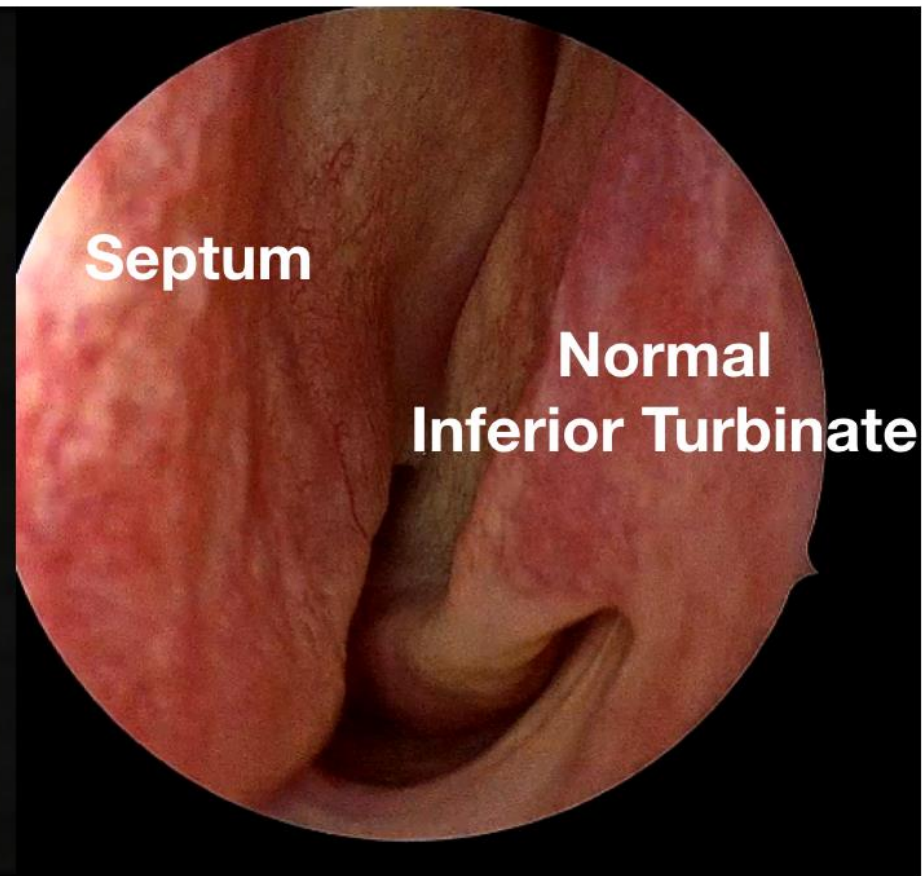
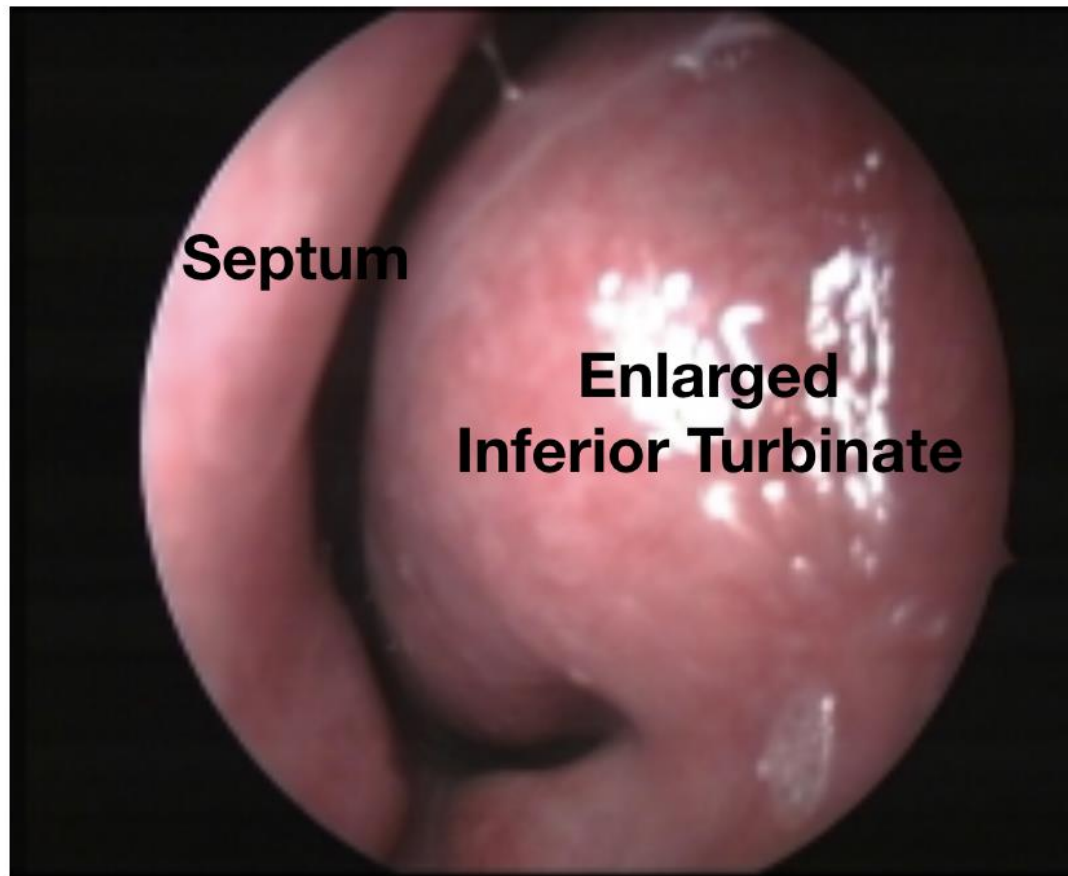
animal dander

Inhalation

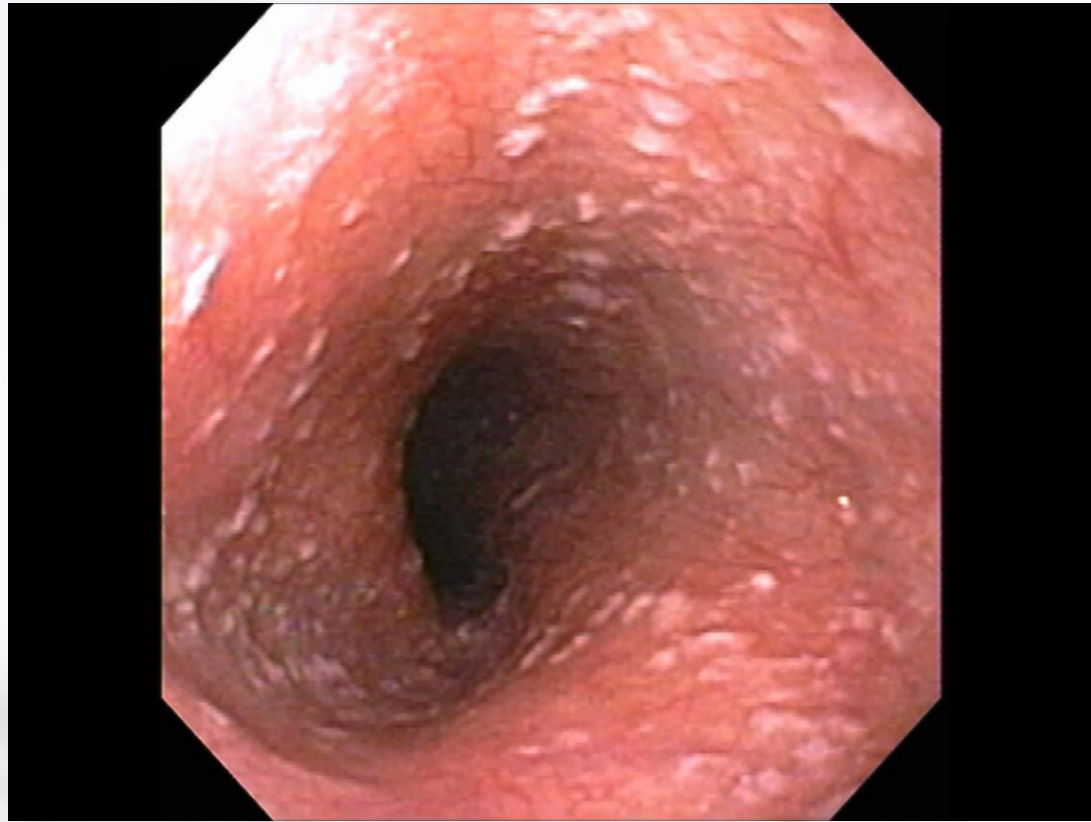
Why do we have allergic reactions?



Allergic Conjunctivitis



Allergic Rhinitis



Eosinophilic Esophagitis



Allergic Urticaria



Allergic Dermatitis (eczema)

Atopy

- Atopy is the genetic predisposition to make IgE antibodies in response to allergen exposure.
- Allergic rhinitis, allergic asthma, atopic dermatitis are the most common manifestation of atopy.

Allergy

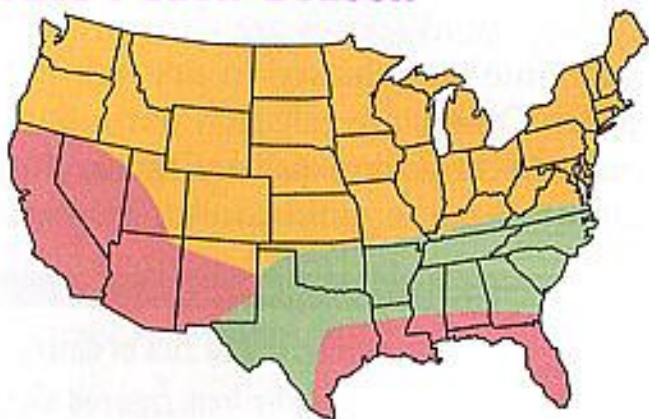
- Type of hypersensitivity reactions of the immune system. Allergy may involve more than one type of reaction.
- An allergy is a reaction to something that is not harmful, but the body perceives it as dangerous, thus taking steps to rid the body of the substance.

Allergy

Risk factors

- Host factors: heredity, gender, race, and age.
- Environmental factors: infectious diseases during early childhood, environmental pollution, allergen levels.
- Food Factors: The lack of introduction of foods in the first year of life

Grass Pollen Season



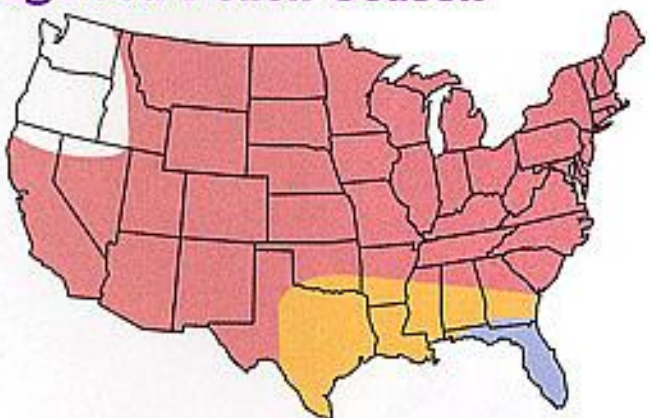
- March to October
- April to September
- May to August

Tree Pollen Season



- January to June
- February to June
- March to June

Ragweed Pollen Season



- July to November
- August to October
- August to November

Weed Pollen Season



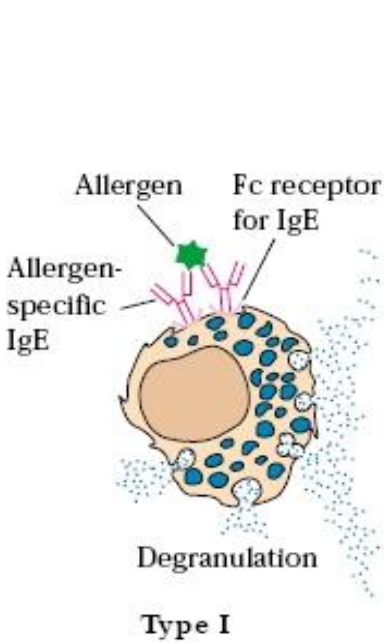
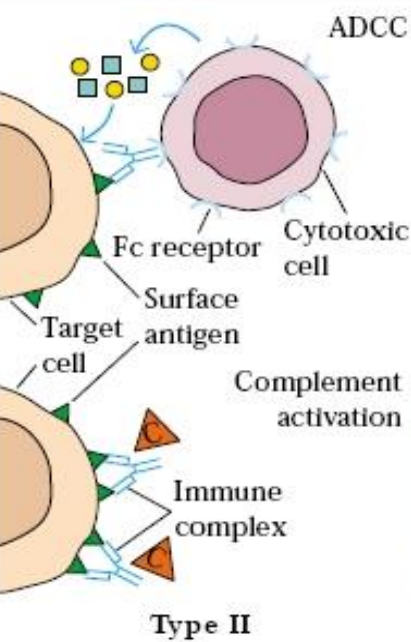
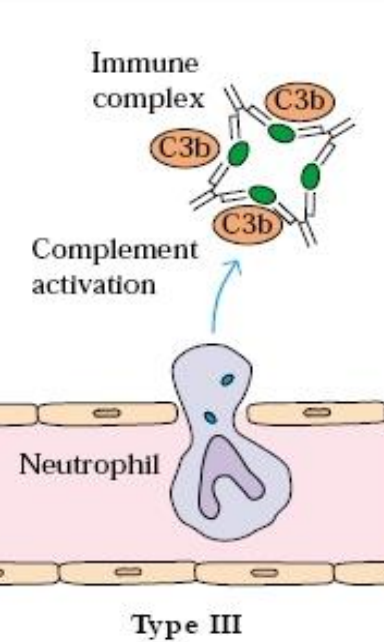
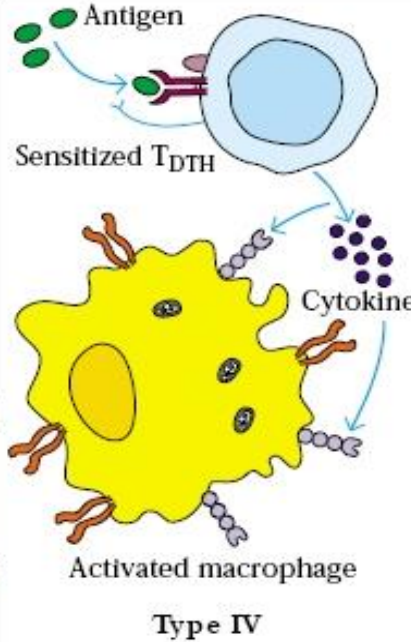
- April to November
- June to October
- July to October
- July to November

Source: American Academy of Allergy, Asthma and Immunology

Hypersensitivity

- Hypersensitivity (hypersensitivity reaction) refers to..... undesirable immune reactions produced by the normal immune system.
- Hypersensitivity reactions require a pre-sensitized (immune) state of the host.
- Hypersensitivity reactions: four types; based on the mechanisms involved and time taken for the reaction

Hypersensitivity Reactions

 <p>Type I</p>	 <p>Type II</p>	 <p>Type III</p>	 <p>Type IV</p>
<p>IgE-Mediated Hypersensitivity</p>	<p>IgG-Mediated Cytotoxic Hypersensitivity</p>	<p>Immune Complex-Mediated Hypersensitivity</p>	<p>Cell-Mediated Hypersensitivity</p>
<p>Ag induces crosslinking of IgE bound to mast cells and basophils with release of vasoactive mediators</p>	<p>Ab directed against cell surface antigens mediates cell destruction via complement activation or ADCC</p>	<p>Ag-Ab complexes deposited in various tissues induce complement activation and an ensuing inflammatory response mediated by massive infiltration of neutrophils</p>	<p>Sensitized T_H1 cells release cytokines that activate macrophages or T_C cells which mediate direct cellular damage</p>
<p>Typical manifestations include systemic anaphylaxis and localized anaphylaxis such as hay fever, asthma, hives, food allergies, and eczema</p>	<p>Typical manifestations include blood transfusion reactions, erythroblastosis fetalis, and autoimmune hemolytic anemia</p>	<p>Typical manifestations include localized Arthus reaction and generalized reactions such as serum sickness, necrotizing vasculitis, glomerulonephritis, rheumatoid arthritis, and systemic lupus erythematosus</p>	<p>Typical manifestations include contact dermatitis, tubercular lesions and graft rejection</p>

Hypersensitivity Reactions

.....
Immediate

Common

Typical
allergy

Type I

IgE-Mediated Hypersensitivity

Ag induces crosslinking of IgE bound to mast cells and basophils with release of vasoactive mediators

Typical manifestations include systemic anaphylaxis and localized anaphylaxis such as hay fever, asthma, hives, food allergies, and eczema

Hypersensitivity Reactions

.....
Delayed

Contact dermatitis

Steroids typically
needed

COVID vaccine
reactions

Type IV

Cell-Mediated Hypersensitivity

Sensitized T_H1 cells release cytokines that activate macrophages or T_C cells which mediate direct cellular damage

Typical manifestations include contact dermatitis, tubercular lesions and graft rejection

Type IV



IgE Mediated: Type I

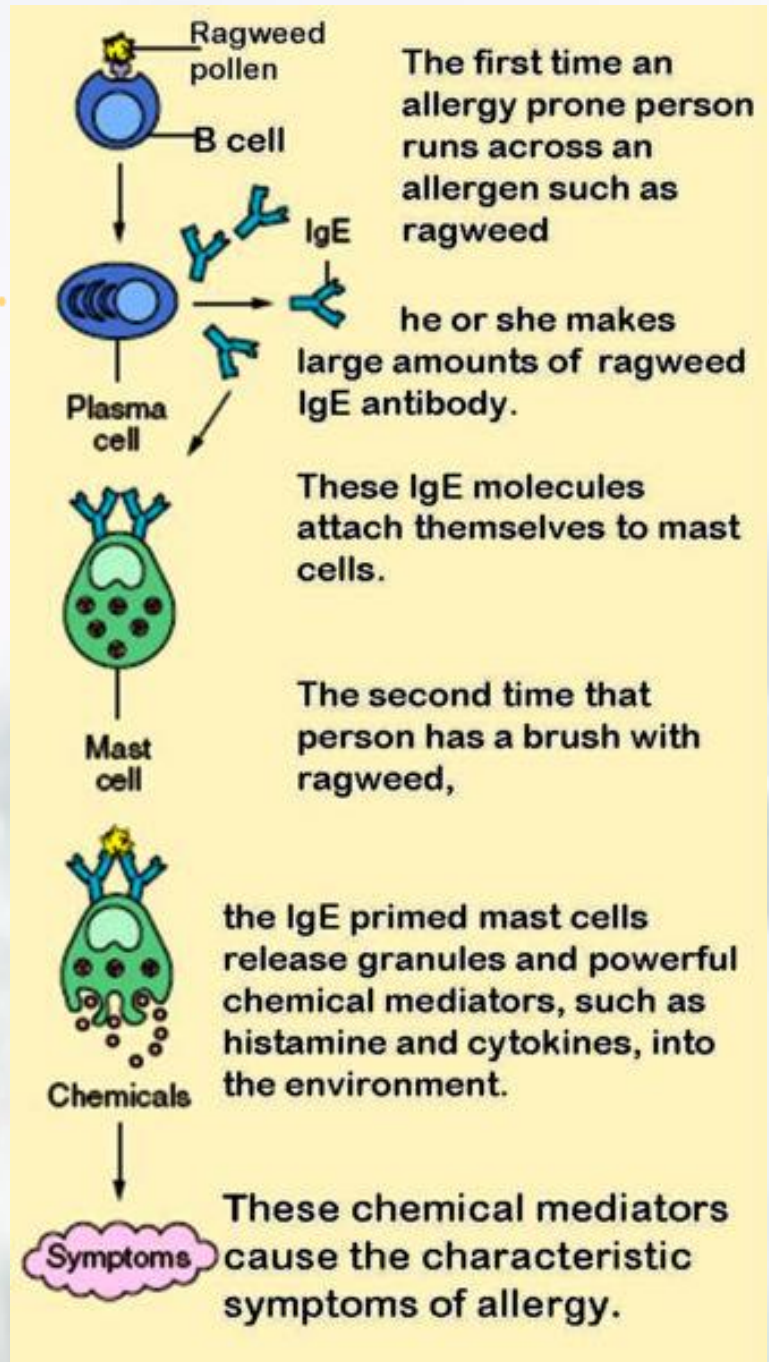
- Overreaction to an allergen that is contact through skin, inhaled through lung, swallowed or injected.
- Triggered by harmless substances such as; pollen, dust, animal danders, food, ... can also occur as a result of drug or bee stings or stings from other insects (**an allergen**).
- **An allergen**; an antigen that causes allergy. Either inhaled, ingested, .. Can be complete protein antigens (Pollen and animal dander) or low molecular weight proteins.

Type IV

- **This is DELAYED, this is not immediate**
- **This is what is called cell-mediated, just means that nothing happens fast, nothing is pre-made, the mediators are drawn to the area. Also drawn to the area are cells**
- **Antihistamines can help but if you need to change the way cells work, you need a steroid**

Mechanism

- While first-time exposure may only produce a mild reaction, repeated exposures may lead to more serious reactions. Once a person is sensitized (has had a previous sensitivity reaction), even a very limited exposure to a very small amount of allergen can trigger a severe reaction.
- Most occur within seconds or minutes after exposure to the allergen, but some can occur after several hours, particularly if the allergen causes a reaction after it is partially digested. In very rare cases, reactions develop after 24 hours.



Mast Cell

- Mast cells are abundant in the mucosa of the respiratory, gastrointestinal tracts and in the skin
- Mast cells release mediator cause the pathophysiology of the immediate and late phases of atopic diseases.

Primary Mediators

- Histamine: key mediator. Acts on histamine 1(H1) and histamine 2 (H2) receptors to cause: contraction of smooth muscles of the airway and GI tract, increased vascular permeability and vasodilation, nasal mucus production, airway mucus production, pruritus, cutaneous vasodilation, and gastric acid secretion.
- Tryptase: is a major player in many allergic reactions, especially anaphylaxis. Testing for this can confirm an anaphylactic reaction.

Important Clinical Aspects of Immediate Hypersensitivity

Main organ	Disease	Main symptoms	Typical allergens	Route of entry
Lung	Asthma	Wheezing, dyspnea, tachypnea	Pollens, house dust, animal danders	Inhalation
Nose and Eyes	Rhinitis, conjunctivitis Hay fever	Runny nose, redness and itching of eyes	Pollens	Contact with mucous membrane
Skin	Eczema (atopic dermatitis) Urticaria	Pruritic, vesicular lesions Pruritic, bullous lesions	Uncertain Various foods Drugs	Uncertain Ingestion Various
Intestinal tract	Allergic GI issues	Vomiting diarrhea	Various food	Ingestion
Systemic	Anaphylaxis	Shock, hypotension, wheezing	Insect venom; honey bee Drugs; penicillin Foods; Peanuts	Sting Various Ingestion

Oral Allergy Syndrome

Pollen Food Allergy Syndrome

This is an allergic reaction that typically occurs after a patient who is sensitive to pollen eats certain foods, e.g., fruits, vegetables, nuts, and grains.

PFAS is possibly the most common food allergy in adults, with up to 60 percent of patients allergic to pollen being affected. Additionally, up to 25 percent of children with allergic rhinitis (i.e., hay fever) also suffer from OAS.

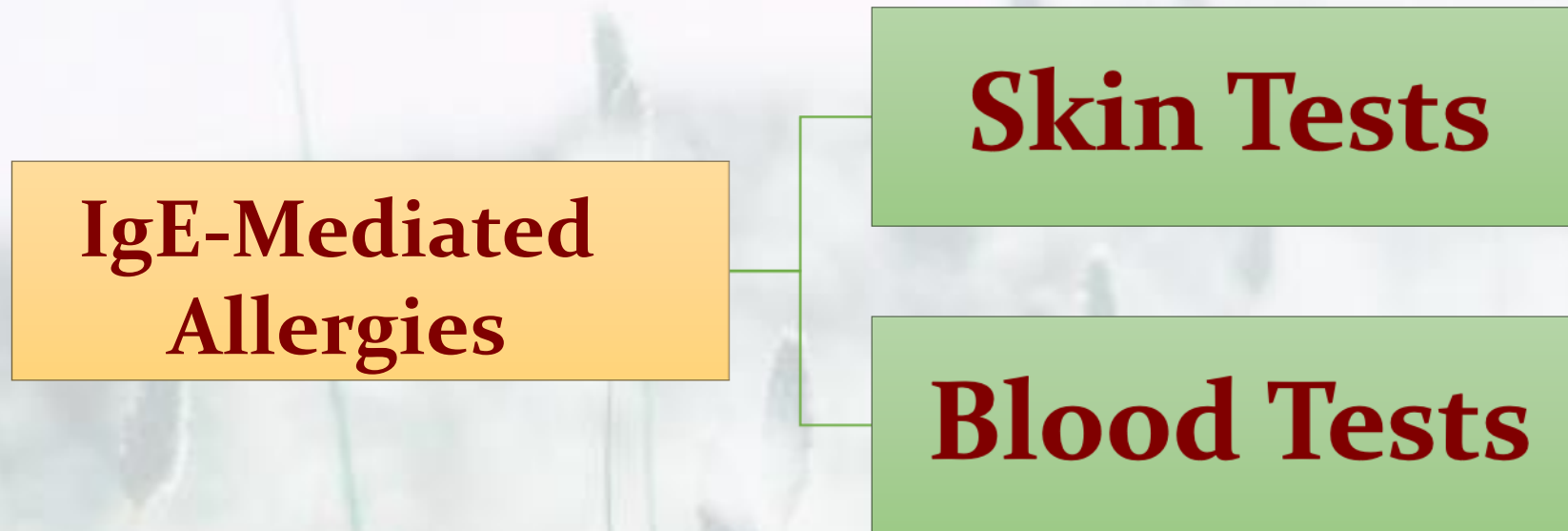
Pollen allergy and foods

Pollen type	Fruit	Vegetables	Seeds and spices	Nut
Tree pollen <i>(typically birch and alder)</i>	Apple, apricot, cherry, kiwi, nectarine, parsley, peach, pear, plum, strawberry, mango, orange	Celery, bean sprouts, carrot, mangetout, green pepper, potato, soya, tomato, parsnip, peas, onion	Basil, coriander, fennel, oregano, parsley, paprika, pepper, thyme	Almond, Brazil nut, hazelnut, walnut, cashew nut
Grass pollen	Kiwi, melon, orange, watermelon, date	Potato, swiss chard, tomato, wheat, peas, lentil, soya bean		Peanut
Weed pollen <i>(typically mugwort)</i>	Apple, melon, orange, peach, tomato, watermelon, banana,	Celery, carrot, green pepper, onion, parsnip, fennel	Sunflower seed, aniseed, celery salt, mustard, spices, coriander, parsley, chives	Peanut

Allergy Testing

- Referral to an allergist for testing can be a life changing event for patients!
- Refer early in the atopic process for the best outcome possible

Laboratory Diagnosis



When is it a good time to order large panels of serum IgE (allergy) tests?

NEVER!

Skin Prick Test

- Easy to administer: Done in the allergy office, readings available right away
- If you think about it 😊 have the patient stop antihistamines for 4 days prior
- Testing includes:
 - Outdoor – trees, grasses, weeds, any pollen that is a known allergen
 - Indoor – molds, pets, pests



Pecan

Egg

Shrimp

Peanut

Dairy

Halibut

Walnut

Hazelnut

Salmon

Almond

Pistachio

Histamine

Cashew

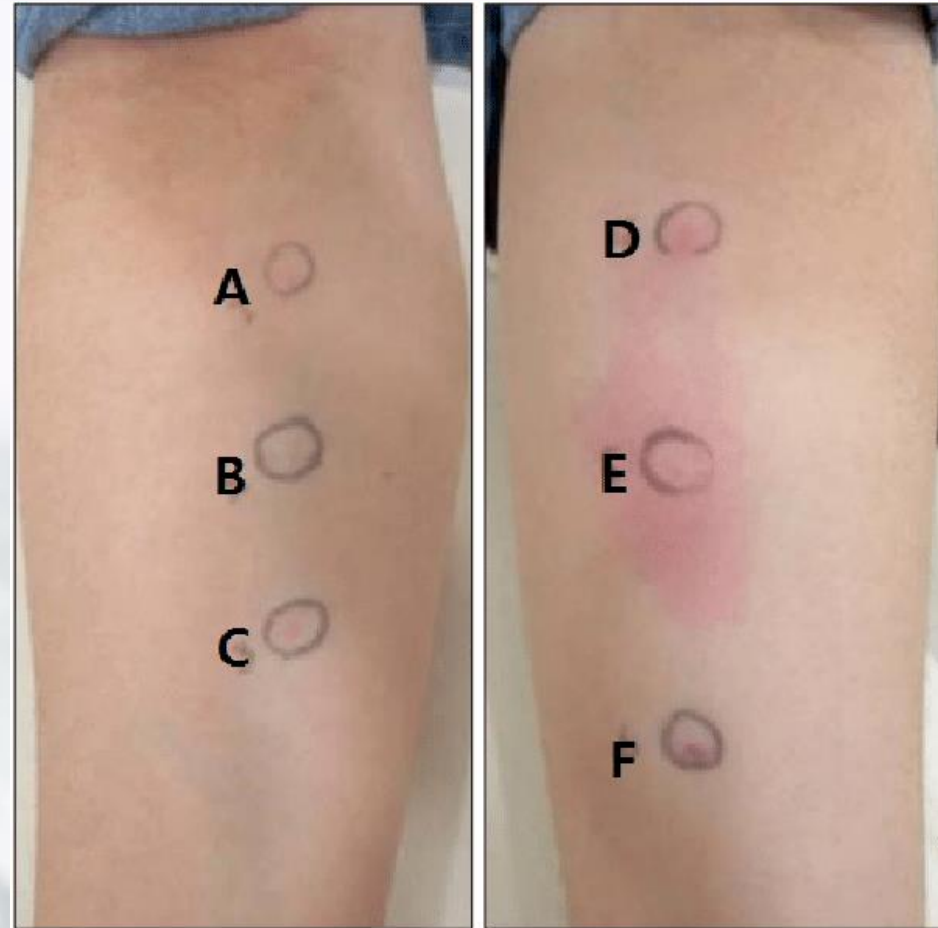
Control

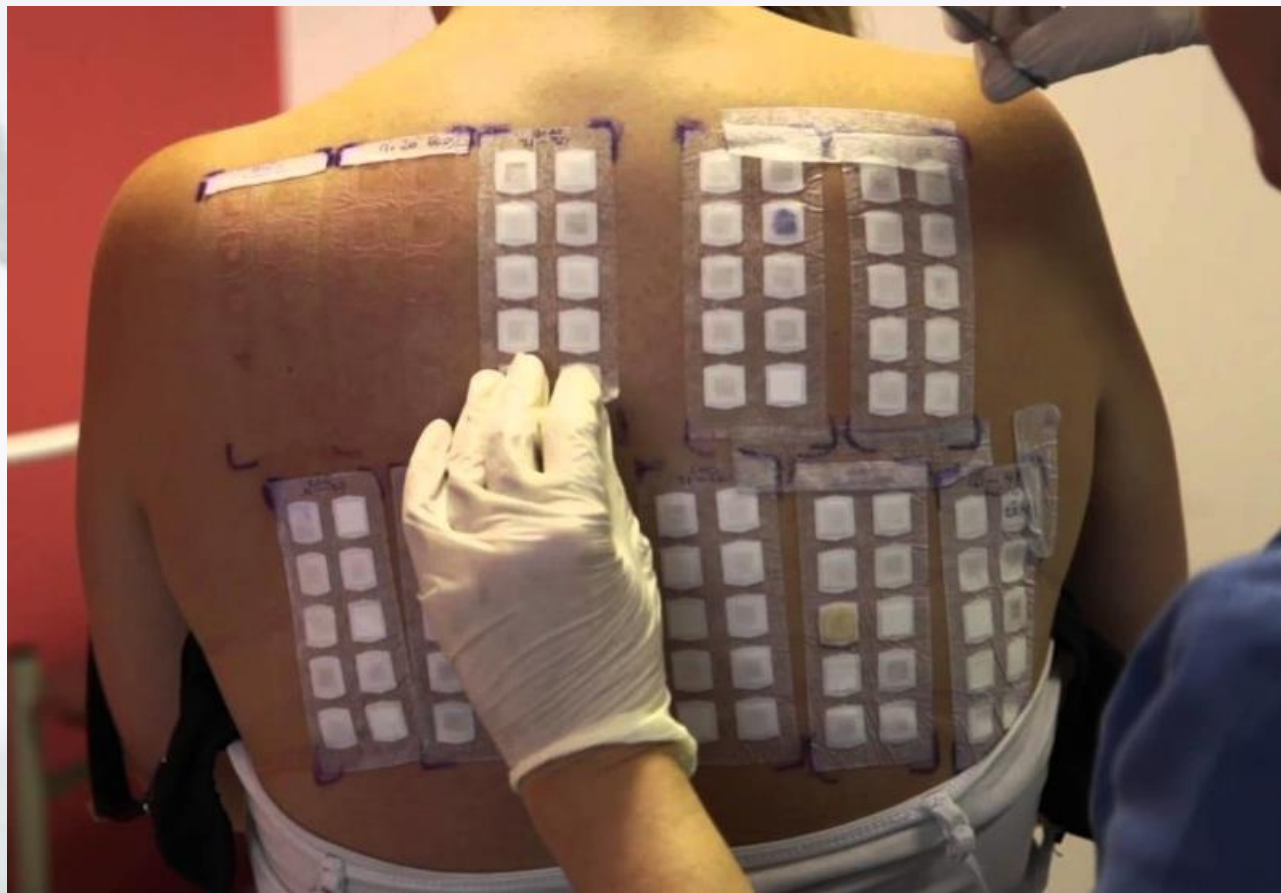


Intradermal testing

About 10 times
stronger than skin
prick testing

Can be helpful if
other testing
ambiguous





Patch Testing

Left on for 2-4 days

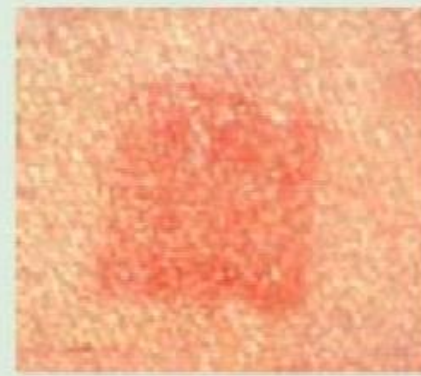
Great for contact allergens (stuff we touch)



Extreme positive
Coalescing
vesicles;
bullae



Strong positive
Erythema;
papules;
infiltration;
discrete vesicles



Weak positive
Erythema;
infiltration;
discrete papules



Doubtful
Faint or homo-
genous erythema;
no infiltration



Irritant
Discrete, patchy
or homogenous
erythema; no infiltration

Allergy Testing

- If there are positive tests, then allergy immunotherapy can be used for what often amounts to a CURE!
- Typical allergy shot plan would include weekly for a year, bi-weekly for a year (or so) and then monthly for 1-2 years

Laboratory Tests

- CBC can show elevated eosinophils
- Total serum IgE can be elevated as well

Food Allergies – What is New!

Think about two groups –

- Infants born with a high likelihood of having a peanut allergy
- Children through adults who already have had an anaphylactic reaction to a food (especially nuts)



PEANUT SNIFFING DOG

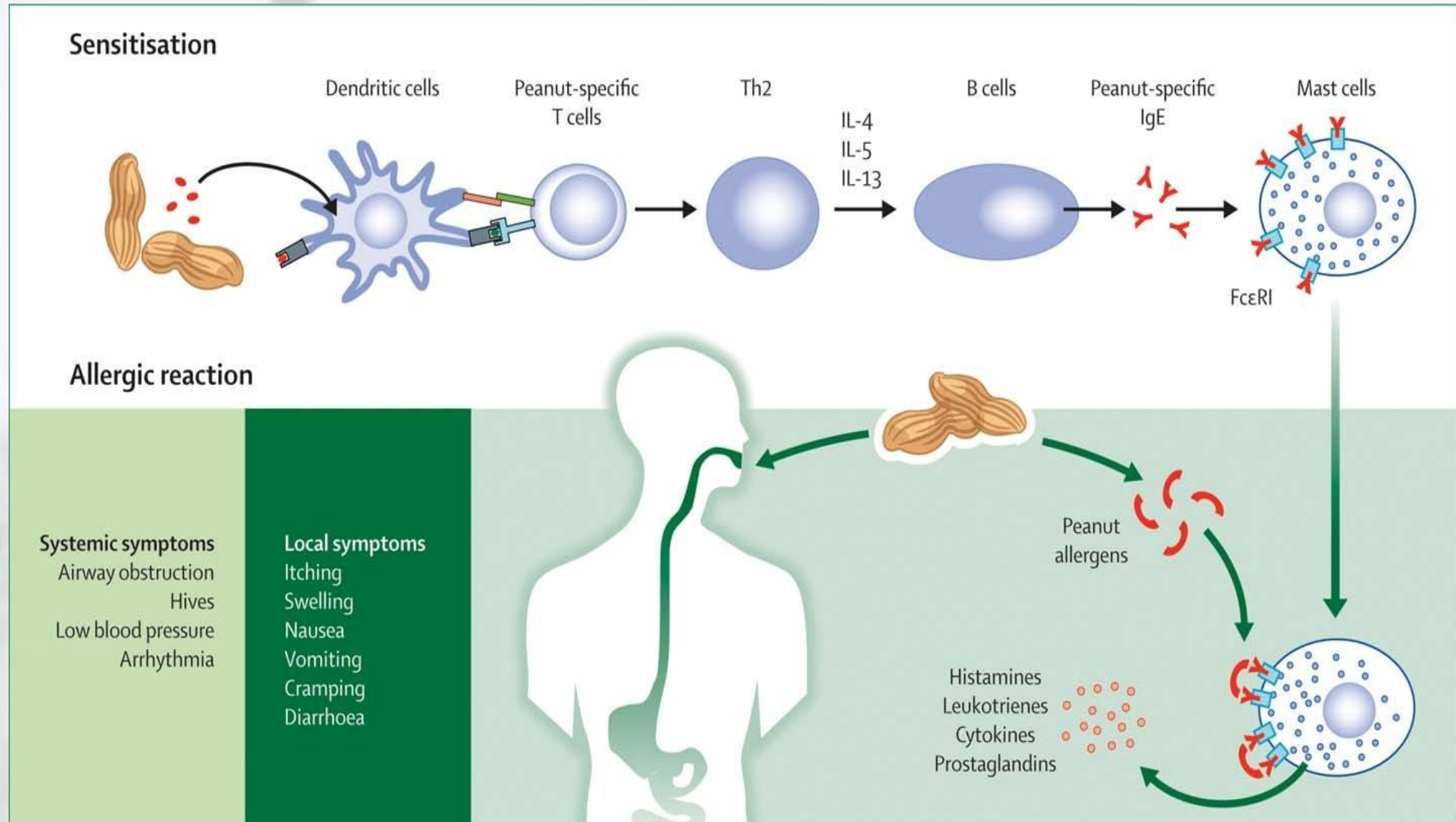


First Group

Infants with a high likelihood of having a peanut allergy

- Is there a way to reduce this risk SIGNIFICANTLY?
- What do we know from dogs for example?

Peanut Sensitization



Incidence of Peanut Allergy

- 1-3 % of all children in the U.S. have a peanut allergy
- Doubled in the past 10 years in Western countries
- Peak incidence is by one year of age
- Only 20% of children outgrow a peanut allergy
- Question – what percent of children outgrow milk allergy?

Osborne NJ, Koplin JJ, et. al., Prevalence of challenge – proven IgE – mediated food allergy using population based sampling and predetermined challenge criteria in infants. J. Allergy Clin Immunol. 2011;127(3):668.

WHO IS AT HIGHEST RISK?

- **Family history of food allergy**
- **Moderate – severe atopic dermatitis**
- **Egg allergic**
- **History of other allergic diseases, for example, children with allergic asthma**



Randomized trial of peanut consumption in infants at risk for peanut allergy

- > *DuTort G., Roberts, G., et al. Randomized trial of peanut consumption in infants at risk for peanut allergy. N Engl J Med. 2015;372(9):803*

STUDY RESULTS

- 530 Infants in the intention to treat
 - At 60 months
 - > 13.7% in the avoidance were peanut allergic
 - > 1.9% in the consumption group (P<0.001)

DuTort G, Roberts G., et al., Randomized trial of peanut consumption in infants at risk for peanut allergy. N.Engl J Med. 2015; 372(9):803

CONCLUSION

- “ THE EARLY INTRODUCTION OF PEANUTS SIGNIFICANTLY DECREASED THE FREQUENCY OF THE DEVELOPMENT OF PEANUT ALLERGY AMONG CHILDREN AT HIGH RISK FOR THIS ALLERGY”

DuTort G, Roberts G., et al. , Randomized trial of peanut consumption in infants at risk for peanut allergy. N.Engl J Med. 2015; 372(9):803

American Academy of Pediatrics 2019

Recommend early introduction of peanut and not delaying any food including allergens after 4-6 months



Dietary Guidelines for Americans 2020-2025

Make every bite count, infants eat small amounts

Recommend exclusive breastfeeding for first 6 months
Provide vitamin D supplementation, as needed

Continue breastfeeding through 1 year and beyond if desired
Substitute iron-fortified formula if breastmilk not feasible

Add complementary foods including allergens at 6 months and developmentally ready





Implementing Guidelines into Practice



Parent Barriers



Afraid of an allergic reaction

- 69% would not consider introducing peanut before/around 6 month of age
- ~40% willing to introduce peanut, tree nuts, seafood, but only after 11 months of age

Parent/guardians or siblings have a food allergy at home

Practical concerns

- Convenience, cost, and food preparation issues

Concerns regarding testing

- 51% unwilling to do skin prick test before 11 months
- 56.8% unwilling to do a food challenge before 11 months



Practical Tips to Overcome Barriers

Provider Facilitators

- Increase education/training on the guidelines
- Using practice aids in the office for providers
 - Guide to clinical assessment and recommendations
 - Guide to an in-office supervised feeding
- Collaborate with ancillary support providers
 - Nutrition, psychology, allergist
- Create an environment where introducing allergens early is part of the normal practice

Addendum Guidelines



Working with Families

- Start the conversation early
- Improve access to providers
- Identify affordable sources of potential allergens
- Provide resources to help with the introduction process
- Review anaphylaxis risk and develop a plan for parents in case of a reaction



Shared Decision Making



Collaborative discussions between providers and patients/families to develop a plan that is both evidence based and inline with personal values

Goal is to empower families with confidence when feeding

Normalize initial reluctance and mixed messages parents receive

Be open, honest and listen to the patients needs and concerns

Provide education on current guidelines and work with families to fit guidelines into their life

Discuss when referral to allergist, nutritionist, or psychologist is needed

Allergic Reaction Signs and Symptoms

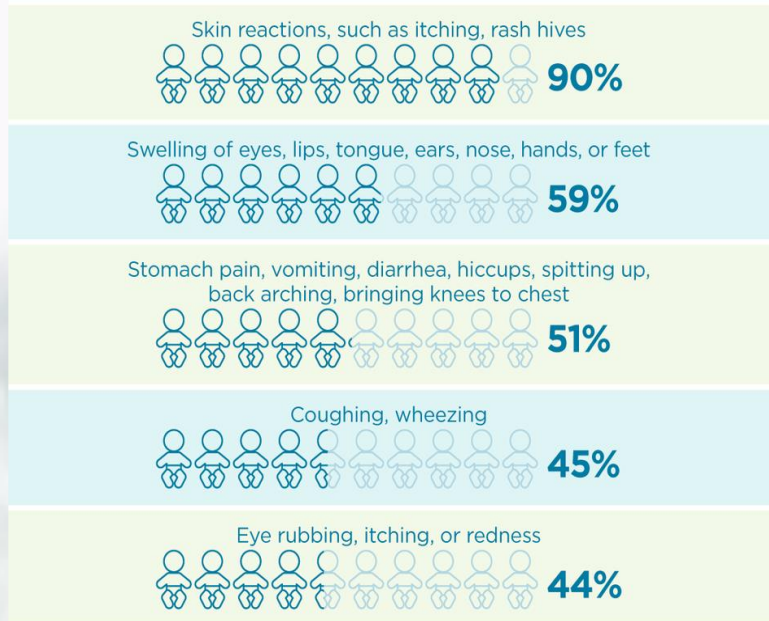
Anaphylaxis is less frequent and less severe in infants
 Fatalities are rare in infants

Food Allergy Reaction Symptoms

Affected Body Part	Symptoms
 Skin	Redness*, itching, hives*, red bumps, swelling beneath skin
 Eyes	Itching, tearing, redness, swelling around eyes
 Respiratory	Nasal congestion, itching, runny nose, sneezing, swelling of voicebox, hoarseness, cough, chest tightness, shortness of breath*, wheezing
 Mouth	Swelling of lips, tongue, or palate*, itching in the mouth
 Gastrointestinal	Nausea, colicky abdominal pain, reflux, vomiting*, diarrhea*
 Cardiovascular	Rapid heartbeat, low blood pressure, dizziness, fainting, loss of consciousness




Most common symptoms

Most Common Symptoms of Anaphylaxis in Infants and Toddlers



 Asthma and Allergy Foundation of America aafa.org or kidswithfoodallergies.org
 KIDS WITH FOOD ALLERGIES
 A Division of the Asthma and Allergy Foundation of America

Symptoms are self-reported by caregivers. Percentages indicate the percent of caregivers who identified these symptoms in a survey conducted by the Asthma and Allergy Foundation of America.

Medical Term	Common Term	What to look for: <small>(Adjusted language for symptoms specific to infants and toddlers)</small>	
 Pruritis	Itchiness	<ul style="list-style-type: none"> Tongue thrusting Tongue pulling Repetitive lip licking or licking of hands or objects 	<ul style="list-style-type: none"> Throat itching Ear pulling, scratching or putting fingers in the ears Eye rubbing, eye itching
 Dyspnea	<ul style="list-style-type: none"> Shortness of breath Difficulty breathing 	<ul style="list-style-type: none"> Belly breathing Fast breathing 	<ul style="list-style-type: none"> Nasal flaring (nostrils open wide) Chest or neck "tugging"
 Persistent gastrointestinal symptoms	<ul style="list-style-type: none"> Gastrointestinal symptoms that are significant 	<ul style="list-style-type: none"> Abdominal pain Diarrhea Hiccups 	<ul style="list-style-type: none"> Spitting up Back arching Vomiting



Develop Treatment Plan with Family



Symptoms occur within minutes to 2 hours after exposure

- Mild symptoms (skin, no effect on breathing) = **Stop the food and contact NP**
- Severe symptoms = **Stop the food and seek immediate medical attention/call 911**

Medication parents can have on hand:

Antihistamine (PO): Use for treatment of cutaneous only symptoms - Does not stop anaphylaxis

Diphenhydramine: *No age limit listed* = 1mg/kg/dose; max dose: 50 mg/dose

Cetirizine: *≥6 months old* = 2.5mg once

Medication prescribed if reaction occurs or if avoiding food due to allergic concern

Epinephrine auto injector

7.5 to <15 kg: 0.1 mg (Only available with Auvi-Q)

7.5 to <30 kg: 0.15 mg (Available with all brands/generics)

If Infant Reacts to New Food

Family may be hesitant to introduce more foods

Discuss risks of reaction, delaying introduction of other foods, and if testing is recommended

Some foods have clinically relevant cross-reactivity

Important to refer to allergist or decide quickly to not delay early introduction of additional foods!

Practical Tips for Introducing Complementary Foods



Check for
Readiness

Start with
one food
at a time

Keep it
small and
soft

Introduce
early in
the day

Be
patient
and keep
at it

Make it
fun



Developmental Readiness for Solid Foods

If the infant shows:

- Good head and neck control
- Sits up with support or alone
- Signs of putting objects to mouth
- Grasps small objects
- Ability to swallow pureed food instead of push out with tongue



Supervised feedings in highchair or other safe place sitting upright

Safe Introduction of Peanut



1. Thin 2 tsp of peanut butter with 2-3 tsp. of hot water, breastmilk, or formula (cool before feeding)
2. Blend 2 tsp or peanut butter/powder into 2-3 tbsp of infant cereal, fruit, yogurt
3. Mix 2 tsp or peanut butter/powder into 2 tbsp of any fruit or vegetable purees
4. Give baby peanut puffs, easily dissolvable
5. To keep in the diet, incorporate peanut into baked goods, sauces, teething biscuits

Guidelines advise 2g of peanut protein (2 tsp peanut butter/powder) at any meal or snack, 3 times a week

Should not be the first food introduced into the child's diet

Do Not give whole nuts to a child under the age of 5 years old

Do Not give peanut in lumps/dollops or off a spoon until 4 years old

Safe Introduction of Egg



- Scramble eggs with water until cooked all the way through
- Mash with water, breastmilk, formula, yogurt, avocado
- Hard boiled eggs can be choking hazard if not mashed completely
- For older infants/toddlers: make a plain omelet and cut into rectangular strips the size of 2 adult fingers

NEVER feed raw or runny eggs to infants

Feed Early and Often



Once peanut and egg are introduced with no reaction:

- 1-2 teaspoons of thinned peanut butter and $\frac{1}{3}$ of mashed egg
- 2-3 times each week



Specific recommendations for other allergens are forthcoming

- current guidelines recommend introducing a variety of foods that are culturally appropriate including allergens



There is no evidence that restricting the maternal diet during pregnancy or breastfeeding prevents food allergy



Summary of Early Introduction Recommendations



Who?

All infants

should start infant safe peanut products and eggs early once developmentally ready and other complementary foods have been introduced and accepted

When?

Has No Eczema

4 - 6 months
(delaying increases risk of developing allergy)

Has Eczema

4 months
(delaying increases risk of developing allergy)

How much?

Peanut

2 grams 3 times/week
about 2 teaspoons of peanut butter thinned

Egg

2 grams 3 times/week
about $\frac{1}{3}$ of a mashed cooked egg

Resources

www.foodallergy.org

www.babysfirst.org

www.preventpeanutallergies.org

www.EggNutritionCenter.org

www.niaid.nih.gov/sites/default/files/addendum_guidelines_peanut_appx_d.pdf

www.solidstarts.com/category/starting-solids

www.dermnetnz.org/topics/scorad



Second Group

Any person with a known anaphylactic food reaction

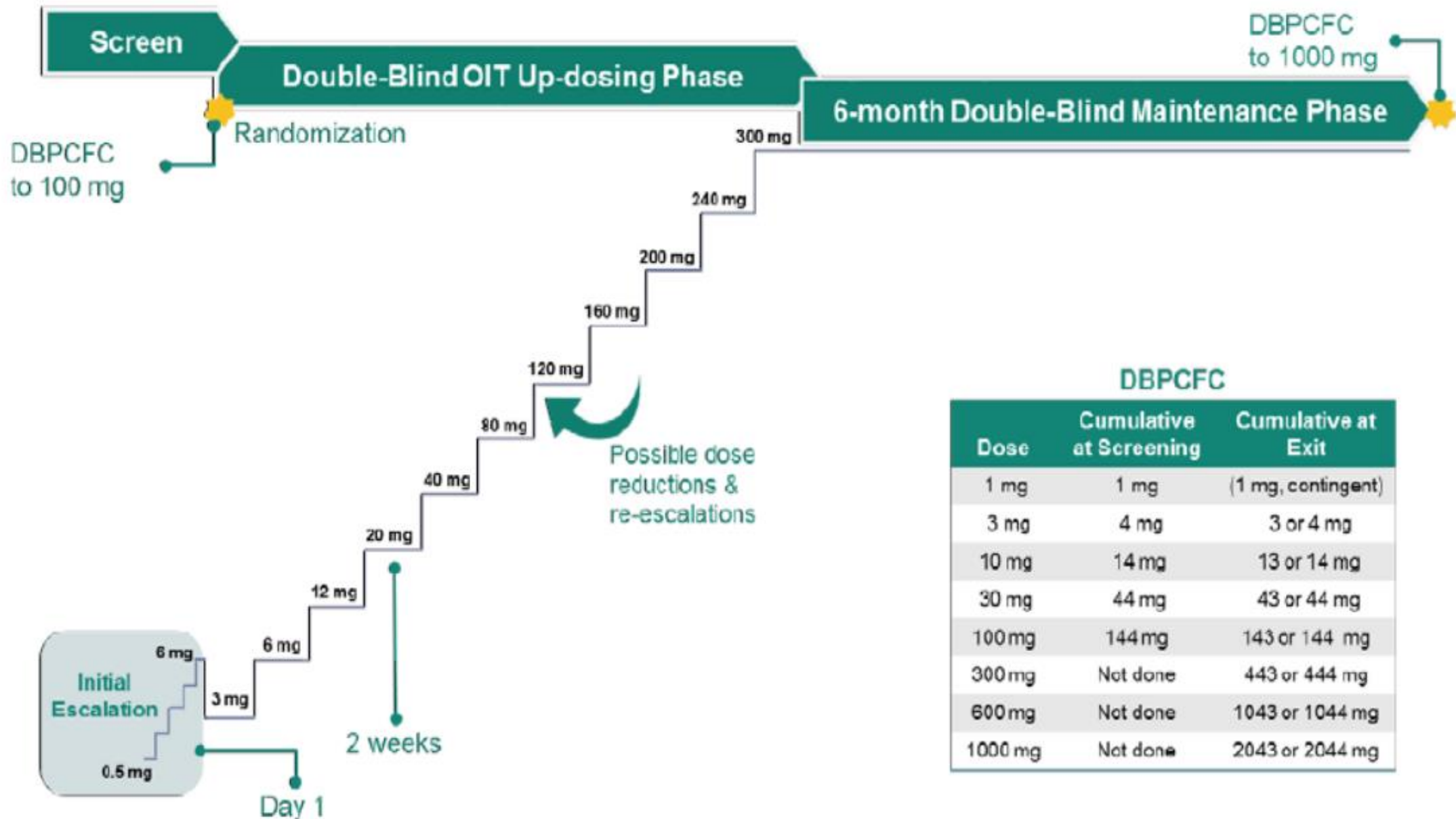
- Can we treat this like a pollen or pet allergy?
- Can we take away the very real fear?

Second Group

Any person with a known anaphylactic food reaction

- The goal is to desensitize the patient to achieve tolerance
- The goal is not to allow unrestricted peanut consumption but rather to make accidental exposure harmless

Peanut Trials



DBPCFC

Dose	Cumulative at Screening	Cumulative at Exit
1 mg	1 mg	(1 mg, contingent)
3 mg	4 mg	3 or 4 mg
10 mg	14 mg	13 or 14 mg
30 mg	44 mg	43 or 44 mg
100 mg	144 mg	143 or 144 mg
300 mg	Not done	443 or 444 mg
600 mg	Not done	1043 or 1044 mg
1000 mg	Not done	2043 or 2044 mg

Second Group

Any person with a known anaphylactic peanut reaction

- By slowly increasing the amount ingested tolerance is achieved
- 90% of all accidental peanut exposures are less than 600mg

Second Group

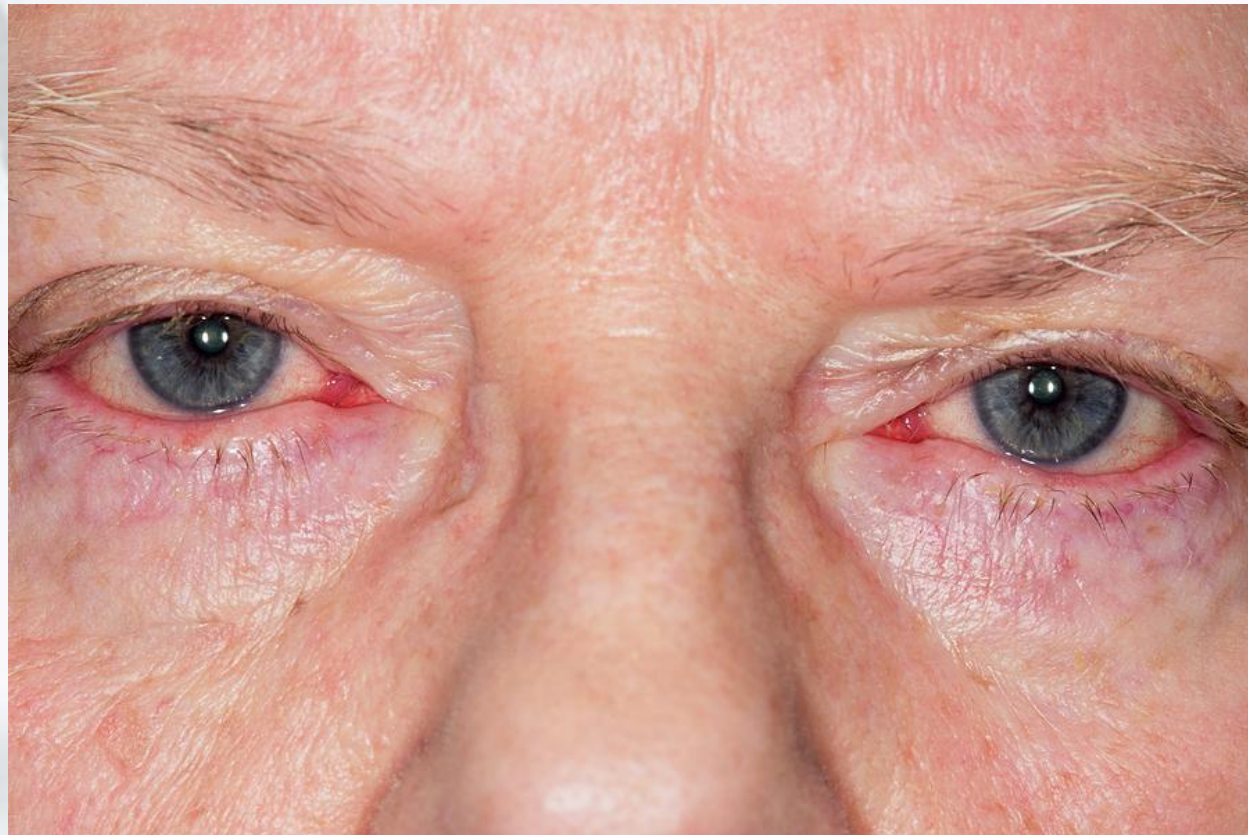
Any person with a known anaphylactic food reaction

PalförziaTM
Peanut (*Arachis hypogaea*)
Allergen Powder-dnfp



Take Home

- High risk infants need to have peanut introduced early – 80% percent reduced risk of a life-threatening peanut allergy
- If anyone over the age of 3 has a serious food allergy, refer if desensitization is desired.



Allergic Conjunctivitis

Tips and Tricks

Allergic Conjunctivitis

- **PO antihistamines and nasal sprays do little for eye symptoms.**
- **Pataday (olopatadine) or any form of the active ingredient olopatadine is great.**
- **Pataday is OTC so is reasonably priced.**
- **Keep these drops in the fridge, the cooler drops feel wonderful and the bottle is good for 3 years or so when refrigerated.**
- **Zatidor eye drops work differently, can use both**
- **Ketorolac eye drops can be wonderful in the right situation**

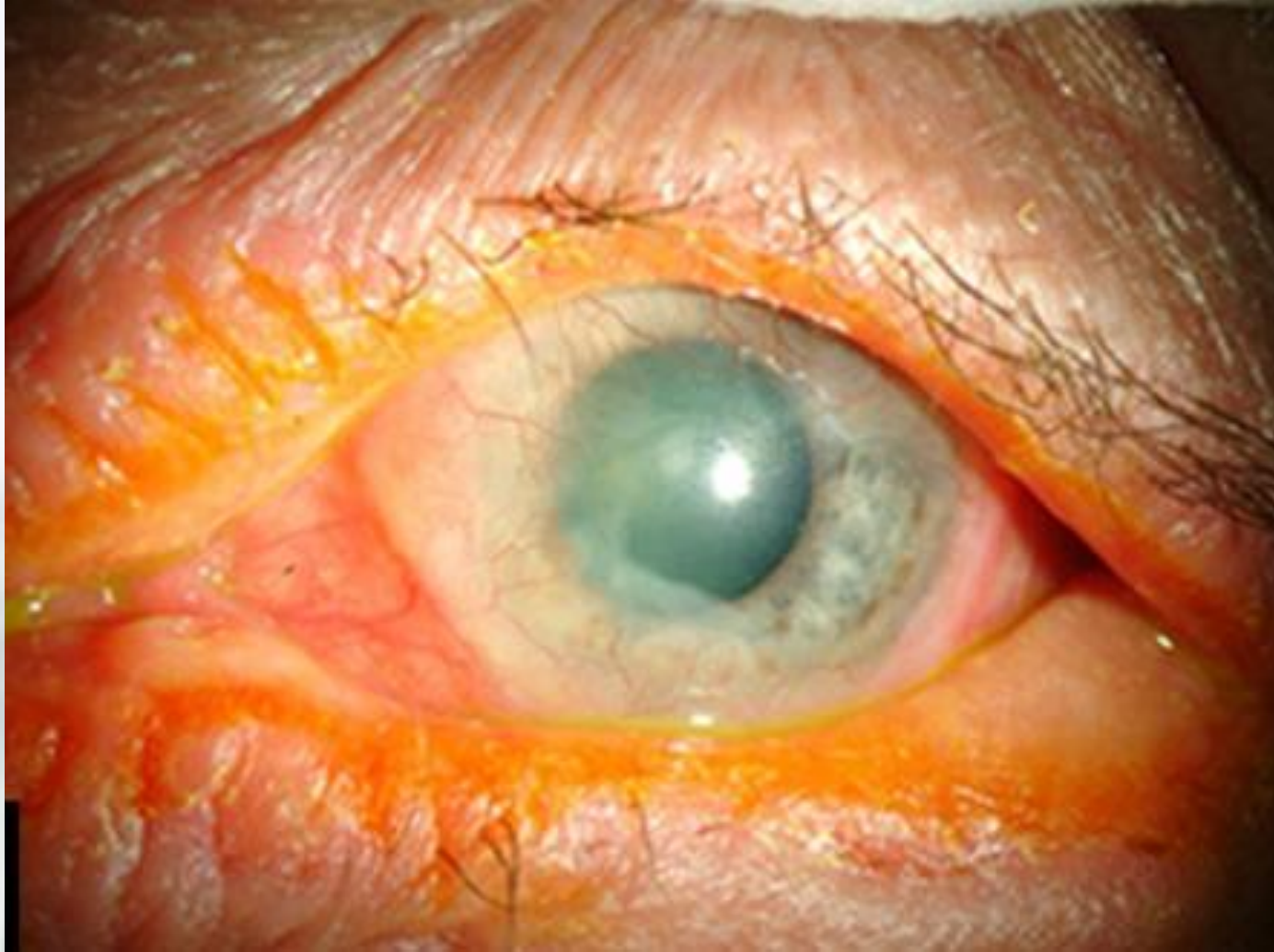
Tips and Tricks

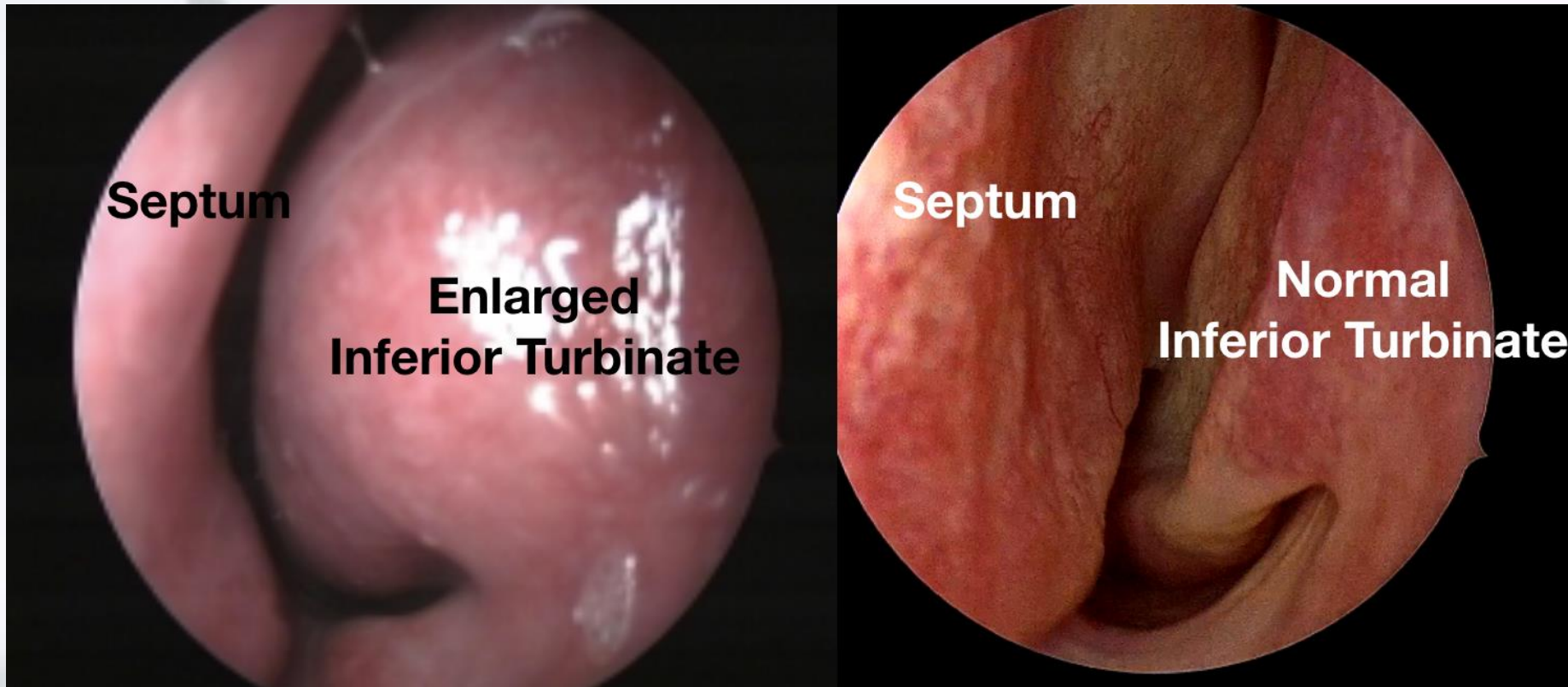
Allergic Conjunctivitis



Severe disease, look under the lid

Allergic Conjunctivitis





Allergic Rhinitis

Tips and Tricks

- Antihistamines – the base to all treatment for seasonal allergies and the base for chronic allergic issues
 - Sedating are good at night –
 - First Generation – all have anticholinergic

Antihistamine	Generation and classification	Common trade names
Chlorpheniramine	First, sedating	Chlor-Trimeton
Brompheniramine	First, sedating	Dimetapp
Diphenhydramine	First, sedating	Benadryl
Cetirizine	Second, nonsedating	Zrytec
Levocetirizine	Second, nonsedating	Xyzal
Loratadine	Second, nonsedating	Claritin
Desloratadine	Second, nonsedating	Clarinex
Fexofenadine	Second, nonsedating	Allegra

Tips and Tricks

- Non sedating for the day –
 - Zyrtec (cetirizine) best, strongest – 10 mg is fine for mild allergies but fine to go to 20 mg either QD or 10 mg BID
 - Claritin (loratadine) – good, same dosing at Zyrtec
 - Allegra – a bit weaker but the least sedating of all – 180 mg or 360 mg

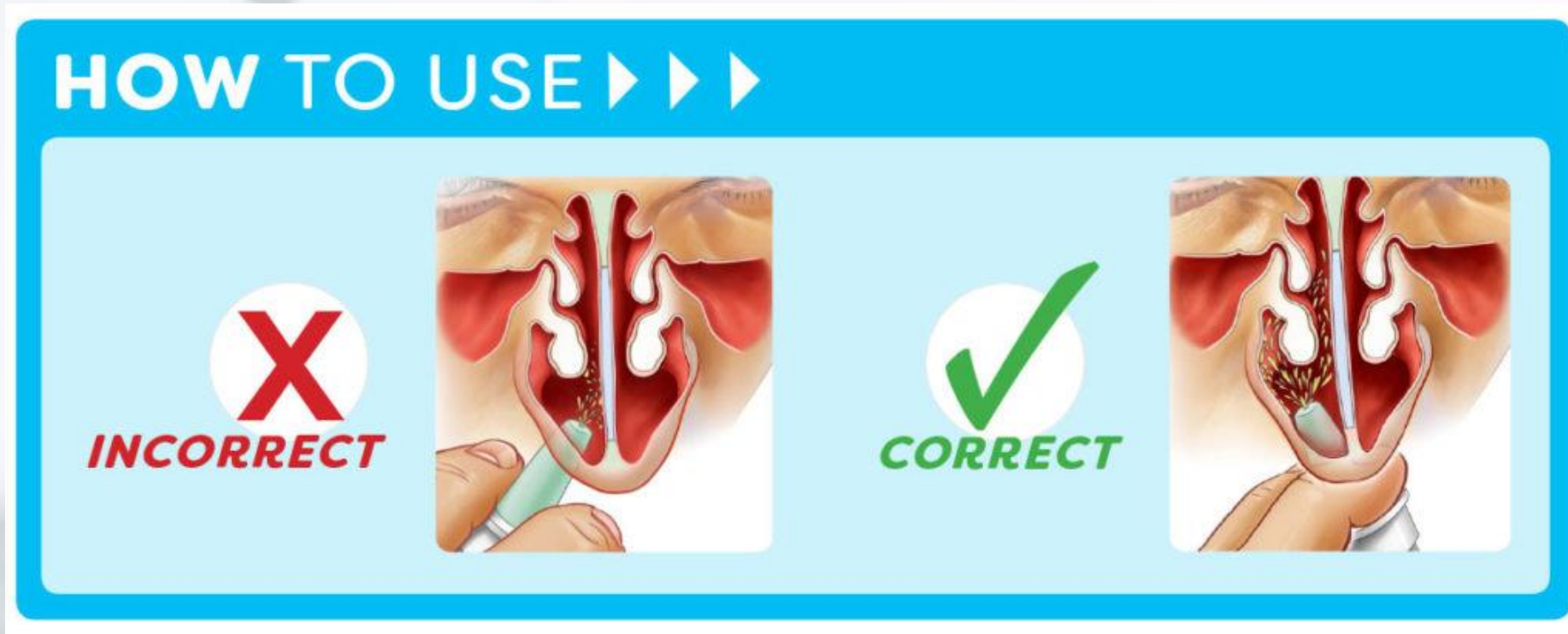
Notes – ok to mix and match, ok to take BID or QD, MUCH better when taken every day – in fact not worth much for severe allergies if taken prn.

For urticaria, either chronic or sporadic these are also the base of therapy

Tips and Tricks Allergic Rhinitis

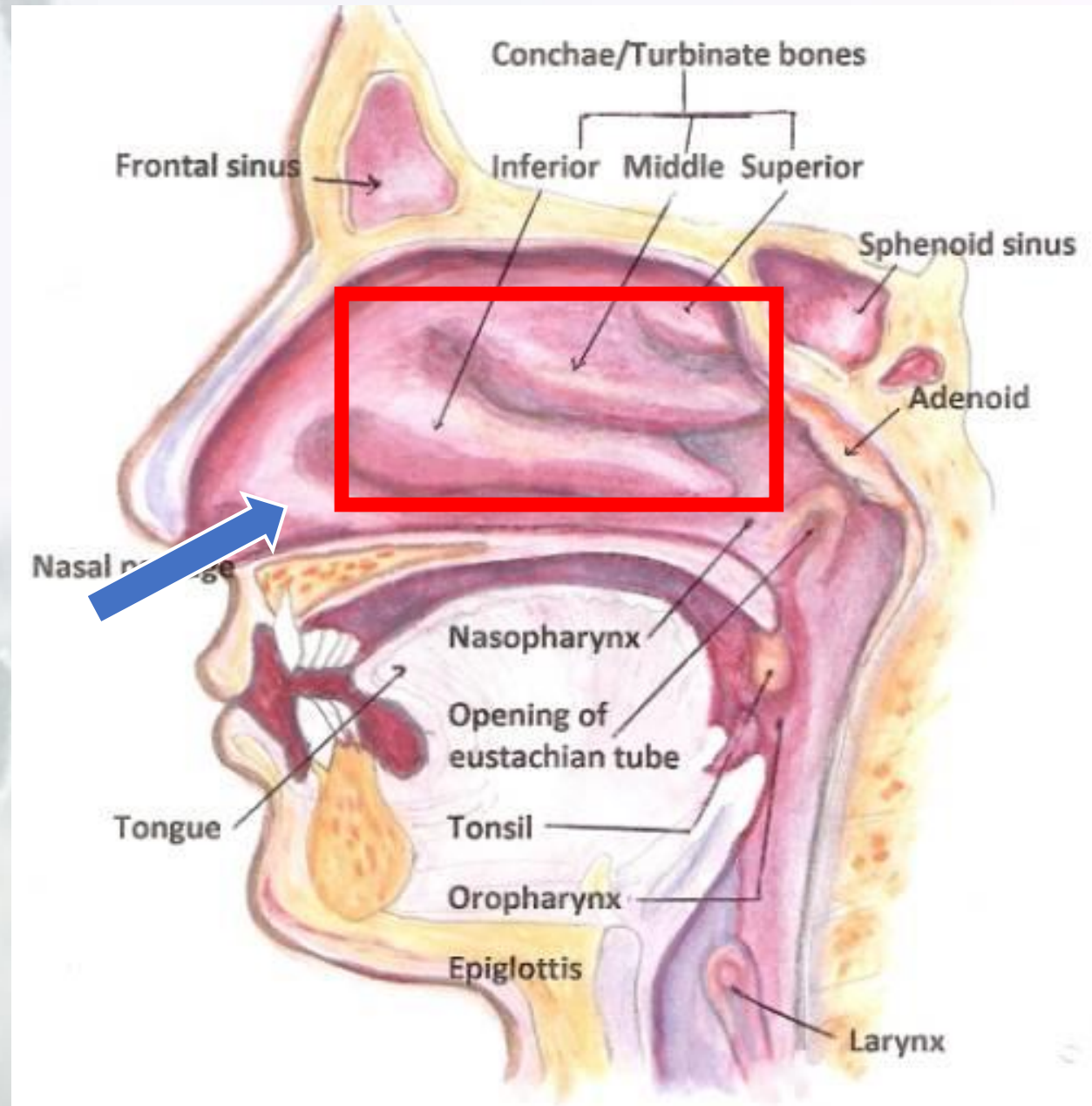
- Nasal Steroids
 - All work great, use daily or BID
 - Make sure to use the opposite hand technique and avoid hitting the septum – where the blood vessels

Tips and Tricks



Head level or sniffing position
Don't inhale

The Approach



Tips and Tricks Allergic Rhinitis

- Nasal Steroids
 - All work great, use daily or BID
 - Make sure to use the opposite hand technique and avoid hitting the septum – where the blood vessels

Tips and Tricks



Tips and Tricks



<https://www.neilmed.com/usa/samplerequest.php>

Choose a one-quart glass jar that is thoroughly cleansed.

Fill it with distilled or bottled water. It should not contain chlorine or other chemicals in high concentrations.

Add 2-3 heaping teaspoons of pickling/canning salt, not table salt as it contains a large number of additives.

Add 1 teaspoon Arm & Hammer Baking Soda (pure bicarbonate).

Mix ingredients together and store them at room temperature.

Discard after one week.

Tips and Tricks



Prescription budesonide in the irrigation bottle works great

Adding in mupirocin ointment? No data but likely not harmful

Ipratropium bromide nasal ALWAYS works to dry things up

Back to results



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Allergic Urticaria

Often will use “histamine blockade”

BID Zyrtec 10 mg

BID Ranitidine 150 mg

Often start with 4 days of prednisone, 40 mg
for 2 days then 20 mg for 2 days

Note – there are more options for longer tx

RESOURCES FOR CLINICIANS

- Local allergist
- American Academy of Allergy, Asthma and Immunology (AAAAI) – www.aaaai.org
- American College of Allergy, Asthma and Immunology (ACAAI) – www.acaai.org
- FARE (Food Allergy Research Education) – www.foodallergy.org

Topics if time...

- Penicillin Allergy – this does not really exist much. 95% of the people with a documented PCN allergy in the chart can safely take PCN containing medications.
- If no anaphylaxis, if treatment for the allergic reaction was not needed and if reaction was more than 5 years ago the number goes to near 99% an tolerate.
- But since this causes much fear, the best thing is to send for PCN allergy testing if you can, especially kids with recurrent OM or tonsillitis.

Thank you!!

Please email, call or text anytime with questions!

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208-404-5338

Questions now?



"Before we come in, was any part of your home produced in a facility that also handles wheat, milk, nuts, eggs, or soy?"