

Approccio al bambino con allergia alimentare

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34

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Approccio al bambino
con allergia alimentare

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UOC Allergologia
OPBG

Milano, 11 novembre 2014



Miti e realtà:
Le allergie alimentari.

Alessandro Focchi

UOC Allergologia
OPBG

Roma, 28 ottobre 2014

- 1. Il bambino con pretesa allergia alimentare**
2. Il bambino con allergia alimentare non IgE-mediata
3. Il bambino con allergia severa ad un alimento
4. Il bambino con allergia severa a più alimenti
5. Conclusioni



Food hypersensitivity

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graph TD; A[Food hypersensitivity] --> B[Food allergy]; A --> C[Nonallergic food hypersensitivity]; B --> D[IgE-mediated food allergy]; B --> E[Non-IgE-mediated food allergy];
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Food allergy

Nonallergic food hypersensitivity

IgE-mediated food allergy

Non-IgE-mediated food allergy

Symptom-based Clinical Score (Cow's Milk Protein Intolerance Score)

Symptom	Score	
Crying*	0	<1 hour/day
	1	1-1.5 hours/day
	2	1.5-2 hours/day
	3	2 to 3 hours/day
	4	3 to 4 hours/day
Regurgitation†	0	
	1	
	2	
	3	
	4	
Stools (Bristol scale)†	0	
	1	
	2	
	3	
	4	
Skin symptoms	0	
	1	
	2	
	3	
Respiratory symptoms	0 or 6	Severe
	0	Urticaria (no 0/yes 6)
	1	No respiratory symptoms
	2	Slight symptoms
	3	Mild symptoms
	3	Severe symptoms

10. Vandенplас Y, Steenhout P, Planoudis Y, Grathwohl D; **Althera Study Group** Treating cow's milk protein allergy: a double-blind randomized trial comparing two extensively hydrolysed formulas with probiotics. *Acta Paediatr* 2013;102:990-8.

11. Vandенplас Y, **Althera Study Group**, Steenhout P, Grathwohl D. A pilot study on the application of a symptom-based score for the diagnosis of cow's milk protein allergy. *SAGE Open Med* 2014; 2:205031211452 3423.

Vandенplас Y.
Treatment of Cow's
Milk Protein Allergy.
*Pediatr Gastroenterol
Hepatol Nutr.*
2014;17:1-5

*Crying was only considered if the child was crying for 1 week or more, assessed by the parents, without any other obvious cause.

†Vandенplас Y, Hachimi-Idrissi S, Casteels A, Mahler T, Loeb H. A clinical trial with an "anti-regurgitation" formula. *Eur J Pediatr* 1994;153:419-23.

†Lewis SJ, Heaton KW. Stool form scale as a useful guide to intestinal transit time. *Scand J Gastroenterol* 1997;32:920-4.

Cronache

Barletta La vittima aveva 29 anni. Due donne salvate dall'antidoto

Test anti allergie da eBay Muore nel centro clinico

Medicina forse contaminata, controlli in tutta Europa

Il commento

QUEI FARMACI IN RETE SENZA CONTROLLI

di ADRIANA BAZZI

La vicenda di Barletta (una donna morta dopo un esame per le intolleranze alimentari e altre due ricoverate in osservazione) è complicata e pone almeno tre tipi di problemi. Primo: l'utilizzo di medicinali comperati su eBay (in questo caso il sorbitolo che, usato per il test, doveva dimostrare l'incapacità dell'intestino di assorbire certi cibi e spiegare certi sintomi del paziente, come il gonfiore intestinale, il sovrappeso, la cefalea e via dicendo). Il commercio di medicine via Internet è senza controllo: al top della classifica ci sono i farmaci Viagra-simile, contro l'impotenza sessuale, che di solito sono acquistati da cittadini comuni, ma, a quanto pare, anche i medici privati (per risparmiare?) comprano prodotti farmaceutici (il sorbitolo) da utilizzare nei loro ambulatori, senza prove di sicurezza. Secondo: i centri privati

dovrebbero garantire la qualità delle loro prestazioni (il

Risparmi

Per risparmiare i

DAL NOSTRO INVIATO

BARLETTA — Cinque grammi. Solo cinque. Di una sostanza innocua. Ma acquistata via internet su eBay da una partita probabilmente contaminata da un veleno potentissimo. Che ora si cerca, in tutta Europa, di fermare prima che possa uccidere ancora. Sperando che, come si sospetta, non lo abbia già fatto. Teresa Sunno, ventinovenne di Andria, residente a Trani, è morta così. In dieci minuti. Dopo aver bevuto quella sostanza, somministrata dal suo gastroenterologo privato alla ricerca di intolleranze alimentari. Non ha avuto il tempo nemmeno di arrivare al pronto soccorso, Teresa. Dove invece sono state salvate per un soffio Anna, Abbrascia di 40 anni e Addolorata Piazzolla, di 62, che avevano ingerito la stessa sostanza e in pochi minuti hanno avuto un collasso. Vive grazie a una fiala blu che Cosimo Sannito, responsabile del Pronto soccorso mostra orgoglioso, è riuscito tempestivamente a individuare l'antidoto e a som-



Giovane
La vittima di ieri a Barletta: Teresa Sunno, 29 anni, originaria di Andria. Salve per un soffio altre due donne

La sostanza

Sorbitolo

Il sorbitolo è uno zucchero semplice, contenuto in frutti come mele, pere, susine, ciliegie e in quelli del sorbo (da cui deriva proprio il nome sorbitolo). Secondo alcune approfondite ricerche scientifiche la sostanza può essere responsabile di malassorbimento intestinale, con la comparsa di sintomi diversissimi che vanno dal gonfiore di pancia, ai dolori addominali, alla stanchezza, fino ai mal di testa. Il test al sorbitolo viene utilizzato per diagnosticare questi disturbi. Il suo uso è,

bambini di età inferiore a un anno di vita

Allergie e intolleranze alimentari

Se sei allergico a... Percentuale di rischio Con il rischio con...

Se sei allergico a...	Percentuale di rischio	Con il rischio con...
Arachide	58%	Altri nocivi
Frutta secca con guscio	37%	Altra frutta secca con guscio
Latte vaccino	10% 92%	Altri cereali
Cereali	20%	Altri pesci
Pesci	50%	Altri crostacei
Crostacei	75%	Altre rosacee
Pesce	55%	Altri frutti
Urtica	92%	
Polline	55%	

Questi prodotti devono essere sempre citati nelle etichette dei prodotti che li contengono

lo, vi siano nitrati fortemente tossici. A Rovigo si indaga su un altro laboratorio che commercializzava la stessa sostanza. Un'operazione capillare seguita passo passo dal ministro della Salute, Renato Balduzzi. Che ieri ha portato ad un primo risultato: ci sono altre situazioni sospette.

Il capo della Procura di Trani, competente delle indagini, Carlo Maria Capristo, raccomanda cautela: «Non dobbiamo spargere il panico. Sono in corso test specialistici sulla tossicità del farmaco. Sono analisi approfondite. Occorre un po' di tempo e un po' di prudenza. Forse ne doveva avere di più il medico ad acquistare il farmaco online. Dove sicuramente si può risparmiare. Ma si trovano, sempre più

Spesso provenienti dalla Cina. Il test letale, si sospetta che possa essere stato originariamente prodotto lì. Ora il medico, Ruggero Spinazzola, rischia un'accusa di omicidio colposo, lesioni gravi e avvelenamento colposo di sostanze alimentari. Ma si approfondisce anche la posizione del dottor Pappagallo, medico associato in quello studio clinico, cui si era rivolta la ragazza. «Aveva un po' di acidità di stomaco» racconta Giovanni, l'amico che l'aveva accompa-

Dalla Gran Bretagna

La sostanza prodotta in Gran Bretagna. Sotto sequestro il centro che cura le intolleranze

gnata agli accertamenti e ora non si dà pace. «Teresa è stata sottoposta prima a una gastroscopia e poi a una colonscopia su consiglio del dottor Pappagallo, che la mandava però allo studio Spinazzola a Barletta». E non era sempre andata bene. Lo racconta il ragazzo: «Dopo alcune analisi, ha ritenuto di farla sottoporre a test per le intolleranze alimentari. Il primo lo ha fatto due settimane fa per verificare l'intolleranza al lattosio: è stata male tutto il giorno dopo averlo fatto. Il secondo era oggi (ieri, ndr). Si è sentita male, ma non è stata l'unica. Solo che lei poi è morta». Non consola, ma grazie all'allerta lanciato la morte di Teresa potrebbe non essere stata inutile.

Virginia Piccolillo

CORRIERE DELLA SERA

Symptoms related to food

SKIN: Acne, dermatitis, eczema, hives, urticaria.

HEADACHES: various kinds of headaches.

EYE CONDITIONS: conjunctivitis, eye pain, periods of blurred vision, tearing, temporary refractive changes.

HEARING: hearing loss, infections, inflammations, Meniere's disease, repeated

HEART: angina, high blood pressure, irregular heartbeat, low blood pressure, rapid pulse.

GASTRO-INTESTINAL: constipation, diarrhoea, gall bladder pains, wind, gastric ulcer, gastro-intestinal

infection, haemorrhoids, indigestion, mucous colitis, nausea, pains or cramps, spastic

colitis, bloating.

RESPIRATORY: asthma, chronic sinusitis, frequent "colds", hay fever, mouth breathing, nosebleeds, polypoid nose, wheezing.

UROLOGICAL: bedwetting, urinary tract infection, frequent urination, painful or difficult urination.

MUSCULO-SKELETAL: joint pain, muscle cramps, muscle aches, muscle spasms, muscle weakness.

MENTAL-BEHAVIOURAL: anxiety, depression (including postnatal depression), drowsiness, epilepsy, floating sensations, general fatigue, hallucinations, hyperactivity, instability, learning disorders, minimal brain dysfunction, nervousness, periodic paralysis, poor concentration, poor memory, poor muscle coordination, restlessness, tics, Tourette's syndrome, sleeps at inappropriate times, sleeps too little, sleeps too much, tension-fatigue syndrome, unsteadiness.

OTHER: Abnormal body odour, excessive sweating, general weakness, hypoglycaemia, night-sweating, overweight, underweight, virus infections

Haemorrhoids

Psoriasis

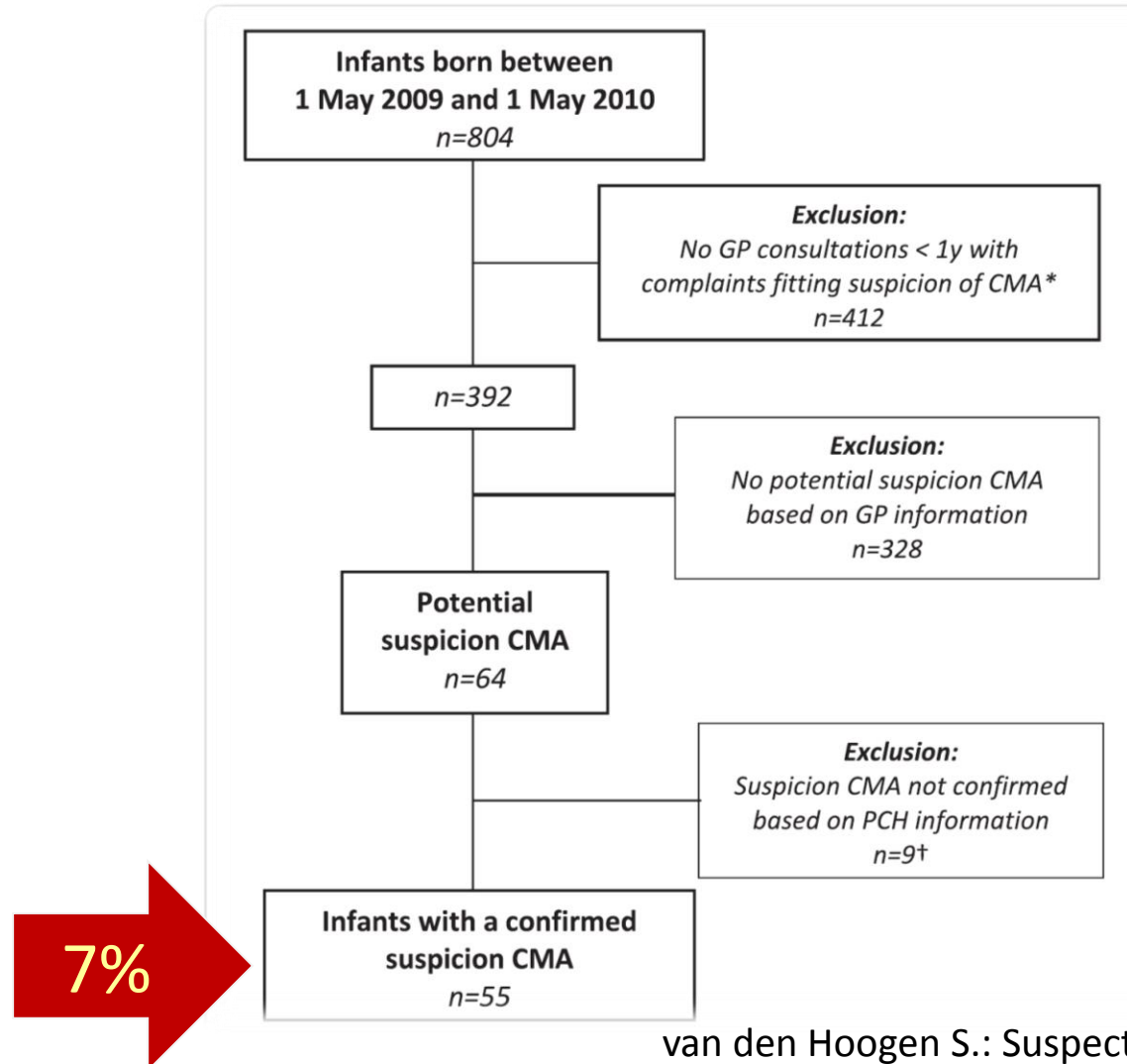
Refractive changes

Bedwetting

Body odour

Overweight

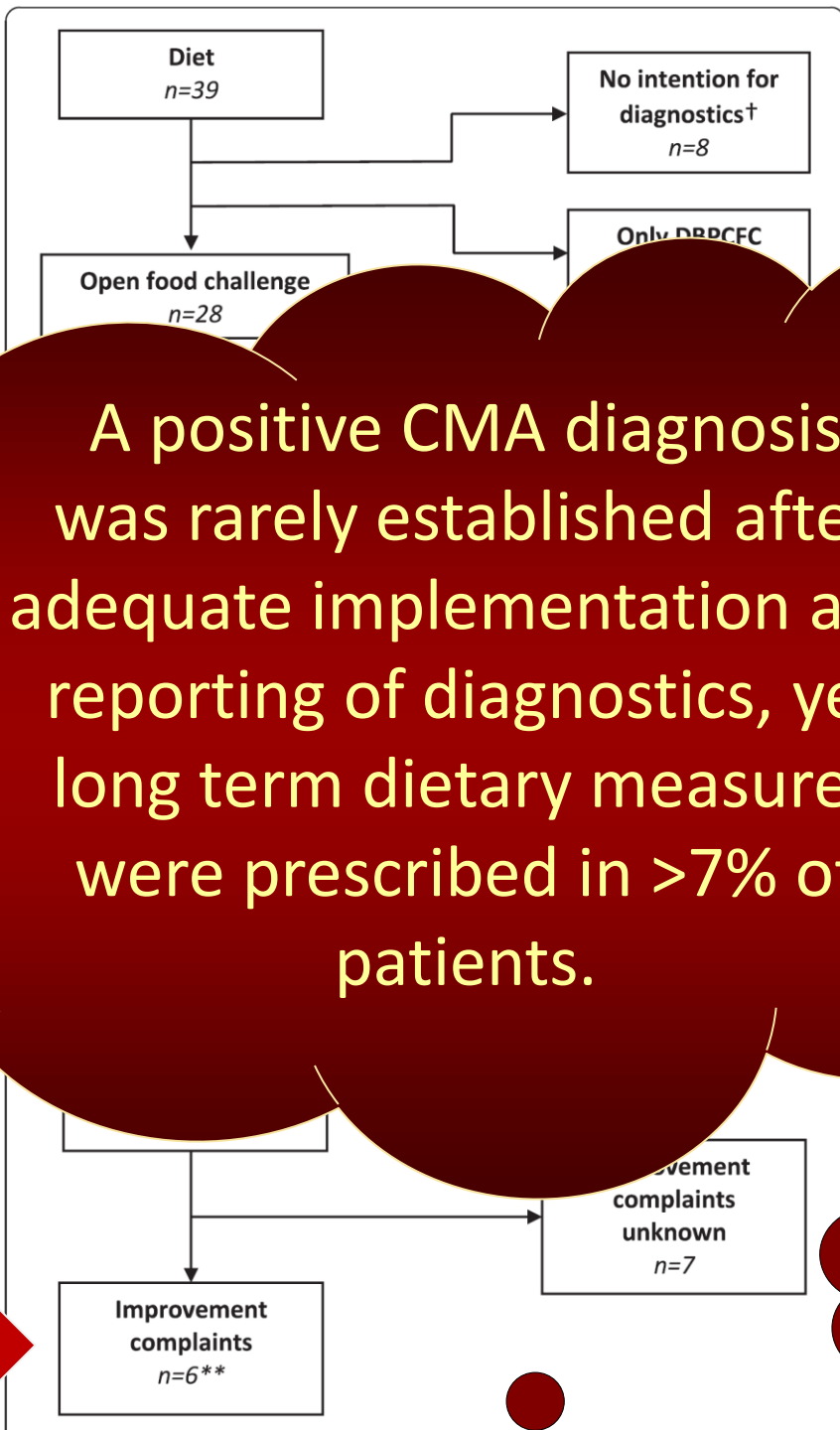
Unnecessary milk elimination diets in children with uncorrected diagnosis of CMA.



van den Hoogen S.: Suspected cow's milk allergy in everyday general practice: a retrospective cohort study on health care burden and guideline adherence. BMC Research Notes 2014 7:507.



Unnecessary milk elimination diets in children with atopic dermatitis.



0.8%

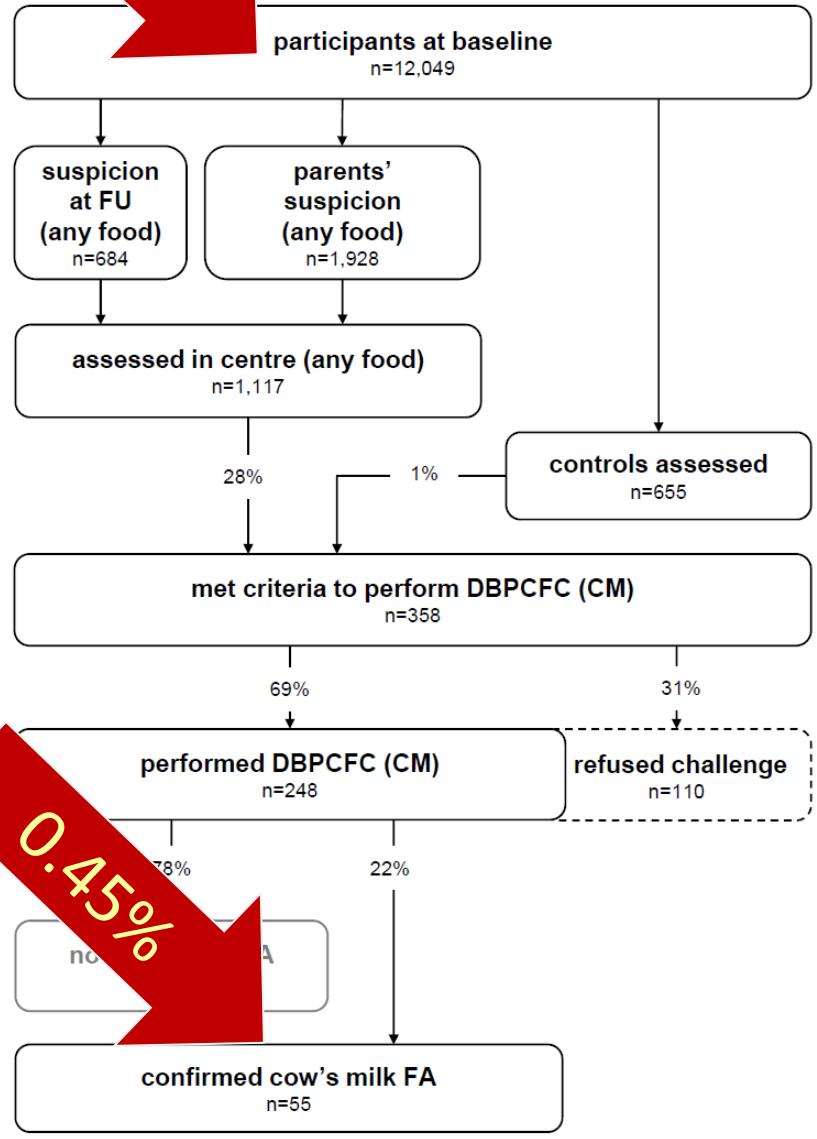
A positive CMA diagnosis was rarely established after adequate implementation and reporting of diagnostics, yet long term dietary measures were prescribed in >7% of patients.

APLV
@opbg.net

in den Hoogen S
pected cow's milk
allergy in everyday
general practice: a

Unnecessary milk elimination diets in children with uncorrected diagnosis of CMA.

12,000

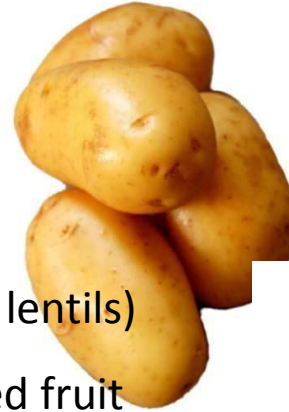


0.45%



Schoemaker AA. Incidence and natural history of challenge-proven cow's milk allergy in European children - EuroPrevall birth cohort. Allergy. 2015;70:963-72

Nickel allergy. a diet regimen for diagnosis



- Nuts and Legumes (beans, lentils)
- Any canned food or canned fruit

- Hot water from the tap

- Anything acidic (like tomatoes) cooked in a stainless steel pan

- Leafy green vegetables



Nickel allergy. Myth or reality? a narrative overview

Nickel is the leading cause of ACD (Allergic Contact Dermatitis).

Systemic nickel allergy syndrome (SNAS) is very controversial.

No challenge studies

Nickel-related gastrointestinal symptoms

Nickel-related chronic fatigue syndrome

Nickel-related fibromyalgia

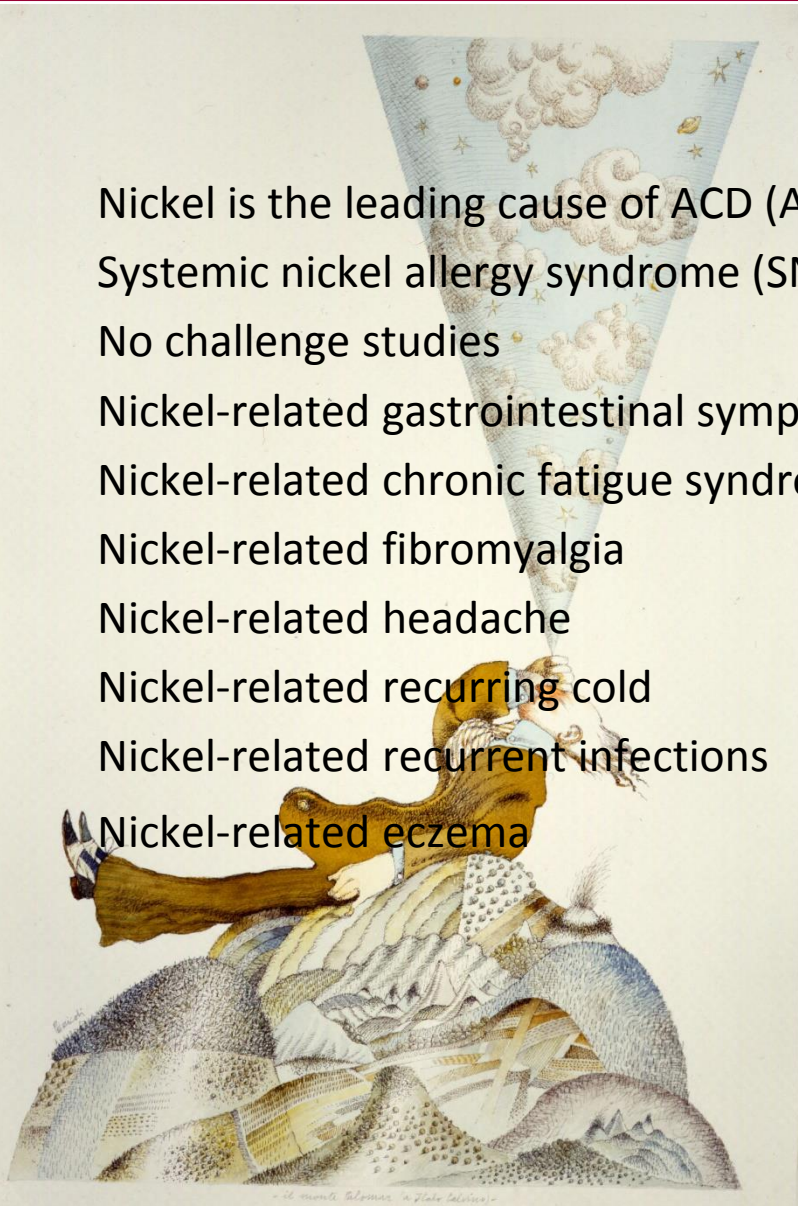
Nickel-related headache

Nickel-related recurring cold

Nickel-related recurrent infections

Nickel-related eczema

In the absence of genuine certainty,
we can only conclude that further and
broader studies, more rigorously
conducted, are needed.



LA CIOTAT, LE

REGIME SANS COBALT

SUPPRIMER LES ALIMENTS SUIVANT

haricots, betteraves, choux,

abricots, noix,

foie,

pain complet,

clous de girofle,

café, thé, cacao, chocolats,

bière,



La Bière est Nourrissante



Celle-ci en boit

Celle-là nen boit pas



- 1. Il bambino con pretesa allergia alimentare**
- 2. Il bambino con allergia alimentare non IgE-mediata**
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Clinical symptoms of FPIES

Mild – moderate acute FPIES	Severe acute FPIES
<p>Required</p> <ul style="list-style-type: none"> • Vomiting (onset usually 1-3 hours, may range 30 minutes-6 hours): few episodes of intermittent vomiting (1-3), may be bilious • Decreased activity level • Pallor • Self-resolving, the child is able to tolerate oral rehydration at home <p>Optional</p> <ul style="list-style-type: none"> • Mild watery diarrhea, onset usually within 24 hours, may be bloody (occasionally) 	<p>Required</p> <ul style="list-style-type: none"> • Vomiting (onset usually 1-3 hours, may range 30 minutes-6 hours): projectile (forceful), repetitive, bilious and dry heaving • Altered behavior (from decreased activity to lethargy) • Pallor • Dehydration • Persistent, unable to rehydrate orally at home <p>Optional</p> <ul style="list-style-type: none"> • Hypotension • Abdominal distention • Hypothermia • Diarrhea, onset usually within 24 hours, may be bloody

Laboratory features of FPIES

Mild – moderate acute FPIES	Severe acute FPIES
<ul style="list-style-type: none">• Elevated white blood cell count with neutrophilia• Thrombocytosis• Stool may be positive for leukocytes, eosinophils or increased carbohydrate content	<ul style="list-style-type: none">• Elevated white blood cell count with neutrophilia• Thrombocytosis• Metabolic acidosis• Methemoglobinemia• Stool may be positive for leukocytes, eosinophils or increased carbohydrate content



Common food cross-reactivities/co-allergies in children with FPIES

FPIES to	Clinical cross-reactivity/co-allergy	Observed Occurrence*
Cow's milk	Soy	<30-40%
	Any solid food	<16%
Soy	Cow's Milk	<30-40%
	Any solid food	<16%
Solid food (any)	Another solid food	<44%
	Cow's milk or soy	<25%
Legumes*	Soy	<80%
Grains: rice, oats, etc*	Other grains (including rice)	about 50%
Poultry*	Other poultry	<40%

Nowak-Węgrzyn A. International Consensus Guidelines for the Diagnosis and Management of Food Protein-Induced Enterocolitis Syndrome. *Submitted*



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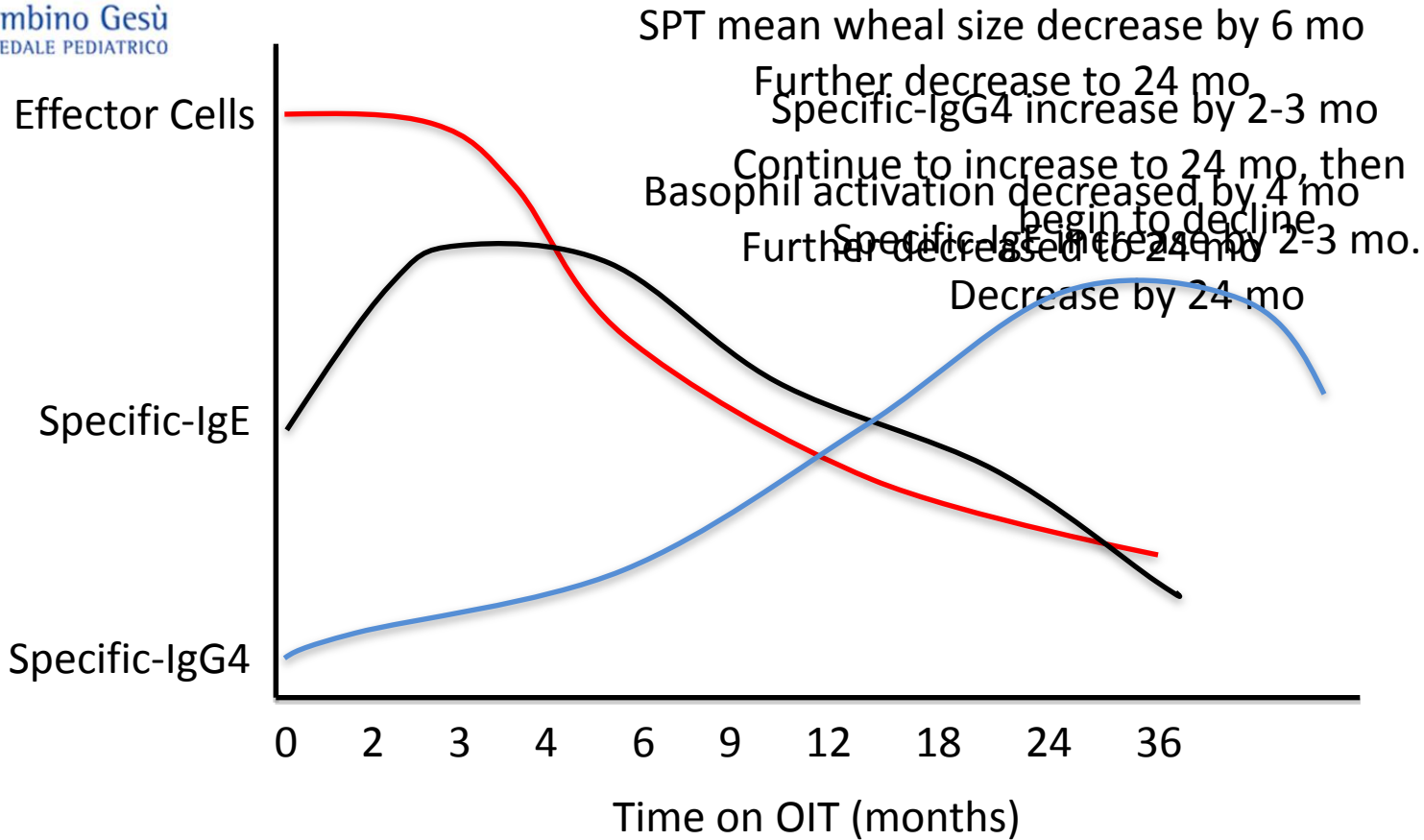
Avoiding milk, dairy products, and egg



Goals of treatment are two-fold:

1. Clinical **desensitization** - tolerate more food on treatment than before starting
2. Eventual clinical **tolerance** - off treatment can tolerate food –how long off treatment?

no good definition of tolerance –issue in all of allergic diseases
“sustained unresponsiveness” –



Skin prick: Jones et al, 2009; Blumchen et al, 2010; Varshney et al, 2011; Jones et al, 2011

Basophil activation: Jones et al, 2009; Jones et al, 2011

Specific IgE: Buchanan et al, 2007; Skripak et al, 2008; Longo et al, 2008; Jones et al, 2009; Blumchen et al, 2010; Varshney et al, 2011; Jones et al, 2011

Specific IgG4: Patriarca et al, 2003; Skripak et al, 2008; Jones et al, 2009; Blumchen et al, 2010; Varshney et al, 2011; Jones et al, 2011

Mithridates - King of Pontos
(ancient Greece, now Turkey)
114-63 BC



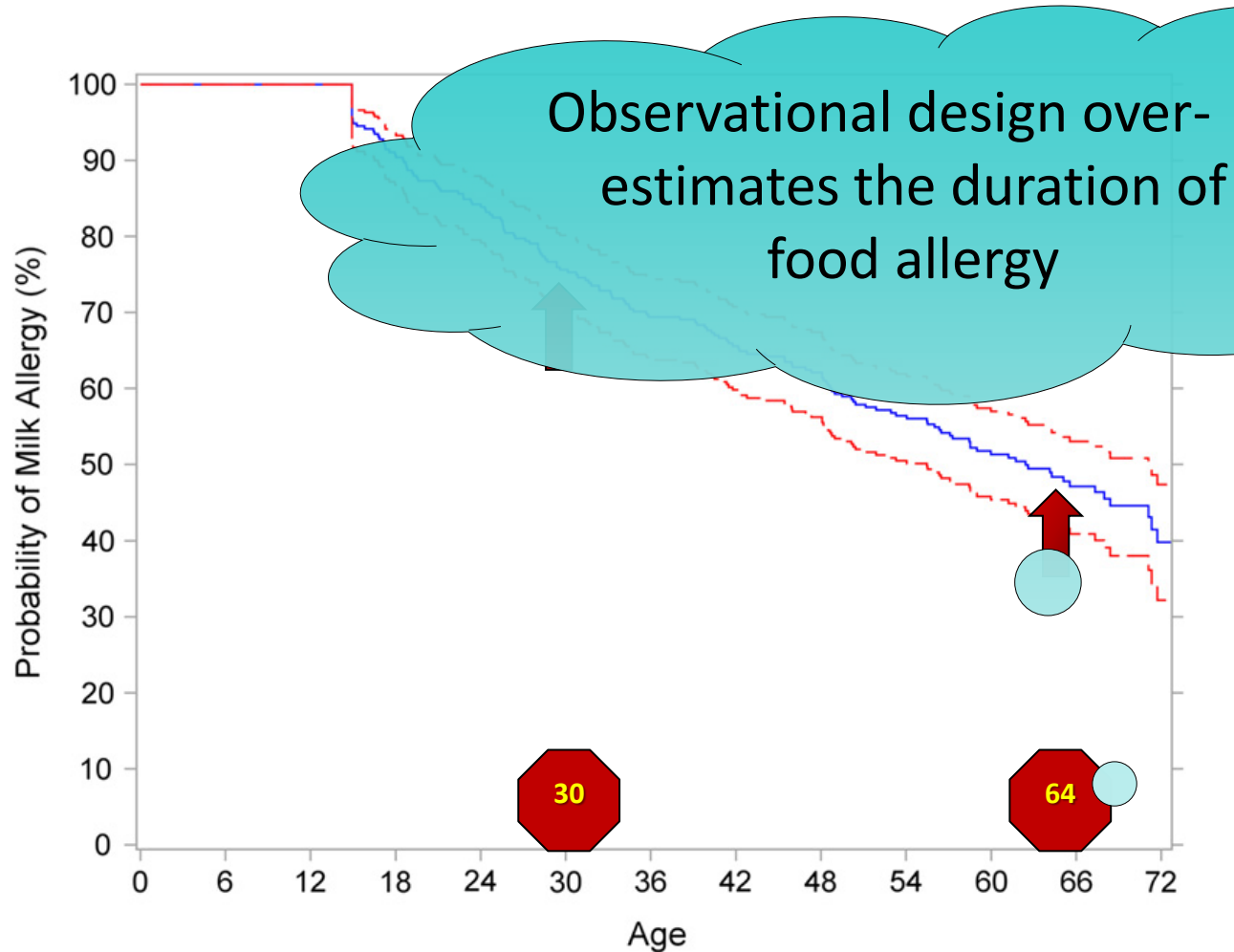
- lived in constant fear of being assassinated by the use of poison
- so paranoid was he that he administered daily amounts of poisons in an attempt to make himself immune to as many poisons as he could.

Tolerance vs. desensitization

- Large number of studies evaluated the ability for OIT to induce desensitization
- Few OIT studies have assessed for tolerance as a study outcome:
 - four uncontrolled open studies
 - three RCTs

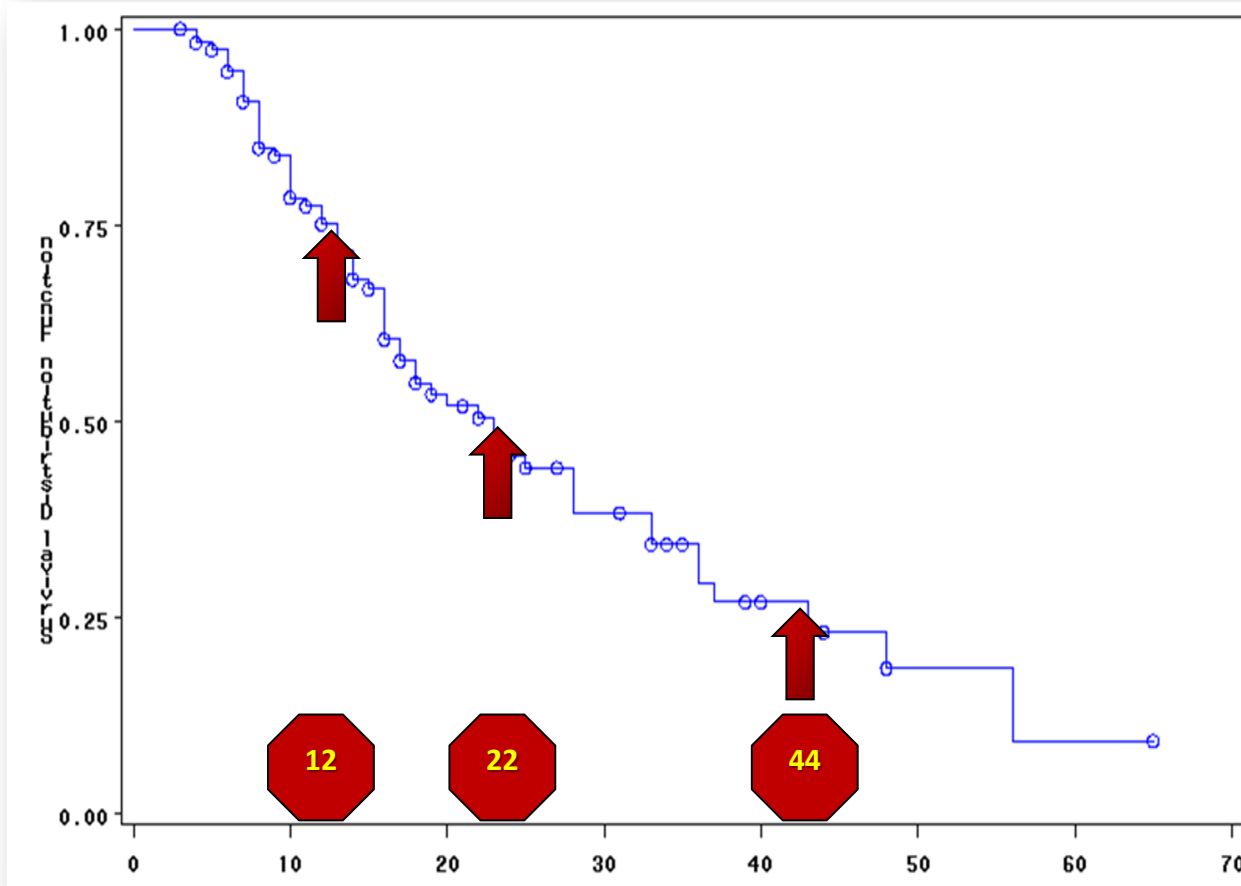
Tang ML, Martino DJ. Oral immunotherapy and tolerance induction in childhood.
Pediatr Allergy Immunol. 2013;24:512-20

Natural history of milk allergy



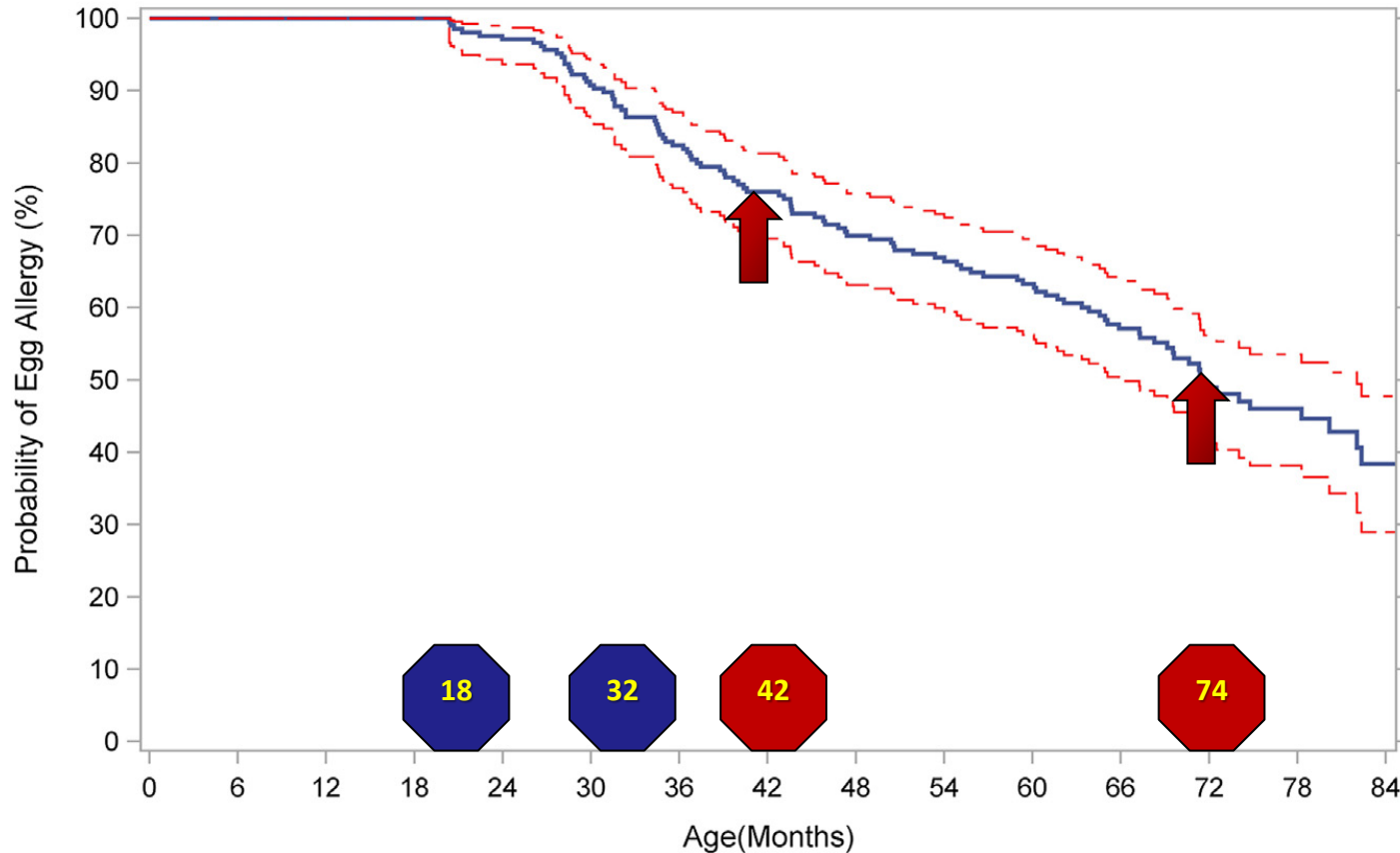
Wood RA, Sicherer SH, Vickery BP, Jones SM, Liu AH, Fleischer DM, Henning AK, Mayer L, Burks AW, Grishin A, Stablein D, Sampson HA. The natural history of milk allergy in an observational cohort. *J Allergy Clin Immunol.* 2013;131:805-12

Natural history of milk allergy



Fiocchi A, Terracciano L Bouygue GR, Veglia F, Sarratud T, Martelli A, Restani P. Incremental prognostic factors associated with cow's milk allergy outcomes in infant and child referrals: the Milan Cow's Milk Allergy Cohort study. *Ann Allergy Asthma Immunol* 2008;101:166-73

Natural history of egg allergy

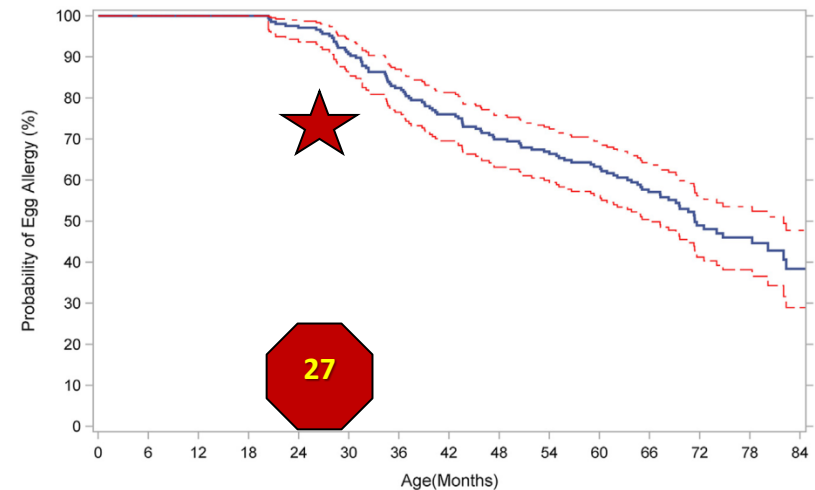
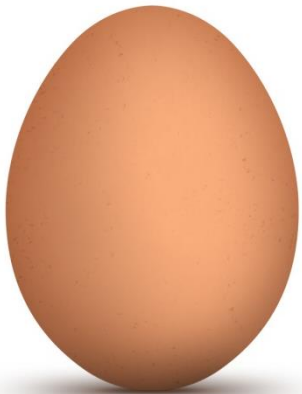


Sicherer SH, Wood RA, Vickery BP, Jones SM, Liu AH, Fleischer DM, Dawson P, Mayer L, Burks AW, Grishin A, Stablein D, Sampson HA. The natural history of egg allergy in an observational cohort. *J Allergy Clin Immunol.* 2014;133:492-9

Tolerance vs. desensitization - 1

- open study
- 7 children with egg allergy
 - for two years
- tolerance 2/7 (29%)

Buchanan ADI. Egg oral immunotherapy in nonanaphylactic children with egg allergy. J Allergy Clin Immunol 2007;119: 199–205



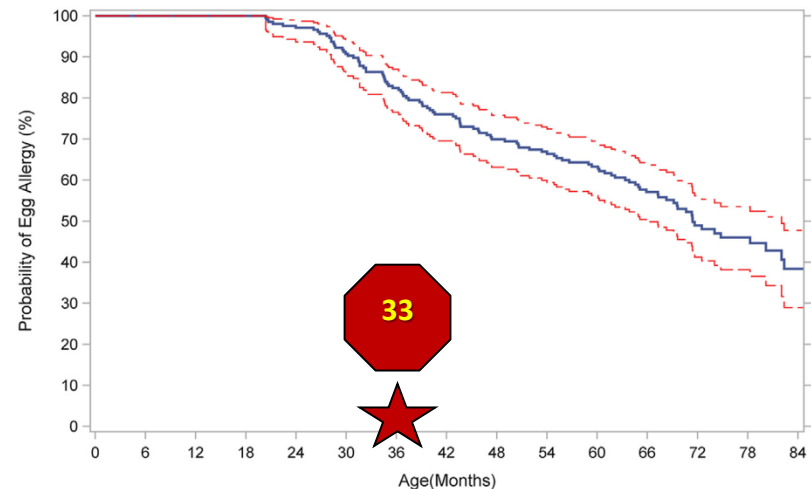
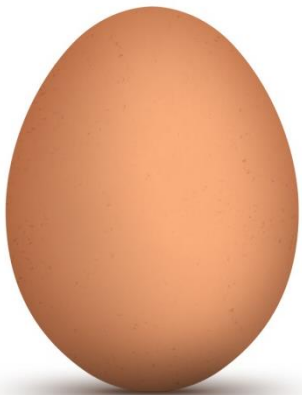
Sicherer SH. The natural history of egg allergy in an observational cohort.

J Allergy Clin Immunol. 2014;133:492-9

Tolerance vs. desensitization - 2

- open study
- 6 children with egg allergy
 - for 33 months
- tolerance 6/6 (100%)

Vickery BP, Pons L, Kulis MI. Individualized IgE-based dosing of egg oral immunotherapy and the development of tolerance. *Ann Allergy Asthma Immunol* 2010; 105: 444–50.



Sicherer SH. The natural history of egg allergy in an observational cohort.

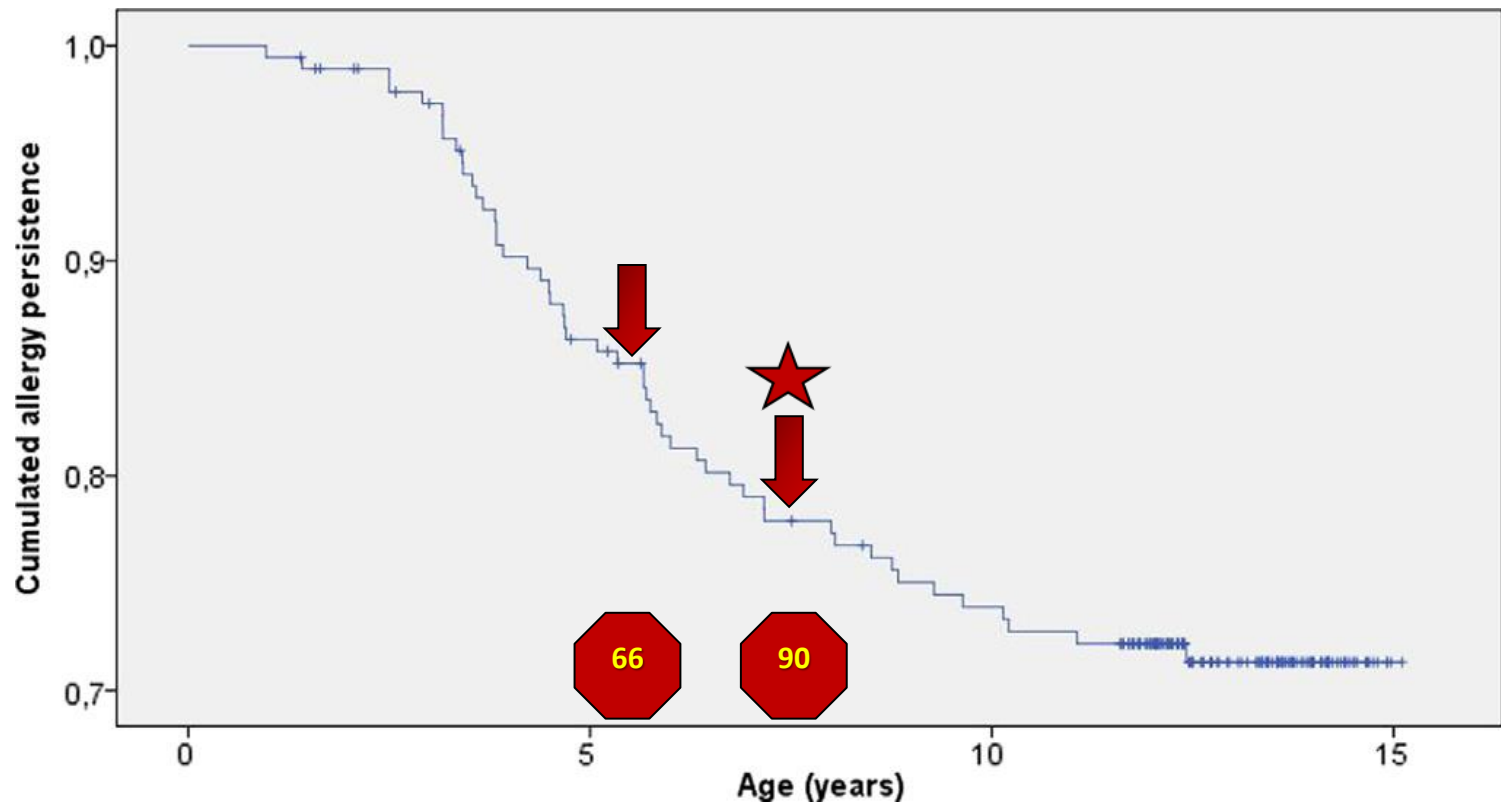
J Allergy Clin Immunol. 2014;133:492-9

Tolerance vs. desensitization - 3

- Open study
- 23 children with peanut allergy
 - Median age 5.6 years
 - For 2 to 22 months
 - Tolerance 4/23 (17%)



Peanut allergy natural history

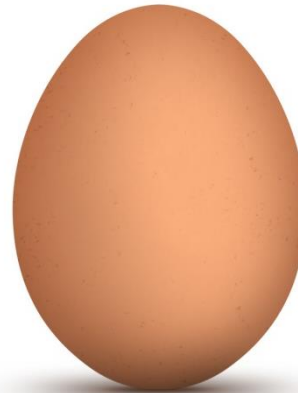


Begin P. Natural resolution of peanut allergy: A 12-year longitudinal follow-up study.

J Allergy Clin Immunol: In Practice 2013;1:528-30

Blumchen K, Ulbricht H, Staden U. Oral peanut immunotherapy in children with peanut anaphylaxis. J Allergy Clin Immunol 2011; 126: 83–91.

- Open study
- 25 children with milk or egg allergy
- For 11 to 59 months
- Tolerance 9/25 (36%)
- Control group tolerated 35%



Tolerance vs. desensitization - 4

SOTI-group (n=25)		
Pattern		N (%)
I	Responder (natural course or SOTI?)	9 (36)
II	Responder (with regular daily intake)	3 (12)
III	Partial responder	4 (16)
IV	Non responder	9 (36)

Tolerance vs. desensitization - 4

SOTI-group (n=25)			Control-group (n=20)	
Pattern		N (%)	Result	N (%)
I	Responder (natural course or SOTI?)	9 (36)	Tolerant	7 (35)
II	Responder (with regular daily intake)	3 (12)		
III	Partial responder	4 (16)		
IV	Non responder	9 (36)	Allergic	13 (65)

Tolerance vs. desensitization - 5



CoFAR3 egg OIT – sustained unresponsiveness (permanent tolerance?)

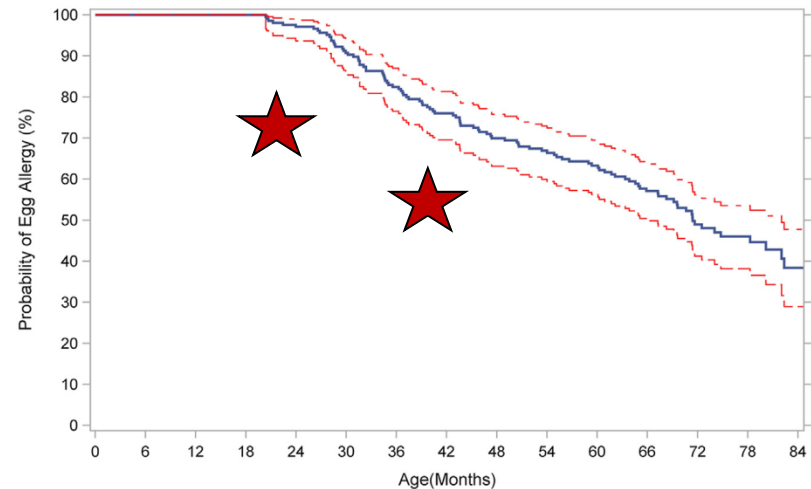
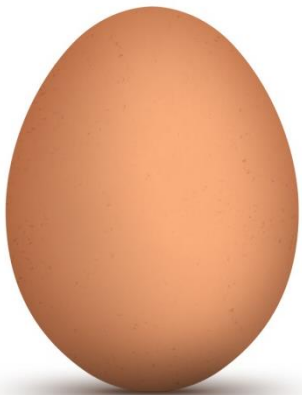
	<u>Placebo</u>	<u>Egg OIT</u>
<u>5 gm desensitization OFC (10 Month)*</u>	0/15 (0%)	22/40 (55%)
<u>10 gm desensitization OFC (22 Month)*</u>	0/15 (0%)(n=1)	30/40 (75%)(n=34)
↓ Off OIT 4 weeks		↓
<u>10 gm tolerance OFC (23 Month)**</u>	0/15 (0%)(n=0)	11/40 (27.5%)(n=29)
↓ Continue OIT 12 months		↓
<u>10 gm tolerance OFC (~36 Month)</u>	N/A	18/40 (45%)(n=13)

* p<.001

** p=.025

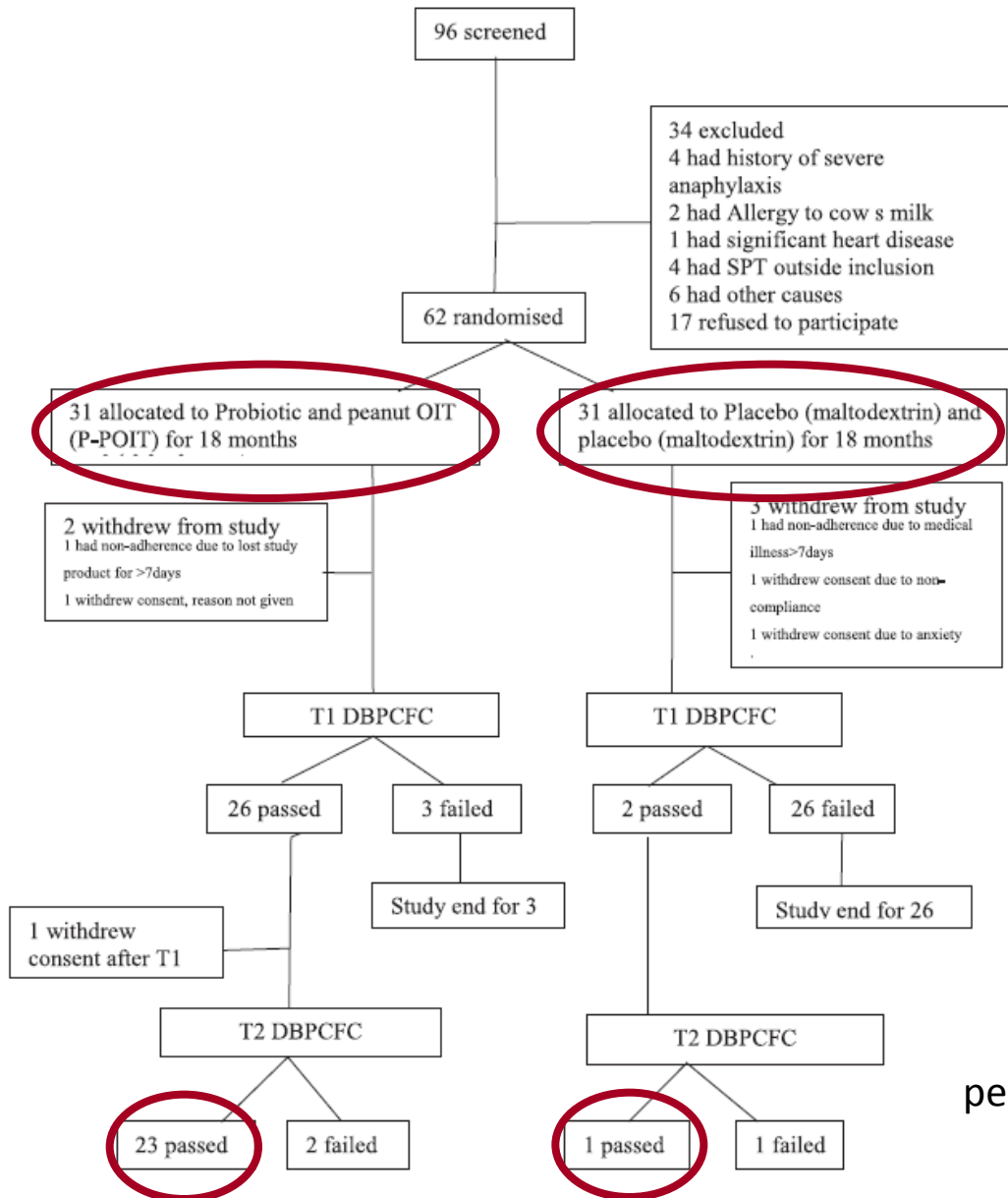
Tolerance vs. desensitization - 5

- RCT/Open study
- 40 children with egg allergy vs. 15 placebo
- For 22 months
- Tolerance 11/40 (28%)
- Control group lost



Burks AW. Oral immunotherapy for treatment of egg allergy in children. N Engl J Med 2012; 367:233–43.

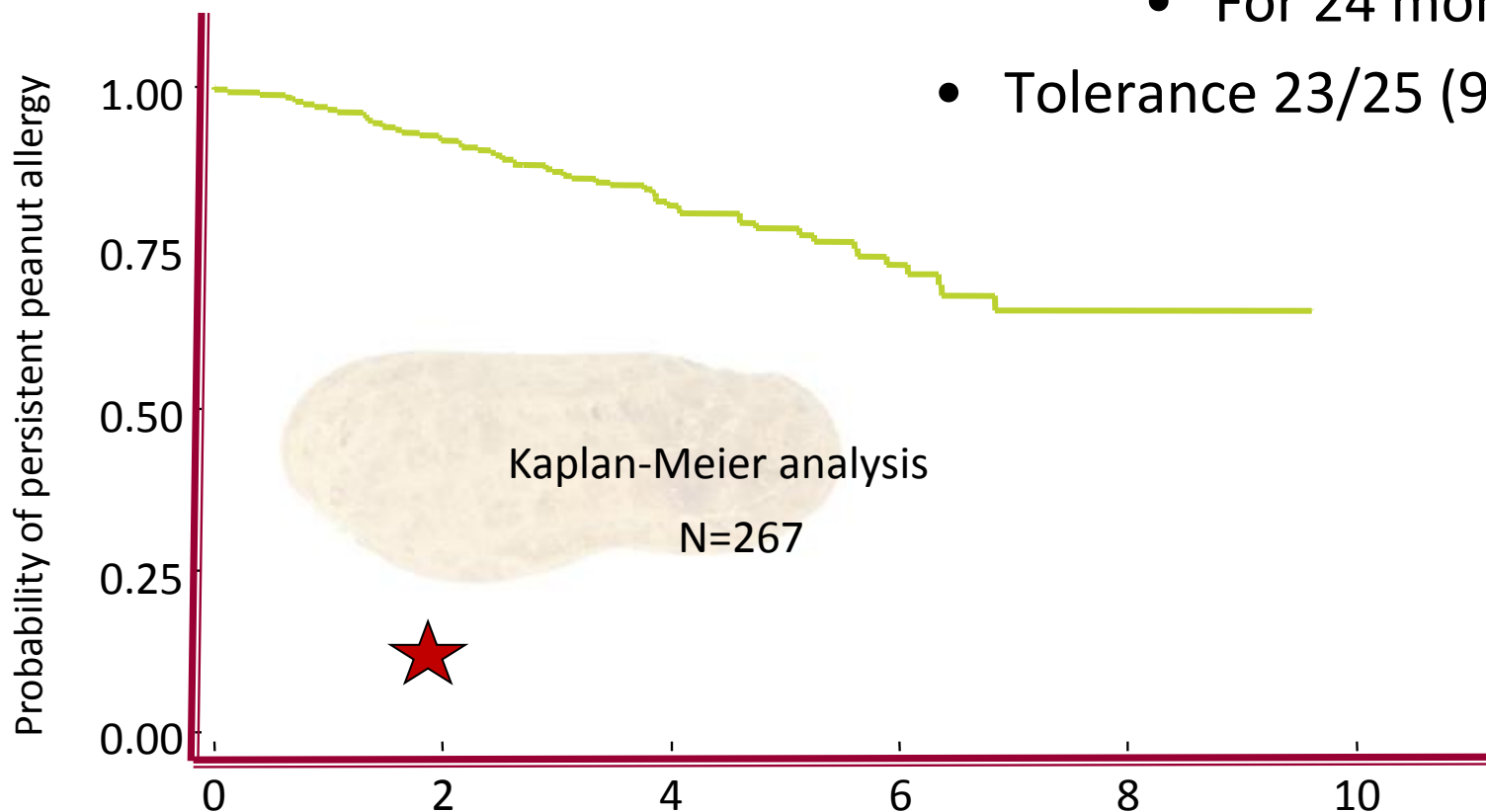
Tolerance vs. desensitization - 6



Tang ML. Administration of a probiotic with peanut oral immunotherapy: a randomized trial. J Allergy Clin Immunol 2015;135:737-44

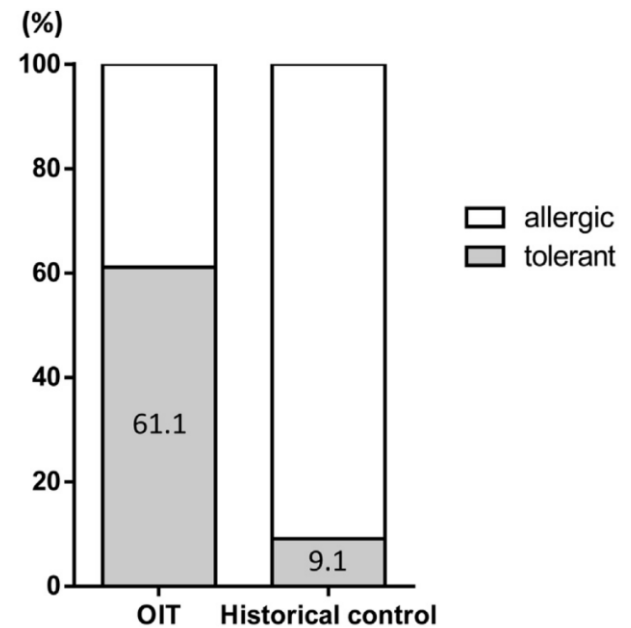
Tolerance vs. desensitization - 6

- Open, randomized study
- 31 children with peanut allergy
 - For 24 months
 - Tolerance 23/25 (91%)



Tolerance vs. desensitization - 7

- Open study
- 18 children with wheat allergy
- For 24 months
- Tolerance 12/18 (60%)
- Control group impossible



Sato S. Wheat oral immunotherapy for wheat-induced anaphylaxis. J Allergy Clin Immunol 2015;136:1131-3



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The polyallergic child

Michele, 6.

Moderate persistent asthma

Minimal possible steroids dose [risk of arterial hypertension found in Misurina].

Food allergy with reactions to small doses of milk, egg, nuts, fresh fruit (kiwi, plum and apricot), fish, shrimp, soy, peanut.

Total IgE > 3000.

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

Uncontrolled asthma

- From 3 years of age
- one episode/month - no seasonality
- desaturation during many ER accesses
- Fluticasone 125 x 2, LABA & MK (3-5 years)
- Betamethasone 5-10 times a year
- Misurina for three months
- Mites, grass, tree pollens, dog & cat hair.

Current therapy: Fluticasone, 250 mcg x 2 + MK 5 mg

Childhood Asthma Control Test, **17**

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

Polysensitization

Total IgE 3027 kU / L

sIgE for foods, kUI/L				sIgE for inhalants, kUI/L			
Egg white	> 100	Shrimp	64.8	Grass	19.4	D. farinae	11.1
Cow's milk	> 100	Peanut	28.9	Corylus	17.5	D. pteronyssinus	12.2
Hazelnut	> 100	Soy	25.7	Birch	15.8	Dog dander	17.9
Egg yolk	91.3	Chicken	15.9	Cupressus	12.2	Cat dander	5.5
Cod	88.1	Beef	6.30	Olea	7.9		

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

STAT-3 score

Total IgE 3027 kU / L

Clinical findings	Points				
	0	4	Points	Scale	Scaled Points
Pneumonias (X-ray proven, #)	none		0	0.222	0
Newborn rash		X	4	0.167	0.668
Scoliosis, max curve	<10°		0	0.042	0
Pathologic fractures	none		0	0.333	0
Characteristic face	absent		0	0.333	0
Gothic palate	absent		0	0.167	0

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

Food allergy - **anaphylaxis**

- Severe AD from the early months of life
- Immediate contact reactions to **milk, egg**.
- Inhalation reactions to **milk, egg, fish**.
- Hives and diarrhea immediately after apricot, kiwi, strawberry and plum.
- Hives and diarrhea hours after chicken and veal
- Immediate reactions after ingestion of **fish, shellfish, nuts** (hazelnuts, Brazil nuts), **peanuts**, lentils, **soy**.
- PedsQL 59.8 (parental) - 67.8 (child) .

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

Michele. What now?...

- Oral Immunotherapy (OIT) has limits in multiple food allergy (MFA) .
- Omalizumab is effective in severe asthma
- Omalizumab is contraindicated by serum IgE levels >1500 kUI/L
- Total plasma Exchange (TPE), anecdotally used to overcome this limit , reduces allergy symptoms per se

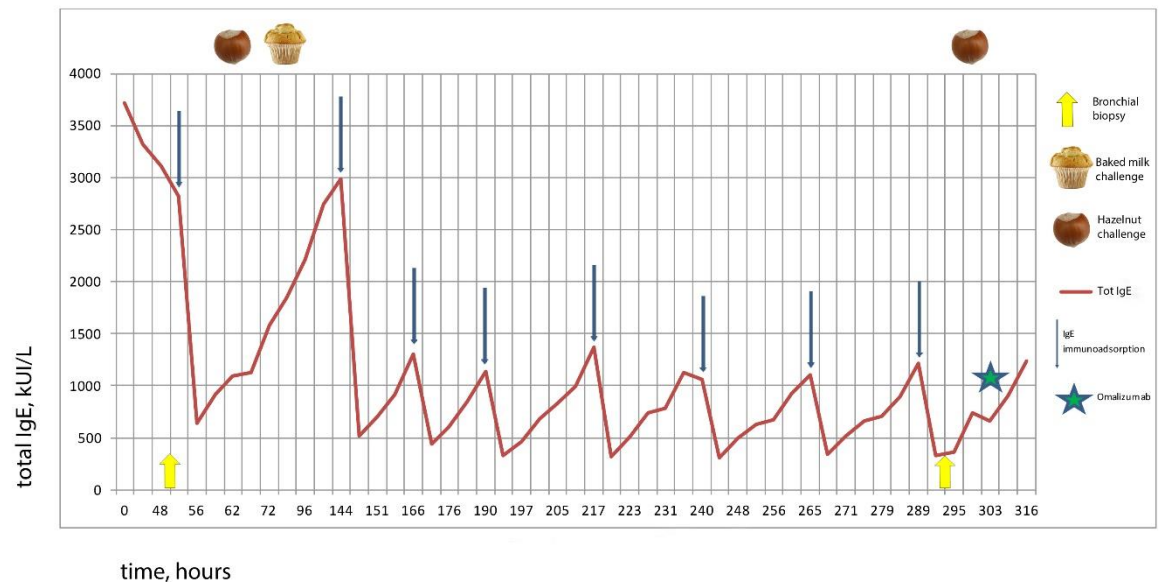
Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

Michele. What now?...

- 10-days
- 1.5 plasma volume treated in eight aphaeresis sessions (2100 mL total plasma exchanged)
- mouse monoclonal anti-human IgE antibody coupled to Sepharose: Therasorb IgE, Miltenyi Biotec GmbH, Cologne, Germany.



Dahdah L. IgE
Immunoadsorption knocks
down the risk of food-
related anaphylaxis.
Pediatrics 2015; *in press*



Michele. What now?...

- Asthma kept in control (score 25 one month after the 8th procedure)
- Montelukast withdrawn, Fluticasone tapered to 175 mcg/day
- Full tolerance to 1.5g baked milk protein (one muffin) after the first session
- Hazelnut tolerated up to 0.142g protein after the first session, 0.377g after the eighth, and 1.067g (full tolerance, 8 hazelnuts) after the first administration of Omalizumab.
- The boy became partially or fully tolerant to all the offending foods.
- PedsQL increased to 78.7 (parental) and 90 (child).

Dahdah L. IgE Immunoabsorption knocks down the risk of food-related anaphylaxis. Pediatrics 2015; in press

1. Il bambino con pretesa allergia alimentare
2. Il bambino con allergia alimentare non IgE-mediata
3. Il bambino con allergia severa ad un alimento
4. Il bambino con allergia severa a più alimenti
5. Conclusioni

Conclusion

1. 'Food intolerance' may translate in overtreatment.
2. FPIES is increasing – it must be suspected
3. The immune mechanisms of tolerance may be little affected by OIT
4. Omalizumab is a possible solution

