Practical SLIT in food allergy: what is happening in the real world?

Edmond S. Chan, MD, FRCPC
Clinical Professor, University of British Columbia, Canada
Head, Division of Allergy, Department of Pediatrics

Jan 9, 2026 (8:15am EST)
Eastern Food Allergy & Comorbidity Conference

FAIT PROGRAM
Food Allergy Immunotherapy

Objectives

- 1) Describe the rationale for studying food SLIT
- 2) Review evidence for safety and efficacy of food SLIT
- 3) Discuss real world options for administration of food SLIT

Why study food SLIT?

Preschool OIT Safety & Efficacy

Soller L et al. Clin Exp Allergy. 2025 Apr

TABLE 1 | Safety and effectiveness of OIT in preschool children.

Author, year (Country)	Age range of patients	Number of patients (active vs. placebo or avoidance if applicable)	Safety outcome 1- % active group receiving epinephrine (placebo or avoidance if applicable)	Safety outcome 2- % active group with severe reaction (placebo or avoidance if applicable)	Maintenance dose; duration of maintenance	Desensitisation outcome 1- % active group tolerating age-appropriate serving at exit OFC (placebo or avoidance if applicable)*	Desensitisation outcome 2- % active group tolerating less than age-appropriate serving at exit OFC (placebo or avoidance if applicable)*	Remission outcome 1- % active group tolerating age-appropriate serving after a period of avoidance (placebo or avoidance if applicable)
Randomised controlled trials of OIT								
Martorell et al. 2011 [78] (Spain)	24–36 months	$N=60$ ($n=30$ cow's milk OIT; $n=30$ avoidance)	6.7% during buildup (0%)	0% (0%)	200 mL; 12 months	90% tolerated 200 mL of cow's milk (23%)		
Jones et al. 2022 [75] (United States)	12–47 months	$N=146$ ($n=96$ peanut OIT; $n=50$ placebo)	9% during buildup, 17% during maintenance (0%)	2% during buildup, 3% during maintenance (0%)	2000 mg; 134 weeks	71% tolerated 5000 mg protein exit OFC (2%)		21% tolerated 5000 mg protein after 26 weeks of avoidance (2%)
Du Toit et al. 2023 [76] (United States, Europe)	12–47 months	$N=146$ ($n=98$ peanut OIT; $n=48$ placebo)	2.1% (0%)	2% during buildup (0%)	300 mg; 12 months	61.2% tolerated 4043 mg protein with only mild allergy symptoms (2.1%)	73.5% tolerated 1043 mg protein with only mild allergy symptoms (6.3%)	
Uhl et al. 2024 [77] (Sweden)	23–40 months	$N=75$ ($n=50$ peanut OIT; $n=25$ avoidance)	4% during buildup and maintenance (0%)	2.3% during buildup and maintenance (0%)	285 mg; 12 months	37% tolerated 5000 mg protein (0%)	72% tolerated 750 mg protein (4%)	
Observational/real-world studies of OIT								
Vickery et al. 2017 [39] (United States)	9–36 months	$N=37$ ($n=$ peanut OIT; $n=154$ avoidance)	3% in the 3000 mg maintenance group during buildup and 0% during maintenance.	0%	300 mg or 3000 mg; 29 months	81% tolerated 5000 mg protein (3.9%)		78% tolerated 5000 mg protein after 4 weeks of avoidance (3.9%)

Author, year (Country)	Age range of patients	Number of patients (active vs. placebo or avoidance if applicable)	Safety outcome 1- % active group receiving epinephrine (placebo or avoidance if applicable)	Safety outcome 2- % active group with severe reaction (placebo or avoidance if applicable)	Maintenance dose; duration of maintenance	Desensitisation outcome 1- % active group tolerating age-appropriate serving at exit OFC (placebo or avoidance if applicable)*	Desensitisation outcome 2- % active group tolerating less than age-appropriate serving at exit OFC (placebo or avoidance if applicable)*	Remission outcome 1- % active group tolerating age-appropriate serving after a period of avoidance (placebo or avoidance if applicable)
Soller et al. 2019 [80] (Canada)	9–70 months	$N=270$ peanut OIT	4% during buildup	0.4% during buildup	300 mg; 12 months			
Soller et al. 2021 [79] (Canada)	9–70 months	$N=117$ peanut OIT			300 mg; 12 months	78.6% tolerated 4000 mg protein	98.3% tolerated ≥ 1000 mg protein	
Bone Calvo et al. 2021 [85] (Spain)	1–12 months	$N=335$ cow's milk OIT	0%	0%	150–200 mL milk; 106 days			
Soller et al. 2022 [81] (Canada)	< 12 months	$N=62$ Infants peanut OIT	1.6%	0%	300 mg; 12 months	81.0% tolerated 4000 mg protein		
	12–70 months	$N=341$ Noninfant preschoolers peanut OIT	5.9%	0.90%		75.6% tolerated 4000 mg protein		
Tosca et al. 2022 [86] (Italy)	5 months – 10 years	$N=57$ Cow's milk OIT	3.5%	3.5% during buildup	300-400 mg; duration unclear			
Erdle et al. 2023 [83] (Canada)	9–70 months	$N=92$ single and multitreenut OIT	2.2%	0%	300 mg; 12 months			
Chua et al. 2023 [84] (Canada)	9–70 months	$N=28$ sesame OIT	3.6%	0%	200 mg; 12 months	85.7% tolerated 2000 mg protein		
Huang et al. 2024 [82] (United States)	Under 24 months	$N=52$ single and multifood peanut, sesame, treenut OIT	0%	0%	300–3000 mg; most patients still updosing so data on duration not available yet			

Abbreviations: Mg, milligram; OFC, oral food challenge; OIT, oral Immunotherapy.
*Desensitisation rates are presented as Intention-to-treat for clinical trials, and as per-protocol for real-world studies.

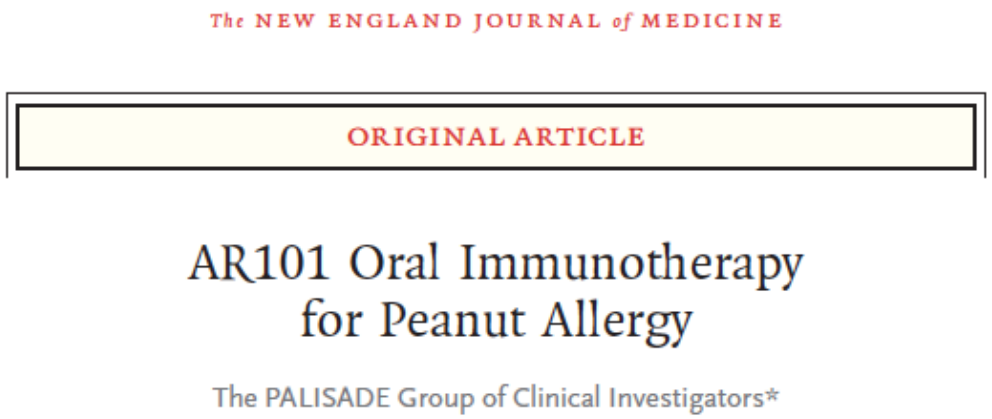
Reports in preschoolers have estimated a lower prevalence of EoE after OIT ranging from 0%–3%.

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Mild symptom/sign(s) only: NB: Reactions can be further categorized as: • **1t**: transient (<20 mins) • **1s**: single organ system only, ≥20 mins • **1m**: 2+ organ systems, ≥20 mins	Any 1 (or more) of the following moderate symptom/sign(s):	Any 1 (or more) of the following symptom/signs:	Any 1 (or more) of the following symptom/signs:	Any 1 (or more) of the following symptom/signs:
Cutaneous *(any one of)*: • Limited (few) or localized hives/urticaria[a] • Skin flushing (few areas of faint erythema) or mild pruritus[a] • Swelling (e.g. lip edema)[a] [a]*excluding localized symptoms at application site*	***Cutaneous*** *(any one of)*: • Systemic urticaria (e.g. numerous or widespread hives) • Generalized (≥50% BSA) erythema • Widespread pruritus with protracted scratching • Significant angioedema (excluding lip swelling and laryngeal edema)	***Lower respiratory*** • Bronchospasm (e.g. wheezing, shortness of breath) which responds to first line treatment • Cough due to laryngeal or lower respiratory involvement	***Respiratory*** • Severe bronchospasm (not improving with 2 doses of IM epinephrine ± other appropriate treatment) • Stridor (with increased work of breathing)	***Respirator*** • Respiratory failure requiring positive pressure ventilation • Respiratory arrest
Or	And/or	And/or	And/or	And/or
Upper respiratory • Nasal symptoms (e.g., sneezing, rhinorrhea, itch, congestion) • Throat-clearing (itchy throat)[a] or throat tightness/discomfort • Cough due to throat irritation or nasal symptoms		***Upper respiratory/laryngeal*** • Throat tightness with vocal hoarseness • Stridor without increased work of breathing • Persisting (≥20 mins) odynophagia (pain on swallowing)	***Cardiovascular*** • Hypotension with associated symptoms of end-organ dysfunction (e.g. hypotonia, dizzy[§], collapse[§], syncope) OR • decrease in systolic blood pressure (sysBP) ≥30% from that person's baseline OR • SysBP <90 mmHg in adults (in children ≤10 years, sysBP <70 mmHg + [2 × age in years]) [§]*excluding vasovagal events (these present with dizziness/fainting which rapidly resolve on lying flat)*	***Cardiovascular*** • Anaphylactic shock i.e. requirement for IV vasopressor infusion to maintain sysBP ≥90 mmHg or MAP ≥65 mmHg in adults and children >10 years (or age-appropriate sysBP in younger children) • Cardiac arrest
Or		And/or		
Gastrointestinal • Nausea • Mild abdominal pain (for example, without a change in activity level)	***Gastrointestinal*** • Persisting (≥20 mins) and non-distractable abdominal pain and/or • Vomiting (not due to gag or taste aversion) and/or diarrhea	***Gastrointestinal AND Cutaneous*** Severe GI symptoms together with cutaneous features which meet WAO 2020 criteria for anaphylaxis (e.g. severe crampy abdominal pain, repetitive vomiting, especially after exposure to a non-ingested allergen)		
Or		And/or	And/or	
Other • Conjunctival reddening (not due to eye rubbing), pruritus, or tearing • Metallic taste		**Uterine** cramps ± uterine bleeding	***Neurological*** • *Glasgow Coma Scale < 13*	

Table 2. Updated WAO Grading system for systemic allergic reactions. *Grade 2 reactions are not usually considered anaphylaxis according to WAO 2020 clinical criteria, but may respond to treatment with epinephrine. BSA, body surface area; sysBP, systolic blood pressure; MAP, mean arterial pressure.* [a]*Application-site reactions are considered local reactions, see text for more information on classification of local reactions*

Turner PJ et al. World Allergy Organ J. 2024 Feb 10

OIT safety concerns in older children


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

AR101 Oral Immunotherapy for Peanut Allergy

The PALISADE Group of Clinical Investigators*

- PALISADE clinical trial:
  - Median age 11.3 yo (n=551)
  - 300mg protein maintenance dose
  - Anaphylaxis risk, 14.5%
  - Epinephrine use, 14.3%

N Engl J Med. 2018 Nov 22


Oral immunotherapy for peanut allergy (PACE): a systematic review and meta-analysis of efficacy and safety

Derek K Chu, Robert A Wood, Shannon French, Alessandro Fiocchi, Manel Jordana, Susan Waserman, Jan L Brożek, Holger J Schünemann

- PACE systematic review & meta-analysis:
  - Median age 8.7 yo (n=1041)
  - Range of maintenance doses (125-5000mg protein)
  - Anaphylaxis risk, 16.5%
  - Epinephrine use, 11.8%
  - Serious adverse events, 6.2%

Lancet. 2019 Jun 1

Clinical trial evidence for food SLIT: safety and efficacy

The safety and efficacy of sublingual and oral immunotherapy for milk allergy

J Allergy Clin Immunol. 2012 Feb

Corinne A. Keet, MD, MS,[a]* Pamela A. Frischmeyer-Guerrerio, MD, PhD,[a]* Ananth Thyagarajan, MD,[b] John T. Schroeder, PhD,[c] Robert G. Hamilton, PhD,[c] Stephen Boden, MD,[b] Pamela Steele, MSN, CPNP, AE-C,[b] Sarah Driggers, RN, MPH, CCRP,[a] A. Wesley Burks, MD,[b] and Robert A. Wood, MD[a] *Baltimore, Md, and Durham, NC*

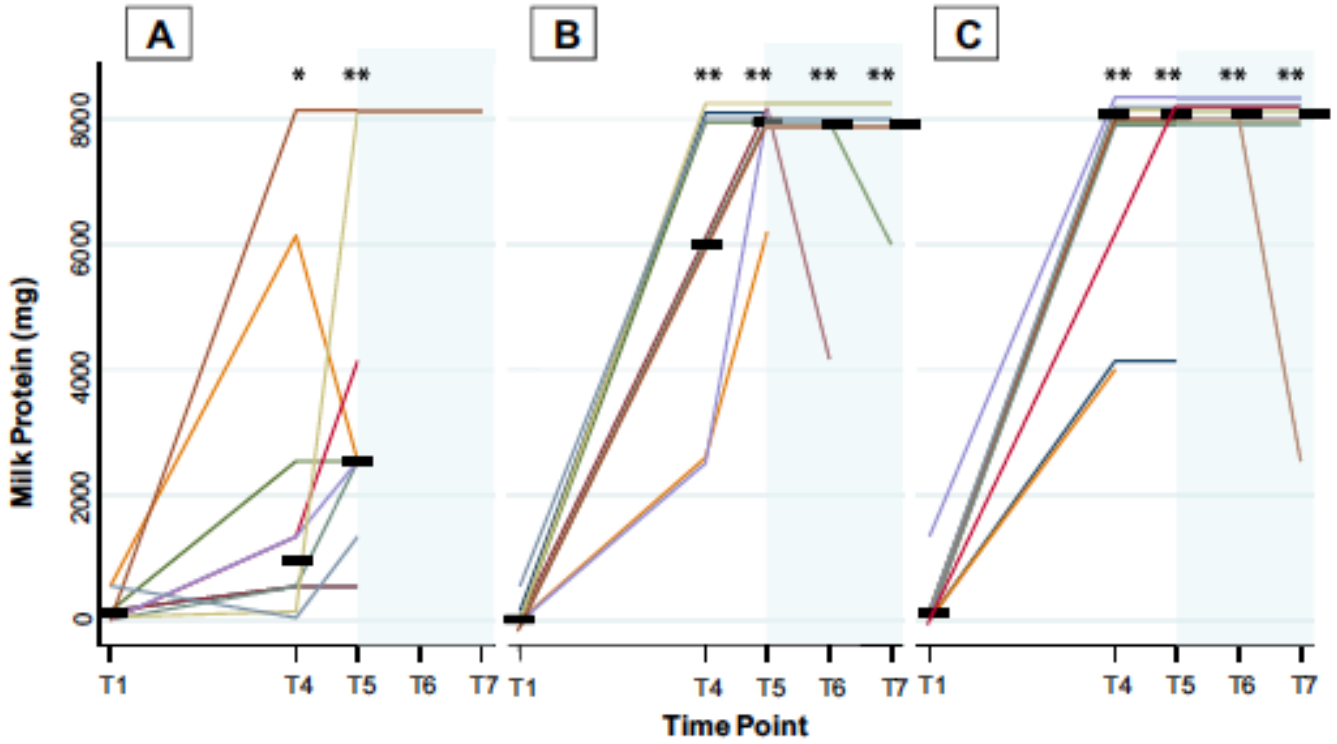


FIG 2. Food challenge outcome. The CM protein threshold is shown for baseline (T1), after 12 weeks of maintenance (T4), after 60 weeks of maintenance (T5), and 1 week (T6) and 6 weeks (T7) off therapy. **A**, SLIT/SLIT group. **B**, SLIT/OITB group. **C**, SLIT/OITC groups. *Bars* represent medians. **P* < .05 and ***P* < .01 compared with T1.

Open label randomized trial of 30 children.
Median age 8-9yo.
SLIT (7mg maintenance) vs OIT (1000mg maintenance) vs OIT (2000mg protein maintenance).
8g milk protein OFC after 12 and 60 weeks maintenance.

Safety: "…compared with SLIT dosing, during OIT, there were significantly more multisystem (IRR, 11.5; P < .001), upper respiratory tract (IRR, 4.7; P=.004), gastrointestinal (IRR, 3.3; P=.01), and lower respiratory tract (IRR, 8.9; P < .001) symptoms, as well as more need for b-agonists (IRR, 8.6; P < .001) and antihistamines (IRR, 8.2; P < .001)."
[IRR = incidence rate ratio]

Peanut SLIT randomized controlled trial x 68 weeks

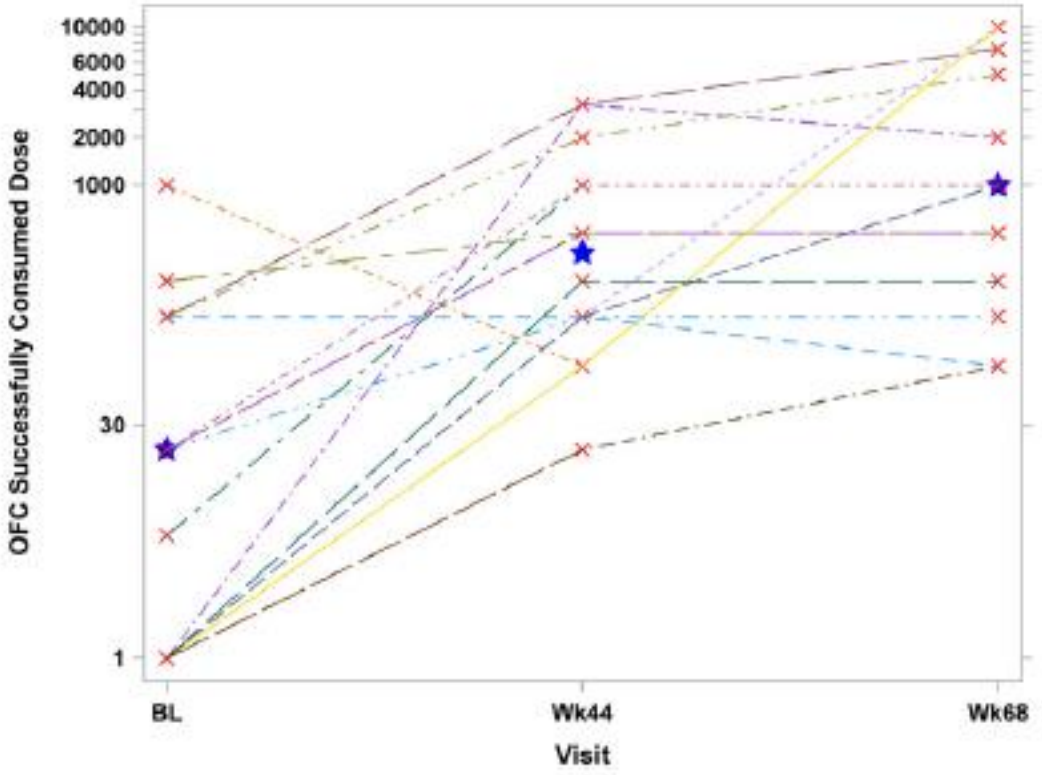


FIG 3. OFC SCD for Peanut SLIT subjects who have Week 68 OFCs. The OFC SCDs of subjects are shown by the OFC doses successfully consumed at baseline *(BL)*, Week 44, and Week 68 for Peanut SLIT subjects. At Week 68, the median dose successfully consumed increased to 996 mg, and this was significantly higher than at Week 44 ($P = .05$) and baseline ($P = .009$). *Stars* identify the median.

Maintenance dosing
1.4-3.7mg protein

Safety:
-no severe reactions
-60% doses symptom free, 37% oropharyngeal
-1 patient administered epinephrine for oropharyngeal pruritus, urticaria, cough

40 participants, median 15yo, COFAR study

Fleischer DM et al. J Allergy Clin Immunol. 2013 Jan

Long term peanut SLIT (3-5 years)

37 completed SLIT therapy
9 after 3 years
1 after 4 years
27 after 5 years

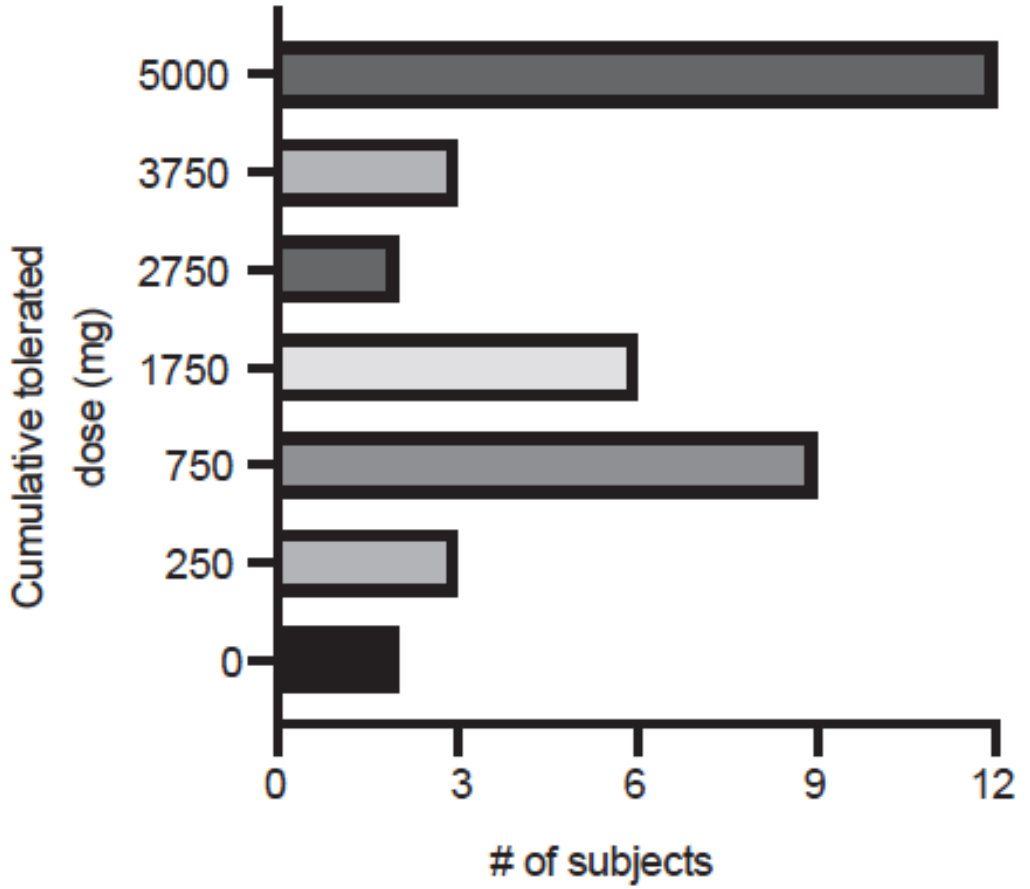
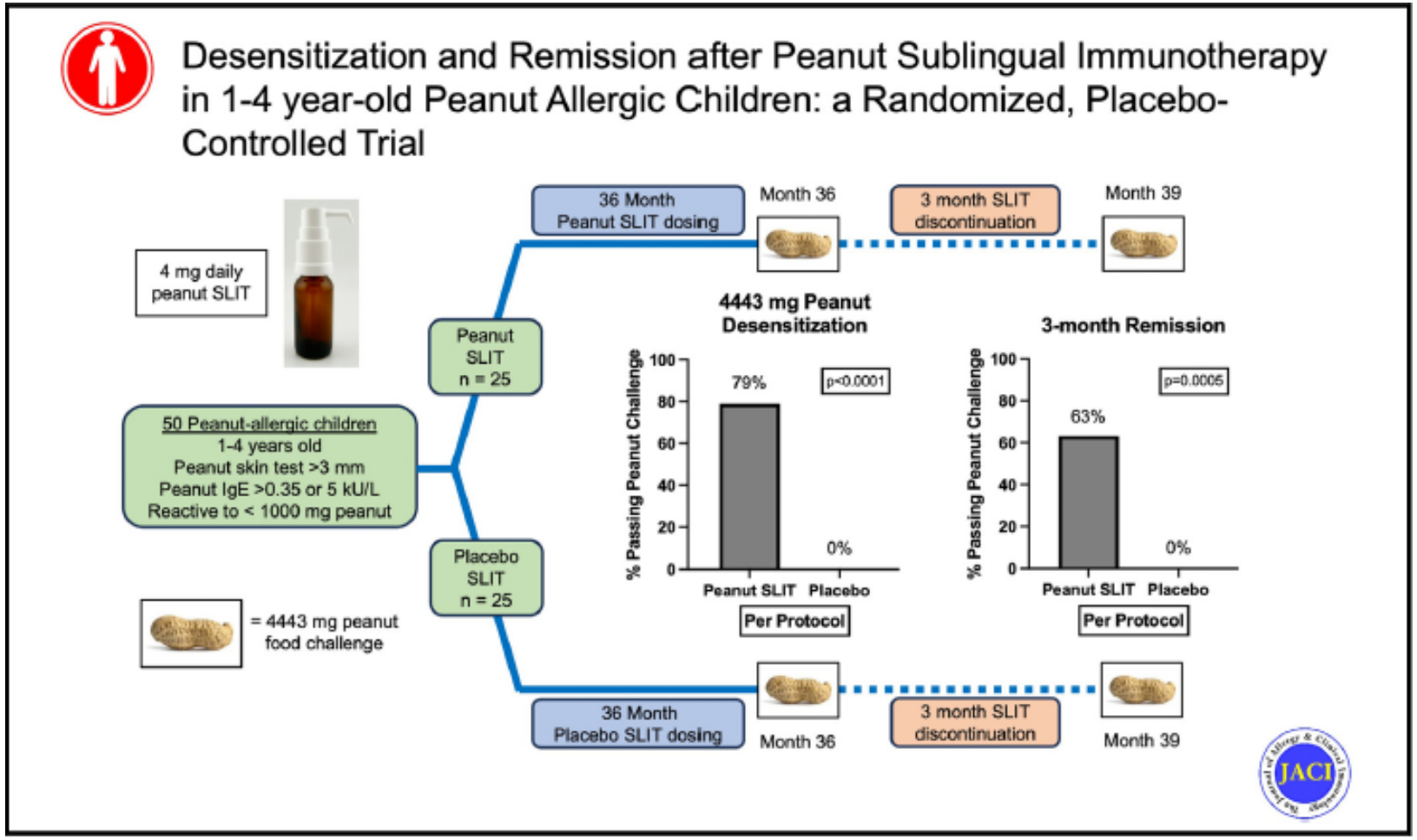
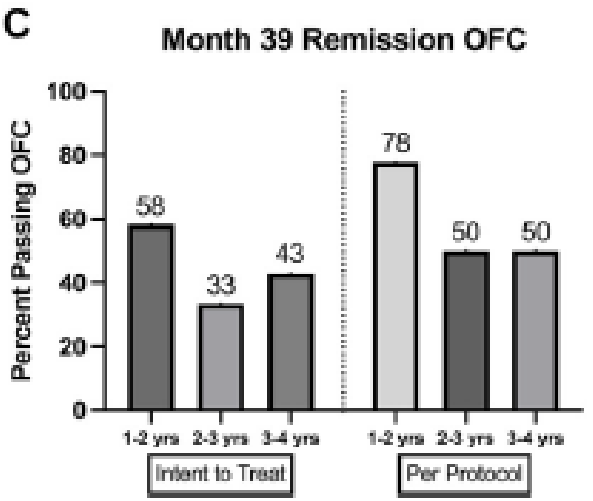


FIG 2. Desensitization thresholds during DBPCFC post-SLIT therapy: Maximum cumulative tolerated dose achieved for each subject during post-SLIT therapy 5000 mg DBPCFC.

- Median age 6.5yo, maintenance dose 2mg protein
- 13 buildup visits
- Baseline threshold ~85mg peanut protein
- Safety: no anaphylaxis, no epinephrine, ~4.8% doses w. mild symptoms, no EoE
- Efficacy (exit OFCs after 3-5 years):
  - OFC's done in 37/48 (77%)
  - 32/48 (67%) ITT and 32/37 (86%) PP consumed at least 750mg peanut protein (at least ~2.5 peanuts)
  - 12/48 (25%) ITT and 12/37 (32%) PP consumed 5000mg peanut protein (~16 peanuts)

Kim EH et al. *J Allergy Clin Immunol*. 2019 Nov





Median age 2.2 years:
-26% asthma, 80% atopic dermatitis, 74% multiple food allergy
-median peanut SPT 10.3mm
-median baseline threshold 43mg protein

Safety (median age 2.2 years):
-no anaphylaxis
-no epinephrine
-~5% doses w. mild symptoms
-no EoE

Kim EH et al. *J Allergy Clin Immunol*. 2024 Jan

Active, not recruiting

Peanut Sublingual Immunotherapy (SLIT)-Tablet for Treatment of Peanut Allergy

ClinicalTrials.gov ID NCT05440643

Sponsor ALK-Abelló A/S

Information provided by ALK-Abelló A/S (Responsible Party)

Last Update Posted 2025-10-01

Brief Summary

This clinical research study investigates the safety, tolerability and efficacy of a peanut SLIT-tablet in adults, adolescents, and children with peanut allergy.

Detailed Description

This is a phase I/II, dose-escalation, multi-site trial including subjects with peanut allergy confirmed by screening double-blind, placebo-controlled food challenge. The trial is conducted in 3 parts; part 1 will determine the entry dose of the up-dosing regimen (UDR) in adults and adolescents; part 2 will characterize the tolerability of the up-dosing regimen in adults, adolescents and children; part 3 will evaluate the efficacy of 2 maintenance doses of the SLIT-tablet primarily in adolescents and children; a small number of adults may also be included.

Study Start (Actual)

2022-09-07

Primary Completion (Estimated)

2026-01

Study Completion (Estimated)

2026-02

Enrollment (Estimated)

192

NIH ClinicalTrials.gov

https://www.clinicaltrials.gov/study/NCT05440643

Journal Pre-proof

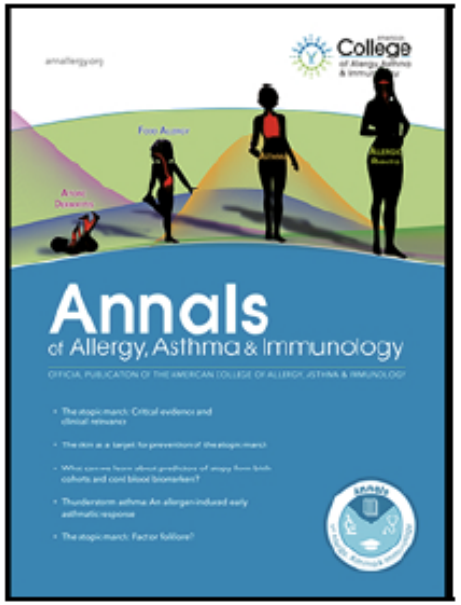
Peanut Sublingual Immunotherapy: a Promising Alternative to Oral Immunotherapy for Risk of Eosinophilic Esophagitis

Anna A Ilyasova BSPH , Edwin H Kim MD MS

PII: S1081-1206(25)01362-6
DOI: https://doi.org/10.1016/j.anai.2025.11.022
Reference: ANAI 5196

To appear in: *Annals of Allergy, Asthma Immunology*

Received date: 20 November 2025
Accepted date: 20 November 2025



"In summary, although the efficacy of peanut OIT is not questioned, the higher risk of side effects and documented incidence of EoE may make it less suitable for patients and caregivers concerned for these GI consequences. Peanut SLIT has shown a lower frequency of side effects and no confirmed episodes of EoE while providing desensitization levels approaching that of OIT."

Avinashi et al. Allergy, Asthma & Clinical Immunology (2025) 21:47
https://doi.org/10.1186/s13223-025-00993-0

Allergy, Asthma & Clinical Immunology

REVIEW ARTICLE Open Access

Recommendations for the diagnosis and management of eosinophilic esophagitis in adults and children in Canada: a Delphi consensus project

Vishal Avinashi[1], Milli Gupta[2], Beth A. Payne[3], Haneen Amhaz[4], Alisha T. Temirova[5], Waqqas Afif[6], Dhandapani Ashok[7], Janice Barkey[8], David Burnett[9], Jonathan W. Bush[10], Scott Cameron[11], Stuart Carr[12], Dina El Demellawy[13], Stephanie Erdle[14], Hien Q. Huynh[15], Jennifer Griffin[16], Samir C. Grover[17], Kelly Grzywacz[18], Samira Jeimy[19], Hin Hin Ko[20], Gina Lacuesta[21], Margaret Marcon[22], Serge Mayrand[6], Harrison Petropolis[23], David Rodrigues[24], Mary Sherlock[25], Christine Song[26], Natacha Tardio[27], Timothy K. Vander Leek[28], Meagan Vurzinger[1], Brock A. Williams[29], Ted Xenodemetropoulos[30], Christopher Ma[31] and Edmond S. Chan[14*]

Allergy Asthma Clin Immunol and JCAG. 2025 Nov 7

Statement #32: It is unclear whether sublingual or oral immunotherapy causes or unmasks EoE, or whether the disease is simply associated with the therapy. Immunotherapy should be based on weighing benefits/risks and shared decision-making.	28 (90.3)

- 15yo male:
  - Confirmed EoE since 3yo (~50 eos/hpf), dysphagia + celiac disease since 10yo
  - Multiple food allergy (egg, peanut, tree nuts, kiwi): severe egg reaction @ 10yo…wheezing, O_2 sats 80%, pale, vomiting, 2 doses Epi, etc
  - EoE controlled on PPI (biopsied) prior to food SLIT at 11yo
  - Biopsy worse 12yo (?contribution from dairy), budesonide orodispersible tablets, repeat biopsy normal
  - 14yo flipped from SLIT to OIT after 300mg protein OFCs to peanut, cashew, hazelnut, walnut
  - Immediate vomiting during low dose OFC egg; started egg OIT buildup at 10mg protein
  - Next few months: 4000mg protein OFCs to peanut, cashew, hazelnut, walnut

Real world evidence and options for administration of food SLIT

Canadian OIT guidelines

- OIT can be offered outside of research
- OIT can be done with non-pharmaceutical food-based products, i.e., grocery store products
  - There is no evidence pharmaceutical products offer additional benefit
- All recommendations applicable to ANY food allergen
  - Absence of data for lack of efficacy or safety issue for any specific food
  - Lack of biologic plausibility that mechanism of OIT would differ from one food to another
- Uncontrolled asthma is an absolute contraindication to OIT
- Eosinophilic esophagitis (EoE) is a relative contraindication to OIT

Canadian Society of Allergy and Clinical Immunology

Bégin P, Chan ES, Kim H, et al. Allergy Asthma Clin Immunol. 2020 Mar

My practice dilemma in 2020 for older children (>6yo)

- PACE systematic review deemed OIT too risky for older children (median age ~10yo)
  - Practically speaking, this meant Canadian OIT guidelines only acceptable for implementation in preschoolers
- SLIT skin test extracts unavailable for treatment in Canada (only available for diagnostic purposes)
- **Options:**
  - Give up on food SLIT in Canada
  - Only offer grocery store based cow's milk SLIT in Canada
  - Study grocery store based food SLIT in Canada for all food allergens

Protein content of SLIT extracts vs grocery store products

Table 1
Total Protein and In Vitro Protein Penetration Rates in Food Powders and Glycerinated Extract for 5 Allergens

Measured and reported total protein content					
Preparation	Measured total protein content (mean ± SD)	Reported total protein content[a]	Percent of reported total protein content	Calculated volume of extract needed to deliver 2 mg protein[b]	Calculated volume of extract needed to deliver 4 mg protein[b]
Extracts[c]					
Peanut	7.75 ± 0.001 mg/mL	approx 4-8 mg/mL[d]	97-194	0.26 mL	0.52 mL
Cashew	10.42 ± 0.002 mg/mL	N/A	N/A	0.19 mL	0.38 mL
Egg	4.71 ± 0.03 mg/mL	2-4 mg/mL[d]	118-236	0.42 mL	0.85 mL
Cow's milk	2.56 ± 0.01 mg/mL	2-4 mg/mL[d]	64-128	0.78 mL	1.56 mL
Sesame	0.88 ± 0.002 mg/mL	N/A	N/A	2.27 mL	4.55 mL
Powders[e]					
Peanut	0.33 ± 0.0004 mg/mg	0.40 mg/mg	83		
Cashew	0.20 ± 0.002 mg/mg	0.18 mg/mg	111		
Egg	0.57 ± 0.004 mg/mg	0.50 mg/mg	114		
Cow's milk	0.36 ± 0.003 mg/mg	0.36 mg/mg	100		
Sesame	0.44 ± 0.2 mg/mg	0.40 mg/mg	110		

Protein penetration rate, mean (SD)										
Time point, h	Peanut		Cow's Milk		Cashew		Egg		Sesame	
	Extract[c]	Powder[e]	Extract[c]	Powder[e]	Extract[c]	Powder[e]	Extract[c]	Powder[e]	Extract[c]	Powder[e]
0.5	36.7 ± 1.2%	30.3 ± 1.5%	42.1 ± 0.5%	40.7 ± 0.9%	28.0 ± 0.7%	32.2 ± 0.6%	40.4 ± 1.0%	40.7 ± 0.9%	38.5 ± 2.9%	24.2 ± 1.1%
1	82.2 ± 2.0%	72.1 ± 1.5%	89.5 ± 1.9%	84.3 ± 1.5%	74.0 ± 2.3%	76.3 ± 3.2%	86.0 ± 1.0%[f]	84.3 ± 1.5%[f]	82.4 ± 1.5%	71.4 ± 1.8%
2	89.8 ± 1.5%	80.0 ± 2.0%	92.8 ± 4.9%	92.6 ± 2.5%	91.0 ± 1.4%	81.2 ± 1.5%	92.6 ± 2.5%[f]	91.7 ± 1.4%[f]	85.5 ± 1.4%	78.3 ± 2.1%
4	95.5 ± 1.5%	96.1 ± 1.5%	94.9 ± 3.2%	93.8 ± 0.7%	94.9 ± 1.0%	91.1 ± 1.5%	96.5 ± 1.7%[f]	93.8 ± 0.7%[f]	92.1 ± 1.1%	93.8 ± 1.1%

Williams BA et al. Ann Allergy Asthma Immunol. 2024 Dec

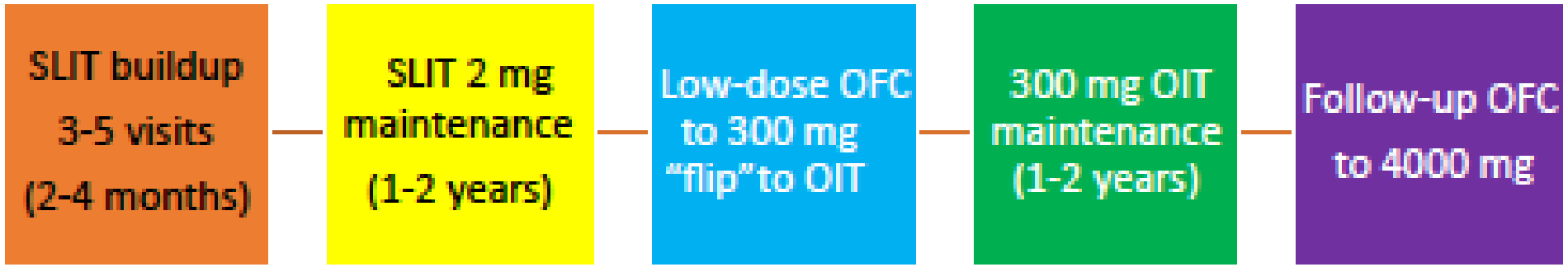


FIGURE E1. The entire food SLIT journey at BC Children's Hospital.

Soller L et al. J Allergy Clin Immunol Pract. 2024 Feb

Original Article

Safety and Effectiveness of Bypassing Oral Immunotherapy Buildup With an Initial Phase of Sublingual Immunotherapy for Higher-Risk Food Allergy

Lianne Soller, PhD, Brock A. Williams, PhD, Raymond Mak, MD, Tiffany Wong, MD, Stephanie C. Erdle, MD, Alanna Chomyn, MD, Brittany Tetreault, BScN, Kelly Morrison, BScN, Lisa Gaudet, BScN, and Edmond S. Chan, MD
Vancouver, BC, Canada

J Allergy Clin Immunol Pract. 2024 Feb 27

- **188 patients, median 11yo:**
  - 75% classified as higher-risk
  - Over 20 different foods treated
- **Safety:**
  - No patients had Grade 4 (severe) reactions during SLIT buildup
  - 4 pre-existing controlled EoE didn't have worsening
  - 1 (0.5%) with vomiting declined endoscopy, reduced dose temporarily, and then successfully completed SLIT
- **Effectiveness:**
  - 50 low dose (300mg protein) OFCs completed in a subset of 20 patients after 1-2 years of SLIT
  - 70% OFCs passed, allowing those patients to bypass OIT buildup and proceed straight to OIT maintenance dosing

UBC

BC Children's Hospital Research Institute

Grocery store SLIT recipes for 26 allergens

Sample protocol: sesame (powder)

Dose number	Protein (mg)	Sesame powder for mixture* (g)	Water for mixture* (mL)	Daily volume (mL)	Interval
2 mg maintenance dose					
1 (Optional)	0.1	0.2	100	0.1	4 wk
2 (Optional)	0.3	0.2	33	0.1	4 wk
3	0.5	0.2	20	0.1	4 wk
4	1	0.2	10	0.1	4 wk
5	2	0.2	5	0.1	Continue daily long term
4 mg maintenance dose					
1 (Optional)	0.3	0.2	33	0.1	4 wk
2 (Optional)	0.5	0.2	20	0.1	4 wk
3	1	0.2	10	0.1	4 wk
4	2	0.2	5	0.1	4 wk
5	4	0.2	5	0.2	Continue daily long term

*Make fresh mixture daily for powder-based mixtures. Mix well before giving. Calculations based on a defatted sesame flour with 12 g of protein per 24 g serving (eg, similar to Kevala sesame flour; note that variations exist in protein and/or serving size by product).

FAIT registry update: 305 SLIT patients at BCCH. 99% of survey respondents satisfied/very satisfied. 82% of respondents consistently taking SLIT dose. Safety: 2.2% Grade 3 reactions, no Grade 4 reactions, 1.3% epinephrine. Effectiveness: among 33 patients, 57 low dose OFCs (300mg protein) performed, of which 70.1% (n=40) successful.

Williams BA et al. Ann Allergy Asthma Immunol. 2025 Ju

Original Article

Food Sublingual Immunotherapy: Safety and Simplicity of a Real Food Updosing Protocol

J Allergy Clin Immunol Pract. 2024 Sep

Reed R. Windom[a], Samantha Seitz[b], Jean B. Ly, MD[c], Neha Dunn, MD[c], Jennifer Fergeson, DO[c], and Hugh H. Windom, MD[c] *Philadelphia, Pa; Omaha, Neb; and Sarasota, Fla*

TABLE I. Food sources with protein content and maintenance, or top, dose features

Food	Source	Protein content	Top dose (mL)	Top dose (mg protein)
Peanut	Light roasted 12% fat (Byrd Mill),* flour solution, 40 mg/mL	50%	0.3	6
Egg	Egg white liquid (Egglands)	111 mg/mL	0.1	11
Milk	Whole or 2% milk	33.3 mg/mL	0.3	10
Cashew	Cashew milk (Elmhurst)	16.7 mg/mL	0.3	5
Walnut	Walnut milk (Elmhurst)	12.5 mg/mL	0.3	3.8
Hazelnut	Hazelnut milk (Pacific)	8.3 mg/mL	0.5	4.2
Wheat	Vital wheat gluten, flour solution, 30 mg/mL	77%	0.3	6.9
Sesame	organic sesame (Kevala), flour solution, 35 mg/mL	50%	0.3	5.3
Sunflower seed	Sunflower milk (Lattini)	8.3 mg/mL	0.5	4.2

*Byrd Mill not currently offering peanut flour.

Foods obtained by parents and diluted with 50% glycerin saline (Greer)

50 patients (median 11yo). After a median of 23 weeks, no severe reactions or epinephrine. SPT of 6 mo old peanut solutions not diminished. Pre/post SLIT exercise challenges in 12 patients negative.

CONCLUSIONS: Allergen extract food SLIT as used in published trials has limitations of cost and multiple office visits. Inexpensive real food, at the same or slightly higher protein dose, was well tolerated in 4 updose visits, a minimum of a week apart. Unlike food oral immunotherapy, a predose or postdose rest period may not be necessary.

Cases: typical older children that PACE would consider as too risky for OIT

TABLE V. *(Continued)*

Patient	Food	Baseline SPT wheal diameter (mm); sIgE (kU/L)	Atopic conditions	Symptoms of most severe reaction before SLIT (grade; food)	Age at start of SLIT	Symptoms experienced during SLIT	Repeat sIgE at low-dose OFC (kU/L)	Cumulative dose reached, mg protein	Symptoms (and treatment, if applicable)	Plan
Patient 11	Peanut	NA; >100	Asthma, allergic rhinitis, multiple food allergy	Urticaria, pruritis, profound lethargy, hypotension (grade 4; peanut)	13 y	Oropharyngeal itch, urticaria, increased saliva	>100	300	None	Switch to 300 mg OIT
	Egg	NA; 5.27					28.5	300	None	Switch to 300 mg OIT
Patient 13	Peanut	14.5; 24.0	Allergic rhinitis	Urticaria, abdominal pain, respiratory distress (grade 3; peanut)	11 y	Oropharyngeal itch	17.8	130	Abdominal pain	Continue SLIT for 1 more year then reattempt low-dose OFC

Soller L et al. J Allergy Clin Immunol Pract. 2024 Feb

Typical SLIT patient in our program

- Over 6yo (approaching age at which PACE systematic review deemed OIT to be unsafe)
  - "No longer a preschooler"
- Single (~40%) or multiple (~60%) food allergy
  - 75% with history of Grade 3 or 4 reaction, and/or SPT >8mm or sIgE>50 kU/L
  - 45% with history of asthma
  - 3% with pre-existing eosinophilic esophagitis
- Most common foods treated:
  - Peanut, cashew, walnut, hazelnut, almond, sesame, egg, cow's milk, soy, pea, etc

FAIT PROGRAM

Food Allergy Immunotherapy

Case: cow's milk SLIT for failed OIT

- **12 yo F**
  - History of multiple food allergy/OIT & severe reactions to cow's milk
    - Failed milk OIT ~6yo (repeated anaphylaxis), high milk sIgE (>20 kU/L)
  - My first ever food SLIT patient (Apr 2020)
    - **Home-based** switch from OIT to SLIT
  - Offered exit OFC sooner but anxiety.
  - Passed exit OFC (>4000mg protein) Sept 19/25.

Case: Peanut SLIT after severe reaction at baseline OFC

- **15yo F**
  - Apr 2025 mandatory baseline eligibility DBPCFC for ALK Phase 2 peanut SLIT tablet clinical trial
    - 40 min after cumulative 143mg protein, severe anaphylaxis (skin, GI, respiratory), needed 4 doses IM Epi, IV Epi infusion, PICU
    - Withdrew from clinical trial (fearful of repeat DBPCFC at exit)
  - Grocery store SLIT started with me 1 month later:
    - First dose virtually supervised (0.1mg protein), 1 small hive on neck. Second buildup (0.3mg) virtually supervised 4 weeks later, tolerated.
    - Then comfortable with all other buildup doses to 4mg protein **home-based**

Food SLIT take home messages

- SLIT is very safe in older children and adolescents (the risk of a severe reaction is extremely low)
    - Therefore, unlike OIT, co-factors not a concern for SLIT
- SLIT is less effective than OIT, but more effective than previously thought
    - Switching to OIT after an initial phase of SLIT could be an option for those who want quicker desensitization
- Due to its excellent safety profile, SLIT is well-suited to home-based buildup which increases access & capacity
- SLIT using grocery store products contains sufficient protein and is inexpensive

What is my latest estimate of my proportion of food immunotherapy patients that need supervised buildups?

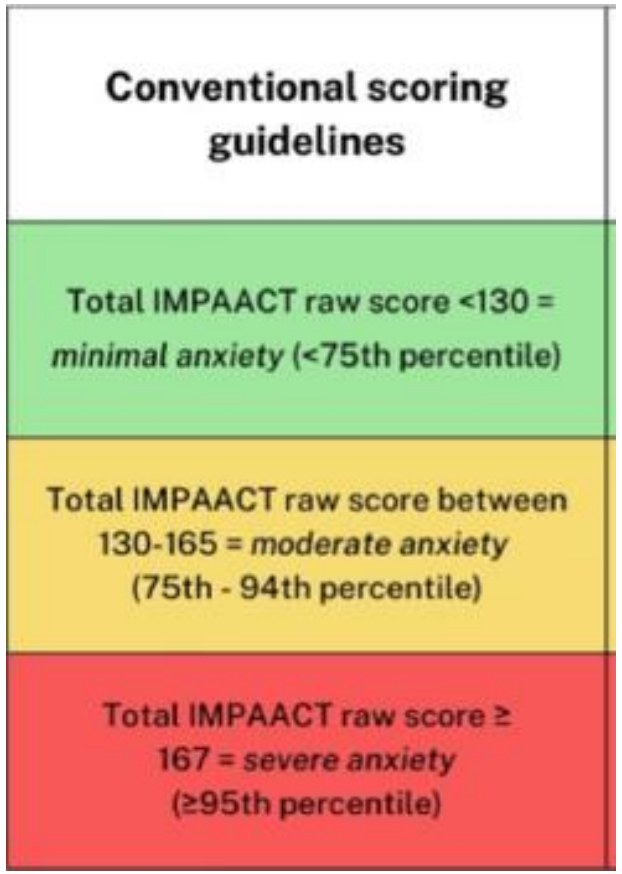
- Offering the combo OIT to preschoolers and SLIT to older children (both extremely safe) has translated to supervised buildups only for high food allergy anxiety

- Home-based OIT/SLIT has increased access and capacity in our program

Normative data for the Impairment Measure for Parental Food Allergy–Associated Anxiety and Coping Tool

Michael A. Golding, MA[a,b], Lianne Soller, PhD[c,d], Jennifer L.P. Protudjer, PhD[a,b,e,f,g], and Edmond S. Chan, MD, FRCPC[c,d]

J Allergy Clin Immunol Pract. 2023 Nov



→ 75% = home-based OIT/SLIT

→ 20% = mostly home-based OIT/SLIT

→ 5% = 1 or 2 virtually supervised OIT/SLIT buildup visits, followed by home-based OIT/SLIT

Thank you

FAIT PROGRAM

Food Allergy Immunotherapy