

Adult Food Allergy Treatment

OIT, SLIT, Biologics

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NYFoodAllergy.com

Your Experience

- **How many OITs have you started in adults (>18 years)?**
- **OIT - Single Food / Multi-food**
- **OIT - with Biologics / without Biologics**
- **SLIT alone**
- **Biologics alone**
- **Combinations**

Your Patients

- **21-year-old college student with PN-TN allergy required Epi in Thailand during study abroad program - wants to “live life”**
- **24-yr mom with PN allergy is afraid to do PN-TN early introduction to her 5-month-old son - asks for help**
- **27-year-old banker with milk allergy is limited with dating options due to prior Epi at the restaurant**
- **49-year-old professional with sesame allergy who needed Epi and ER visit in Israel - wants protection, freedom**

- Do you recommend FA treatment to adult patients?
- Would SLIT, OIT, Biologics work for food allergic adults?
- Can OIT be done without SLIT or biologics?
- Are there increased risks - side effects with OIT in adults?
- Any specific food OIT has a higher risk of reactions?
- Is free-eating possible in adults with OIT?
- How about sustained unresponsiveness and tolerance?
- How do current and future biologics fit?

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ORIGINAL ARTICLE

Food Allergy and Gastrointestinal Disease



WILEY

Efficacy and safety of food allergy oral immunotherapy in adults

Na'ama Epstein-Rigbi^{1,2}  | Michael B. Levy¹ | Liat Nachshon^{1,3}  | Yael Koren¹ |
Yitzhak Katz² | Michael R. Goldberg^{1,2}  | Arnon Elizur^{1,2} 

Summary

- N = 96 adults
- OIT is successful in desensitizing most adults
- Adults undergoing milk OIT are at an increased risk for severe reactions and OIT failure
- Failure rates in adults undergoing OIT for other foods are low.

> [Ann Allergy Asthma Immunol.](#) 2024 Jun;132(6):782. doi: 10.1016/j.anai.2024.03.020.

Oral immunotherapy in food-allergic adults is safe and effective, particularly for foods other than milk

Na'ama Epstein-Rigbi ¹, Arnon Elizur ²

Affiliations + expand

PMID: 38839142 DOI: [10.1016/j.anai.2024.03.020](#)

> [Allergy Asthma Clin Immunol.](#) 2024 Oct 14;20(1):53. doi: 10.1186/s13223-024-00915-6.

Oral immunotherapy improves the quality of life of adults with food allergy

[Na'ama Epstein-Rigbi](#)^{1 2}, [Michael B Levy](#)³, [Liat Nachshon](#)^{3 4}, [Yael Koren](#)³,
[Michael R Goldberg](#)^{3 5}, [Arnon Elizur](#)^{3 5}

Affiliations + expand

PMID: 39402617 PMCID: [PMC11472437](#) DOI: [10.1186/s13223-024-00915-6](#)

> [Allergy](#). 2025 Apr 23. doi: 10.1111/all.16493. Online ahead of print.

Oral Immunotherapy in Peanut-Allergic Adults Using Real-World Materials

Hannah Hunter¹, Kok Loong Ue¹, Victoria Cornelius², Ching Ching Yung¹, Iason Thomas¹,
Olympia Tsilochristou¹, Janice Layhadi^{3 4}, Leonard Q C Siew¹, Carina Venter⁵,
Mohamed H Shamji^{3 4}, Stephen J Till^{1 6 7}

GUPI - Grown Up Peanut Immunotherapy

N = 21

> [J Allergy Clin Immunol Pract.](#) 2024 Sep;12(9):2447-2453.e1. doi: 10.1016/j.jaip.2024.05.007.
Epub 2024 May 15.

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

[Reed R Windom](#)¹, [Samantha Seitz](#)², [Jean B Ly](#)³, [Neha Dunn](#)³, [Jennifer Fergeson](#)³,
[Hugh H Windom](#)⁴

Affiliations + expand

PMID: 38759790 DOI: [10.1016/j.jaip.2024.05.007](#)

5-50 years of age, median 11 years

> [J Allergy Clin Immunol Pract.](#) 2024 Nov;12(11):2947-2954. doi: 10.1016/j.jaip.2024.08.056.
Epub 2024 Sep 16.

Omalizumab Implementation in Practice: Lessons Learned From the OUtMATCH Study

Brian P Vickery ¹, J Andrew Bird ², R Sharon Chinthrajah ³, Stacie M Jones ⁴, Corinne A Keet ⁵,
Edwin H Kim ⁵, Donald Y M Leung ⁶, Wayne G Shreffler ⁷, Scott H Sicherer ⁸,
Sayantani Sindher ³, Jonathan Spergel ⁹, Robert A Wood ¹⁰

More questions than answers!

Randomized Controlled Trial

> [N Engl J Med. 2024 Mar 7;390\(10\):889-899.](#)

doi: [10.1056/NEJMoa2312382](https://doi.org/10.1056/NEJMoa2312382). Epub 2024 Feb 25.

Omalizumab for the Treatment of Multiple Food Allergies

[Robert A Wood](#)¹, [Alkis Togias](#)¹, [Scott H Sicherer](#)¹, [Wayne G Shreffler](#)¹, [Edwin H Kim](#)¹,

Age 1-17

Controlled Clinical Trial > [J Allergy Clin Immunol. 2012 Nov;130\(5\):1123-1129.e2.](#)

doi: [10.1016/j.jaci.2012.05.039](#). Epub 2012 Jul 15.

Kinetics of mast cell, basophil, and oral food challenge responses in omalizumab-treated adults with peanut allergy

[Jessica H Savage](#)¹, [Jean-Paul Courneya](#), [Patricia M Sterba](#), [Donald W Macglashan](#), [Sarbjit S Saini](#),
[Robert A Wood](#)

N = 14

Review

> [Curr Opin Allergy Clin Immunol.](#) 2024 Jun 1;24(3):147-152.

doi: 10.1097/ACI.0000000000000981. Epub 2024 Mar 28.

New biologics for food allergy

[Jackson P Schuetz](#)¹, [Brent Anderson](#), [Sayantani B Sindher](#)

**Omalizumab, ligelizumab, UB-221,
dupilumab, etokimab, tezepelumab**

► [BMJ Open](#). 2024 Feb 7;14(2):e075253. doi: [10.1136/bmjopen-2023-075253](https://doi.org/10.1136/bmjopen-2023-075253) [↗](#)

Efficacy of biological agents combined with oral immunotherapy (OIT) for food allergy: a protocol for a systematic review and meta-analysis

[Aiko Honda](#)^{1,✉}, [Yoshiyuki Okada](#)², [Tomomi Matsushita](#)³, [Takeshi Hasegawa](#)^{4,5}, [Erika Ota](#)⁶, [Hisashi Noma](#)⁷,
[Takanori Imai](#)¹, [Joey Kwong](#)⁶

**Omalizumab, ligelizumab, UB-221,
dupilumab, etokimab, tezepelumab**

Review > [Ann Allergy Asthma Immunol.](#) 2023 Jul;131(1):29-36.

doi: [10.1016/j.anai.2023.04.023](https://doi.org/10.1016/j.anai.2023.04.023). Epub 2023 Apr 25.

Treatment of food allergy: Oral immunotherapy, biologics, and beyond

[Sayantani B Sindher](#)¹, [Claire Hillier](#)², [Brent Anderson](#)², [Andrew Long](#)², [R Sharon Chinthrajah](#)²

JAK1 and BTK inhibitors nanoparticles

Food allergy and gastrointestinal disease

Ara h 2-expressing cucumber mosaic virus-like particle (VLP Peanut) induces *in vitro* tolerogenic cellular responses in peanut-allergic individuals

Janice A. Layhadi, PhD, Sviatlana Starchenka, MRes, Pieter-Jan De Kam, PhD, Elizabeth Palmer, PhD, Nandinee Patel, MD, Sean T. Keane, MRes, et al

VLP Peanut - enrolling adult patients for safety study

- **Adults with food allergies have different needs and expectations - be flexible with their changing life situations**
- **Unplanned pregnancy during OIT is a possibility - be prepared!**
- **Additional considerations - work, travel, physical activities, alcohol, drugs, smoking, sexual activities, menstrual cycle, pregnancy, breast feeding, hormone therapy (gender reassignment / transition / egg harvesting)**

NYFA Experience

NY Food Allergy Observations



- **Social life planning - travel, restaurants, bars, weddings**
- **Managing spouses, partners, parents - before & during OIT**
- **Patient commitment level is higher, better compliance**
- **Patients have clear objectives of outcomes desired**
- **Easy to overcome taste aversion**

NYFA Experience

Post OIT BAT - PN

BASOPHIL PHENOTYPING

	% positive CD63	CD63 Reference Range	CD203c MFI fold change	CD203c Reference Range
CD45/CD123/CD193/IgE/CD63/CD203c	0.0		N/A	
Antigen KLH: CD63+CD203c+	0.1		1.0	
Antigen IgE: CD63+CD203c+	2.1		1.8	
Antigen fMLP: CD63+CD203c+	27.5		4.2	
Antigen 1: Peanut				
Basophil Phenotype 10,000 ng/ml	23.9 H	<1	5.06 H	<2
Basophil Phenotype 1000 ng/ml	5.3 H	<1	2.66 H	<2
Basophil Phenotype 100 ng/ml	1.1 H	<1	1.33	<2
Basophil Phenotype 10 ng/ml	0.6	<1	0.93	<2
Basophil Phenotype 1 ng/ml	0.2	<1	0.87	<2
Basophil Phenotype 0.1 ng/ml	0.3	<1	0.83	<2

NYFA Experience

Post OIT BAT - Sesame

Antigen 2: Sesame

Basophil Phenotype 10,000 ng/ml	51.4	H	<1	13.82	H	<2
Basophil Phenotype 1000 ng/ml	3.8	H	<1	3.80	H	<2
Basophil Phenotype 100 ng/ml	0.1		<1	0.94		<2
Basophil Phenotype 10 ng/ml	0.1		<1	0.83		<2
Basophil Phenotype 1 ng/ml	0.0		<1	0.90		<2
Basophil Phenotype 0.1 ng/ml	0.2		<1	0.84		<2

NYFA Experience

Post OIT IgE - BAT- SU, Tolerance

Food	Components	11/30/2015	07/29/2016	04/22/2017	07/09/2018	04/15/2019	09/28/20	12/23/21	04/27/24
		Pre-OIT							
Total IgE			1296	1512	703	326	158	123	145
Peanut	SPT								
2016	slgE	>100	44.2	51.2	24.1	10.1	4.94	2.89	2.1
	ARA H2*	73	44.5	33.3	13.1	5.82	2.26	1.54	1.23
	ARA H6*					2.91	1.03	0.47	0.26

ALLERGEN	CD203c MFI Fold Change	CD203c Reference Range
Allergen: 10,000ng/ml (CD203c)	1.04	<2
Allergen: 1000ng/ml (CD203c)	1.12	<2
Allergen: 100ng/ml (CD203c)	1.03	<2
Allergen: 10ng/ml (CD203c)	1.03	<2
Allergen: 1ng/ml (CD203c)	0.97	<2
Allergen: 0.1ng/ml (CD203c)	0.95	<2

Questions

- Do you recommend FA treatment to adult patients? - **Yes**
- Would SLIT, OIT, Biologics work for food allergic adults? - **Yes**
- Can OIT be done without SLIT or biologics? - **Yes**
- Are there increased risks with OIT in adults? - **Comparable**
- Any specific food OIT has a higher risk of reactions? - **Milk**
- Is free-eating possible in adults with OIT? - **Yes**
- How about sustained unresponsiveness and tolerance?- **Possible**
- How do current and future biologics fit? - **Individualized**

Our Patients



- 21-year-old college student with PN-TN allergy required Epi in Thailand during study abroad program - wants to “live life”
Completed OFC for TNs, OIT for PN, free-eating now
- 24-yr mom with PN allergy is afraid to do PN-TN early introduction to her 5-month-old son - **Dad fed the baby, Mom - OIT to 3 PNs**
- 27-year-old banker with milk allergy is limited with dating options due to prior Epi at the restaurant - **Omalizumab + Milk OIT**
- 49-year-old professional with sesame allergy who needed Epi and ER visit in Israel - **Completed OIT, Free eating, Completed loop**

OIT during pregnancy: (4 tree-nut OIT)

- **Kept at the same dose**
- **Successfully completed OIT after delivery**
- **Continued during nursing**
- **Infant early introduction**

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