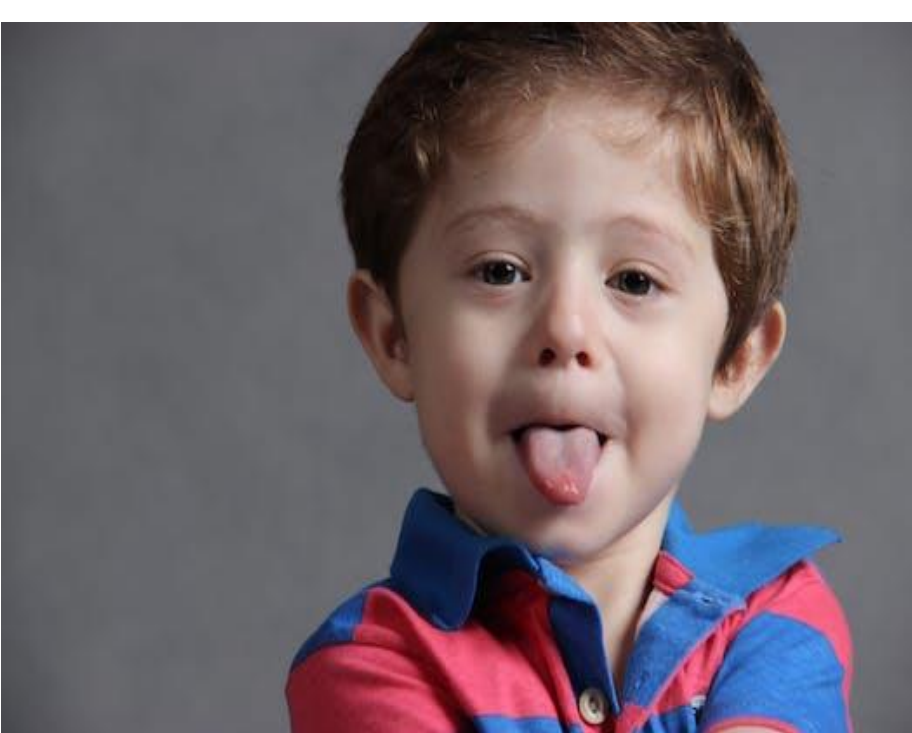
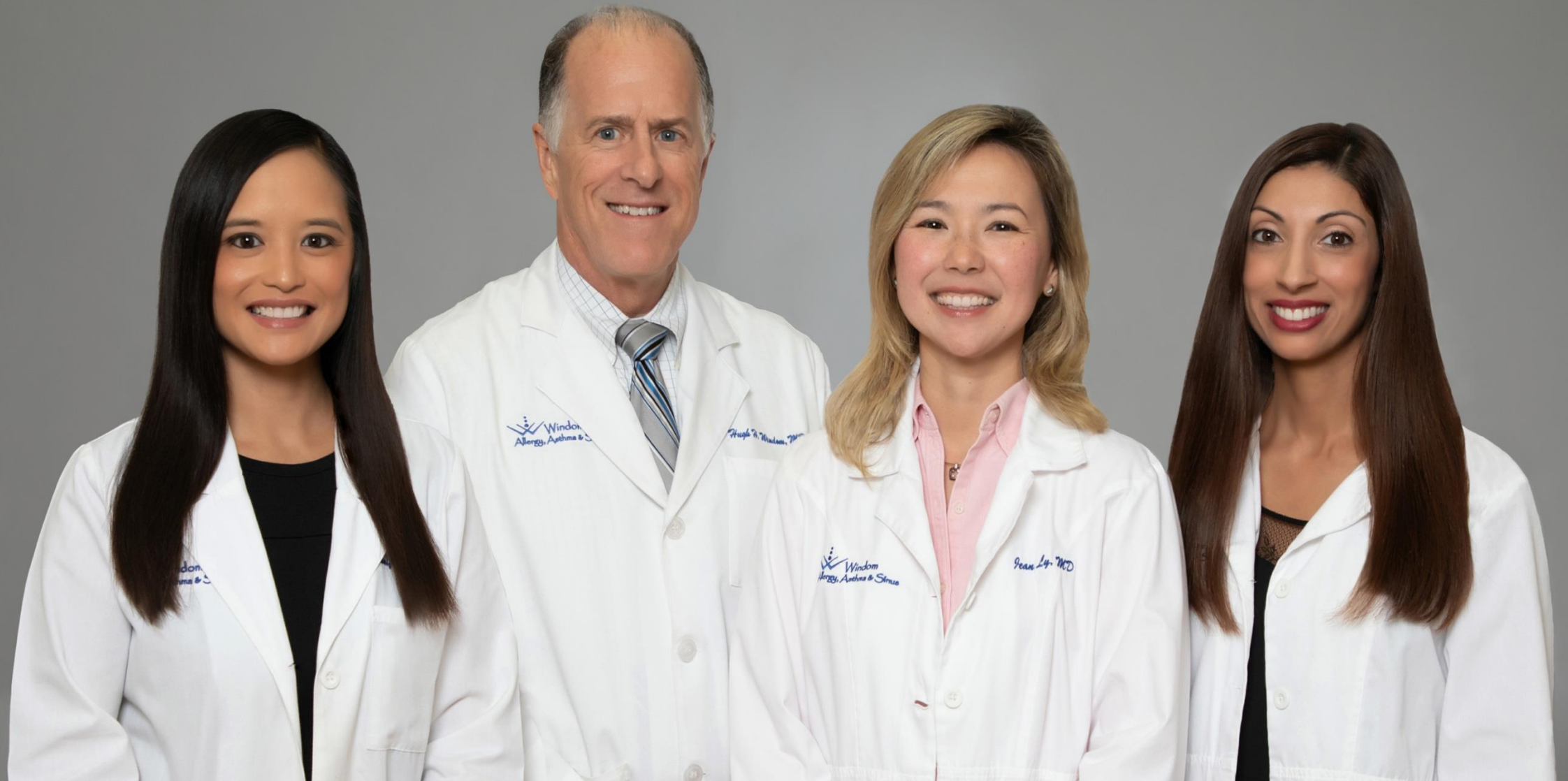


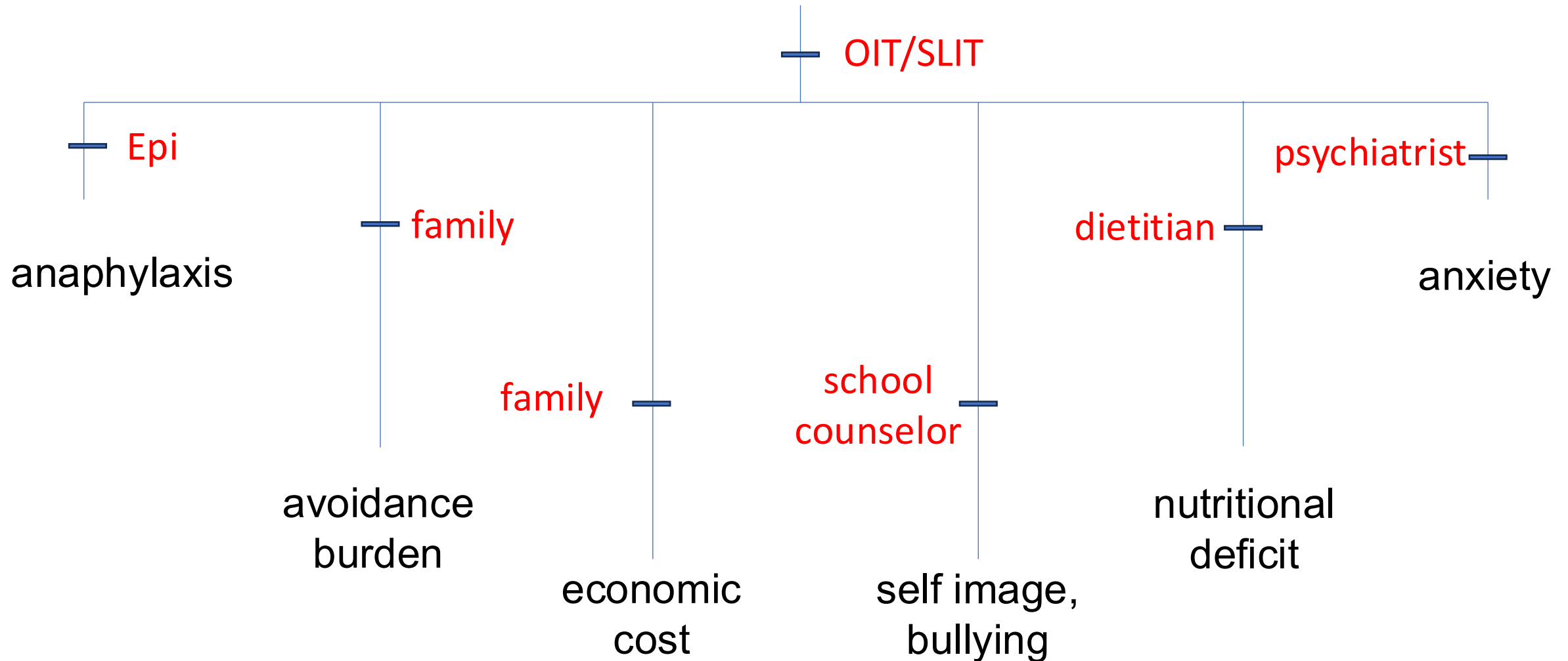
Sublingual Immunotherapy

Hugh H. Windom, MD





Food Allergy Impact & Intervention



Why Do We Need Food SLIT

- OIT may not appeal to your patient (choices are nice)
- OIT dropouts
- Free eating is risky in >5 yo or >50 sIgE
- If your goal is safety, SLIT is safer and easier

Early SLIT Studies – Designed to Fail



- Tested in older patients
- Asked to pass 5 gm peanut protein OFC ≤ 1 year
- Final doomsday endpoint ---- remission

Milk SLIT vs OIT



- 6-16 y.o. 10 SLIT (**7 mg**), 20 OIT (1 gm or 2 gm)
- OFC at 60 weeks to 8 gm milk protein
- 1/10 SLIT passed, 14/20 OIT passed
- Median increase OFC threshold 40-fold for SLIT (**3 ml to 120 ml**)



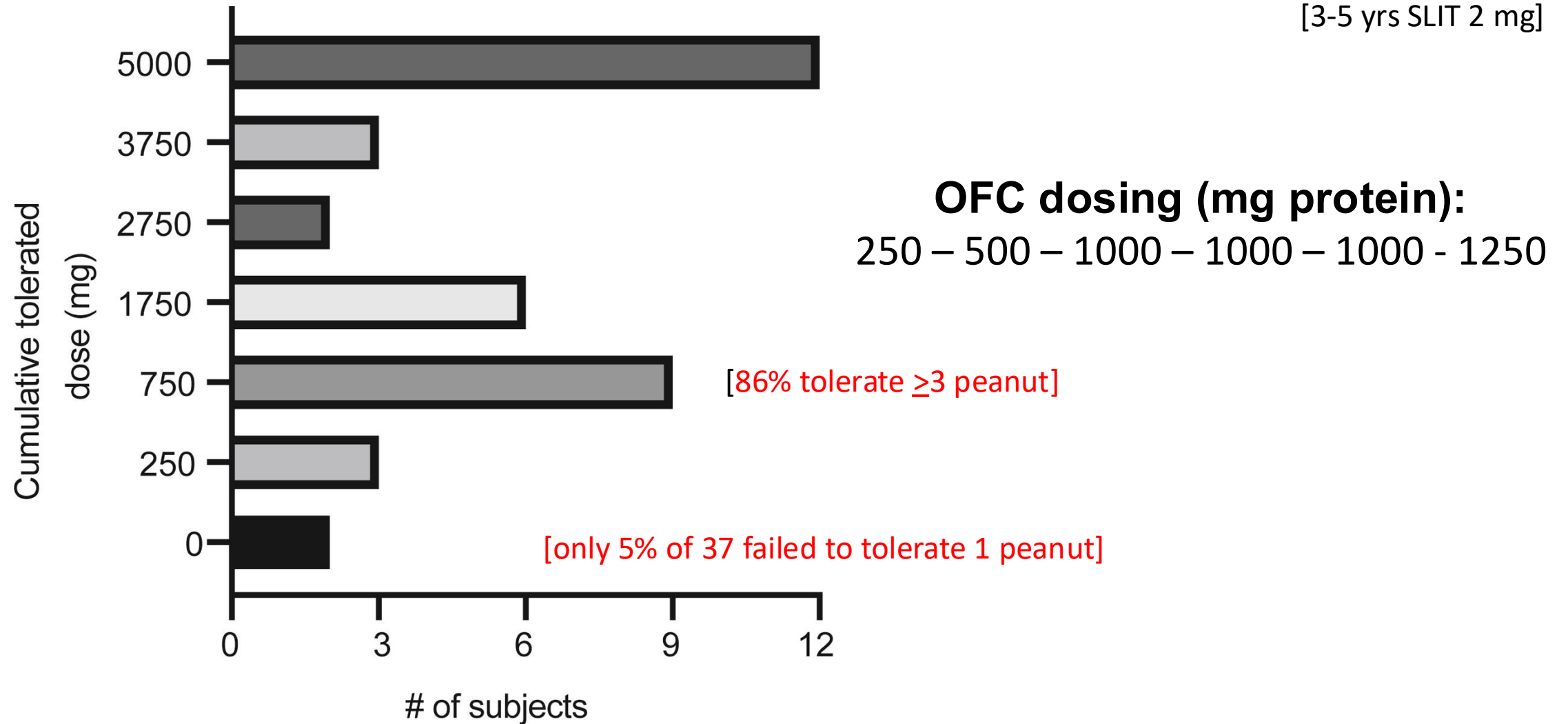
Long Term Peanut SLIT



- 3-5 years of **2 mg** peanut protein (pp) SLIT
- 37/47 completed (79%), 1-11 y.o., 2 dropped GI sx.
- No epi
- OFC to 5 gm pp, ^{~20 peanuts} 32% passed, median 1750 mg, ^{~7 peanuts} 86% tolerated ≥ 750 mg

Robust Peanut Protection

[3-5 yrs SLIT 2 mg]



More Peanut, Please

- 54 pts. 2-11 yo (mean 7 yo) peanut allergy (+ OFC, mean 66 mg pp, range 0-425)
- 4 mg peanut protein open label SLIT x 4 years (16 pumps 5 mg/ml extract) [buildup 20 wks]
- At 4 yrs: OFC to 5 gm pp, d/c SLIT, rechallenge at 1-17 weeks

Peanut 4 mg SLIT - Results

- 47/54 (87%) completed 4 years
 - [81% of original 54]
- 44 of 47 (94%) tolerated ≥ 300 mg peanut protein
 - [31% by ITT]
- 17 (36%) passed 5 gm OFC
- mean OFC 48 mg baseline to 2723 mg pp, no Epi

Peanut 4 mg – Missed Doses

- After 4 yrs. d/c dosing (n=37), block randomized to OFC within 6 wks, 7-12 wks, or 13-17 wks
- OFC: 100 mg – 200 – 500 – 800 – 1300 – 2100^[5 gm]
- 49% dropped $\geq$ 1 step in their OFC threshold
- None dropped below 300 mg between 1-17 wks

Peanut in Babes



- 1-4 yo, 4 mg PP SLIT x 3 yrs, n=25
- exit OFC with cumulative 4443 mg PP, repeat in 3 months off SLIT
- at 3 yrs, median OFC 4443 mg PP vs. 143 mg controls [~18 peanuts]
- 80% passed high dose OFC at 39 mo. (remission)

Food Sources & Maintenance Dose (protein)



Off the shelf

Milk – 10 mg

Egg white liquid – 11 mg*

Cashew milk – 5 mg

Walnut milk – 3.8 mg

Sesamilk – 3.8 mg

Flour solutions

Peanut 40 mg/ml – 6 mg

Wheat 60 mg/ml – 4 mg*

Sesame 25 mg/ml – 6.3 mg

*EWL 0.1 ml dose, wheat 0.5 ml, all others 0.3 ml

Supplies and Methods



- Liquid food source
- Bottles and syringes to prepare 2 dilutions with distilled water or 50% glycerin saline
- 0.5 ml syringe
- Timer

Peanut SLIT Protocol

Visit	Dilution of peanut flour solution	Dose	Reaction	peanut protein/ dose (mg)
1	0.4 mg/ml	0.05 0.15 0.3		0.01 0.03 0.06
2	4 mg/ml	0.05 0.15 0.3		0.1 0.3 0.6
3	40 mg/ml	0.05 0.1		1 2
4	“ “	0.1 0.3		2 6



Is it Working?

To find out, we recommend annual food challenge(s)

	Year 1	Year 2	Year 3	Year 4
Milk	Baked	1, 3, 10 ml	10, 30 ml	30, 60 ml
Egg (EWL)	Baked	0.5, 1, 3 ml	3, 10 ml	10, 30 ml
Others (mg protein)	10, 30, 100	100, 300	300, 1 gm	1 gm x 2



Florida Data

- not ready for primetime
- slgE all over the place in 1st year: 1/3 drop, 1/3 the same (within 10%), 1/3 up
- OFC – 90% pass single food SLIT

Multi-food SLIT

88% pass their 1st OFC

Cashew --- 100%	Egg --- 80%
Walnut --- 88%	Milk --- 75%
Hazelnut --- 50%	Sesame --- 100%
Peanut --- 88%	Wheat --- 100%

SLIT ROCKS



- Safety - what's Epi?
- Lifestyle – no rest period, 3-4 week buildup
- Ease of administration – draw and squirt
- Missed doses – who cares
- Enjoy “your daily vitamin”



Can I Switch to OIT?

Yes, but...

- Safety – go find your Epi
- Lifestyle – slow down, 2 hour rest period
- Ease of administration – weigh, hate the taste
- Missed doses – camp, trips; call the office
- Enjoy “your daily chore”

SLIT – Now and in the Future

- 1-4 visit buildup or even remote
- Hold for 15-30 seconds
- Spit or swallow
- Resume eat/drink in 1-2 minutes
- Reduce dosing frequency 2-3 days/week



Food SLIT: Needs to be in your Toolbox

1) Prevention	...2015	...LEAP, word is out
2) Avoidance	...pre-historic	...still a viable option
3) Desensitization	...21 st century	...OIT, SLIT, (EPIT)
4) Biologics	...2024	...hear the noise

