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Table E1. Relationship between symptomatic food allergy and asthma in children ≥ 6 years old (n=443)

| Food Allergy Status | N | Asthma Diagnosis | OR | 95% CI | | p |
|---------------------|-----|---------------------|------|----------------|----------------|---------------------|
| | | Yes | | Lower bound | Upper bound | |
| Any Food Allergen | 152 | 97(64%) | 4.6 | 2.4 | 8.8 | <.0001 ¹ |
| Milk | 50 | 34(68%) | 7.4 | 2.5 | 21.4 | <0.01 ¹ |
| Egg | 49 | 36(73%) | 13.6 | 4.6 | 40.3 | <.0001 ¹ |
| Peanut | 94 | 64(68%) | 5.6 | 2.3 | 13.6 | <0.01 ¹ |
| Soy | 11 | 9(82%) | 17.8 | 3.6 | 87.9 | <.0001 ² |
| Wheat | 6 | 5(83%) | 19.8 | 2.2 | 177.4 | <0.01 ² |
| Fish | 5 | 5(100%) | — | — | — | <0.01 ² |
| Shellfish | 10 | 7(70%) | 9.2 | 2.2 | 38.4 | <0.01 ² |
| Sesame | 12 | 7(58%) | 5.5 | 1.6 | 19.0 | <0.01 ² |
| Walnut | 30 | 20(67%) | 9.2 | 2.6 | 32.8 | <0.01 ¹ |

¹Adjusted for age, gender, ethnicity (white vs non-white), intrafamilial correlation, family history of asthma, and aeroallergen sensitization

²Unadjusted

Table E2A. Relationship between skin test positivity to food allergens and asthma in children ≥ 6 years old with asymptomatic sensitization*

| Positive skin test (MWD ≥ 3 mm) | N | Asthma Diagnosis | OR | 95% CI | | p |
|--------------------------------------|----|------------------|-----|-------------|-------------|-------|
| | | Yes | | Lower bound | Upper bound | |
| Any Food Allergen | 45 | 13(29%) | 1.8 | 0.8 | 4.0 | 0.16 |
| Milk | 2 | 1(50%) | 4.4 | 0.3 | 72.5 | 0.35† |
| Egg | 0 | 0(0%) | — | — | — | — |
| Peanut | 21 | 8(38%) | 2.7 | 1.0 | 7.3 | 0.05 |
| Soy | 20 | 5(25%) | 1.5 | 0.5 | 4.5 | 0.51 |
| Wheat | 2 | 1(50%) | 4.4 | 0.3 | 72.5 | 0.35† |
| Fish | 2 | 0(0%) | — | — | — | — |
| Shellfish | 14 | 5(36%) | 2.4 | 0.7 | 8.0 | 0.14 |
| Sesame | 15 | 4(27%) | 1.6 | 0.5 | 5.5 | 0.49† |
| Walnut | 14 | 5(36%) | 2.4 | 0.7 | 8.0 | 0.14 |

*Unadjusted

† Fischer's exact test used due to number of observations, all others use Chi square as test statistic.

Table E2B. Relationship between detectable levels of specific IgE to food allergens and asthma in children ≥ 6 years old with asymptomatic sensitization

| Detectable specific IgE | N | Asthma Diagnosis | OR | 95% CI | | p |
|-------------------------|-----|------------------|-----|-------------|-------------|-------------------|
| | | Yes | | Lower bound | Upper bound | |
| Any Food Allergen | 146 | 43(29%) | 1.5 | 0.8 | 2.8 | 0.17 ¹ |
| Milk | 67 | 17(25%) | 1.2 | 0.6 | 2.6 | 0.56 ² |
| Egg | 58 | 18(31%) | 1.6 | 0.8 | 3.5 | 0.19 ² |
| Peanut | 49 | 16(33%) | 1.8 | 0.8 | 3.8 | 0.15 ² |
| Soy | 45 | 17(38%) | 2.2 | 1.0 | 4.8 | 0.04 ² |
| Wheat | 89 | 21(24%) | 1.1 | 0.6 | 2.3 | 0.74 ² |
| Fish | 3 | 2(67%) | 7.3 | 0.6 | 84.7 | 0.13 ² |
| Shellfish | 33 | 10(30%) | 1.6 | 0.7 | 3.9 | 0.31 ² |
| Sesame | 81 | 22(27%) | 1.4 | 0.7 | 2.7 | 0.38 ² |
| Walnut | 34 | 12(35%) | 2.0 | 0.8 | 4.7 | 0.11 ² |

¹Adjusted for age, gender, ethnicity (white vs non-white), intrafamilial correlation, family history of asthma, and aeroallergen sensitization.

²Unadjusted

Table E3. Severity of food allergy and asthma prevalence in Children \geq 6 years (Total subjects=271)

| Food Allergen | Severity | N | Asthma Diagnosis | | OR | 95% CI | | p | p-trend* |
|---------------|------------|-----|------------------|------|------|-------------|-------------|---------------------|----------|
| | | | N | % | | Lower bound | Upper bound | | |
| Milk | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 8 | 5 | 62% | 6.9 | 1.1 | 44.5 | 0.041 | |
| | Severe | 42 | 29 | 69% | 7.5 | 2.4 | 23.3 | <0.01 ¹ | |
| Egg | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 21 | 15 | 71% | 12 | 3.1 | 46.2 | <0.01 ¹ | |
| | Severe | 28 | 21 | 75% | 15.3 | 4.2 | 55.6 | <.0001 ¹ | |
| Peanut | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 34 | 22 | 65% | 5 | 1.6 | 15.3 | <0.01 ¹ | |
| | Severe | 60 | 42 | 70% | 6 | 2.3 | 15.6 | <0.01 ¹ | |
| Soy | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 2 | 1 | 50% | 4.3 | 0.7 | 107.5 | 0.372 | |
| | Severe | 9 | 8 | 89% | 35.6 | 3.7 | 346.4 | <0.01 ² | |
| Wheat | None | 119 | 24 | 20% | 1 | — | — | — | 0.0025 |
| | Non-severe | 1 | 1 | 100% | — | — | — | 0.212 | |
| | Severe | 5 | 4 | 80% | 15.8 | 1.7 | 148.2 | <0.01 ² | |
| Fish | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 3 | 3 | 100% | — | — | — | 0.012 | |
| | Severe | 2 | 2 | 100% | — | — | — | 0.042 | |
| Shellfish | None | 119 | 24 | 20% | 1 | — | — | — | 0.002 |
| | Non-severe | 6 | 4 | 67% | 6.9 | 0.8 | 54.1 | 0.072 | |
| | Severe | 4 | 3 | 75% | 14.8 | 1.1 | 200 | 0.042 | |
| Sesame | None | 119 | 24 | 20% | 1 | — | — | — | 0.0053 |
| | Non-severe | 6 | 3 | 50% | 4.3 | 0.4 | 28.7 | 0.132 | |
| | Severe | 6 | 4 | 67% | 8.9 | 1.3 | 65.3 | 0.032 | |
| Walnut | None | 119 | 24 | 20% | 1 | — | — | — | <0.0001 |
| | Non-severe | 10 | 6 | 60% | 6.6 | 1.4 | 30 | 0.022 | |
| | Severe | 20 | 14 | 70% | 10.1 | 3.1 | 33.2 | <0.01 ² | |

¹Adjusted for age, gender, ethnicity (white vs non-white), intrafamilial correlations, family history of asthma, and aeroallergen sensitization.

²Unadjusted

*Cochran-Armitage Test for Trend (Exact Test)