

Supplementary Data

Table S1. Maternal and infant characteristics of participants included in the current analysis compared to the full CHILd cohort.

	Full Cohort (N=3311)		Current Analysis ¹ (N=2773)	
	N	n (%) or Mean ± SD	N	n (%) or Mean ± SD
Maternal Characteristics				
Age; years	3305	32.3 ± 4.7	2773	32.3 ± 4.6
Ethnicity; non-Caucasian	3239	881 (27.2)	2773	709 (25.6)
Asthma	3187	669 (21.0)	2773	589 (21.2)
Postsecondary degree	3159	2414 (76.4)	2773	2138 (77.1)
Smoking	3191	287 (9.0)	2773	241 (8.7)
Infant Characteristics				
Sex; male	3311	1748 (52.8)	2773	1465 (52.8)
Gestational age; weeks	3220	39.2 ± 1.4	2773	39.2 ± 1.4
Breastfeeding at 3 months				
Exclusive	3152	1885 (59.8)	2773	1643 (59.2)
Partial	3152	821 (26.0)	2773	723 (26.1)
None	3152	446 (14.1)	2773	407 (14.7)
Breastfeeding Duration¹				
Never	2953	114 (3.9)	2773	104 (3.8)
< 3 months	2953	332 (11.2)	2773	303 (10.9)
3 to <6 months	2953	278 (9.4)	2773	255 (9.2)
6 to <12 months	2953	871 (29.5)	2773	826 (29.8)
≥12 months	2953	1358 (46.0)	2773	1285 (46.3)
Respiratory Illness in first 12 months				
Ever Wheeze (≥1 episode)	2369	534 (22.5)	2230	474 (21.3)
Recurrent (≥2 episodes)	2350	215 (9.1)	2214	199 (9.0)
Frequent colds (≥4 episodes)	2316	866 (37.4)	2203	812 (36.9)

¹Infants with any wheezing data, and complete data for breastfeeding and essential covariates.

Comparisons by chi-squared test (categorical variables) or t-test (continuous variables); no significant differences at p<0.05.

Table S2. Associations of breastfeeding and recurrent wheezing (≥ 2 episodes) in the first year of life in the CHILD cohort (N=2214)*.

Breastfeeding Measure	Prevalence of Recurrent Wheezing	Crude OR (95%CI)	Adjusted ¹ OR (95%CI)
Breastfeeding at 3 months			
None	39/292 (13.4%)	1.00 (reference)	1.00 (reference)
Partial (with Formula)	62/576 (10.8%)	0.78 (0.51 - 1.20)	1.05 (0.66 - 1.66)
Exclusive	98/1346 (7.3%)	0.51 (0.34 - 0.76)	0.74 (0.48 - 1.13)
Breastfeeding at 6 months			
None	59/472 (12.5%)	1.00 (reference)	1.00 (reference)
Partial (with Formula)	60/594 (10.1%)	0.79 (0.54 - 1.15)	1.04 (0.69 - 1.57)
Partial (without Formula)	51/752 (6.8%)	0.51 (0.34 - 0.76)	0.67 (0.44 - 1.02)
Exclusive	25/387 (6.5%)	0.48 (0.30 - 0.79)	0.66 (0.39 - 1.12)
Breastfeeding Duration²			
<6 months	61/478 (12.8%)	1.00 (reference)	1.00 (reference)
6 to <12 months	71/669 (10.6%)	0.81 (0.56 - 1.17)	1.07 (0.72 - 1.58)
≥ 12 months	67/1067 (6.3%)	0.46 (0.32 - 0.66)	0.61 (0.41 - 0.91)

CI, confidence interval; OR, odds ratio. ¹Adjusted for study site; maternal age, asthma, ethnicity, smoking during pregnancy, postsecondary education; infant sex and gestational age. ²Refers to any breastfeeding. Associations determined by logistic regression; trend p-values determined by modeling categorical breastfeeding variables as continuous measures. *2214 infants with complete data for breastfeeding, recurrent wheezing and above covariates.

Table S3. Associations of breastfeeding and wheezing rates in the first year of life the CHILD cohort, with and without adjustment for frequent colds (N=2203)*.

Breastfeeding Measure	Crude RR (95%CI)	Adjusted ¹ RR (95%CI)	Further Adjusted for Frequent Colds RR (95%CI)
Breastfeeding at 3 months			
None	1.00 (reference)	1.00 (reference)	1.00 (reference)
Partial (with Formula)	0.78 (0.60 - 1.02)	0.97 (0.75 - 1.26)	0.98 (0.76 - 1.26)
Exclusive	0.59 (0.47 - 0.75)	0.81 (0.64 - 1.03)	0.77 (0.61 - 0.97)
Breastfeeding at 6 months			
None	1.00 (reference)	1.00 (reference)	1.00 (reference)
Partial (with Formula)	0.78 (0.62 - 0.98)	0.98 (0.78 - 1.23)	0.93 (0.75 - 1.17)
Partial (without Formula)	0.62 (0.49 - 0.78)	0.79 (0.63 - 0.99)	0.76 (0.61 - 0.94)
Exclusive	0.50 (0.37 - 0.67)	0.67 (0.50 - 0.90)	0.62 (0.47 - 0.82)
Breastfeeding Duration²			
<6 months	1.00 (reference)	1.00 (reference)	1.00 (reference)
6 to <12 months	0.83 (0.67 - 1.04)	1.02 (0.83 - 1.27)	1.01 (0.82 - 1.24)
≥12 months	0.53 (0.43 - 0.66)	0.69 (0.56 - 0.86)	0.64 (0.52 - 0.79)

CI, confidence interval; RR, rate ratio. ¹Adjusted for study site; maternal age, ethnicity, asthma, smoking during pregnancy, postsecondary education; infant sex and gestational age. ²Refers to any breastfeeding. Associations determined by Poisson regression. ²Interaction p-value by modeling interaction terms. *N=2203 infants with wheezing data and complete data for breastfeeding, above covariates, plus frequent colds.

Table S4. Associations of breastfeeding and wheezing rates in the first year of life the CHILD cohort, stratified by maternal asthma and infant sex (N=2773).

Breastfeeding Measure	Maternal Asthma		No Maternal Asthma		p for effect modification	
	Girls (N=274) Adjusted ¹ RR (95%CI)	Boys (N=315) Adjusted ¹ RR (95%CI)	Girls (N=1034) Adjusted ¹ RR (95%CI)	Boys (N=1150) Adjusted ¹ RR (95%CI)	by maternal asthma	by sex
Breastfeeding at 3 months						
None	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	0.009	0.08
Partial (with Formula)	1.88 (1.02 - 3.47)	0.59 (0.34 - 1.04)	0.88 (0.54 - 1.43)	0.84 (0.59 - 1.20)		
Exclusive	1.13 (0.61 - 2.08)	0.49 (0.29 - 0.82)	1.46 (0.99 - 2.15)	0.66 (0.47 - 0.93)		
Breastfeeding at 6 months						
None	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	0.001	0.77
Partial (with Formula)	0.96 (0.56 - 1.67)	0.80 (0.48 - 1.35)	1.43 (0.97 - 2.12)	0.85 (0.61 - 1.17)		
Partial (without Formula)	0.79 (0.44 - 1.43)	0.63 (0.36 - 1.09)	1.18 (0.81 - 1.72)	0.80 (0.58 - 1.11)		
Exclusive	0.53 (0.23 - 1.21)	0.32 (0.12 - 0.83)	1.34 (0.85 - 2.12)	0.76 (0.51 - 1.13)		
Breastfeeding Duration²						
<6 months	1.00 (reference)	1.00 (reference)	1.00 (reference)	1.00 (reference)	0.004	0.09
6 to <12 months	0.93 (0.54 - 1.61)	0.87 (0.54 - 1.41)	2.06 (1.44 - 2.93)	0.85 (0.62 - 1.16)		
≥12 months	0.75 (0.43 - 1.31)	0.45 (0.25 - 0.79)	0.88 (0.60 - 1.28)	0.81 (0.60 - 1.11)		

CI, confidence interval; RR, rate ratio. ¹Adjusted for study site; maternal age, ethnicity, smoking during pregnancy, postsecondary education; and infant gestational age. ²Refers to any breastfeeding. Associations determined by Poisson regression. ²Interaction p-value by modeling interaction terms.