Supplemental Information 1

LRI ASCERTAINMENT DURING EARLY LIFE

During the first 3 years of life, parents were instructed to take their children to their pediatricians whenever the children had any of the following symptoms: deep or "wet" chest cough, wheezing, hoarseness, stridor, barking cough, or shortness of breath. Pediatricians obtained a detailed history at the time of such illnesses and recorded all relevant signs and symptoms (including wheezing on auscultation) on a study form. The study nurses working in the pediatrician's office obtained additional historical information.[37] Of the original 1246 children enrolled in the study, 888 were followed for LRIs by the original study pediatricians for the entire first 3 years of life.

Supplemental Information 2

LUNG FUNCTION ASSESSMENTS

Spirometry was performed at ages 11, 16, and 22 years by using a portable Schiller Spirovit SP-1 (Schiller AG, Baar, Switzerland)[38] or at age 26 years by using the KoKo Legend portable spirometer (Ferraris Respiratory, Louisville, CO). Testing equipment met American Thoracic Society guidelines for spirometry. None of the participants had used a bronchodilator within 6 hours of testing. Study nurses recorded height, weight, and age at the time of testing. Subsequent to baseline measurements, a fixed dose of albuterol, 2 puffs (180 μg) at ages 11,16, and 22 years or 4 puffs (360 μg) at age 26 years, was administered from a metered-dose inhaler and aerochamber holding device (Monaghan Medical, Plattsburgh, NY), with post-bronchodilator spirometry obtained after 15 minutes.

All best-fitting models included age, gender, height, race/ethnicity, LRIs, current smoking, current wheeze, current physician-diagnosed asthma, maternal history of physician-diagnosed asthma, maternal smoking, and paternal smoking. The number of observations for the prealbuterol FEV_1 model was 1571; the number of individuals included in the analysis was 624, with an average number of observations per individual of 2.5. B, model coefficient; Ref, reference group in the model.

SUPPLEMENTAL TABLE 5 Number of Episodes of LRIs During the First 3 Years of Life

Number of LRI Episodes	LRIs		
	Pneumonia	Other LRIs	Total
1	20	180	200
2	9	69	78
3	8	30	38
4	5	7	12
5	1	8	9
6	1	0	1
Total	44	294	338

SUPPLEMENTAL TABLE 6 Best-Fitting Multivariate Longitudinal Random-Effects Models for Lung Function From Ages 11 Through 26 Years and LRIs During the First 3 Years of Life

LRIs	FEV_1 (mL)		FVC (mL)		FEV_1:FVC Ratio (%)		$FEF_{25–75}$ (mL/s)		$FEF_{25–75}$:FVC Ratio (%)	
	B (SE)	*P*	B (SE)	*P*	B (SE)	*P*	B (SE)	*P*	B (SE)	*P*
Prealbuterol lung function at ages 11–26 years										
No LRI	Ref		Ref		Ref		Ref		Ref	
Pneumonia	−78.77 (56.84)	.166	66.86 (66.34)	.314	−3.30 (0.94)	<.001	−345.88 (117.37)	.003	−10.67 (3.21)	.001
Other LRIs	−57.66 (28.26)	.041	−14.71 (32.99)	.656	−1.13 (0.47)	.015	−161.31 (58.36)	.006	−4.35 (1.60)	.006
Postalbuterol lung function at ages 11–26 years										
No LRI	Ref		Ref		Ref		Ref		Ref	
Pneumonia	−17.65 (55.07)	.749	81.84 (66.32)	.217	−1.83 (0.79)	.020	−241.21 (113.79)	.034	−7.27 (3.16)	.022
Other LRIs	−33.33 (27.61)	.227	−8.60 (33.26)	.796	−0.67 (0.40)	.092	−124.45 (57.07)	.029	−3.52 (1.59)	.026