

**CORRECTION**

The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age (September 9, 2004;351:1057-67). On page 1059, under the heading Statistical Analysis, in the list of model adjustments, lines 18 through 20 of the left-hand column should have read “the square of log values for height,” rather than “body-mass index (the weight in kilograms divided by the square of the height in meters); the square of the body-mass index,” as printed. Also, in the right-hand column, lines 3 and 4 should have read “ordinal variables for the field technician and the spirometer,” rather than “indicator variables,” as printed. These errors had no bearing on the analysis of persons with clinically low lung function. Adjustment for body-mass index and indicator variables as intended changes the results slightly but does not affect the reported associations between growth and pollution during an eight-year period. The corrected values for Table 2 (page 1062), Table 3 (1063), and Table 4 (1064) and for Figure 2 (page 1062) are available at the *Journal's* Web site at [www.nejm.org](http://www.nejm.org).

**Table 2. Mean Levels of Growth in Pulmonary Function during the Eight-Year Study Period, from 1993 to 2001.\***

Pulmonary-Function Measure	Girls			Boys		
	Age of 10 yr	Age of 18 yr	Average 8-yr growth	Age of 10 yr	Age of 18 yr	Average 8-yr growth
FVC (ml)	2227	3757	1530	2392	5227	2835
FEV <sub>1</sub> (ml)	1951	3286	1335	2050	4467	2418
MMEF (ml/sec)	2284	3686	1402	2255	4676	2420

\* Levels at the ages of 10 and 18 years are derived from the growth model described in the Methods section. FVC denotes forced vital capacity, FEV<sub>1</sub> forced expiratory volume in one second, and MMEF maximal midexpiratory flow rate.

**Table 3. Difference in Average Growth in Lung Function over the Eight-Year Study Period from the Least to the Most Polluted Community.\***

Pollutant	FVC		FEV <sub>1</sub>		MMEF	
	Difference (95% CI) <i>ml</i>	P Value	Difference (95% CI) <i>ml</i>	P Value	Difference (95% CI) <i>ml/sec</i>	P Value
O <sub>3</sub>						
10 a.m.–6 p.m.	-36.4 (-124.5 to 51.6)	0.38	-17.8 (-101.7 to 66.0)	0.65	79.7 (-155.5 to 314.8)	0.47
1-Hour maximal level	-51.9 (-135.1 to 31.3)	0.20	-37.1 (-117.4 to 43.3)	0.33	34.5 (-202.1 to 271.2)	0.75
NO <sub>2</sub>	-70.4 (-139.8 to -1.1)	0.05	-89.1 (-154.0 to -24.2)	0.01	-232.7 (-410.4 to -54.9)	0.01
Acid vapor	-81.0 (-148.5 to -13.6)	0.02	-95.7 (-159.7 to -31.6)	0.007	-191.8 (-382.1 to -1.5)	0.05
PM <sub>10</sub>	-57.8 (-150.4 to 34.9)	0.20	-85.6 (-168.7 to -2.6)	0.04	-175.9 (-413.9 to 62.0)	0.13
PM <sub>2.5</sub>	-51.0 (-127.1 to 25.2)	0.17	-78.3 (-145.6 to -11.0)	0.03	-191.8 (-379.8 to 3.7)	0.05
Elemental carbon	-65.4 (-127.1 to -3.8)	0.04	-83.5 (-141.2 to -25.9)	0.009	-185.2 (-353.5 to -16.9)	0.03
Organic carbon	-57.3 (-155.4 to 40.8)	0.22	-91.7 (-178.3 to -5.1)	0.04	-175.9 (-428.2 to 76.5)	0.15

\* Values are the differences in the estimated rate of eight-year growth at the lowest and highest observed levels of the indicated pollutant. Differences are scaled to the range across the 12 study communities in the average level of each pollutant from 1994 through 2000 as follows: 37.5 ppb of O<sub>3</sub> (measured from 10 a.m. to 6 p.m.), 46.0 ppb of O<sub>3</sub> (the one-hour maximal level), 34.6 ppb of NO<sub>2</sub>, 9.6 ppb of acid vapor, 51.4 µg of PM<sub>10</sub> per cubic meter, 22.8 µg of PM<sub>2.5</sub> per cubic meter, 1.2 µg of elemental carbon per cubic meter, and 10.5 µg of organic carbon per cubic meter. CI denotes confidence interval.

**Table 4. Sensitivity Analysis of the Effects of Acid Vapor and Elemental Carbon on Growth in FEV<sub>1</sub> over the Eight-Year Study Period.\***

Model	Acid Vapor	Elemental Carbon
	<i>Difference (95% Confidence Interval)</i>	
Main model (model 1)†	-95.7 (-159.7 to -31.6)	-83.5 (-141.2 to -25.9)
<b>Additional covariates‡</b>		
Main model + in-utero exposure to maternal smoking (model 2)	-98.9 (-164.0 to -33.7)	-80.8 (-141.4 to -20.1)
Main model + exposure to gas stove (model 3)	-95.8 (-171.0 to -20.7)	-80.8 (-148.9 to -12.8)
Main model + pets in home (model 4)	-98.2 (-162.3 to -34.2)	-85.2 (-143.3 to -27.2)
Main model + parental level of education (model 5)	-91.4 (-160.1 to -22.6)	-78.0 (-140.0 to -15.9)
Main model + short-term effects of pollution (model 6)§	-104.2 (-207.1 to -1.2)	-97.2 (-188.1 to -6.2)
<b>Subgroup effects</b>		
No history of asthma (model 7)¶	-90.4 (-163.4 to -17.4)	-87.5 (-150.3 to -24.6)
No history of smoking (model 8)‖	-102.1 (-221.9 to 17.8)	-107.3 (-209.5 to -5.1)
After exclusion of communities with lowest and highest levels of pollution (model 9)**	-105.6 (-189.5 to -21.7)	-88.4 (-156.7 to -20.1)
Complete follow-up (model 10)††	-127.4 (-216.4 to -38.3)	-96.0 (-184.2 to -7.8)

\* Values are the differences in the estimated rate of eight-year growth at the lowest and highest observed levels of the indicated pollutant. Differences are scaled to the range across the 12 study communities in the average level of each pollutant from 1994 through 2000 as follows: 9.6 ppb of acid vapor and 1.2 µg of elemental carbon per cubic meter.

† Model 1 is equivalent to effect estimates for FEV<sub>1</sub> in Table 3 and is based on data on 1759 children.

‡ The main model was adjusted for each of the covariates listed.

§ Values were adjusted for the average levels of O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>10</sub> on the three days before each child's pulmonary-function test.

¶ The analysis includes data on 1302 children with no history of doctor-diagnosed asthma.

‖ The analysis includes data on 1276 children with no history of active tobacco smoking at any time during follow-up.

\*\* The analysis excludes children from the two communities with the lowest and highest levels of each pollutant. This leaves 1507 children (excluding those from Lompoc and Upland) in the analysis of acid vapor and 1484 children (excluding those from Lompoc and Long Beach) in the analysis of elemental carbon.

†† The analysis includes 713 children who underwent pulmonary-function testing in both 1993 and 2001 (i.e., those observed throughout the study).

