

## Author correction

**Due to an error, which occurred as part of a merging process of laboratory results and questionnaire data, a sizable fraction of the participants were linked to the wrong health status data. Where it was previously found that "home endotoxin was inversely associated with asthma (OR=0.90 (0.82-1.00))", after re-analysis of the data no associations were found with endotoxin at home. The associations between school endotoxin and asthma changed slightly, but in general remained positive and stayed significant. The main conclusion regarding the school exposures remain the same: "The high endotoxin levels in schools compared to homes indicate that exposure at school can contribute considerably to environmental endotoxin exposure of children and teachers. Our results also suggest that endotoxin in schools may be associated with non-atopic asthmatic symptoms in pupils, although the results require reproduction because of the modest sample size".**

**The changes which are the result of this error are highlighted below, which include the old and a revised version of the tables and figures of the manuscript.**

### Abstract (corrected version)

Several studies describe indoor pollutant exposure in homes and to a lesser extent in schools. Population studies that include both environments are sparse. This study aims to assess endotoxin levels in primary schools and homes of children. Endotoxin was also studied in relation to asthma and sensitization. Ten schools with (index) and without (reference) dampness were selected, based on reports and inspections. Cases and controls were selected from 169 homes, based on the presence or absence of asthma-like symptoms of children. Classrooms and bedrooms airborne settled dust was sampled with the Electrostatic Dust fall Collectors (EDC). Average endotoxin levels in schools ranged from 2178 to 6914 EU/m<sup>2</sup> per week compared to 462 to 1285 EU/m<sup>2</sup> per week in homes. After mutual adjustment for home and school endotoxin, school endotoxin was positively associated with non-atopic asthma (OR=1.11; 95%CI 0.97-1.27), while we did not find any associations with endotoxin at home. The high endotoxin levels in schools compared to homes indicate that exposure at school can contribute considerably to environmental endotoxin exposure of children and teachers. Our results also suggest that endotoxin in schools may be associated with non-atopic asthmatic symptoms in pupils, although the results require reproduction because of the modest sample size.

### Abstract (original version)

Several studies describe indoor pollutant exposure in homes and to a lesser extent in schools. Population studies that include both environments are sparse. This study aims to assess endotoxin levels in primary schools and homes of children. Endotoxin was also studied in relation to asthma and sensitization. Ten schools with (index) and without (reference) dampness were selected, based on reports and inspections. Cases and controls were selected from 169 homes, based on the presence or absence of asthma-like symptoms of children. Classrooms and bedrooms airborne settled dust was sampled with the Electrostatic Dust fall Collectors (EDC). Average endotoxin levels in schools ranged from 2178 to 6914 EU/m<sup>2</sup> per week compared to 462 to 1285 EU/m<sup>2</sup> per week in homes. After mutual adjustment for home and school endotoxin, home endotoxin was inversely associated with asthma (OR=0.90 (0.82-1.00). School exposure was positively associated with non-atopic asthma (OR=1.13; 95%CI 1.03-1.25). The high endotoxin levels in schools compared to homes indicate that exposure at school can contribute considerably to environmental endotoxin exposure of children and teachers. Our results also suggest that endotoxin in schools may be associated with non-atopic asthmatic symptoms in pupils, although the results require reproduction because of the modest sample size.

Table 2: General characteristics of children with symptoms indicative for asthma (**corrected version**)

	<b>Asthma suggestive symptoms*</b>	
	Controls	Cases
<i>Subjects n</i>	103	66
<b>Basic characteristics</b>		
Males (n, %)	53 (51%)	29 (44%)
Age (y, sd)	8.8 (1.4)	8.3 (1.4)
BMI (kg/m <sup>2</sup> , sd)	15.9 (1.9)	16.1 (2.1)
Number older siblings (median, interquartile range) <sup>†</sup>	0 (1)	1 (1)
Parental education (n, %)		
- Low	7 (7%)	2 (3%)
- Intermediate	28 (28%)	29 (44%)
- High	66 (65%)	35 (53%)
Parental smoking (n, %)		
Current	12 (12%)	5 (8%)
During 1st yr of child's life	11 (11%)	5 (8%)
During pregnancy	5 (5%)	7 (11%)
Birth weight (n, %)		
< than 2.5 kg	5 (5%)	4 (6%)
2.5-4 kg	82 (80%)	51 (78%)
>4 kg	16 (16%)	9 (14%)
Daycare attendance (n, %)	43 (42%)	23 (35%)
Parental asthma (n, %)	27 (26%)	18 (27%)
Farm animal contact 1 <sup>st</sup> yr (n, %)	13 (13%)	7 (11%)
Pets present in home (n, %)		
Current	47 (46%)	34 (52%)
During 1 <sup>st</sup> yr	48 (47%)	30 (45%)
Mould spots/odour at home (n, %)		
During last 12 mths	19 (19%)	19 (29%)
Ever	30 (29%)	25 (38%)
Water damage at home (n, %)		
During last 12 mths	25 (24%)	18 (28%)
Ever	40 (29%)	29 (45%)
Sensitisation >1 common allergen <sup>§</sup>	23 (42%)	10 (24%) <sup>#</sup>

\* Not all categories add to the total sample size due to missing information.

<sup>†</sup>Because the distribution is skewed to the right, the median is reported instead of the mean.

<sup>§</sup> Serum information was available from 97 children

<sup>#</sup> p≤0.10 different from controls

**Table 2: General characteristics of children with symptoms indicative for asthma (original version)**  
**Asthma suggestive symptoms\***

	Controls	Cases
<i>Subjects n</i>	103	66
<b>Basic characteristics</b>		
Males (n, %)	52 (50%)	30 (45%)
Age (y, sd)	8.7 (1.5)	8.5 (1.4)
BMI (kg/m <sup>2</sup> , sd)	16.3 (1.9)	16.6 (2.0)
Number older siblings (median, interquartile range) †	1 (1)	0 (1)
Parental education (n, %)		
- Low	8 (8%)	1 (2%)
- Intermediate	28 (28%)	29 (44%)
- High	65 (64%)	36 (55%)
Parental smoking (n, %)		
Current	9 (9%)	8 (13%)
During 1st yr of child's life	9 (9%)	7 (11%)
During pregnancy	6 (6%)	6 (9%)
Birth weight (n, %)		
< than 2.5 kg	4 (4%)	5 (8%)
2.5-4 kg	80 (78%)	53 (82%)
>4 kg	18 (17%)	7 (11%)
Daycare attendance (n, %)	41 (40%)	25 (38%)
Parental asthma (n, %)	23 (22%)	22(34%) #
Farm animal contact 1 <sup>st</sup> yr (n, %)	12 (12%)	8 (12%)
Pets present in home (n, %)		
Current	53 (51%)	28 (42%)
During 1 <sup>st</sup> yr	45 (44%)	33 (50%)
Mould spots/odour at home (n, %)		
During last 12 mths	20 (20%)	18 (27%)
Ever	31 (30%)	24 (36%)
Water damage at home (n, %)		
During last 12 mths	27 (26%)	16 (25%)
Ever	38 (37%)	31 (48%)
Sensitisation >1 common allergen <sup>§</sup>	24 (40%)	9 (24%)

\* Not all categories add to the total sample size due to missing information.

† Because the distribution is skewed to the right, the median is reported instead of the mean.

§ Serum information was available from 97 children

# p≤0.05 different from controls

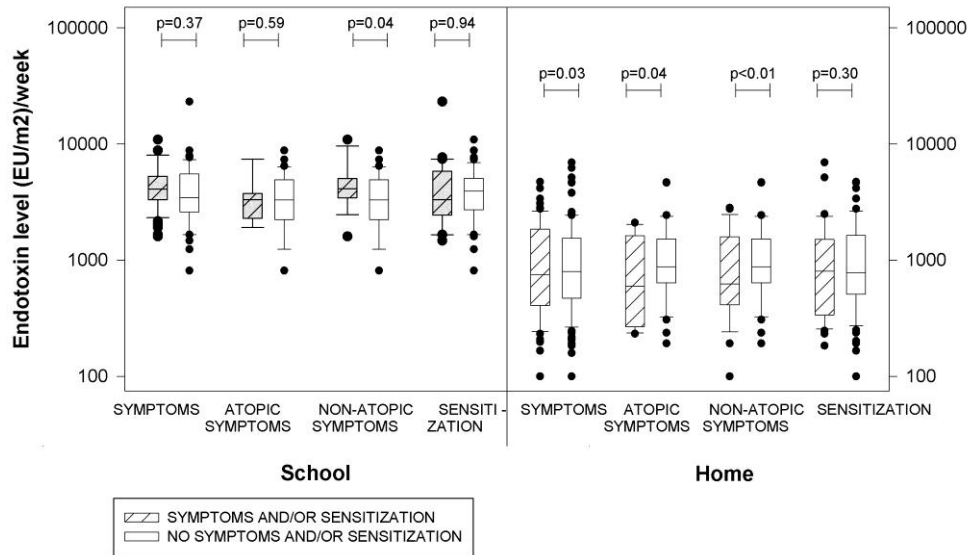
Table 3: Association between endotoxin levels at home and school and asthma suggestive symptoms (**corrected version**)

Endotoxin exposure	Asthma symptoms <sup>#</sup>	Asthma symptoms including sensitization status <sup>#</sup>	
	OR (95% CI)	Atopic asthma OR (95% CI)	Non-atopic asthma OR (95% CI)
<i>Number cases/controls</i>	66/103	10/32	32/32
In classroom (of participants with home endotoxin measurements)	1.06(0.97-1.17)	1.08(0.96-1.21)	<b>1.13(1.01-1.26)</b>
At home	<b>1.03(0.92-1.16)</b>	0.83(0.62-1.11)	<b>0.98(0.74-1.3)</b>
Endotoxin exposure mutually adjusted:			
School	1.06(0.97-1.16)	<b>1.12(1.02-1.23)</b>	<b>1.15(1.02-1.3)</b>
Home	<b>1.02(0.91-1.15)</b>	0.81(0.62-1.06)	0.92(0.8-1.05)
Endotoxin exposure mutually adjusted and adjusted for additional confounders*			
School	1.06(0.98-1.15)	<b>0.99(0.88-1.11)</b>	1.11(0.97-1.27)
Home	<b>1.09(0.96-1.24)</b>	0.87(0.68-1.11)	0.92(0.76-1.11)

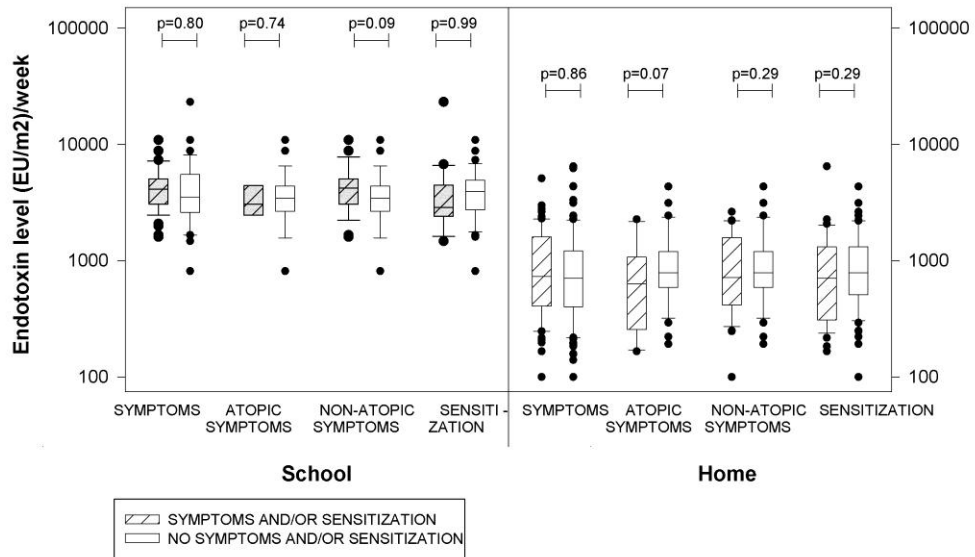
Table 3: Association between endotoxin levels at home and school and asthma suggestive symptoms (**original version**)

<b>Endotoxin exposure</b>	<b>Asthma symptoms<sup>#</sup></b>	<b>Asthma symptoms including sensitization status<sup>#</sup></b>	
	<i>OR (95% CI)</i>	<i>Atopic asthma OR (95% CI)</i>	<i>Non-atopic asthma OR (95% CI)</i>
<i>Number cases/controls</i>	66/103	9/36	28/36
In classroom (of participants with home endotoxin measurements)	1.08 (0.98-1.19)	1.03 (0.89-1.19)	<b>1.16 (1.03-1.3)</b>
At home	<b>0.90 (0.81-0.99)</b>	<b>0.79 (0.63-1.00)</b>	<b>0.74 (0.62-0.87)</b>
Endotoxin exposure mutually adjusted:			
School	1.08 (0.98-1.20)	1.09 (0.90-1.31)	<b>1.17 (1.02-1.35)</b>
Home	<b>0.89 (0.80-0.98)</b>	<b>0.77 (0.59-1.00)</b>	<b>0.73 (0.64-0.84)</b>
Endotoxin exposure mutually adjusted and adjusted for additional confounders*			
School	<b>1.06 (1.00-1.12)</b>	1.08 (0.96-1.20)	<b>1.13 (1.03-1.25)</b>
Home	<b>0.90 (0.82-1.00)</b>	<b>0.77 (0.61-0.98)</b>	<b>0.73 (0.61-0.86)</b>

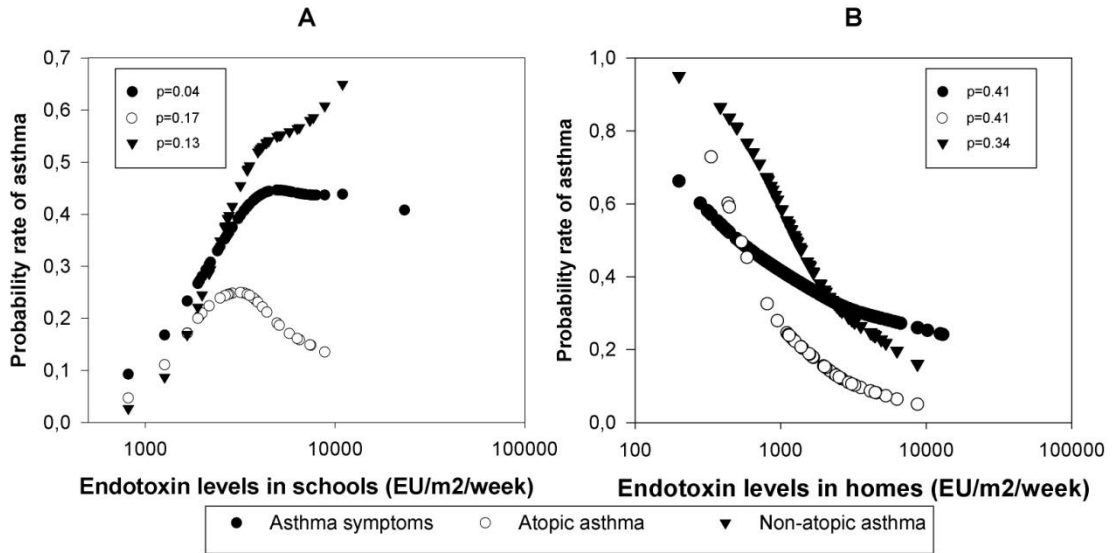
Original version



Corrected version



Original version



Corrected version

