

Table E1 Relative risks of asthma at 7 years in children born to mothers with pre-eclampsia when excluding women with chronic hypertension before pregnancy

<b>Registry linkage (n= 404,626)</b>				
Pre-eclampsia	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
No	388,769	3.5	1	1
Yes	15,857	4.9	1.37 (1.27, 1.47)	1.31 (1.22, 1.40)
Pre-eclampsia in combination with preterm birth	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
Neither	371,352	3.4	1	1
Preterm birth only	17,417	6.0	1.73 (1.63, 1.85)	1.65 (1.55, 1.76)
Pre-eclampsia only	12,180	4.4	1.27 (1.16, 1.38)	1.20 (1.10, 1.31)
Preeclampsia and preterm birth	3,677	6.5	1.89 (1.67, 2.15)	1.86 (1.64, 2.10)
Relative excess risk due to interaction			-0.11 (-0.38, 0.17)	0.00 (-0.27, 0.27)
<b>MoBa (n= 44,780)</b>				
Pre-eclampsia	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>b</sup>
No	43,083	4.8	1	1
Yes	1,697	6.4	1.35 (1.12, 1.63)	1.20 (1.00, 1.46)
Pre-eclampsia in combination with preterm birth	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>b</sup>
Neither	41,466	4.7	1	1
Preterm birth only	1,617	7.1	1.52 (1.27, 1.83)	1.40 (1.16, 1.68)
Pre-eclampsia only	1,322	5.3	1.14 (0.90, 1.43)	1.02 (0.81, 1.29)
Preeclampsia and preterm birth	375	10.4	2.23 (1.65, 3.01)	1.91 (1.41, 2.57)
Relative excess risk due to interaction			0.57 (-0.19, 1.33)	0.49 (-0.18, 1.16)

<sup>a</sup> Adjusted for maternal age, parity, education, asthma and child gender.

<sup>b</sup> Adjusted for maternal age, parity, education, asthma and child gender, maternal smoking during pregnancy and pre-pregnancy body-mass index.

Table E2 Relative risks of asthma at 7 years in children born to mothers with pre-eclampsia when excluding women results from multiple imputation analysis

<b>Registry linkage (n=406,907)</b>					
Pre-eclampsia	n	% asthma	Unadjusted RR(95% CI)	Adjusted RR (95 % CI) <sup>a</sup>	Adjusted RR (95 % CI) <sup>a,b</sup>
No	390,578	3.6	1	1	1
Yes	16,329	4.9	1.37 (1.28, 1.47)	1.31 (1.22, 1.40)	1.31 (1.22, 1.40)
Pre-eclampsia in combination with preterm birth	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>	Adjusted RR (95 % CI) <sup>a,b</sup>
Neither	372,992	3.4	1	1	1
Preterm birth only	17,586	6.0	1.74 (1.64, 1.85)	1.67 (1.57, 1.77)	1.67 (1.57, 1.77)
Pre-eclampsia only	12,466	4.4	1.28 (1.17, 1.39)	1.22 (1.12, 1.32)	1.21 (1.12, 1.32)
Preeclampsia and preterm birth	3,863	6.4	1.87 (1.65, 2.11)	1.80 (1.59, 2.03)	1.80 (1.59, 2.03)
Relative excess risk due to interaction			-0.15 (-0.42, 0.12)		
<b>MoBa (n=45,028)</b>					
Pre-eclampsia	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>c</sup>	
No	43,281	4.8	1	1	
Yes	1,747	6.4	1.33 (1.11, 1.60)	1.20 (1.00, 1.45)	
Pre-eclampsia in combination with preterm birth	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>c</sup>	
Neither	41,645	4.7	1	1	
Preterm birth only	1,636	7.1	1.51 (1.26, 1.82)	1.41 (1.18, 1.69)	
Pre-eclampsia only	1,352	5.3	1.12 (0.89, 1.41)	1.02 (0.81, 1.29)	
Preeclampsia and preterm birth	395	10.1	2.16 (1.61, 2.91)	1.89 (1.41, 2.52)	
Relative excess risk due to interaction					

<sup>a</sup> Adjusted for maternal age, parity, education, asthma and child gender.

<sup>b</sup> Additional adjustment for maternal smoking during pregnancy available for 84% of the study population.

<sup>c</sup> Adjusted for maternal age, parity, education, asthma and child gender, maternal smoking during pregnancy and pre-pregnancy body-mass index.

Table E3 Relative risks of asthma at 7 years in children born to mothers with pre-eclampsia when stratified by parity

<b>Registry linkage (n=406,907)</b>					
Nulliparous (n= 164,683)	Pre-eclampsia	N	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
	No	154,958	3.7	1	1
	Yes	9,725	4.9	1.35 (1.23, 1.48)	1.31 (1.19, 1.43)
Parous (n= 242,224)	Pre-eclampsia	N	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
	No	235,620	3.5	1	1
	Yes	6,604	4.8	1.37 (1.23, 1.53)	1.33 (1.19, 1.48)
<b>MoBa (n=45,028)</b>					
Nulliparous (n= 19,511)	Pre-eclampsia	N	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>b</sup>
	No	18,413	4.9	1	1
	Yes	1,098	6.5	1.33 (1.05, 1.68)	1.20 (0.94, 1.52)
Parous (n= 25,517)	Pre-eclampsia	N	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>b</sup>
	No	24,868	4.7	1	1
	Yes	649	6.2	1.31 (0.96, 1.77)	1.21 (0.89, 1.64)

<sup>a</sup> Adjusted for maternal age, education, asthma and child gender.

<sup>b</sup> Adjusted for maternal age, education, asthma and child gender, maternal smoking during pregnancy and pre-pregnancy body-mass index.

Table E4 Relative risks of maternal report of current doctor diagnosed asthma at 7 years in children born to mothers with pre-eclampsia

Pre-eclampsia	n	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
No	25,508	5.7	1	1
Yes	988	8.6	1.52 (1.23, 1.88)	1.37 (1.10, 1.71)
Pre-eclampsia in combination with preterm birth	N	% asthma	Unadjusted RR (95% CI)	Adjusted RR (95 % CI) <sup>a</sup>
Neither	24,525	5.5	1	1
Preterm birth only	983	9.4	1.69 (1.38, 2.08)	1.60 (1.26, 2.02)
Pre-eclampsia only	760	6.9	1.26 (0.95, 1.65)	1.11 (0.82, 1.51)
Preeclampsia and preterm birth	228	14.1	2.56 (1.85, 3.54)	2.62 (1.77, 3.89)
Relative excess risk due to interaction			0.61 (-0.34, 1.55)	0.91 (-0.22, 2.05)

<sup>a</sup> Adjusted for maternal age, parity, education, asthma and child gender, maternal smoking during pregnancy and pre-pregnancy body-mass index.

Table E5 Logistic regression model of the direct and indirect effects through preterm birth, low birth weight and delivery by caesarean section of pre-eclampsia on asthma at 7 years

<b>Registry linkage (n=406,907)</b>		
Component	Adjusted Odds Ratio <sup>a</sup>	(95% CI)
Direct Effect	1.11	(1.04, 1.18)
Indirect Effect	1.21	(1.18, 1.24)
Total Effect	1.34	(1.26, 1.43)
<b>MoBa (n=45,028)</b>		
Component	Adjusted Odds Ratio <sup>b</sup>	(95% CI)
Direct Effect	1.03	(0.83, 1.27)
Indirect Effect	1.19	(1.11, 1.27)
Total Effect	1.22	(0.98, 1.52)

<sup>a</sup> Adjusted for maternal age, parity, education, asthma and child gender.

<sup>b</sup> Adjusted for maternal age, parity, education, asthma and child gender, maternal smoking during pregnancy and pre-pregnancy body-mass index.