

## SUPPLEMENTAL MATERIAL

Figure S1. Directed acyclic graph representing the causal assumptions used for covariate selection

The DAG was created with DAGitty version 2.3 (<http://dagitty.net/>).

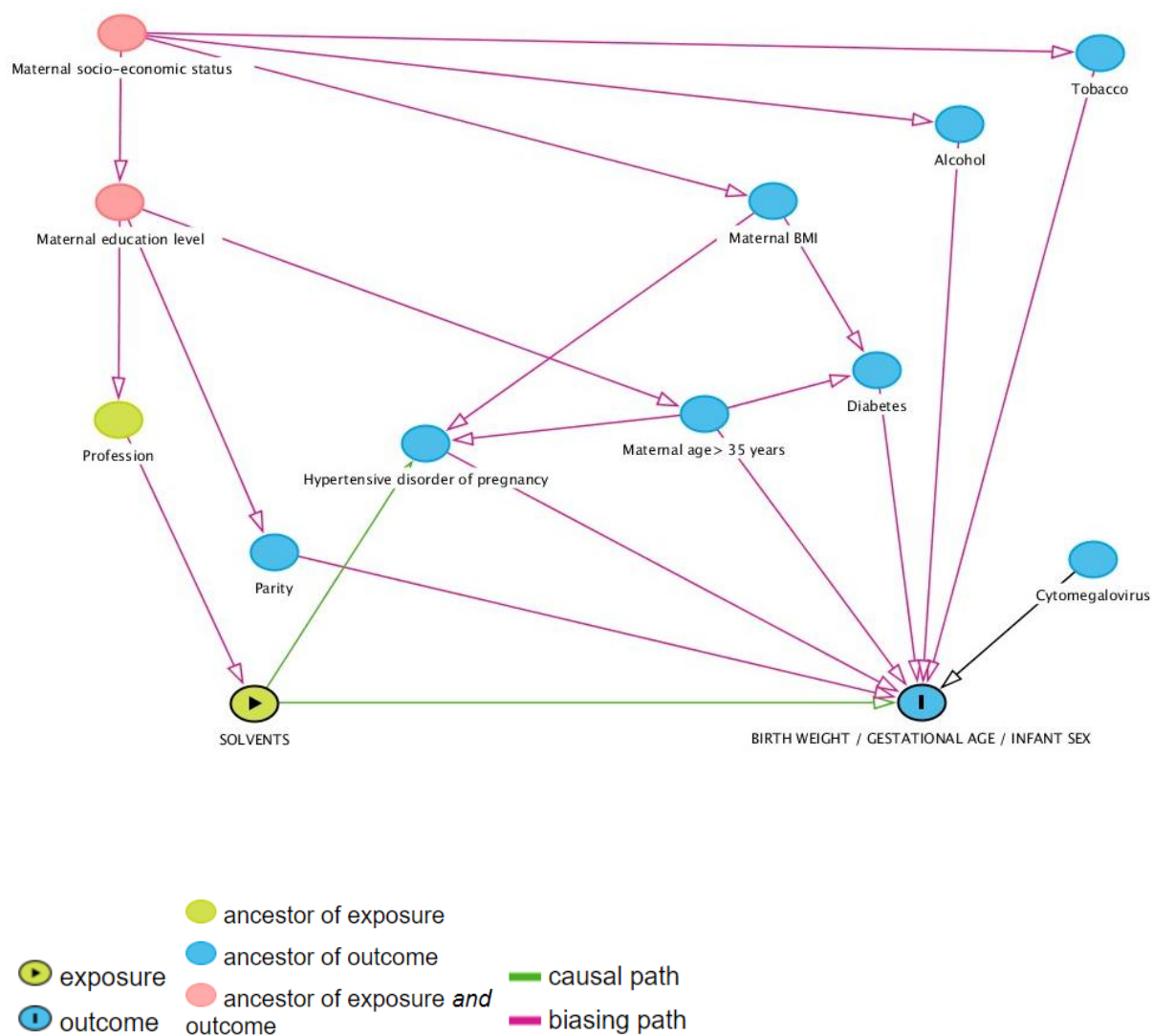


Table S1. Notation of probability and level of exposure for each group of solvents in the JEM.

	<b>Oxygenated solvents</b>	<b>Petroleum solvents</b>	<b>Chlorinated solvents</b>
<b>Probability of exposure</b>	0: not exposed 10: [1%–10%] 20: ]10%–20%] 30: ]20%–30%] 40: ]30%–40%] 50: ]40%–50%] 60: ]50%–60%] 70: ]60%–70%] 80: ]70%–80%] 90: ]80%–90%] 100: > 90%	0: < 1 % 1: [1%–10%] 2: ]10%–50%] 3: ]50%–90%] 4: > 90 %	0: not exposed 10: [1%–10%] 20: ]10%–20%] 30: ]20%–30%] 40: ]30%–40%] 50: ]40%–50%] 60: ]50%–60%] 70: ]60%–70%] 80: ]70%–80%] 90: ]80%–90%] 100: > 90%
<b>Level of exposure</b>	1: very low 2: low 3: moderate 4: high	1: low 2: moderate 3: high	1: very low 2: low 3: moderate 4: high

Table S2. Probability and level of occupational exposure to oxygenated solvents for women of the ELFE cohort who worked during pregnancy (N=12,910 women).

Oxygenated solvents		Level of exposure				
Probability of exposure		Not exposed (N)	Very low (N)	Low (N)	Moderate (N)	Total (N)
Not exposed	<i>Not exposed</i>	9988				9988
]1%–10%]	<i>Likely exposed</i>		15			15
]10%– 20%]			23			23
]20%–30%]			18			18
]30%–40%]			220	8		228
]40%–50%]			13		1	14
]50%–60%]			516			516
]60%–0%]			2	1		3
]70%–80%]			51	9	2	62
]80%–90%]			1	5		6
> 90%	<i>Certainly exposed</i>		1785	249	3	2037
Total		9988	2644	272	6	12,910

Table S3. Probability and level of occupational exposure to petroleum solvents for women of the ELFE cohort who worked during pregnancy (N=12,897 women).

Petroleum solvents		Level of exposure			
Probability of exposure		Not exposed (N)	Low (N)	Moderate (N)	Total (N)
Not exposed	<i>Not exposed</i>	12,036			12,036
]1%–10%]	<i>Possibly exposed</i>		743		743
]10%–50%]			79	1	80
]50%–90%]			24		24
> 90 %			12	2	14
Total		12,036	858	3	12,897

Table S4. Probability and level of occupational exposure to chlorinated solvents for women of the ELFE cohort who worked during pregnancy (N=12,976 women).

Chlorinated solvents		Level of exposure		
Probability of exposure		Not exposed (N)	Very low (N)	Total (N)
Not exposed	<i>Not exposed</i>	12,786		12,786
]1%–5%]	<i>Possibly exposed</i>		164	164
]5%–10%]			14	14
]10%–50%]			1	1
]50%–55%]			11	11
Total		12,786	190	12,976

Table S5. Probability of occupational exposure to subgroups of solvents for women of the ELFE cohort who worked during pregnancy (N=13,026 women).

			Likely exposed	Certainly exposed at a very low level	Certainly exposed at least at a low level
Solvents	Subgroups	N exposed (%)	N exposed (%)	N exposed (%)	N exposed (%)
Oxygenated	Alcohols	2758 (21.2)	815 (6.3)	93 (0.7)	1850 (14.2)
	Diethyl ether	1742 (13.4)	1742 (13.4)	0	0
	Ethylene glycol	1 (0.008)	1 (0.008)	0	0
	Ketones and esters	367 (2.8)	189 (1.5)	93 (0.7)	85 (0.6)
	Tetrahydrofurane	30 (0.2)	30 (0.2)	0	0
Petroleum	Benzene	8 (0.06)	7 (0.05)	0	1 (0.001)
	Fuel	19 (0.1)	18 (0.1)	0	1 (0.001)
	Kerosene	16 (0.1)	16 (0.1)	0	0
	Special essence	206 (1.6)	205 (1.6)	0	1 (0.001)
	White spirit	748 (5.8)	737 (5.7)	0	11 (0.1)
Chlorinated	Dichloromethane	166 (1.3)	166 (1.3)	0	0
	Tetrachloroethylene	13 (0.1)	13 (0.1)	0	0
	Trichloroethylene	9 (0.07)	9 (0.07)	0	0
	Trichloromethane	163 (1.3)	163 (1.3)	0	0

Table S6. Relation between exposure to oxygenated solvents and the risk of SGA status, birthweight, and head circumference (threshold with a probability of exposure > 50 %) (N=13,026 children).

				SGA		Birth weight		Head circumference	
Solvent	Exposure	Not SGA: N (%)	SGA: N (%)	Crude OR (95% CI)	Adjusted OR* (95% CI)	Crude $\beta$ (95% CI)	Adjusted $\beta$ ** (95% CI)	Crude $\beta$ (95% CI)	Adjusted $\beta$ ** (95% CI)
Oxygenated	Not exposed	8783 (90.5)	924 (9.5)	ref	ref	ref	ref	ref	ref
	Likely exposed	256 (87.7)	36 (12.3)	1.34 (0.94;1.91)	1.33 (0.93;1.91)	-42.38 (-97.01; 12.25)	-24.75 (-70.45; 20.95)	-0.07 (-0.22; 0.12)	-0.03 (-0.19; 0.12)
	Certainly exposed at a very low level	2068 (89.8)	236 (10.2)	1.08 (0.93;1.26)	1.06 (0.91;1.24)	-20.53 (-41.79; 0.73)	-1.87 (-20.24; 16.50)	-0.07 (-0.13; -0.003)	-0.03 (-0.09; 0.03)
	Certainly exposed at least at a low level	229 (88.8)	29 (11.2)	1.20 (0.81; 1.78)	1.19 (0.80;1.77)	-28.19 (-85.66; 29.29)	-34.21 (-83.49; 15.07)	-0.24 (-0.42; -0.06)	-0.25 (-0.42; -0.09)

\*Adjusted for maternal education level, smoking status, alcohol consumption, and body mass index

\*\* Adjusted for gestational age (linear and quadratic form), newborn sex, maternal education level, smoking status, alcohol consumption, and body mass index

Table S7. Relation between exposure to oxygenated solvents and the risk of SGA status, birthweight, and head circumference (certainly exposure to oxygenated solvent, aggregated) (N=13,026 children).

				SGA		Birthweight		Head circumference	
Solvent	Exposure	Not SGA: N (%)	SGA: N (%)	Crude OR (95% CI)	Adjusted OR* (95% CI)	Crude $\beta$ (95% CI)	Adjusted $\beta$ ** (95% CI)	Crude $\beta$ (95% CI)	Adjusted $\beta$ ** (95% CI)
Oxygenated	Not exposed	8783 (90.5)	924 (9.5)	ref	ref	ref	ref	ref	ref
	Likely exposed	762 (6.7)	104 (8.4)	1.30 (1.05-1.61)	1.24 (0.99-1.55)	-39.42 (-71.96; -6.88)	-16.45 (-44.49; 11.59)	-0.09 (-0.19; 0.02)	-0.03 (-0.13; 0.06)
	Certainly exposed	1791 (90.1)	197 (9.9)	1.05 (0.89-1.23)	1.04 (0.89-1.23)	-16.51 (-39.08; 6.07)	-8.42 (-27.38; 10.55)	-0.08 (-0.15; -0.01)	-0.06 (-0.13; 0.01)

\*Adjusted for maternal education level, smoking status, alcohol consumption, and body mass index

\*\* Adjusted for gestational age (linear and quadratic form), newborn sex, maternal education level, smoking status, alcohol consumption, and body mass index

Table S8. Relation between exposure to solvents by family and head circumference (additionally adjusted for the mode of delivery) (N=13,026 children).

Solvent	Exposure	Head circumference ( $\beta$ (95% CI)) ***
Oxygenated	Not exposed	ref
	Likely exposed	-0.04 (-0.13; 0.06)
	Certainly exposed at a very low level	-0.03 (-0.09; 0.04)
	Certainly exposed at least at a low level	-0.27 (-0.44; -0.10)
Petroleum	Not exposed	ref
	Possibly exposed	-0.06 (-0.16; 0.03)
Chlorinated	Not exposed	ref
	Possibly exposed	-0.25 (-0.43; -0.06)

\*\*\*Adjusted for gestational age (linear and quadratic form), newborn sex, maternal education level, smoking status, alcohol consumption, body mass index, and mode of delivery