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### **Supplemental Material**

#### **Air Pollution and Glucose Metabolism: An Analysis in Non-Diabetic Participants of the Heinz Nixdorf Recall Study**

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**Table S1.** Spearman correlation coefficients between 28- and 91-day mean PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>2</sub>, and PN<sub>AM</sub> exposure levels from the EURAD model.

		28-Day Exposures				91-Day Exposures			
		PM <sub>2.5</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	PN <sub>AM</sub> (n/mL)	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	PN <sub>AM</sub> (n/mL)
28-Day Exposures	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	1	0.89	0.73	0.53	0.63	0.54	0.49	0.25
	PM <sub>10</sub> (µg/m <sup>3</sup> )	0.89	1	0.77	0.51	0.61	0.73	0.54	0.29
	NO <sub>2</sub> (µg/m <sup>3</sup> )	0.73	0.77	1	0.33	0.70	0.68	0.81	0.13
	PN <sub>AM</sub> (n/mL)	0.53	0.51	0.33	1	0.29	0.29	0.25	0.59
91-Day Exposures	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	0.63	0.61	0.70	0.29	1	0.85	0.82	0.47
	PM <sub>10</sub> (µg/m <sup>3</sup> )	0.54	0.73	0.68	0.29	0.85	1	0.79	0.48
	NO <sub>2</sub> (µg/m <sup>3</sup> )	0.49	0.54	0.81	0.25	0.82	0.79	1	0.34
	PN <sub>AM</sub> (n/mL)	0.25	0.29	0.13	0.59	0.47	0.48	0.34	1

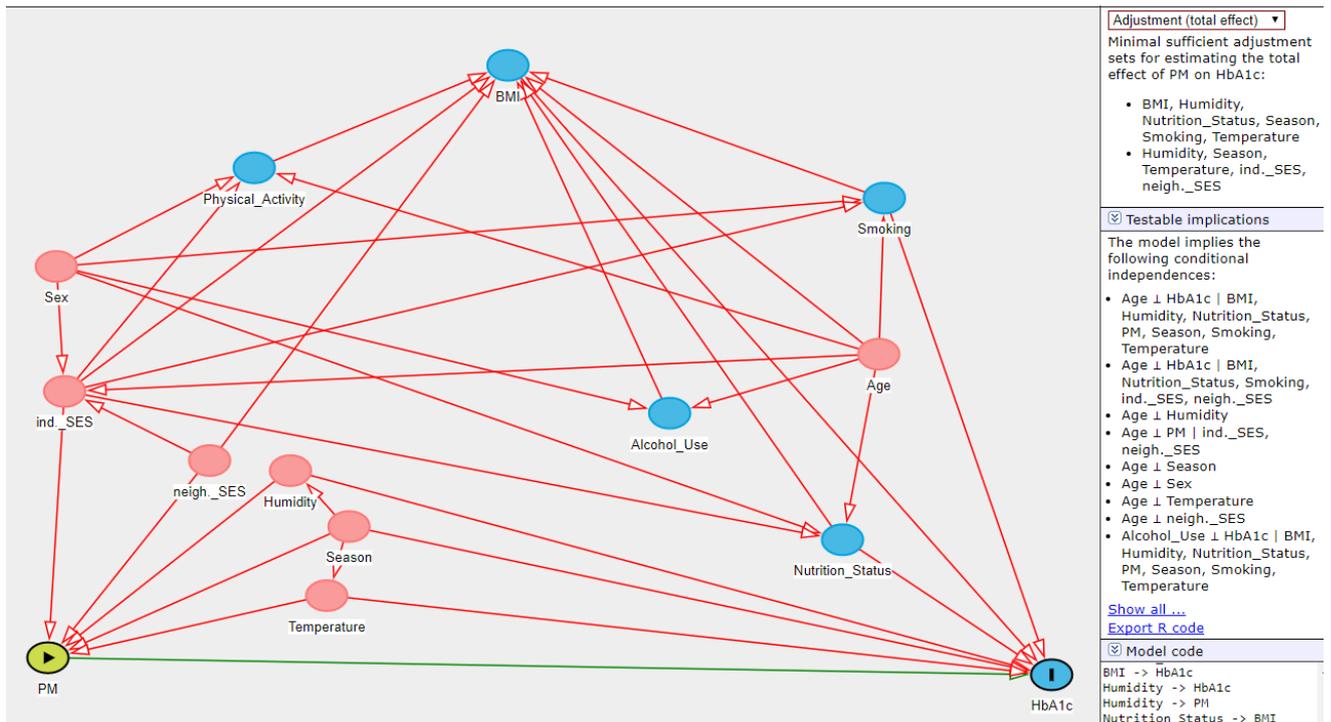
Abbreviations: PM, particulate matter; PN<sub>AM</sub>, accumulation mode particle number; EURAD, EUROpean Air Pollution Dispersion

**Table S2.** Demographic characteristics of observations excluded from analysis due to missing exposure, outcome, or covariate data at baseline or follow-up examination.

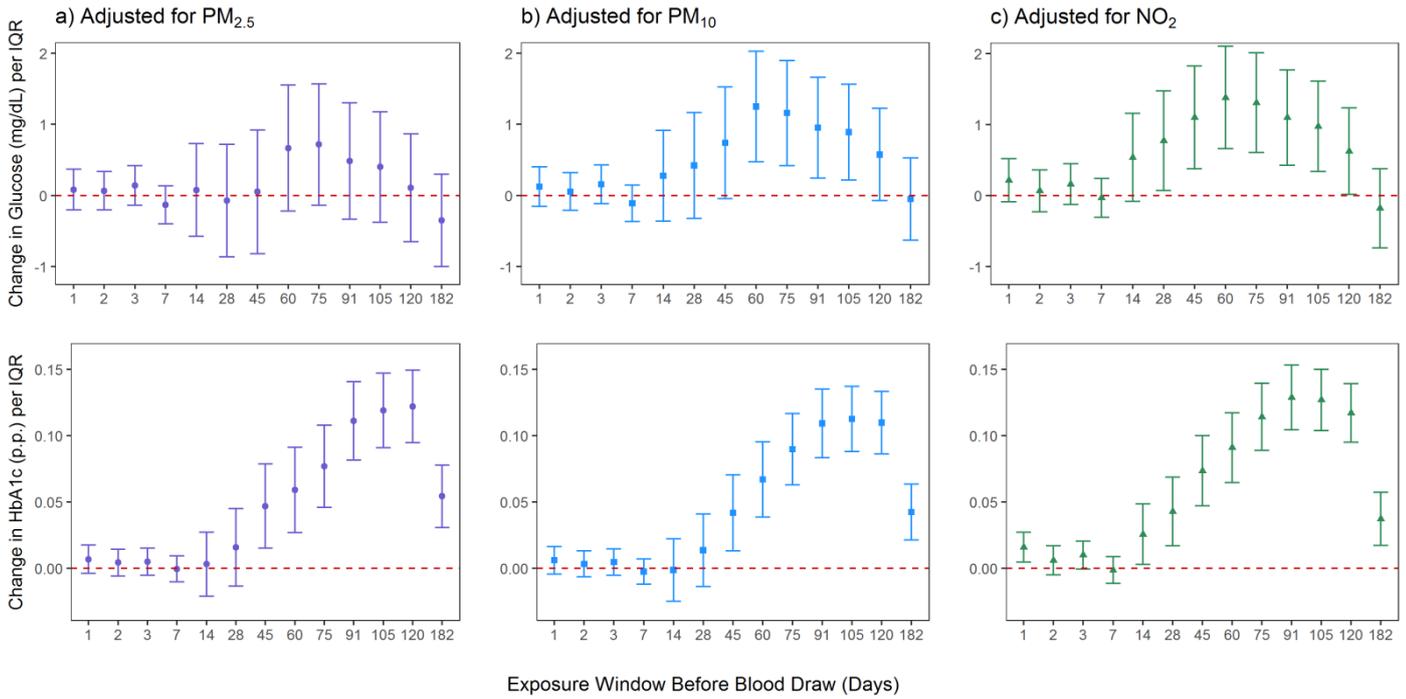
Covariate	Baseline (n=560)	Follow-Up (n=330)
	Mean ± SD or n (%)	Mean ± SD or n (%)
Age (years)	59.2 ± 8.1	63.8 ± 7.5
HbA1c (percentage points)	5.5 ± 0.7	5.5 ± 0.5
<i>Missing</i>	47 (8.4)	72 (21.2)
Blood Glucose (mg/dL)	110.2 ± 23.9	106.2 ± 15.2
<i>Missing</i>	25 (4.5)	24 (7.3)
Time since Last Meal (hours)	7.9 ± 5.5	12.2 ± 4.6
<i>Missing</i>	55 (9.8)	6 (1.8)
Body Mass Index (BMI; kg/m <sup>2</sup> )	27.9 ± 4.7	27.3 ± 4.1
<i>Missing</i>	27 (4.8)	12 (3.6)
Neighborhood Unemployment (%)	13.0 ± 3.8	-
Cumulative smoking (pack-years) <sup>a</sup>	29.8 ± 25.6	-
<i>Missing</i>	45 (8.0)	-
Sex, Male	281 (50.2)	161 (48.8)
Physical Activity, yes	269 (48.0)	181 (54.9)
<i>Missing</i>	1 (0.2)	7 (2.1)
Statin Use, yes	23 (4.1)	62 (18.8)
<i>Missing</i>	300 (53.6)	0 (0.0)
ETS Exposure, yes	227 (40.5)	84 (25.5)
<i>Missing</i>	16 (2.9)	8 (2.4)
Season at Blood Draw		
<i>Spring</i>	138 (24.6)	91 (27.6)
<i>Summer</i>	98 (17.5)	93 (28.2)
<i>Fall</i>	80 (14.3)	76 (23.0)
<i>Winter</i>	244 (43.6)	70 (21.2)
Smoking Status		
<i>Never Smoker</i>	225 (40.2)	124 (37.6)
<i>Former Smoker</i>	186 (33.2)	141 (42.7)
<i>Current Smoker</i>	140 (25.0)	58 (17.6)
<i>Missing</i>	9 (1.6)	7 (2.1)
Education Level		
<i>≤10 years</i>	84 (15.0)	40 (12.1)
<i>11-13 years</i>	304 (54.3)	165 (50.0)
<i>14-17 years</i>	101 (18.0)	77 (23.3)
<i>≥18 years</i>	56 (10.0)	43 (13.0)
<i>Missing</i>	15 (2.7)	5 (1.5)
Nutrition Index		
<i>&lt;10</i>	66 (11.8)	43 (13.0)
<i>11-12</i>	162 (28.9)	103 (31.2)
<i>13-15</i>	109 (19.5)	54 (16.4)
<i>&gt;15</i>	139 (24.8)	102 (30.9)
<i>Missing</i>	84 (15.0)	28 (8.5)
Alcoholic Drinks per Week		
<i>0</i>	233 (41.6)	96 (29.1)
<i>1-3</i>	83 (14.8)	64 (19.4)
<i>4-6</i>	45 (8.0)	24 (7.3)
<i>&gt;6</i>	92 (16.4)	90 (27.3)
<i>Missing</i>	107 (19.1)	56 (17.0)

Abbreviations: ETS, environmental tobacco smoke

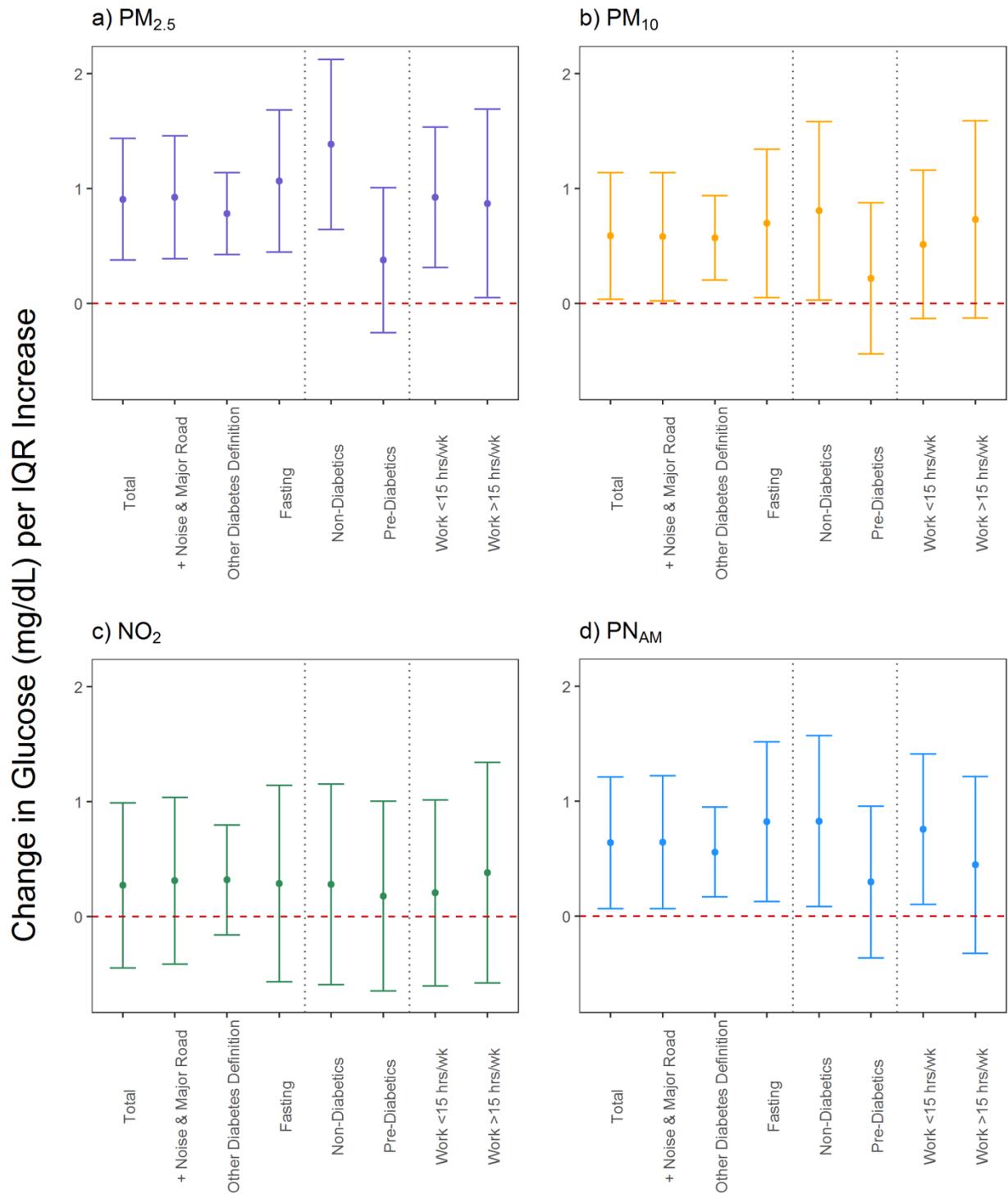
<sup>a</sup>Among current or former smokers only



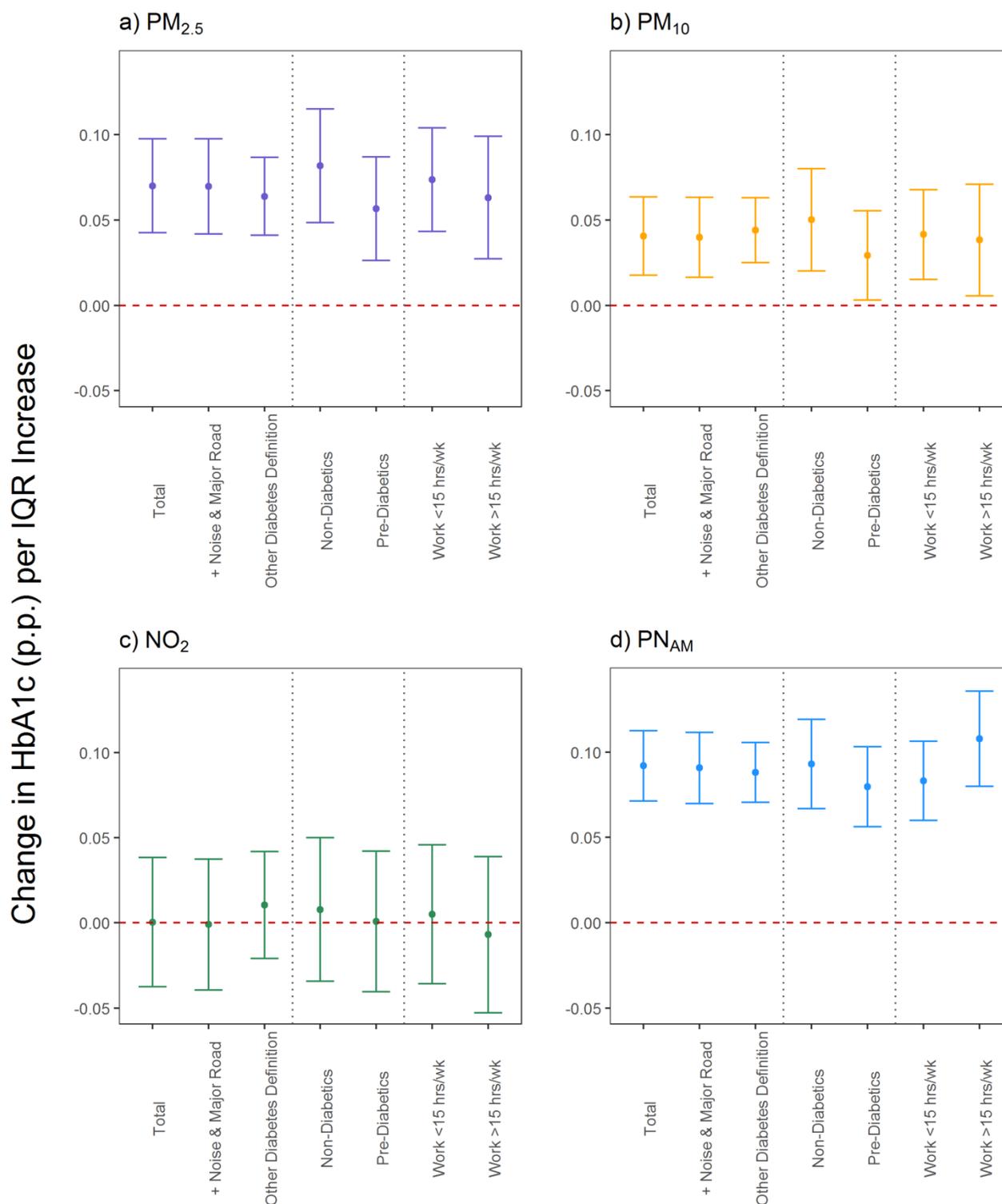
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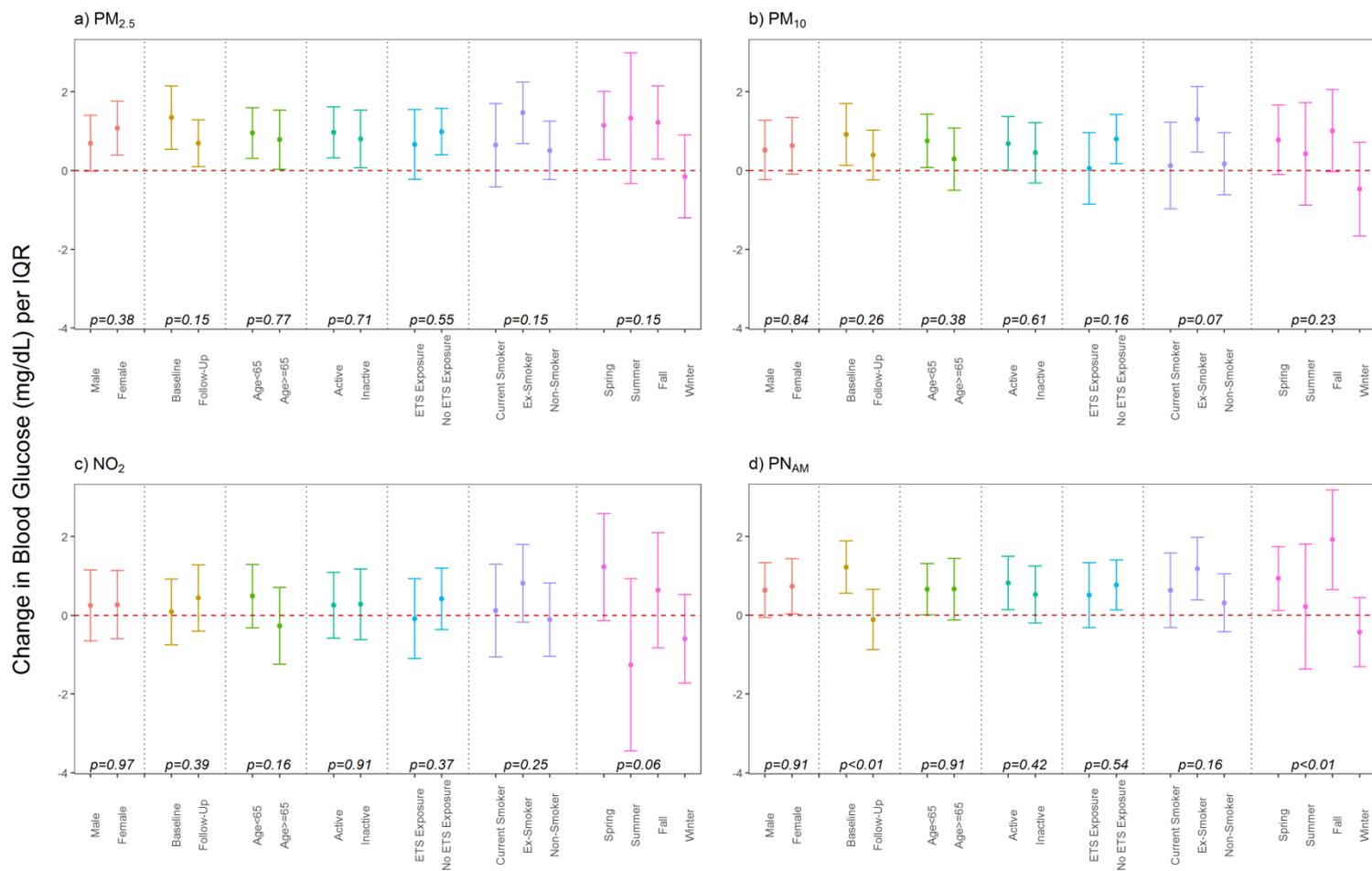
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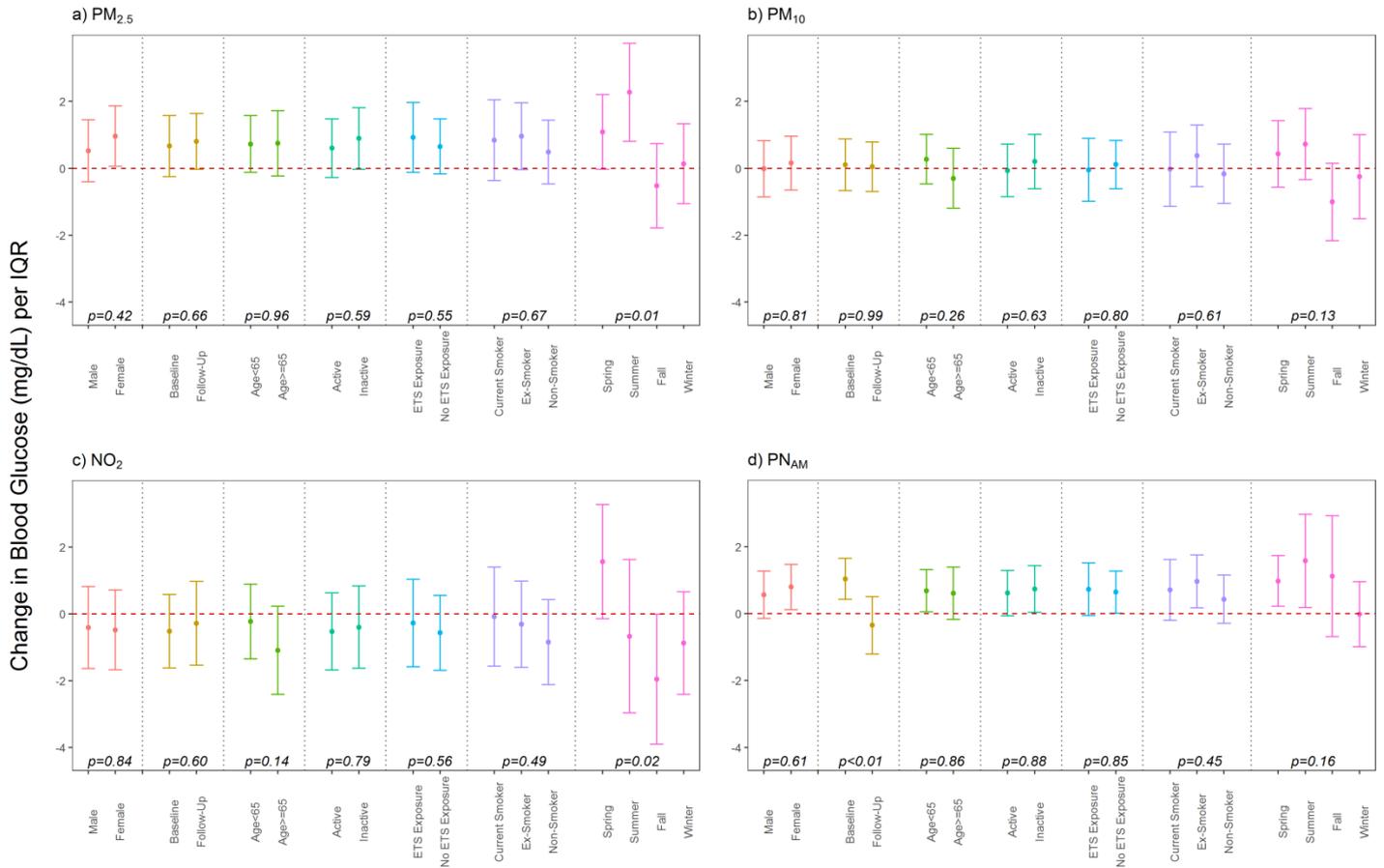
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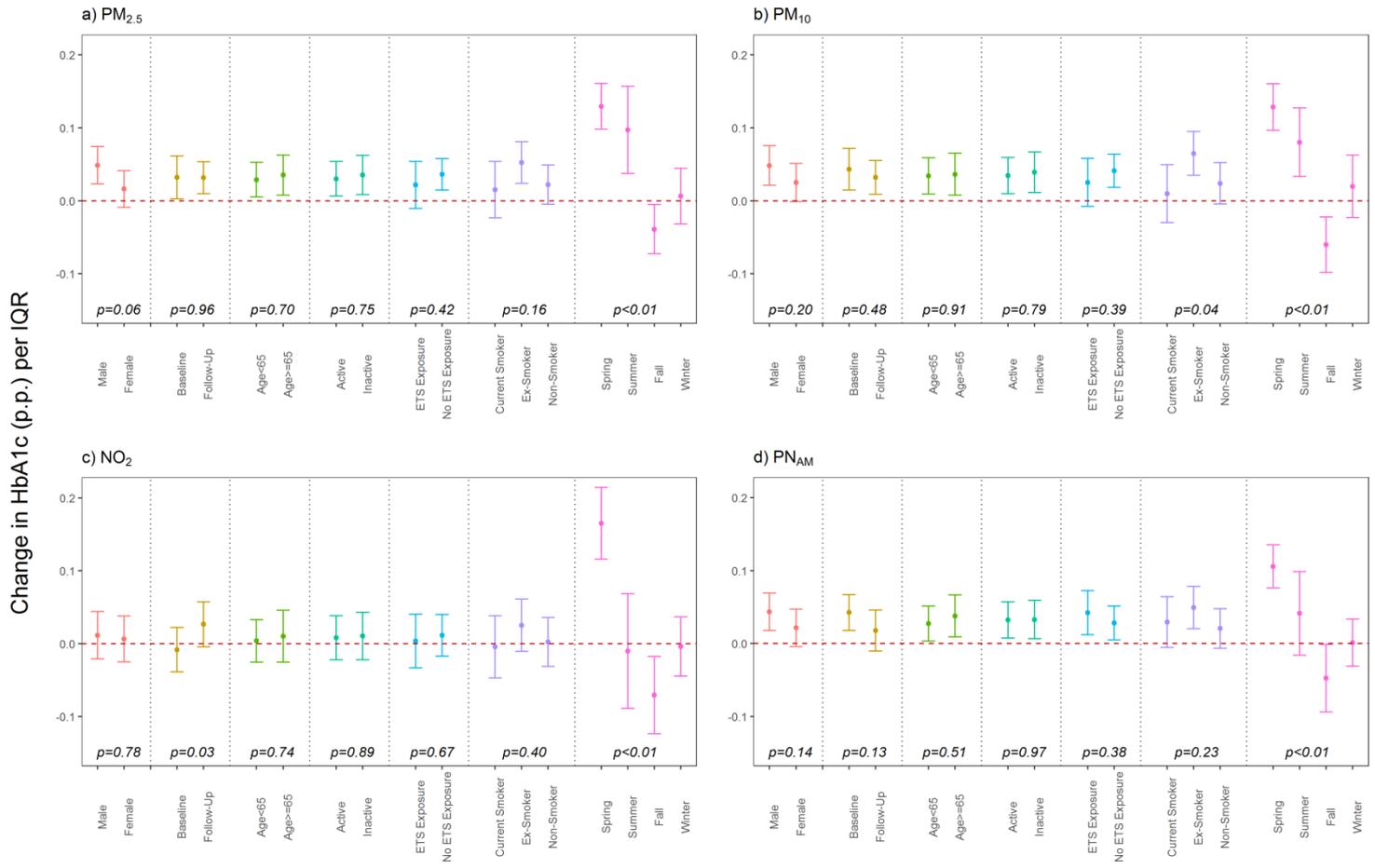
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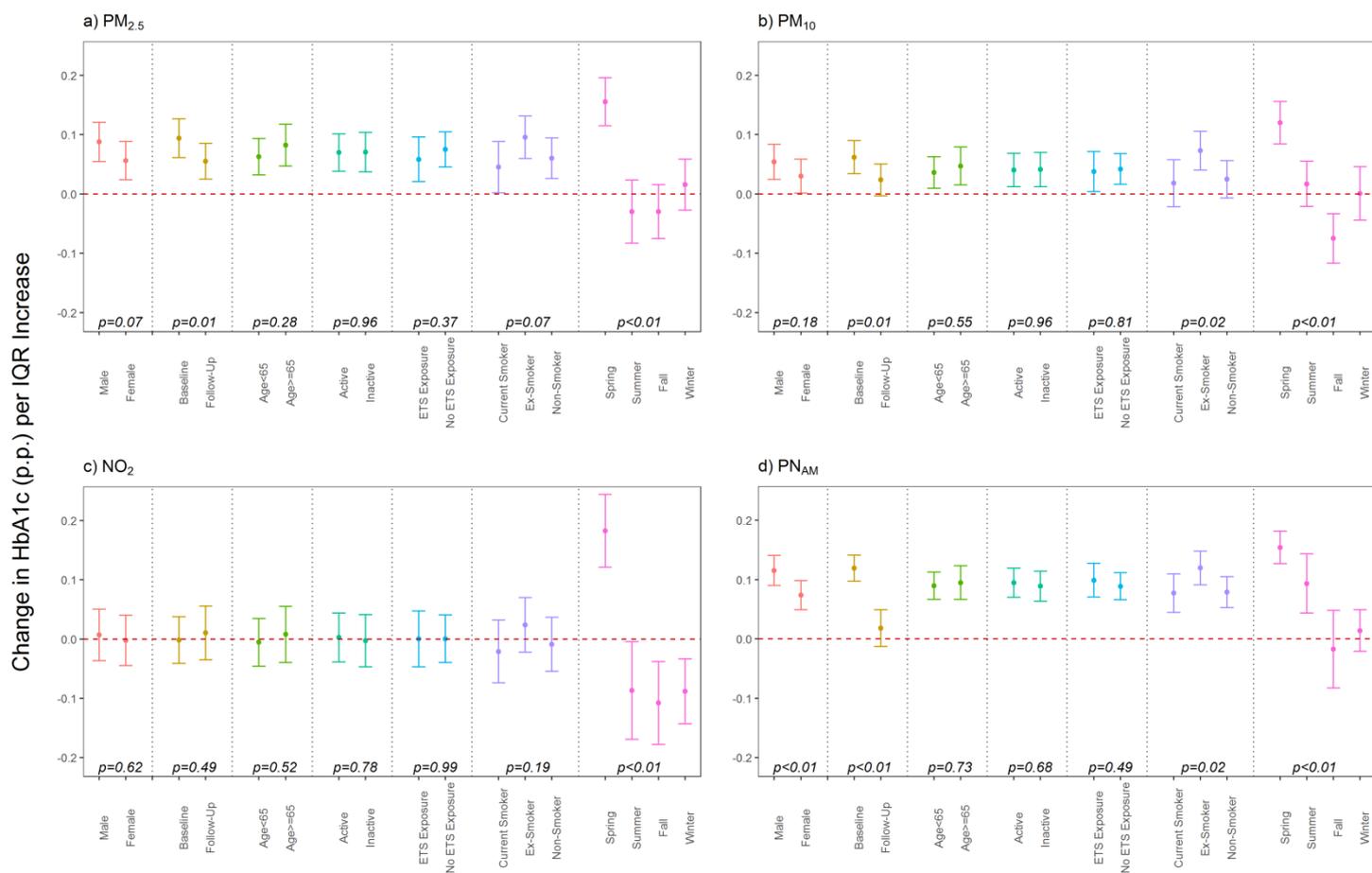
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