Short-term effects of air pollution on blood pressure

Short title: Short-term effects of air pollution on BP

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Supplementary Material

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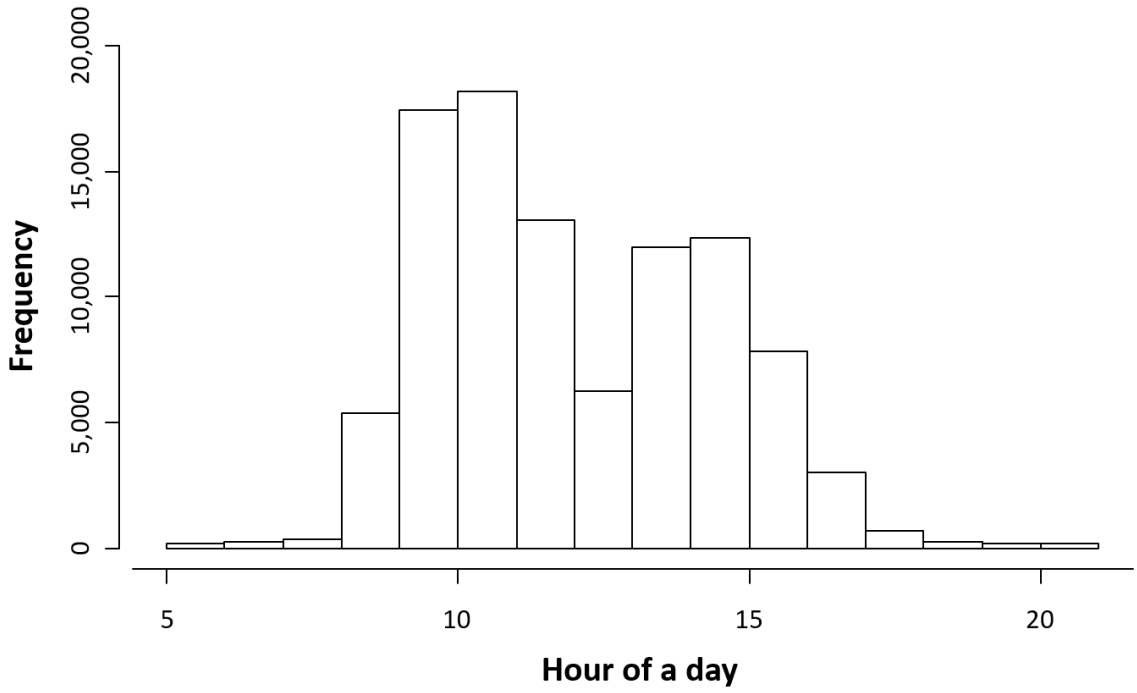
Supplementary Figure 1. Histogram of the hour a day when blood pressure and pulse rate measurements were done

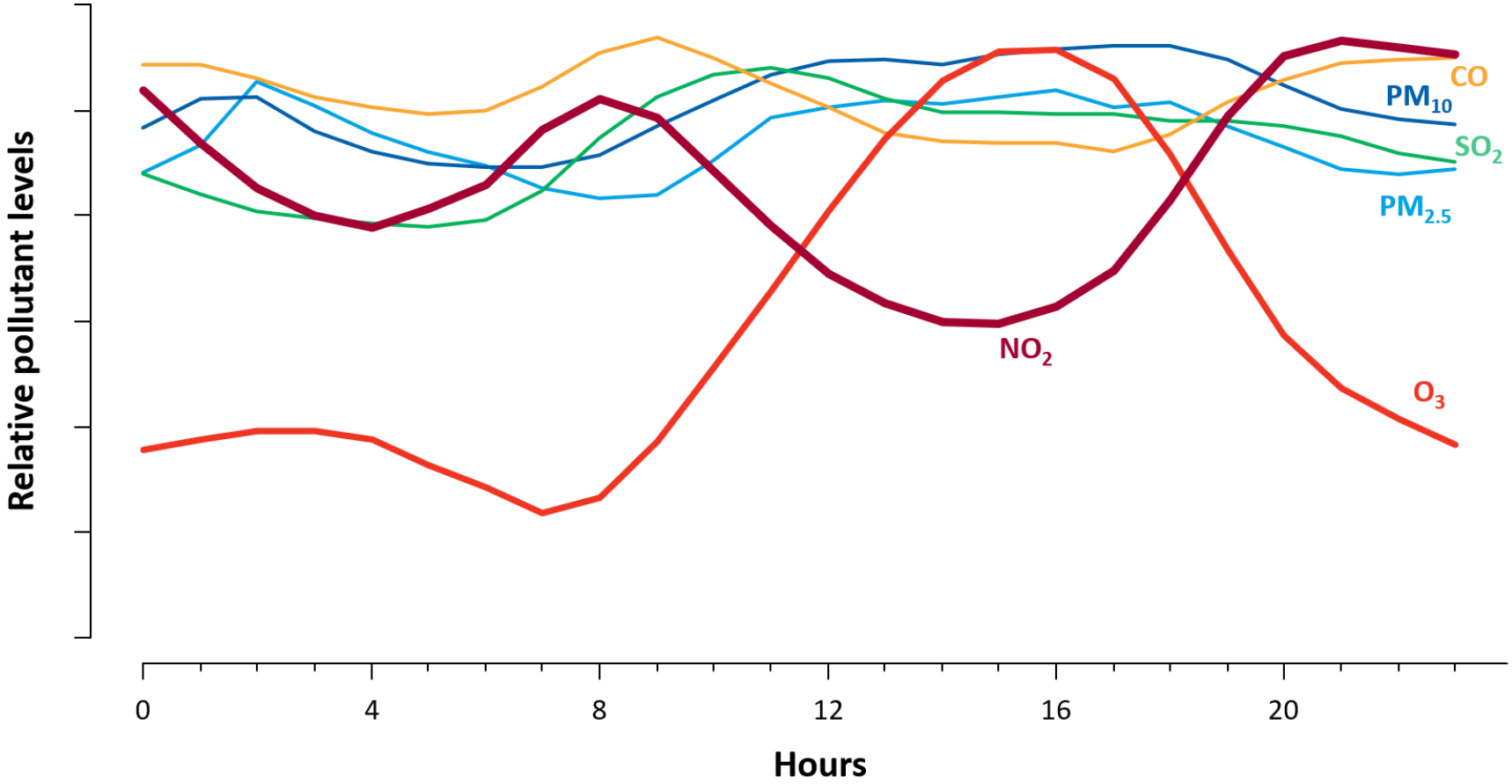


Supplementary Table 1. Correlation matrix among air pollutants, temperature, and humidity during the study period

	$PM_{2.5}$	PM_{10}	SO_2	CO	O_3	NO_2	Temperature	Humidity
$PM_{2.5}$	–	0.64	0.40	0.58	0.09	0.33	-0.05	0.07
PM_{10}		–	0.34	0.42	0.07	0.21	-0.16	-0.10
SO_2			–	0.49	0.05	0.33	-0.20	-0.30
CO				–	-0.37	0.67	-0.37	0.17
O_3					–	-0.58	0.50	-0.40
NO_2						–	-0.31	0.13
Temperature							–	0.03
Humidity								–

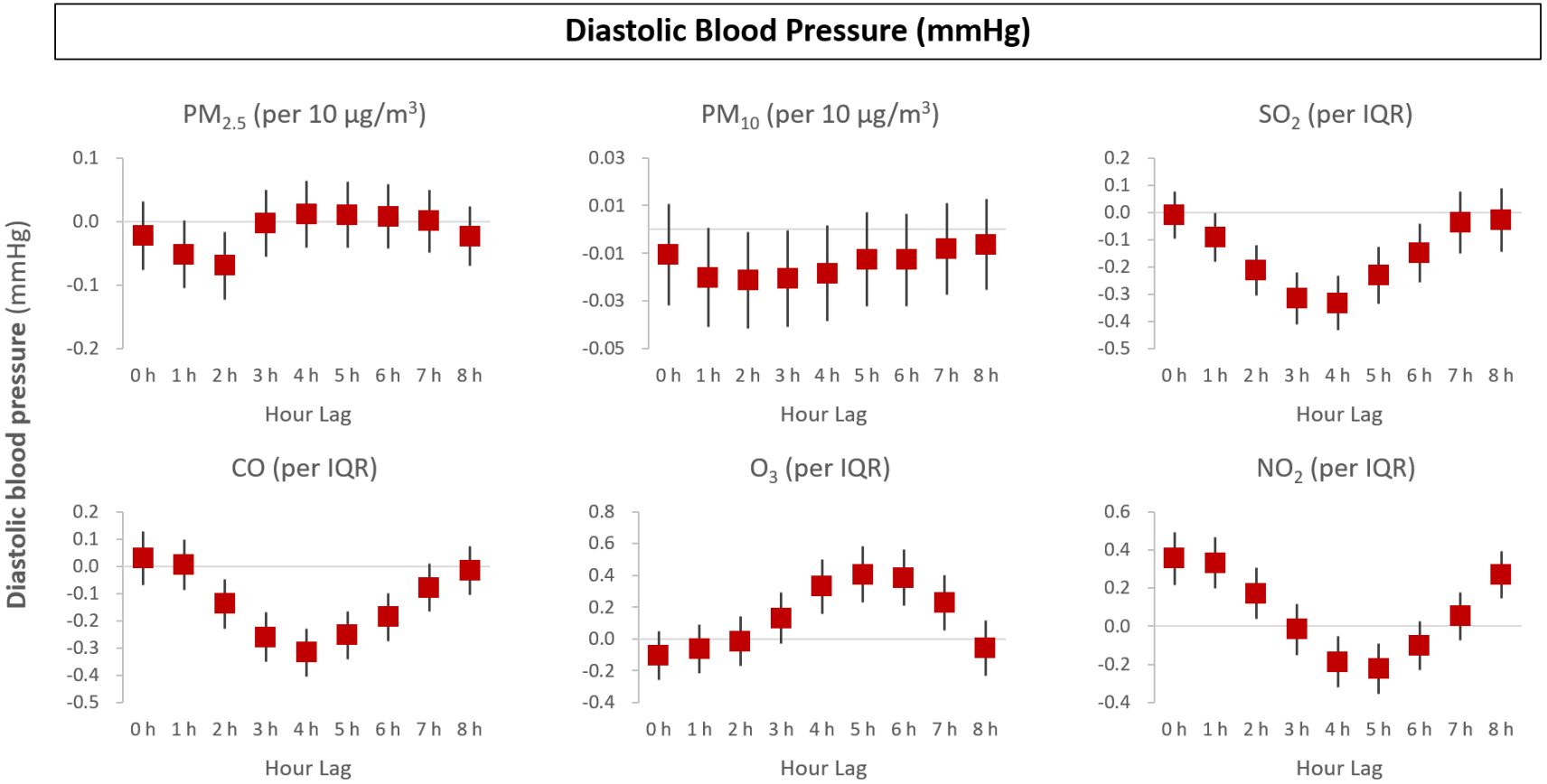
Abbreviations: $PM_{2.5}$, fine particulate matter with an aerodynamic diameter of <2.5 μm; PM_{10}, fine particulate matter with an aerodynamic diameter of <10 μm; CO, carbon monoxide; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; O_3, ozone.

Supplementary Figure 2. Relative concentrations of air pollutants according to time in a day during the study period



Abbreviations: $PM_{2.5}$, fine particulate matter with an aerodynamic diameter of <2.5 μm; PM_{10}, fine particulate matter with an aerodynamic diameter of <10 μm; CO, carbon monoxide; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; O_3, ozone.

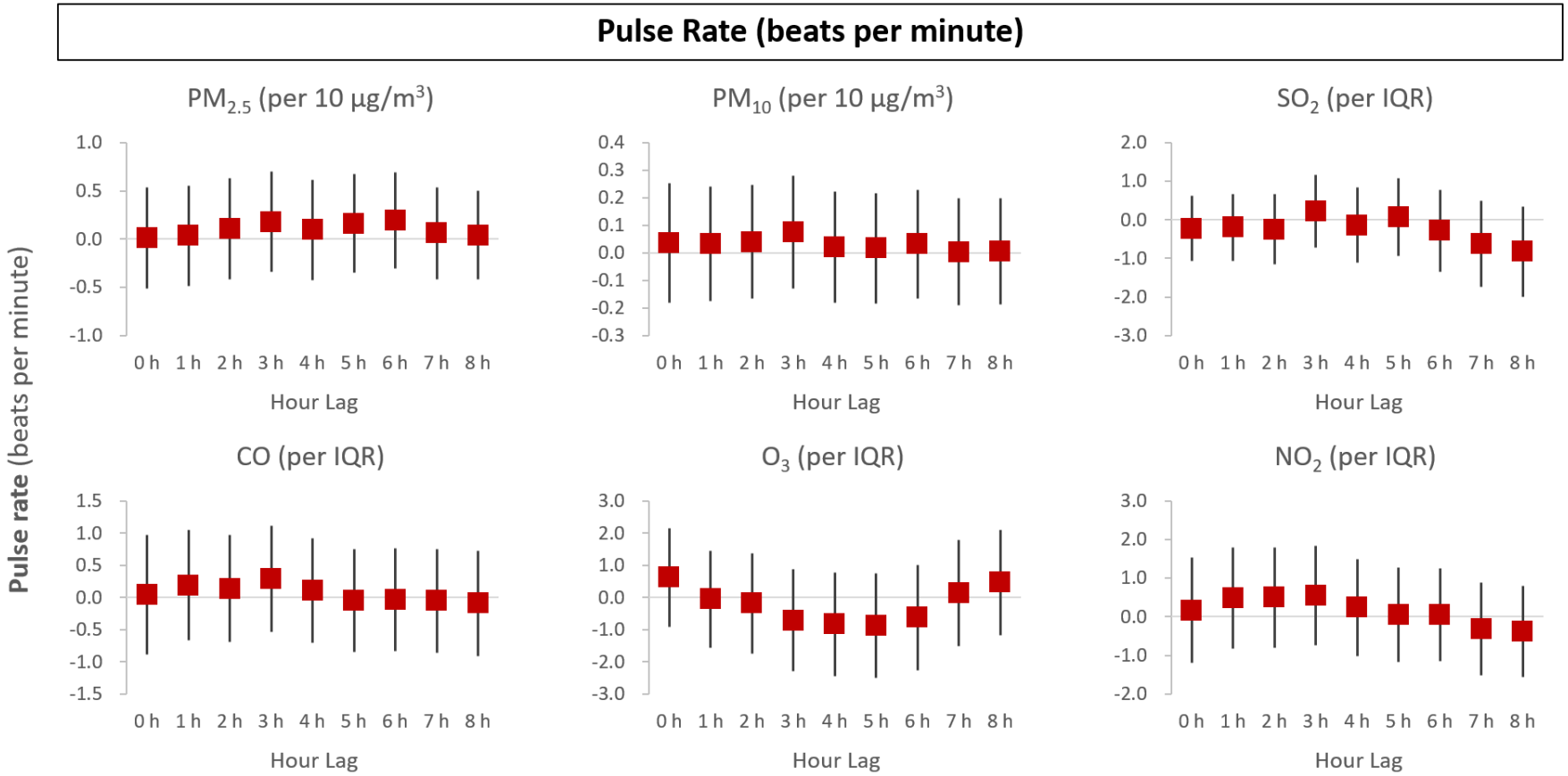
Supplementary Figure 3. Time-lag effects of air pollution on diastolic blood pressure



The x-axis represents hour lags, while the y-axis does adjusted effects on systolic blood pressure.

Abbreviations: $PM_{2.5}$, fine particulate matter with an aerodynamic diameter of <2.5 μm; PM_{10}, fine particulate matter with an aerodynamic diameter of <10 μm; CO, carbon monoxide; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; O_3, ozone; IQR, Interquartile range.

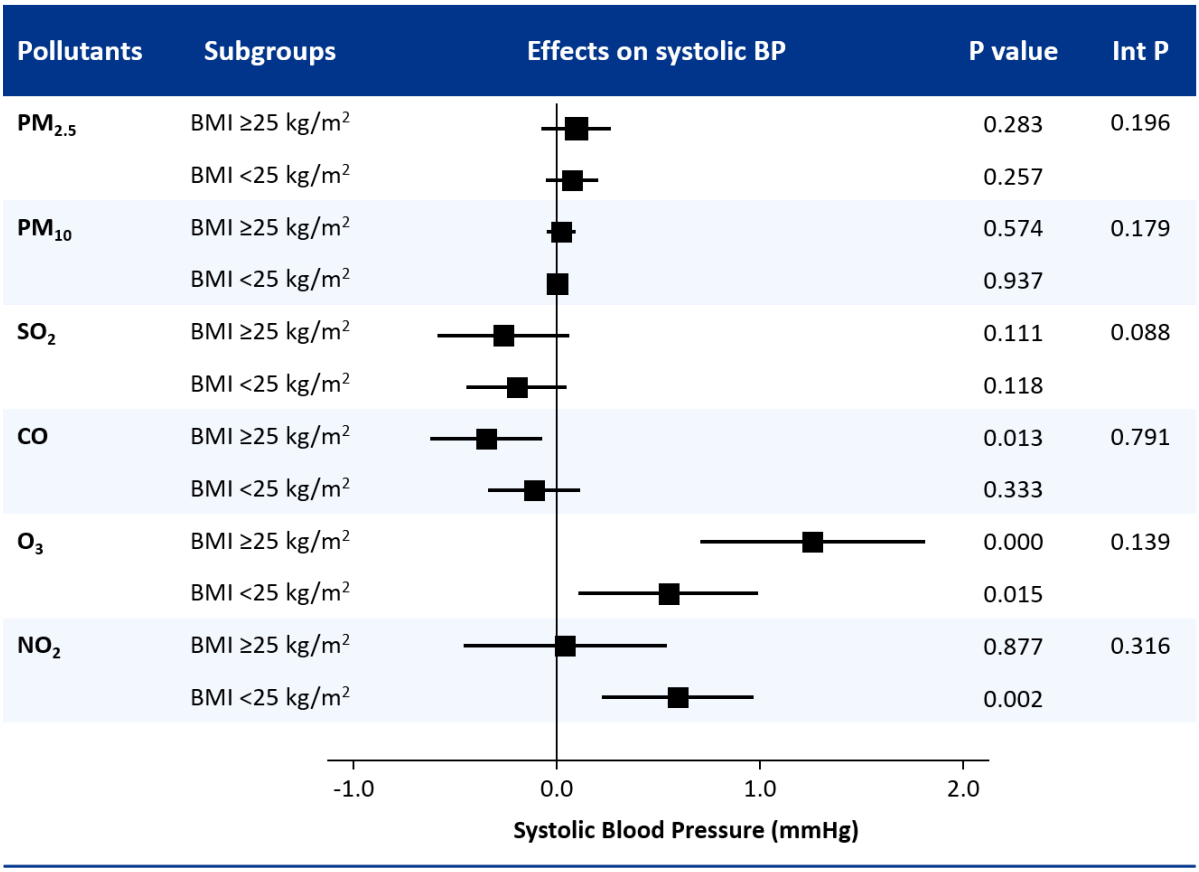
Supplementary Figure 4. Time-lag effects of air pollution on pulse rate



The x-axis represents hour lags, while the y-axis does adjusted effects on systolic blood pressure.

Abbreviations: $PM_{2.5}$, fine particulate matter with an aerodynamic diameter of <2.5 µm; PM_{10}, fine particulate matter with an aerodynamic diameter of <10 µm; CO, carbon monoxide; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; O_3, ozone; IQR, Interquartile range.

Supplementary Figure 5. Subgroup analysis for the associations between air pollutants and systolic blood pressure stratified by body mass index.



Abbreviations: BMI, body mass index (kg/m^2); Int P, interaction P values; $PM_{2.5}$, fine particulate matter with an aerodynamic diameter of <2.5 μm; PM_{10}; CO, carbon monoxide; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; O_3, ozone.