

A1: Distributions of PM10 and PM2.5 moving averages (lag 1-5) for the person-years included in the study

Figure 1: PM10 distribution

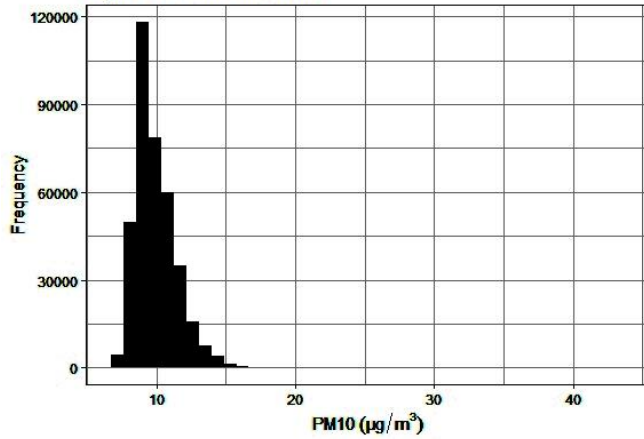
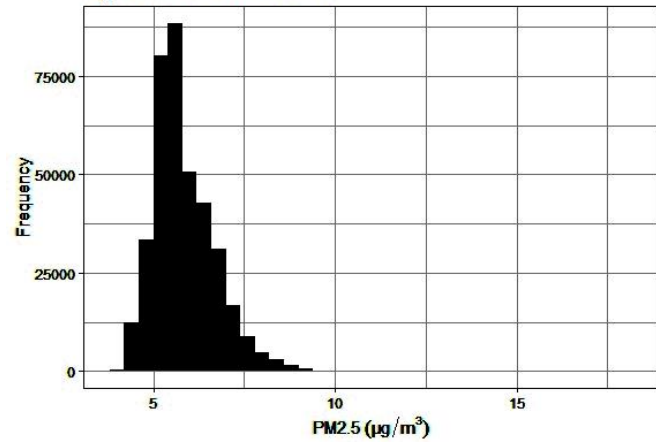


Figure 2: PM2.5 distribution



A2: Distributions of PM10 and PM2.5 moving averages (lag 1-5) for the person-years included in the study at different levels of physical activity (exercise in training clothes).

Figure 3: PM10 at different levels of exercise

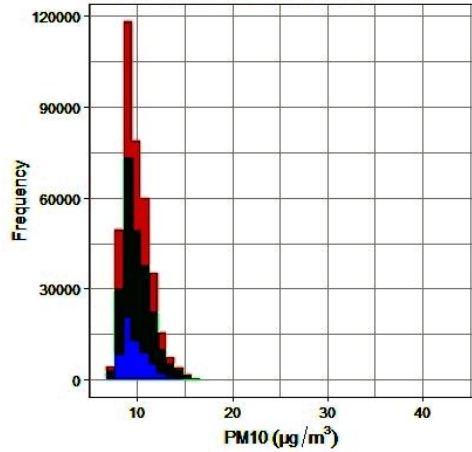
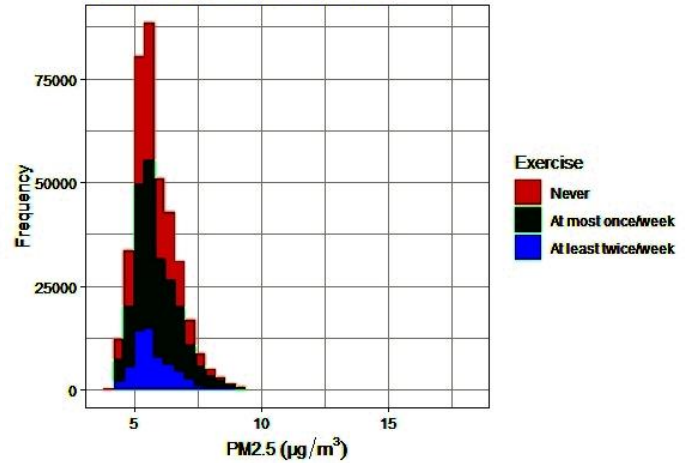


Figure 4: PM2.5 at different levels of exercise



B: Sensitivity analysis by excluding the individuals with follow-up time below the 25th percentile

Table 1. Hazard ratios (95% CI) for IHD associated with different exercise and commuting habits among persons with different air pollution exposure at home addresses.

Exercise in training clothes	Overall model with no interaction effects	Adjusted ^a HRs in categories of high and low particle exposure		Adjusted ^a interaction hazard ratio
		Low PM ₁₀ ^b	High PM ₁₀ ^b	
		Low PM _{2.5} ^c	High PM _{2.5} ^c	Benefits of exercise/commuting comparing high and low particle exposure
Never	1	1	1	
≤ once/week	1.00 (0.84-1.19)	1.01 (0.84-1.21)	1.02 (0.85-1.23)	1.02 (0.79-1.31)
≥ twice/week	0.88 (0.76-1.02)	1.0 (0.77-1.31)	0.48 (0.34-0.7)	0.48 (0.31-0.76)
		Low PM ₁₀ ^b	High PM ₁₀ ^b	
Never	1	1	1	
≤ once/week		1.01 (0.84-1.21)	1.02 (0.85-1.23)	1.01 (0.78-1.31)
≥ twice/week		0.95 (0.72-1.24)	0.53 (0.37-0.75)	0.56 (0.36-0.87)
Active commuting per season		Low PM ₁₀ ^b	High PM ₁₀ ^b	
Non-active commuting	1	1	1	
≤ two seasons of four	1.02 (0.89-1.16)	1.16 (0.92-1.46)	0.85 (0.66-1.09)	0.73 (0.52-1.03)
> two seasons of four	0.74 (0.6-0.92)	0.91 (0.74-1.12)	0.83 (0.68-1.02)	0.91 (0.69-1.2)
		Low PM _{2.5} ^c	High PM _{2.5} ^c	
Non-active commuting		1	1	
≤ two seasons of four		1.18 (0.93-1.48)	0.84 (0.65-1.08)	0.70 (0.50-0.98)
> two seasons of four		0.98 (0.80-1.2)	0.79 (0.64-0.96)	0.82 (0.62-1.09)

^aAdjusted for sex, calendar year, education, smoking, alcohol intake, occupation, neighbourhood mean income, leisure time physical activity, active commuting

^bLow PM₁₀: ≤9.6 µg/m³; High PM₁₀: >9.6 µg/m³

^cLow PM_{2.5} ≤5.7 µg/m³; High PM_{2.5}: >5.7 µg/m³

Table 2. Hazard ratios (95% CI) for IHD associated with high air pollution levels (vs low) at home address among persons with different exercise/commuting habits.

	Overall model with No interaction effects	Adjusted ^a HRs in different exercise categories		
		Exercise in training clothes		
		Never	≤ once/week	≥ twice/week
Low PM ₁₀ ^b	1	1	1	1
High PM ₁₀ ^b	1.22 (0.96-1.56)	1.25 (1.0-1.56)	1.27 (1.03-1.58)	0.61 (0.40-0.93)
Low PM _{2.5} ^c	1	1	1	1
High PM _{2.5} ^c	0.95 (0.74-1.21)	1.15 (0.92-1.43)	1.16 (0.94-1.44)	0.64 (0.42-0.97)
		Active commuting		
		Non-active commuting	≤ two seasons of four	> two seasons of four
Low PM ₁₀ ^b		1	1	1
High PM ₁₀ ^b		1.28 (1.04-1.57)	0.94 (0.68-1.29)	1.16 (0.9-1.5)
Low PM _{2.5} ^c		1	1	1
High PM _{2.5} ^c		1.23 (1.0-1.51)	0.88 (0.64-1.21)	0.99 (0.76-1.27)

^aAdjusted for sex, calendar year, education, smoking, alcohol intake, occupation, neighbourhood mean income, leisure time physical activity, active commuting

^bLow PM₁₀: ≤9.6 µg/m³; High PM₁₀: >9.6 µg/m³

^cLow PM_{2.5} ≤5.7 µg/m³; High PM_{2.5}: >5.7 µg/m³

C: Sensitivity analyses with PM10 and PM2.5 concentrations categorized by tertile limits

Table 3. Hazard ratios (95% CI) for IHD associated with different exercise and commuting habits among persons with different air pollution exposure at home addresses.

Exercise in training clothes	Overall model with no interaction effects	Proportional hazard p-value*	Adjusted ^a HRs in categories of high and low particle exposure					
			Low PM ₁₀ ^b	Proportional hazard p-value ^d	Moderate PM ₁₀ ^b	Proportional hazard p-value ^d	High PM ₁₀ ^b	Proportional hazard p-value ^d
Never	1		1		1			
≤ once/week	1.03 (0.90-1.16)	0.36	0.93 (0.74-1.16)	0.42	1.15 (0.94-1.41)	0.95	0.99 (0.80-1.23)	0.37
≥ twice/week	0.76 (0.62-0.93)	0.09	0.95 (0.68-1.32)	0.54	0.83 (0.60-1.15)	0.16	0.51 (0.34-0.77)	0.86
			Low PM _{2.5} ^c		Moderate PM _{2.5} ^c		High PM _{2.5} ^c	
Never			1		1			
≤ once/week			0.98 (0.78-1.22)	0.67	1.08 (0.88-1.32)	0.60	1.02 (0.82-1.26)	0.48
≥ twice/week			0.91 (0.65-1.27)	0.71	0.83 (0.60-1.14)	0.13	0.54 (0.36-0.82)	0.60

^aAdjusted for sex, calendar year, education, smoking, alcohol intake, occupation, neighbourhood mean income, leisure time physical activity, and active commuting

^bLow PM₁₀: ≤9.6 µg/m³; High PM₁₀: >9.6 µg/m³

^cLow PM_{2.5}: ≤5.7 µg/m³; High PM_{2.5}: >5.7 µg/m³

^dp-value of the Schoenfeld residual test of proportional hazards

Table 4. Hazard ratios (95% CI) for IHD associated with high and moderate air pollution levels (vs low) at home address among persons with different exercise/commuting habits.

	Overall model with no interaction effects	Proportional hazard p-value ^d	Adjusted ^a HRs in categories of high and low particle exposure					
			Exercise in training clothes					
			Never	Proportional hazard p-value ^d	≤ once/week	Proportional hazard p-value ^d	≥ twice/week	Proportional hazard p-value ^d
Low PM ₁₀ ^b	1		1		1		1	
Moderate PM ₁₀ ^b	1.04 (0.81-1.34)	0.55	1.05 (-0.83 - 1.32)	0.35	1.30 (-1.03 - 1.63)	0.95	0.92 (0.61-1.39)	0.26
High PM ₁₀ ^b	1.00 (0.69-1.45)	0.99	1.16 (-0.87 - 1.53)	0.13	1.23 (0.93-1.64)	0.13	0.62 (0.37-1.04)	0.56
Low PM _{2.5} ^c	1		1		1		1	
Moderate PM ₁₀ ^{c,e}	1.12 (0.88-1.43)	0.94	1.11 (-0.89 - 1.39)	0.73	1.23 (-0.98-1.53)	0.73	1.02 (0.67-1.54)	0.30
High PM _{2.5} ^c	1.15 (0.79-1.68)	0.13	1.18 (-0.89 - 1.57)	0.05	1.23 (0.92-1.64)	0.04	0.71 (0.42-1.18)	0.22

^aAdjusted for sex, calendar year, education, smoking, alcohol intake, occupation, neighbourhood mean income, leisure time physical activity, and active commuting

^bLow PM₁₀: <9.6 µg/m³; High PM₁₀: >9.6 µg/m³

^cLow PM_{2.5}: <5.7 µg/m³; High PM_{2.5}: >5.7 µg/m³

^eLow PM₁₀: 7.2 - 9.1 µg/m³; Moderate PM₁₀: 9.2 - 10.3 µg/m³; High PM₁₀: 10.4 - 43.0 µg/m³

^fLow PM_{2.5}: 4.1 - 5.4 µg/m³; Moderate PM_{2.5}: 5.5 - 6.1 µg/m³; High PM_{2.5}: 6.2 - 17.9 µg/m³

^dp-value of the Schoenfeld residual test of proportional hazards

Table 5. Interaction hazard ratios between exercise and air pollution for incident IHD

Exercise in training clothes	Adjusted ^a interaction hazard ratio			
	Benefits of exercise comparing moderate ^b high with low PM ₁₀ ^b exposure		Benefits of exercise comparing high with low PM ₁₀ ^b particle exposure	
	Moderate PM ₁₀ ^b	Proportional hazard p-value ^d	High PM ₁₀ ^b	Proportional hazard p-value ^d
Never	1		1	
≤ once/week	1.24 (0.91-1.68)	0.51	1.07 (0.78-1.45)	0.99
≥ twice/week	0.88 (0.55-1.39)	0.58	0.54 (0.32-0.92)	0.81
	Benefits of exercise comparing moderate ^b high with low PM _{2.5} ^c exposure		Benefits of exercise comparing High ^b moderate with low PM _{2.5} ^c exposure	
Never	1		1	
≤ once/week	1.11 (0.82-1.50)	0.97	1.04 (0.77-1.42)	0.87
≥ twice/week	0.92 (0.58-1.46)	0.45	0.60 (0.35-1.02)	0.87

^aAdjusted for sex, calendar year, education, smoking, alcohol intake, occupation, neighbourhood mean income, leisure time physical activity, and active commuting

^bLow PM₁₀: <9.6 µg/m³; High PM₁₀: >9.6 µg/m³

^cLow PM_{2.5}: <5.7 µg/m³; High PM_{2.5}: >5.7 µg/m³

^eLow PM₁₀: 7.2 - 9.1 µg/m³; Moderate PM₁₀: 9.2 - 10.3 µg/m³; High PM₁₀: 10.4 - 43.0 µg/m³

^fLow PM_{2.5}: 4.1 - 5.4 µg/m³; Moderate PM_{2.5}: 5.5 - 6.1 µg/m³; High PM_{2.5}: 6.2 - 17.9 µg/m³

^dp-value of the Schoenfeld residual test of proportional hazards

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