

Differences in Heart Rate Variability Associated with Long-term Exposure to NO₂

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Supplemental Material, Table 1. Crude regression coefficients of annual home outdoor exposure to NO₂^a (by 10 µg/m³) in models of indices of HRV, by sex

Outcome variable	Men (n=683)				Women (n=725)			
	24-h		Night		24-h		Night	
	Coefficient (SE)	p						
ln(SDNN)	-0.0060 (0.011)	0.584	0.0018 (0.012)	0.883	-0.0306 (0.010)	0.002	-0.0163 (0.011)	0.137
ln(Total Power)	0.0141 (0.026)	0.957	-0.0144 (0.026)	0.574	-0.0459 (0.023)	0.047	-0.0452 (0.023)	0.050
ln(HF)	-0.0009 (0.040)	0.982	0.0033 (0.039)	0.934	-0.018 (0.034)	0.602	-0.0166 (0.033)	0.618
ln(LF)	-0.0324 (0.031)	0.303	-0.0321 (0.031)	0.299	-0.0523 (0.028)	0.063	-0.0814 (0.028)	0.004
ln(LF/HF)	-0.0315 (0.027)	0.249	-0.0383 (0.027)	0.161	-0.0347 (0.023)	0.129	-0.0536 (0.024)	0.024

^a averaged over previous year

Supplemental Material, Table 2. Adjusted regression coefficients^a of annual home outdoor exposure to NO₂^b (by 10 µg/m³) in models of indices of HRV, by sex, 2.5% of observations at each end of NO₂-scale removed

Outcome variable	Men (n=677)				Women (n=723)			
	24-h		Night		24-h		Night	
	Coefficient (SE)	p						
ln(SDNN)	0.0017 (0.013)	0.896	0.0001 (0.014)	0.996	-0.0246 (0.011)	0.031	-0.0164 (0.014)	0.255
ln(Total Power)	-0.0021 (0.027)	0.943	-0.0064 (0.032)	0.843	-0.0520 (0.032)	0.121	-0.0463 (0.027)	0.124
ln(HF)	0.0120 (0.048)	0.808	0.0252 (0.050)	0.625	-0.0160 (0.046)	0.731	-0.0107 (0.042)	0.803
ln(LF)	0.0024 (0.034)	0.942	-0.0131 (0.035)	0.706	-0.0428 (0.032)	0.203	-0.0762 (0.031)	0.016
ln(LF/HF)	-0.0086 (0.031)	0.806	-0.0275 (0.027)	0.404	-0.0225 (0.026)	0.389	-0.0564 (0.028)	0.042

^a adjusted for age, body mass index, hypertension, exercise, beta blocker, uric acid, self reported diabetes, smoking status, educational level and random area effects

^b averaged over previous year

Supplemental Material, Table 3. Regression coefficients^a of annual home outdoor exposure to NO₂^b (by 10 µg/m³) in models of indices of HRV, stratified by time spent at home.

Outcome variable	Men				Women			
	home-staying (n=229)		not home-staying (n=453)		home-staying (n=402)		not home-staying (n=323)	
	Coefficient (SE)	p	Coefficient (SE)	p	Coefficient (SE)	p	Coefficient (SE)	p
ln(SDNN)	0.0090 (0.019)	0.641	-0.0040 (0.015)	0.794	-0.0299 (0.013)	0.026	-0.0240 (0.017)	0.175
ln(Total Power)	0.0239 (0.052)	0.653	0.0087 (0.032)	0.787	-0.0964 (0.036)	0.026	0.0041 (0.042)	0.923
ln(HF)	0.0700 (0.074)	0.346	-0.0079 (0.054)	0.886	-0.0144 (0.060)	0.814	0.0229 (0.059)	0.702
ln(LF)	0.0171 (0.058)	0.767	0.0089 (0.038)	0.814	-0.0328 (0.049)	0.508	-0.0261 (0.044)	0.551
ln(LF/HF)	-0.0529 (0.051)	0.303	0.0186 (0.033)	0.595	-0.0112 (0.032)	0.723	-0.0506 (0.041)	0.228

^a adjusted for age, body mass index, hypertension, exercise, beta blocker, uric acid, self reported diabetes, smoking status, educational level and random area effects

^b averaged over previous year

Supplemental Material, Table 4. Regression coefficients^a of short-term home outdoor exposure to NO₂^b (by 10 µg/m³) in models of indices of HRV, by sex

Outcome variable	Men (n=664)				Women (n=679)			
	24-h		Night		24-h		Night	
	Coefficient (SE)	p						
ln(SDNN)	0.0009 (0.007)	0.201	0.0087 (0.007)	0.266	-0.0043 (0.007)	0.557	0.0082 (0.008)	0.293
ln(Total Power)	0.0140 (0.015)	0.226	-0.0055 (0.018)	0.757	-0.0036 (0.017)	0.829	0.0031 (0.015)	0.843
ln(HF)	0.0043 (0.023)	0.852	-0.0009 (0.026)	0.973	0.0043 (0.024)	0.856	0.0031 (0.021)	0.885
ln(LF)	0.0087 (0.018)	0.633	-0.0082 (0.021)	0.689	0.0008 (0.017)	0.966	-0.0095 (0.018)	0.598
ln(LF/HF)	0.0044 (0.015)	0.764	-0.0075 (0.015)	0.625	-0.0070 (0.015)	0.648	-0.0086 (0.015)	0.579

^a adjusted for age, body mass index, hypertension, exercise, beta blocker, uric acid, self reported diabetes, smoking status, educational level and random area effects (not adjusted for seasonal terms and meteorological variables)

^b same day average

Supplemental Material, Table 5. Regression coefficients^a of short-term home outdoor exposure to PM10^b (by 10 µg/m³) in models of indices of HRV, by sex

Outcome variable	Men (n=576)				Women (n=586)			
	24-h		Night		24-h		Night	
	Coefficient (SE)	p						
ln(SDNN)	0.0161 (0.007)	0.020	0.0209 (0.008)	0.008	0.0012 (0.007)	0.860	0.0065 (0.008)	0.393
ln(Total Power)	0.0357 (0.016)	0.025	0.0216 (0.017)	0.198	0.0071 (0.016)	0.655	0.0100 (0.015)	0.513
ln(HF)	0.0152 (0.024)	0.532	0.0270 (0.025)	0.287	0.0110 (0.023)	0.631	0.0111 (0.025)	0.622
ln(LF)	0.0296 (0.019)	0.121	0.0242 (0.020)	0.227	0.0061 (0.018)	0.737	0.0070 (0.018)	0.700
ln(LF/HF)	0.0144 (0.015)	0.347	0.0005 (0.016)	0.974	-0.0055 (0.016)	0.727	-0.0067 (0.016)	0.683

^a adjusted for age, body mass index, hypertension, exercise, beta blocker, uric acid, self reported diabetes, smoking status, educational level and random area effects (not adjusted for seasonal terms and meteorological variables)

^b same day average

Supplemental Material, Table 6. Regression coefficients^a of short-term home outdoor exposure to PM2.5^b (by 10 µg/m³) in models of indices of HRV, by sex

Outcome variable	Men (n=451)				Women (n=444)			
	24-h		Night		24-h		Night	
	Coefficient (SE)	p						
ln(SDNN)	0.0207 (0.008)	0.010	0.0124 (0.009)	0.177	0.0001 (0.009)	0.987	0.0071 (0.010)	0.468
ln(Total Power)	0.0379 (0.018)	0.044	0.0200 (0.019)	0.286	0.0097 (0.020)	0.631	0.0137 (0.020)	0.504
ln(HF)	0.0151 (0.028)	0.592	0.0159 (0.029)	0.579	0.0267 (0.029)	0.362	0.0250 (0.029)	0.384
ln(LF)	0.0368 (0.022)	0.102	0.0221 (0.023)	0.326	0.0085 (0.024)	0.723	0.0029 (0.024)	0.903
ln(LF/HF)	0.0217 (0.018)	0.232	0.0043 (0.019)	0.819	-0.0179 (0.020)	0.369	-0.0219 (0.021)	0.298

^a adjusted for age, body mass index, hypertension, exercise, beta blocker, uric acid, self reported diabetes, smoking status, educational level and random area effects (not adjusted for seasonal terms and meteorological variables)

^b same day average