

**Appendix 3:** Association between appendicitis and increases in the interquartile range of air pollutants, stratified by age and sex

Pollutant*	Period	Age, yr; OR (95% CI)†			Sex; OR (95% CI)†	
		18–34 years n = 2402	35–64 years n = 2399	> 64 n = 390	Male n = 2764	Female n = 2427
		Ozone	Same day	1.03 (0.93–1.16)	1.06 (0.95–1.18)	1.13 (0.87–1.48)
	1-day lag	1.08 (0.99–1.19)	1.04 (0.94–1.14)	1.05 (0.83–1.33)	1.07 (0.98–1.17)	1.05 (0.95–1.15)
	3-day average	1.10 (0.97–1.25)	1.11 (0.98–1.27)	1.02 (0.75–1.40)	1.11 (0.98–1.25)	1.09 (0.96–1.24)
	5-day average	1.10 (0.95–1.27)	1.21 (1.05–1.39)	1.02 (0.72–1.43)	1.19 (1.04–1.36)	1.09 (0.94–1.25)
	7-day average	1.16 (0.99–1.35)	1.17 (1.01–1.37)	1.03 (0.71–1.50)	1.22 (1.06–1.41)	1.08 (0.93–1.26)
Sulfur dioxide	Same day	1.05 (0.97–1.14)	1.05 (0.97–1.15)	1.00 (0.82–1.21)	1.07 (0.99–1.16)	1.02 (0.94–1.11)
	1-day lag	0.96 (0.88–1.04)	1.03 (0.95–1.13)	1.05 (0.86–1.27)	1.00 (0.92–1.08)	1.00 (0.92–1.09)
	3-day average	1.03 (0.92–1.16)	1.10 (0.98–1.23)	1.03 (0.79–1.34)	1.09 (0.98–1.21)	1.03 (0.92–1.16)
	5-day average	1.07 (0.93–1.22)	1.14 (1.00–1.30)	1.08 (0.79–1.49)	1.15 (1.01–1.30)	1.05 (0.92–1.20)
	7-day average	1.10 (0.95–1.28)	1.15 (0.99–1.34)	1.19 (0.83–1.69)	1.14 (0.99–1.32)	1.11 (0.96–1.29)
Nitrogen dioxide	Same day	1.06 (0.97–1.17)	0.97 (0.88–1.07)	1.09 (0.85–1.40)	1.01 (0.92–1.11)	1.03 (0.94–1.14)
	1-day lag	0.97 (0.87–1.07)	0.98 (0.89–1.08)	1.05 (0.82–1.33)	0.97 (0.89–1.07)	0.99 (0.89–1.09)
	3-day average	1.02 (0.89–1.16)	1.04 (0.91–1.19)	1.16 (0.83–1.62)	1.02 (0.90–1.16)	1.06 (0.92–1.21)
	5-day average	1.06 (0.91–1.24)	1.16 (0.99–1.36)	1.17 (0.79–1.75)	1.09 (0.94–1.27)	1.13 (0.97–1.33)
	7-day average	1.10 (0.92–1.31)	1.10 (0.92–1.32)	1.32 (0.84–2.06)	1.08 (0.91–1.28)	1.15 (0.97–1.38)
Carbon monoxide	Same day	1.03 (0.98–1.08)	0.97 (0.92–1.02)	1.07 (0.94–1.21)	1.00 (0.96–1.05)	1.00 (0.95–1.06)
	1-day lag	0.99 (0.94–1.04)	1.00 (0.95–1.05)	0.96 (0.84–1.10)	1.00 (0.96–1.05)	0.98 (0.93–1.03)
	3-day average	1.02 (0.94–1.10)	1.01 (0.93–1.08)	1.05 (0.87–1.27)	1.03 (0.96–1.10)	1.00 (0.92–1.08)
	5-day average	1.07 (0.98–1.16)	1.07 (0.98–1.17)	1.03 (0.82–1.29)	1.08 (1.00–1.17)	1.04 (0.96–1.14)
	7-day average	1.08 (0.97–1.19)	1.04 (0.94–1.15)	1.03 (0.81–1.33)	1.07 (0.97–1.17)	1.04 (0.94–1.15)
PM <sub>2.5</sub>	Same day	1.02 (0.98–1.06)	1.00 (0.96–1.05)	1.03 (0.92–1.15)	1.01 (0.97–1.05)	1.02 (0.98–1.06)
	1-day lag	1.01 (0.97–1.06)	1.01 (0.97–1.06)	0.96 (0.86–1.07)	0.99 (0.95–1.03)	1.02 (0.98–1.07)
	3-day average	1.04 (0.99–1.09)	1.01 (0.96–1.07)	0.99 (0.87–1.13)	1.01 (0.96–1.06)	1.04 (0.98–1.09)
	5-day average	1.07 (1.01–1.14)	1.02 (0.96–1.08)	1.00 (0.87–1.15)	1.04 (0.98–1.09)	1.05 (0.99–1.11)
	7-day average	1.08 (1.01–1.16)	1.01 (0.94–1.08)	1.01 (0.86–1.18)	1.04 (0.97–1.10)	1.05 (0.98–1.12)

Note: CI = confidence interval, OR = odds ratio, PM<sub>2.5</sub> = particulate matter < 2.5 μ in diameter.

\*The daily maximum was determined for ozone; daily means were determined for the other pollutants.

†Values are adjusted for temperature and relative humidity.